CITY OF CRYSTAL LAKE
AGENDA
CITY COUNCIL
REGULAR MEETING

City of Crystal Lake
100 West Woodstock Street, Crystal Lake, IL
City Council Chambers
January 17, 2023
7:00 p.m.

1. **Call to Order**
2. **Roll Call**
3. **Pledge of Allegiance**
4. **Approval of Minutes – January 3, 2023 Regular City Council Meeting**
5. **Accounts Payable**
6. **Public Presentation**
   The public is invited to make an issue oriented comment on any matter of public concern not otherwise on the agenda. The public comment may be no longer than 5 minutes in duration. Interrogation of the City staff, Mayor or City Council will not be allowed at this time, nor will any comment from the Council. Personal invectives against City staff or elected officials are not permitted.
7. **Mayor's Report**
8. **City Council Reports**
9. **Consent Agenda**
   a. **Class 19 Temporary Liquor License Request – Crystal Lake South High School Booster Club, Trivia Night, Saturday, February 25, 2023**
   b. **40 N. Williams Street d/b/a Benedict's la Strata Ground Lease Agreement Amendment**
   c. **Special Event Request – Smith Therapy Crystal Lake Aquathon at the Three Oaks Recreation Area, Sunday, July 30, 2023**
   d. **Special Event Request - Medela LLC Company Picnic at the Three Oaks Recreation Area, Saturday, June 17, 2023, with set up on Friday, June 16, 2023**
   e. **Three Oaks Recreation Area Beach Concessionaire Lease Agreement Extension**
10. **Retailer Facade and Commercial Tenant Improvement Grant Funds request for Heisler's Bootery, 50 N. Williams Street, requesting $1,162.50 in matching grant funds**
11. **269 Liberty Road - Special Use Permit for a Wireless Communication Tower and Variations from Article 2-400 to allow the Monopine style tower and for the tower to be setback less than 110% of the height of the tower from the west and south property lines**
12. **Bid Award – Central Park Drive at Lutter Drive Traffic Signal Installation**
13. **Reject March 7, 2022 bids for Salt Storage Building Repairs and award December 9, 2022 bid to Carmichael Construction**
14. **Appointment to Firefighters' Pension Board of Trustees**
15. **Appointment to Police Pension Board of Trustees**

16. Amendment to City Code Article 11 related to the Police and Fire Pension Board

17. Council Inquiries and Requests

18. Adjourn to Executive Session for the purpose of discussing matters of pending and probable litigation, the sale, purchase or lease of real property, collective bargaining and personnel

19. Reconvene to Regular Session

20. Adjourn

If special assistance is needed in order to participate in a City of Crystal Lake public meeting, please contact Melanie Nebel, Executive Assistant, at 815-459-2020, at least 24 hours prior to the meeting, if possible, to make arrangements.

Agenda Item No: 9a

City Council
Agenda Supplement

Meeting Date: January 17, 2023

Item: Class 19 Temporary Liquor License Request – Crystal Lake South High School Booster Club, Trivia Night, Saturday, February 25, 2023

Staff Recommendation: Motion to approve issuance of a Class 19 Temporary Liquor License to the Crystal Lake South High School Booster Club

Staff Contact: Nick Hammonds, Assistant City Manager

Background:
The City received a request from the Crystal Lake South High School Booster Club for the issuance of a Class 19 Temporary Liquor License in order to sell beer, wine, and possibly alcoholic liquor drinks at their thirteenth annual Trivia Game Night being held at the St. Elizabeth Ann Seton Church Community Center, located at 1023 McHenry Avenue, on Saturday, February 25, 2023 from 6:00 p.m. to 11:00 p.m.

Section 329-5-S of the City Code permits the issuance of a Class 19 Temporary Liquor License for the retail sale of beer, wine, and alcoholic liquor drinks for consumption upon the premises specified in the license where sold. The license shall be issued to not-for-profit corporations qualified to do business in the State of Illinois. The license shall be for a period not to exceed three (3) days, and shall be issued only for special events sponsored by the not-for-profit corporation requesting the license.

The Council has approved this event in the past.

Votes Required to Pass:
Simple majority

TLL22-000003
Temporary Liquor License

Applicant Name	Michelle Chase
Applicant Email	[redacted]
Applicant Address	1790 Queensport Drive Crystal Lake IL 60014
Applicant Company Name	Crystal Lake South High School Booster Club
Applicant Company Address	1200 S McHenry Avenue Crystal Lake IL 60014
Applicant Home Phone	
Applicant Cell Phone	[redacted]
Applicant Work Phone	
Temporary License Classification	Class 19
Dates of Event	02/25/2023
Hours of Operation	6PM-11PM

Letter to the Mayor and City Council requesting approval of the issuance of a Temporary Liquor License to applicant: LettertoCity.pdf
President Signature: signature.png
Proof of liquor liability insurance: LiqLiabIns.pdf
Proof of permission from owner of the premises, if different than applicant, authorizing the sale of beer, wine and alcoholic liquor drinks on the property during the time requested: South HS Boosters Club Letter.pdf
Secretary Signature: signature.png
Site plan of area where beer, wine and alcoholic liquor drinks will be sold: ChurchDiagram.pdf
Upload signed affidavit Click Here for form: LiqLicSignatures.pdf

December 31, 2022

Dear Mayor and City Council,

On Saturday February 25, 2023, the Crystal Lake South Booster Club will be holding their thirteenth annual Trivia Game Night at Saint Elizabeth Ann Seton Church. This will be the ninth year we will be at this venue. The event is for adults only and is attended mostly by South parents, faculty and administrators. During the event, teams answer trivia questions asked by an emcee. Each team can bring in their own snacks and the Boosters have a cash bar that serves beer, wine, pop and water. The doors open at 6:30, trivia starts at 7:00, there are three breaks, 'last call' is during the last break and winning teams are announced about 10:30 to wrap up the evening.

Trivia Night has become one of CLS Boosters biggest fundraising events of the year. St. Elizabeth Ann Seton has agreed to allow the CLS Boosters to host Trivia Night at the parish center and understand that we will be seeking a temporary liquor license so we can sell alcohol at the event. The CLS Boosters will be complying with the City and Church's requirements to have the proper insurance coverage for the event.

Thank you for your consideration,

Michelle Chase

Michelle Chase, Trivia Night Chairperson

CLS Booster Club President



St. Elizabeth Ann Seton Catholic Church

1023 McHenry Avenue

Crystal Lake, Illinois 60014

"The first end I propose in our daily work is to do the will of God;

secondly, to do it in the manner He wills it; and thirdly to do it because it is His will."

City of Crystal Lake
100 W Woodstock St
Crystal Lake, IL 60014

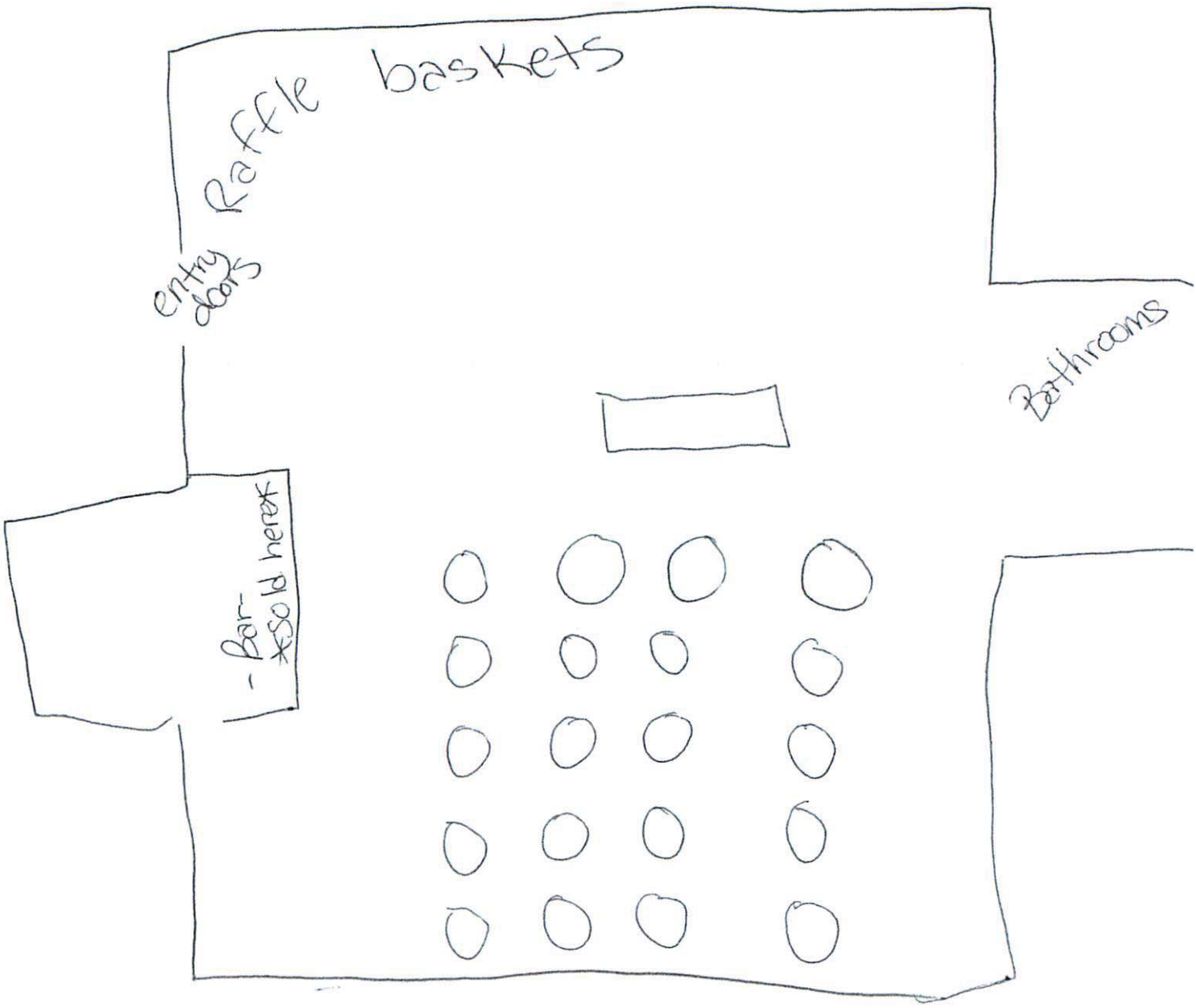
To Whom it May Concern:

This letter is to inform you that Crystal Lake South High School will be hosting their Booster Trivia Night on February 25, 2023 in our Parish Hall. We are aware that they will be serving alcohol. Please contact us if you have further questions.

Sue Schulz

Parish Business Manager

Phone: 815-459-3033 Fax: 815-459-3040


Raffle baskets
entry doors
Bathrooms
- Bar -
Sold here

AFFIDAVIT

STATE OF ILLINOIS)
COUNTY OF MCHENRY)

We swear that we will not violate any of the Ordinances of the City of Crystal Lake or the laws of the State of Illinois or the laws of the United States of America, in the conduct of the place of business described herein and that the statements contained in this application are true and correct to the best of our knowledge and belief.

Michelle Chase
Signature of President

Claudine Kerber
Signature of Secretary

Subscribed and sworn to before me this 28
day of December, 2022.

Denise M. Rognstad
Notary Public

OFFICIAL SEAL
DENISE M ROGNSTAD
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:09/24/24

U.S. INSURANCE COMPANY OF AMERICA
A Stock Company

Company: U.S Insurance Company of America
3131 Greenhead Drive
Springfield, IL 62711
(217)391-5252

Producer: Frisch & Barrett Insurance
226 West Main Street
Cary, IL 60013
(847) 639-2134

THIS IS A LIMITED COVERAGE POLICY - PLEASE READ YOUR POLICY IN ITS ENTIRETY
SPECIAL EVENT LIABILITY POLICY DECLARATIONS
Policy #: 22IL0000211SE00

NAMED INSURED: Crystal Lake South High School Booster Club
TYPE OF ENTITY: Non Profit Organization
MAILING ADDRESS: 1200 McHenry Ave., Crystal Lake, IL 60014
POLICY PERIOD: Inception Date and Time: February 25, 2023 11:00 AM Standard Time
Expiration Date and Time: February 26, 2023 07:00 AM Standard Time

FOR THE PAYMENT OF THE PREMIUM AND SUBJECT TO ALL THE TERMS AND CONDITIONS OF THIS POLICY, WE AGREE WITH YOU TO PROVIDE THE INSURANCE AS DESCRIBED IN THIS POLICY.

LIABILITY COVERAGES

Designated Premises: 1023 McHenry Avenue, Crystal Lake, IL 60014

Coverage	Limit of Liability
Illinois Liquor Liability - Each Common Cause	$1,000,000

Additional Insureds:
Name: St. Elizabeth Ann Seaton Catholic Church
Address: 1023 McHenry Ave., Crystal Lake, IL 60014
Interest: Lessor of premises

REPRESENTATIONS - The Insured has made the following representations:

The event is scheduled to start on February 25, 2023 at 05:00 PM and end on February 26, 2023 at 01:00 AM
Type of Event: Trivia Night
Estimated Number of Attendees: 200
Alcohol Is:
☐ Not Being Served
☐ Being Served But Not Sold By The Insured
☒ Being Sold By The Insured And The Estimated Liquor Sales Are: $2,400

FORMS AND ENDORSEMENTS:
IL-LL 104 12-07 Iowa Law Endorsement
IL-LL 101 09-09 IL Liquor Liability Policy
IL-LL 911 11-07 Terrorism Disclosure

FULLY EARNED POLICY PREMIUM: $200
PREMIUM IS DUE AND PAYABLE PRIOR TO THE INCEPTION DATE OF THE POLICY

U.S. Insurance
Company Of America

THIS ENDORSEMENT CHANGES THE POLICY
PLEASE READ IT CAREFULLY

IOWA ENDORSEMENT

1. Exclusion **1. Iowa Dram Shop Act** of **SECTION IV -- EXCLUSIONS** is deleted.

ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME

U.S. Insurance
Company Of America

LIQUOR LIABILITY
POLICYHOLDER DISCLOSURE
NOTICE OF TERRORISM
INSURANCE COVERAGE

Coverage for acts of terrorism is included in your Liquor Liability Policy.

You should know that coverage provided by this policy for losses caused by certified acts of terrorism will be partially reimbursed by the United States under a formula established by federal law. Under this formula, the United States pays a percentage of covered terrorism losses exceeding a statutorily established deductible to the insurance company providing the coverage. The percentage paid by the United States is 90% due to a certified act of terrorism occurring prior to January 1, 2007, or 85% due to a certified act of terrorism occurring on or after January 1, 2007.

The portion of your annual premium that is attributable to coverage for an act of terrorism is $0.00 (zero).



U.S. Insurance
Company of America

A STOCK COMPANY

LIQUOR LIABILITY POLICY

CLAIMS REPORTING

PLEASE REPORT CLAIMS IMMEDIATELY
BY PHONE, FAX OR EMAIL

(Phone) 217-241-5284
(Fax) 217-391-8742
(Email) claims@usicoa.com

U.S. Insurance Company of America
3131 Greenhead Drive, Springfield, IL 62711
217-391-5252

usicoa.com

U.S. Insurance
Company Of America

ILLINOIS LIQUOR LIABILITY COVERAGE FORM

READ THE ENTIRE POLICY CAREFULLY TO DETERMINE WHAT IS COVERED, WHAT IS NOT COVERED, AND OUR AND YOUR RIGHTS AND DUTIES.

In consideration of the premium charged, we provide insurance based on the following terms and conditions. The combination of the Liquor Liability Declarations, this Illinois Liquor Liability Coverage Form and any endorsements, as indicated on the Declarations and attached, constitute the insurance provided by this policy. Various provisions in this policy restrict coverage. Read the entire policy carefully to determine what is covered, what is not covered, and our and your rights and duties.

Throughout this policy the words "you" and "your" refer to the Named Insured shown in the Declarations, and any other person or organization qualifying as a Named Insured under this policy. The words "we", "us" and "our" refer to the company providing this insurance.

The word "insured" means any person or organization qualifying as such under Section **II** – Who Is An Insured.

Other words and phrases that appear in quotation marks have special meaning. Refer to Section **VI** –Definitions.

SECTION I -- COVERAGES

1.Insuring Agreement

a. We will pay those sums that the insured becomes legally obligated to pay as damages because of "injury" arising out of a "common cause" to which this insurance applies. "Injuries" and other circumstances to which this insurance does not apply are described in SECTION IV – EXCLUSIONS and other sections of this endorsement.

b. This insurance applies only to "injury" imposed on the insured arising from the selling, serving or furnishing of alcoholic beverage at "your premises".

c. We will have the right and duty to defend the insured against any claim or "suit" seeking those damages because of "injuries" to which this insurance applies as described in **a.** and **b.** above; however, we will have no duty to defend the insured against any "suit" seeking damages for "injury" to which this insurance does not apply. We may, at our sole discretion, investigate any "injury" and settle any claim or "suit" that may result. Our right and duty to defend ends when we have paid the full amount of the applicable limit of insurance in the payment of judgments or settlements. The most we will pay for damages is limited by the amounts described in SECTION III – LIMIT OF LIABILITY.

d. This insurance applies to "injury" only if: the "injury":

   1) arose from a "common cause" which occurred in the state of Illinois; and

   2) occurs during the policy period in the "coverage territory" as defined in this endorsement.

e. No other obligation or liability to pay sums or perform acts or services is covered unless it is explicitly provided for under **Supplemental Payments.**

2.Supplementary Payments

a. We will pay, with respect to any "suit" against an insured we defend or any claim we investigate or settle,

   (1) all expenses we incur.

   (2) the cost of bonds to release attachments, but only for bond amounts within the applicable limit of insurance. We have no obligation to furnish these bonds.

   (3) all reasonable expenses incurred by the insured arising from our request to assist us in the investigation or defense of the claim or "suit", including actual loss of earnings up to $250 a day because of time off from work.

   (4) all costs taxed against the insured in the "suit".

(5) prejudgment interest awarded against the insured on that part of the judgment we pay. If we make an offer to pay the applicable limit of insurance, we will not pay any prejudgment interest based on the period of time after such offer was made.

(6) all interest on the full amount of any judgment that accrues after entry of such judgment and before we have:

(i) deposited in court;

(ii) paid, or

(iii) offered to pay

that part of the judgment that is within the applicable limit of insurance.

(7) Expenses incurred by the insured for first aid administered to others for ""injuries" resulting from a "common cause" to which this insurance applies. Our obligation to pay such first aid expenses is for those first aid expenses incurred at the time of "injury".

SECTION II -- WHO IS AN INSURED

1. If you are designated in the Declarations, under form of business, as:

a. an individual, then you and your spouse are insureds.

b. a partnership or joint venture, then you are insured. Also insureds are:

(1) your partners and their spouses, and

(2) your members,

but only with respect to the conduct of your business.

c. a limited liability company, then you are an insured. Also insureds are:

(1) your members, but only with respect to the conduct of your business; and

(2) your managers, but only with respect to their duties as your manager.

d. an organization as:

(1) a corporation, or

(2) an organization other than a corporation, partnership, joint venture or limited liability company,

then you are an insured. Also insureds are:

(1) your "executive officers" and directors, but only with respect to their duties as your officers or directors.

(2) your stockholders, but only with respect to their liability as stockholders.

2. Any person or organization that owns and:

a. rents to you;

b. leases to you; or

c. permits you to occupy

"your premises" with knowledge that any alcoholic beverages are to be sold, served or furnished at "your premises" is an insured, but only with respect to their liability for "injury" arising out of the selling, serving or furnishing of any alcoholic beverage to any one person at "your premises."

3. An insured is also any person or organization having proper temporary custody of "your "premises" if you die, but only:

a. with respect to liability arising out of the maintenance or use of "your premises"; and

b. until your legal representative has been appointed

4. Also insureds are your "employees", other than either:

a. your "executive officers" (if you are an organization other than a partnership, joint venture or limited liability company) or

b. your managers (if you are a limited liability company),

but only for acts within the scope of their employment by you or while performing duties related to the conduct of your business. Your "volunteer workers" are also insureds, but only while performing duties related to the conduct of your business. However, none of these "employees" or "volunteer workers" is an insured for:

a. "injury":

(1) to:

(i) you,

(ii) your partners or members (if you are a partnership or joint venture),

(iii) your members (if you are a limited liability company), or

(iv) a co-"employee" while that co-"employee" is either in the course of his or her employment or performing duties related to the conduct of your business, provided such co-"employee" is receiving workers compensation

from any organization for such "injury"; or

(2) to the spouse, child, parent, brother or sister of that co-"employee" or "volunteer worker" as a consequence of "injury" to persons described in sub-paragraphs **(i)** through **(iv)** of paragraph **4.a.(1)** above; or

(3) for which there is any obligation to share damages with or repay someone else who must pay damages because of the "injury" described in Paragraphs **a.(1)**. or **a.(2)** above.

b. "Property damage" to property:

(1) owned or occupied by, or

(2) rented or loaned to

that "employee", any of your other "employees", any "volunteer worker", any of your partners or members (if you are a partnership or joint venture), or any of your members if you are a limited liability company.

SECTION III -- LIMIT OF LIABILITY

1.The Limits of Insurance shown in the Declarations and the rules below fix the most we will pay for "injury" arising out of each "common cause" regardless of the number of:

a. insureds;

b. claims made or "suits" brought; or

c. persons or organizations making claims or bringing "suits".

2.Subject to the applicable not to exceed amounts determined, calculated and set forth in the Law established in Section 235.5/6-21 of the Illinois Administrative Code (and any amendments thereto), hereinafter referred to as the Illinois Liquor Control Act, for "injury" arising out of a "common cause":

a. involving persons injured or killed,

b. involving persons incurring property damage,

c. for either loss of means of support or loss of society resulting from the death or injury of any person;

the Each Common Cause Limit is the most we will pay for "injury" to all persons and/or organizations arising out of a "common cause". It is also the most we will pay for all "injury" resulting from a "common cause" should any court rule that the applicable not to exceed amounts for "injury" in the Illinois Liquor Control Act shall not apply to such "injury".

SECTION IV -- EXCLUSIONS

1.Iowa Dram Shop Act

Unless this exclusion is modified or deleted by endorsement, this insurance does not apply to any liability any insured incurs arising out of the Iowa Civil Damage Act (Iowa Code Annotated Sec. 123.92), or any amendments thereof, related to the selling, serving, manufacturing, distributing or furnishing of alcoholic beverages.

2.Workers Compensation, Disability and Unemployment Benefits

This insurance does not apply to any obligation of any insured under:

a. worker compensation,

b. disability benefits; or

c. unemployment compensation

law or any other similar laws.

3.Property in Your Care, Custody, and Control

This insurance does not apply to any damage to property

a. you own,

b. you rent,

c. you occupy,

d. loaned to you,

e. in your care, custody or control; or

f. that any insured is exercising physical control.

4.Expected or Intended

This insurance does not apply to any "injuries" or damages which are expected or intended from the insured's standpoint. This exclusion does not apply to bodily injury resulting from the use of reasonable force to protect persons or property.

5.Outside Illinois Locations

This insurance does not apply to any "injuries" or damages arising out of any "common cause" that occurred outside the state of Illinois.

6."Common Cause" Away from "Your Premises"

This insurance does not apply to any "injuries" or damages arising out of any "common cause" that occurred from any location that does not qualify as "your premises".

7.Damages to You

This insurance does not apply to any "injuries" or damages to you.

8.Owners not listed as Named Insured

If, as indicated on the Declarations, insurance provided by this policy is for a business, this insurance does not apply to any "injuries" or damages to any person who:

a. is not listed on the Declarations as a Named Insured; and

b. owns or controls any interest in you.

This exclusion applies to such person if he or she is or is not named on the Liquor License issued by the state of Illinois for such business covered by this insurance.

If the form of business as indicated on the Declarations is a Corporation, this exclusion shall not apply to corporations whose stock is listed, bought and sold on a stock exchange.

9.Liquor License not in Effect

If, as indicated on the Declarations, insurance provided by this policy is for a business, this insurance does not apply to any "injuries" or damages arising out of any "common cause" while any required license for selling, serving or furnishing of any alcoholic beverages is not in effect.

10.Employees

This insurance does not apply to any "injuries" or damages for "personal injury" to:

a. An "employee" of the insured arising out of and in the course of

(1) employment by an insured; or

(2) performing duties related to the conduct of the insured's business; or

b. The spouse, child, parent, brother or sister of that "employee" as a consequence of Paragraph **a.** above.

This exclusion applies:

a. Whether the insured may be liable as an employer or in any other capacity; and

b. To any obligation to share damages with or repay someone else who must pay damages because of the "injury".

11.Alcohol Without Liquid Machines

This insurance does not apply to:

a. a claim or "suit" against any insured for "injury" arising out of a "common cause"; and

b. the person who is the alleged intoxicated patron in the claim or "suit" in **a.** above was sold, served or furnished alcohol from an "alcohol without liquid machine" by any insured.

This exclusion only applies if you knew, or should have known, that "alcohol without liquid machine(s)" were being used to sell, serve or furnish alcohol at "your premises".

12. Products

We do not pay and this insurance does not apply to "injury" arising out of "products". This exclusion does not apply to "injury" for which the insured or the insured's indemnities may be held liable by reason of:

a. contributing to or causing the intoxication of any person;

b. selling, serving or furnishing alcoholic beverages:

1) to a person in violation of any law that prohibited the selling, serving or furnishing of such alcoholic beverage to such person at the time such alcoholic beverage was sold; served or furnished; or

2) to a person and it is alleged that the consequences of such selling, serving or furnishing brought about an actual or alleged right of action under the Illinois Liquor Control Act.

c. any statute, ordinance or regulation relating to the sale, gift, distribution or use of alcoholic beverages.

SECTION V -- CONDITIONS

1.Representations

By accepting this policy, you agree that the statements in the Declarations are:

a. accurate and complete, and

b. based on representations you made to us; and that we have issued the insurance provided by this policy in reliance upon those representations.

2.Premium

a. We will compute all premiums for this insurance in accordance with our rates and rules. We computed the premium shown in the Declarations based on our rates in effect at the time the policy was issued. On each renewal, continuation, or anniversary of the effective date of this policy, we will compute the premium in accordance with our rates and rules then in effect.

b. If the Type of Premium shown on the Declarations is:

(1) Flat Premium and for a "Special Event", the premium shown on the Declarations is not subject to audit. There will be no premium returned to you even if we agree, by endorsement, to shorten the policy period shown on the declarations for the "Special Event" described on the Declarations.

(2) Flat Premium and not for a "Special Event", the premium shown on the Declarations will not be subject to audit, but otherwise will be subject to return premium based on our rates and rules.

(3) Not a Flat Premium, then the premium shown on the Declarations is subject to a premium audit at our sole discretion. Should we choose:

(i) to conduct a premium audit, at the close of each audit period, we will compute the earned premium for that period and send notice to the first Named Insured. The due date for the audit premium and any retrospective premiums is the date shown as the due date on the bill. If the sum of the premium shown on the Declarations and audit premiums paid for the policy period is greater than the earned premium, we will return the excess to the first Named Insured.

(ii) not to conduct a premium audit, the base premium for computing the final earned premium will be the premium shown on the Declarations for the policy period.

c. The first Named Insured must keep records of the information we need for premium computation, and send us copies at such times as we may request.

3.Transfer of Your Rights of Subrogation to Us

If you have rights to recover all or part of any payment we have made under this insurance, those rights are transferred to us. You must do nothing after a loss to impair our rights. You must assist us, upon our request, in the enforcement of any right against any person or organization which may be liable to the insured because of "injury" to which this insurance may also apply. At our request and at our discretion, the insured will bring "suit" or transfer those rights to us and help us enforce them.

4.Other Insurance

If any claim under this insurance is covered by other valid and collectible insurance, in whole or in part, our liability will be limited as follows:

a. Primary Insurance

This insurance is primary. Our obligations are not affected unless any of the other insurance is also primary. Then, we will share with all that other insurance by the method described in **b.** below.

b. Method Of Sharing

(1) If all of the other insurance permits contribution by equal shares, we will follow this method also. Under this approach each insurer contributes equal amounts until it has paid its applicable limit of insurance or none of the loss remains, whichever comes first.

(2) If any of the other insurance does not permit contribution by equal shares, we will contribute by limits. Under this method, each insurer's share is based on the ratio of its applicable limit of insurance to the total applicable limits of insurance of all insurers.

5.Our Right to Inspect and Survey

We have the right, but are not obligated to make inspections and surveys at anytime during the policy period. Our inspections and surveys are for the sole purpose of insurability by us. We do not warrant that:

a. you are in compliance with any law, regulation, code or standard as a result of our inspection or survey; or

b. the conditions of "your premises" are safe and sanitary.

6.Duties and Rights in the Event of a Claim or Suit

We have no duty to provide coverage under this insurance in the event of "injury", claim or "suit" unless there has been full compliance with the following duties:

a. In the event of an "injury" which may result in a claim, you must notify us as soon as practicable. The notice should include the names and addresses of any injured persons and witnesses and how, when and where the "injury" took place.

b. You must provide us written notice as soon as practicable of any claims made or "suits" brought against any insured. You must:

(1) record the date the claim or suit was received.

(2) immediately send us copies of any demands, notices, summonses or legal papers received in connection with the claim or "suit".

(3) authorize us to obtain records and other information.

(4) cooperate with us in the investigation or settlement of the claim or defense against the "suit".

c. No insured will, except at that insured's own cost, voluntarily make any payment, assume any obligation, or incur any expense, other than for first aid, without our consent.

d. At any time after we receive notice of a claim or "suit", we may, at our sole discretion, investigate any "injury" and settle any claim or "suit" that may result. We may also notify an insured in writing that:

(1) There may not be coverage for a claim or "suit" because this insurance does not apply to such claim or "suit"; and/or

(2) We are defending such insured, but that we are reserving our rights to terminate the defense of such claim or "suit" should:

(i) we determine;

(ii) it be determined by law; or

(iii) we reach an agreement between the insured and us

that insurance does not apply to such claim or "suit".

If:

(1) we already defended an insured or paid for an insured's defense for such claim or "suit"; and

(2) and it is later determined that such claim(s) or "suit(s)" is (are) not covered under this insurance

we will have the right to reimbursement for the defense costs we have incurred. The right to reimbursement for the defense costs under this provision will only apply to defense costs we have incurred after we notify you in writing that there may not be coverage for such claim or "suit", and that we are reserving our rights to terminate the defense and seek reimbursement for defense costs.

7.Cancellation and Non-renewal Illinois Provision

a. Cancellation

(1) The first Named Insured shown in the Declarations may cancel this policy by mailing to us advance written notice of cancellation.

(2) We may cancel this policy by mailing to you written notice stating the reason for cancellation:

(i) If we cancel for nonpayment of premium, we will mail the notice at least 10 days prior to the effective date of cancellation.

(ii) If we cancel for a reason other than nonpayment of premium, we will mail the notice at least:

(a) 30 days prior to the effective date of cancellation if the policy has been in effect for 60 days or less.

(b) 60 days prior to the effective date of cancellation if the policy has been in effect for more than 60 days.

(c) if this policy has been in effect for more than 60 days, we may cancel only for one or more of the following reasons:

i. non-payment of premium;

ii. the insurance provided by this policy was obtained through a material misrepresentation;

iii. any insured has violated any of the terms and conditions of the policy;

iv. the risk originally accepted has measurably increased;

v. certification of the Director of Insurance of the loss of reinsurance by the insurer that provided coverage to us for all or a substantial

part of the underlying risk insured; or

vi. determination by the Director of Insurance that the continuation of the insurance provided by this policy could place us in violation of the insurance laws of this State.

(3) Notice of cancellation will state the effective date of cancellation. The policy period will end on that date.

(4) If this policy is cancelled, we will send to the first Named Insured any premium refund due. If we cancel, the refund will be pro rata. If the first Named Insured cancels, the refund will be less than pro rata. The cancellation will be effective even if we have not offered a refund.

b. Non-renewal

(1) If we decide not to renew the insurance provided by this policy, we will mail written notice to you stating the reason for non-renewal no less than 60 days before the expiration date to:

(i) You; and

(ii) the broker, if known to us, or the agent of record.

(2) If we decide to renew or continue, but you do not accept our offer to renew or continue, the insurance provided by this policy will terminate at the end of the current policy period.

(i) It is understood by you and us that your failure to pay the required renewal or continuation premium when due shall mean that you have not accepted our offer to renew or continue.

(ii) If you fail to perform any of your obligations in connection with the payment of the premium for the insurance provided by this policy, whether or not such premium is:

(a) payable directly to us or our agents; or

(b) indirectly under any premium finance plan or extension of credit;

it will mean that you failed to pay the required renewal or continuation premium when due as required by paragraph **(2)(i)** above.

(3) If:

(i) we fail to provide you with proper written notice of non-renewal by us, and

(ii) you obtain other insurance

then the insurance provided by this policy will terminate on the effective date of the insurance described in paragraph **(3)(ii)** above.

(4) If you have notified us or our agent that you do not want to renew this policy, then the insurance provided by this policy will terminate at the end of the current policy period.

c. Mailing of Notices and Refunds of Premium

We will mail premium refunds, cancellation and non-renewal notices, as described in this condition, to:

(1) you,

(2) the first Named Insured; and

(3) the broker, if known to us, or the agent of record

at the last addresses known to us. Proof of mailing will be sufficient proof of notice.

8.Separation of Insured

Except with respect to the Limits of Insurance shown on the Declarations or SECTION III -- Limit of Liability, and any rights or duties specifically assigned in this insurance to the first Named Insured, this insurance applies:

a. as if each Named Insured were the only Named Insured; and

b. separately to each insured against whom claim is made or "suit" is brought.

9.Bankruptcy

Bankruptcy or insolvency of the insured or of the insured's estate will not relieve us of our obligations under this insurance.

10.Legal Action Against Us

No organization or person has a right under this policy:

a. To join us as a party or otherwise bring us into a "suit" asking for damages from an insured; or

b. To sue us on the insurance provided by this policy unless all of its terms have been fully complied with.

A person or organization may sue us to recover on an agreed settlement or on a final judgment against an insured; but we will not be liable for damages:

a. that are not payable under the terms of this insurance; or

b. that are in excess of the applicable Limits of Insurance shown on the Declarations or applicable limit of insurance described in SECTION III -- Limit of Liability.

An agreed settlement means a settlement and release of liability signed by us, the insured and the claimant or the claimant's legal representative.

11. Modifications

The insurance provided by this policy's terms can be amended or waived only by an endorsement(s) issued by us that are made a part of this policy.

12. Conformity to Law

Any terms and/or conditions of this policy that conflict with the statutes or regulations of any applicable state are hereby amended to conform to such statutes or regulations.

SECTION VI -- DEFINITIONS

1. "Alcohol without liquid machine" means a device or machine that mixes an alcoholic beverage with oxygen to produce a cloudy vapor which can be inhaled or snorted.

2. "Common cause" means the selling, serving or furnishing of any alcoholic beverage to any one person.

3. "Coverage territory" means the United States of America (including its territories and possessions), Puerto Rico and Canada. However, the coverage territory is outside the state of Illinois only if an alleged right of action against the insured is because of the selling, serving or furnishing of alcoholic beverages from a location:

   a. In the state of Illinois that you own, rent or occupy, and

   b. a valid Liquor License issued by the state of Illinois applies that allows you, or someone on your behalf, to sell, serve or furnish any alcoholic beverage from such location. This paragraph **b.** shall not be part of the definition of "coverage territory" when:

      (1) the Declarations Page indicates that insurance provided by this policy is for a "Special Event" described in the Declarations; and

         (i) you are not the owner of the location of the Special Event described in the Declarations, and

            (a) the owner or manager of such location requires you to purchase Liquor Liability insurance for such Special Event; or

            (b) an organization or person you hire for the Special Event described in the Declarations, for example, a bartender or caterer, requires you to have Liquor Liability insurance for such Special Event;

         or

      (2) a valid Liquor License issued by the state of Illinois is not required by the laws of the state of Illinois for you, or someone on your behalf, to sell, serve or furnish any alcoholic beverage at the location for the Special Event described in the Declarations.

4. "Employee(s)" includes both a "temporary worker" and a "leased worker".

5. "Executive officer(s)" means a person holding any of the officer positions created by your charter, constitution, by-laws, or any other similar governing document.

6. Should the Illinois Liquor Control Act apply to "injury" arising out of a "common cause", "injury" means all damages for "personal injury", "property damage", and loss of society or loss of means of support as set forth in the Illinois Liquor Control Act. Should the Illinois Liquor Control Act not apply to "injury" arising out of a "common cause", "injury" means all damages for "personal injury", "property damage", and loss of society or loss of means of support arising out of a "common cause".

7. "Leased worker" means a person leased to you by a labor leasing firm under an agreement between you and the labor leasing firm, to perform duties related to the conduct of your business. "Leased worker" does not include a "temporary worker".

8. Should the Illinois Liquor Control Act apply to "injury" arising out of a "common cause", "personal injury" means:

   a. bodily injury,

   b. sickness; or

c. disease

sustained by a person, including death resulting from **a.**, **b.**, or **c.** above, at any time and subject to the recovery of injury to the person limit set forth in the Illinois Liquor Control Act. Should the Illinois Liquor Control Act not apply to "injury" arising out of a "common cause", "personal injury" means:

a. bodily injury,

b. sickness; or

c. disease

sustained by a person, including death resulting from **a.**, **b.**, or **c.** above, at any time.

9. Should the Illinois Liquor Control Act apply to "property damage" arising out of a "common cause", "property damage" means

a. Physical injury to tangible property, including all resulting loss of use of that property. All such loss of use shall be deemed to occur at the time of the physical injury that caused it; or

b. Loss of use of tangible property that is not physically injured. All such loss of use shall be deemed to occur at the time of the occurrence that caused it,

and subject to the recovery for "injury" to property of any person limit set forth in the Illinois Liquor Control Act. Should the Illinois Liquor Control Act not apply to "property damage" arising out of a "common cause", "property damage" means:

a. Physical injury to tangible property, including all resulting loss of use of that property. All such loss of use shall be deemed to occur at the time of the physical injury that caused it; or

b. Loss of use of tangible property that is not physically injured. All such loss of use shall be deemed to occur at the time of the occurrence that caused it,

10. "Special Event" means a single theme event, for example, Anniversary Party, Fundraiser, Reunions, etc., at one specific location with a maximum duration of 15 days.

11. "Suit" means a civil proceeding in which damages because of "injury" to which this insurance applies are alleged. "Suit" includes:

a. An arbitration proceeding in which such damages are claimed and to which the insured must submit or does submit with our consent; or

b. Any other alternative dispute resolution proceeding in which such damages are claimed and to which the insured submits with our consent.

12. "Temporary worker" means a person who is furnished to you to substitute for a permanent "employee" on leave or to meet seasonal or short-term workload conditions.

13. "Volunteer worker" means a person who:

a. is not an "employee";

b. voluntarily donates his or her time and labor for your benefit;

c. acts at the direction of and within the scope of duties determined by you, and

d. is not paid a fee, salary or other compensation by you or anyone else for their work performed for you.

14. "Your premises"

a. If, as indicated on the Declarations, insurance provided by this policy is for a business, "your premises" means:

(1) each premises listed in the Declarations that you own, rent or occupy that requires a liquor license issued by the state of Illinois; and

(2) includes approaches immediately adjoining such premises

provided that the selling, serving or furnishing of alcoholic beverages:

(1) took place at such premises (described in paragraphs **a.(1)** and/or **a.(2)** immediately above); and

(2) caused an "injury" that occurred during the policy period shown on the Declarations Page.

It is understood that any location that you intend to purchase a Special Use Liquor License Permit from the Illinois Liquor Control Commission for the purpose of selling, serving or furnishing of alcoholic beverages at such location will be covered by this insurance only if an endorsement is attached to this policy indicating that such location is included in the definition of "your premises".

b. If, as indicated on the Declarations, insurance provided by this policy is for a Special Event, "your premises" means the location of the Special Event specifically described in the Declarations.

15. "Products"

a. Means:

(1) any products or goods, other than real property, manufactured, sold, handled, distributed or disposed of

by:

(i) you;

(ii) others trading under your name;

or

(iii) a person or organization whose business or assets you have acquired;

and

(2) materials, containers (other than vehicles), parts or equipment furnished in connection with such goods or products.

b. Includes:

(1) warranties or representations made at any time with respect to the fitness, quality, durability, performance or use of products, goods, materials, containers, parts or equipment described in paragraph a. immediately above, and

(2) the providing of or failure to provide warnings or instructions.

c. Does not include vending machines or other property rented to or located for the use of others but not sold.

NOTICE OF CONSUMER COMPLAINTS

In compliance with Section 143c., of the Illinois Insurance Code, you are hereby notified of the following addresses:

U.S. Insurance Company of America
Public Relations Department
3131 Greenhead Drive
Springfield, IL 62711

Illinois Department of Insurance
Public Services Division
320 West Washington Street
Springfield, IL 62767

Frisch & Barrett Insurance
226 W. Main
Cary, IL 60013
Phone: 847-639-2134 847-639-2163

INVOICE NO. 6153

ACCOUNT NO.	CSR	DATE
HIGHS-1	HS	12/29/2022

BALANCE DUE ON
02/25/2023

High School District #155
Booster Clubs
226 W. Main St.
Cary, IL 60013-2721

Date Trn	Trn	Type	Policy #	Description	Amount
12/29/22	NEW	LIQL	22IL0000211SE00	Special Event Liab.- 2/25/23	$200.00
				Invoice Balance:	**$200.00**

***** PLEASE RETURN ONE COPY WITH YOUR REMITTANCE *****

Agenda Item No: 9b

City Council
Agenda Supplement

Meeting Date: January 17, 2023

Item: 40 N. Williams Street d/b/a Benedict's la Strata Ground Lease Agreement Amendment

Staff Recommendation: Motion to adopt a Resolution authorizing the City Manager to execute a Ground Lease Agreement Amendment between the City of Crystal Lake and 40 N. Williams Street d/b/a Benedict's la Strata.

Staff Contact: Kathryn Cowlin, Director of Community Development
Nick Hammonds, Assistant City Manager

Background:

At the May 19, 2009 City Council meeting, the City Council approved a ground lease agreement amendment with Benedict's la Strata for an area in front of 40 N. Williams Street, which is owned by the City. The lease agreement amendment allows Benedict's la Strata to operate within the contained canopy area for outdoor dining and additional outdoor seating to the north and south of the canopied area.

Benedict's la Strata assumed new ownership in 2021. Per the lease agreement terms, the lease cannot be assigned without the written consent of the City, and a lease agreement amendment must be authorized by the City with the new ownership. **The terms and conditions established in the 2009 lease agreement will remain unchanged.**

Benedict's la Strata's current liquor license allows for the retail sale of alcohol not only in the interior of the building but also in the open unroofed area immediately contiguous to the building. The site plan included in the lease agreement amendment outlines the canopied and open air areas. Specific conditions for the unroofed area are included in the Class 24 ordinance and are unaltered by this agreement amendment. The agreement requires the restaurant to provide insurance and hold harmless the City for activities in the leased area.

The lease agreement amendment has been reviewed and approved by special legal counsel.

Votes Required to Pass:

Simple majority

RESOLUTION

BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF CRYSTAL LAKE that the City Manager be and he is hereby authorized and directed to execute a Ground Lease Agreement Amendment between the City of Crystal Lake and 40 N. Williams Street d/b/a Benedict's la Strata for the property at 40 N. William Street.

DATED this 17th day of January 17, 2023.

CITY OF CRYSTAL LAKE, an
Illinois municipal corporation,

By:_____
Haig Haleblian, MAYOR

Draft

SEAL:
ATTEST:

By: _____
Nick Kachiroubas, CITY CLERK

PASSED: January 17, 2023
APPROVED: January 17, 2023

GROUND LEASE

THIS INDENTURE, made this ___ day of January, 2023, (the "Effective Date") between the CITY OF CRYSTAL LAKE, an Illinois municipal corporation, Lessor, and 40 N. Williams LLC d/b/a Benedict's La Strata

WITNESSETH:

That Lessor, for and in consideration of the covenants and agreements hereinafter mentioned, to be kept and performed by Lessee, has demised and leased to Lessee, all those Premises situated in the City of Crystal Lake in the County of McHenry and State of Illinois, known and described as follows, to wit:

approximately 25.1 feet by 68 feet (as modified to keep clear aisles around existing light fixtures) immediately adjacent to Units F and G, 40 North Williams Street, Crystal Lake, Illinois (as depicted in the Site Plan Attached hereto as Exhibit A (the "Premises")

TO HAVE AND TO HOLD the above-described Premises, with the appurtenances, unto Lessee, from January ___, 2023 to and including the 17th of January, 2024

AND Lessee, in consideration of the leasing of the Premises aforesaid by Lessor to Lessee, does covenant and agree with Lessor to pay Lessor, as rent for said demised Premises, at the office of the Finance Director of the City of Crystal Lake, 100 W. Woodstock Street, Crystal Lake, Illinois 60014 the sum of Ten and no/100 Dollar ($10.00) per year; to be used for outside food service from a food service establishment utilizing a portion of the Brink Street Market Public Plaza, subject to the following conditions:

1. The area used for outside seating shall be limited to the area designated on a certain site plan, attached hereto as Exhibit A.

2. A Certificate of Insurance in accordance with the "Use of City Owned Property Insurance Provisions" attached as Exhibit B.

3. All tables and chairs shall be stored off of the plaza during the winter months.

4. The Tenant shall keep and maintain all existing structures existing upon the Premises in good condition and repair and shall not modify any existing structures upon the Premises or erect any new structures upon the Premises without having first obtained the written consent of the Lessor.

5. The outside seating shall be located so as not to obstruct the exits from the building.

6. The City reserves the right to require minor modifications to the operations of the outdoor seating area for reasons of public health, safety or aesthetic.

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7. The Lessee shall comply with all other ordinances of the City including, but not limited to the provisions of the City Code regarding the sale of alcoholic beverages.

IT IS FURTHER COVENANTED AND AGREED by Lessee that Lessee will pay or cause to be paid all water rates, and all taxes and assessments that may be laid, charged or assessed on said demised Premises, pending the existence of this lease, or if at any time after any tax, assessment or water rate shall have become due or payable Lessee shall neglect to pay such water rates, tax or assessment, it may be lawful for Lessor to pay the same at any time thereafter, and the amount of any and all such payments so made by Lessor be deemed and taken, and are hereby declared to be so much additional and further rent for the above demised Premises due from and payable by Lessee; and may be collected in the same manner, by distress or otherwise, as is hereinafter provided for the collection of other rents to grow due thereon.

AND IT IS EXPRESSLY UNDERSTOOD AND AGREED by Lessee that the whole amount of rent reserved and agreed to be paid for said above demised Premises, and each and every installment thereof, shall be and is hereby declared to be a valid and first lien upon any and all buildings and improvements on said Premises, or that may at any time be erected, placed or put on said Premises by Lessee, and upon his interests in this lease, and the Premises hereby demised; and that whenever and as often as any installment of rent or any other amount above declared to be deemed and taken as rent shall become due and remain unpaid for one day after the same becomes due and payable, Lessor may sell at public auction, to the highest bidder for cash, after having first given ten days' notice of the time and place of such sale in some newspaper published in the county aforesaid, all the buildings and improvements on said Premises, and all the right, title and interest acquired by Lessee under this lease to the Premises herein described, and as the attorney of Lessee hereby irrevocably constituted may make to the purchaser or purchasers thereof a suitable and proper transfer, bill of sale, or deed of the same, and out of the proceeds arising from such sale, after first paying all costs and expenses of such sale, including commissions and attorney's fees, retain to himself the whole amount due on said lease, up to the date of said sale, rendering the surplus (if any) to Lessee, which sale shall be a perpetual bar to and against all rights and equities of Lessee in and to the property sold.

AND Lessee further covenants with Lessor that Lessee will keep said demised Premises in a clean and wholesome condition, in accordance with the ordinances of the City, and directions of the health officers, and that, at the expiration of the time in this Lease mentioned, Lessee will yield up said Premises to the Lessor in as good condition as when the same were entered upon by Lessee, loss by fire, or inevitable accident and ordinary wear excepted.

IT IS FURTHER AGREED by Lessee that it will not underlet said Premises, or any part thereof, or assign this Lease, without the written assent of Lessor had and obtained thereto said assent shall not be unreasonably withheld, nor use, or suffer them to be used for any other purpose calculated to injure the reputation of the Premises, or of the neighborhood, or to impair the value of the surrounding neighborhood property for present use or otherwise.

IT IS EXPRESSLY UNDERSTOOD AND AGREED by and between the parties aforesaid that if the rent above reserved, or any part thereof, shall be behind or unpaid, on the day of payment whereon it ought to be paid as aforesaid, or if default shall be made in any of the covenants herein contained to be kept by Lessee and said default shall not have been cured within 14 days of Lessee=s

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receipt of notice of default from Lessor, it shall be lawful for Lessor, at his election, to declare said term ended, and into the said demised Premises, or any part thereof, either with or without process of law, to re-enter, and Lessee or any person or persons occupying, in or upon the same, to expel, remove and put out, using such force as may be necessary in so doing, and the said Premises again to repossess and enjoy, as in Lessor's first and former estate; and to distrain for any rent that may be due thereon, upon any property belonging to Lessee, whether the same be exempt from execution and distress by law or not; and Lessee in that case hereby waives all legal rights which he now has, or may have, to hold or retain any such property under any exemption laws now in force in this State, or in any other way; meaning and intending hereby to give Lessor a valid and first lien upon any and all the goods, chattels, or other property belonging to Lessee as security for the payment of said rent in manner aforesaid, anything hereinbefore contained to the contrary notwithstanding. And if at any time said term shall be ended at such election of Lessor as aforesaid, or in any other way, Lessee does hereby covenant and agree to surrender and deliver up said above described Premises and property peaceably to Lessor immediately upon the determination of said term as aforesaid; and if Lessee shall remain in possession of the same one day after notice of such default, or after the termination of this lease, in any of the ways above named, Lessee shall be deemed guilty of a forcible detainer of the Premises under the statute, and shall be subject to all conditions and provisions above named, and to eviction and removal, forcibly or otherwise, with or without process of law, as above stated.

AND IT IS FURTHER UNDERSTOOD AND AGREED by Lessee that neither the right given in this lease to Lessor, to collect the rent that may be due under the terms of this lease by sale, or any proceedings under the same, shall in any way affect the right of Lessor to declare this lease void and the term hereby created ended as above provided under default made by Lessee.

AND Lessee hereby waives his right to any notice from Lessor any demand for the payment of rent, or the possession of Premises leased herein; but the simple fact of the non-payment of the rent reserved shall constitute a forcible detainer as aforesaid.

Lessee further agrees not to remove any buildings or other improvements from said Premises, without written consent of Lessor, and that Lessee shall pay and discharge all costs and attorney's fees and expenses that shall arise from enforcing the covenants of this indenture by Lessor.

AND Lessee further agrees to allow access to the leased area for any Lessor required improvements, installation or repair to the Leased area and adjacent areas including planters and other hardscape.

IT IS FURTHER UNDERSTOOD AND AGREED that all the conditions and covenants contained in this lease shall be binding upon the heirs, executors, administrators and assigns of the parties of these presents, respectively.

This Lease supersedes any previous lease agreements between the Lessee and Lessor.

This Lease shall be automatically renewed for additional one-year periods unless either the Lessor or the Lessee provides written notice of their intent not to renew this Lease not less than ninety (90) days prior to the expiration of the then current term.

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The Lessee agrees to pay any and all real estate taxes assessed against the Lessor for the property which is the subject matter of this Lease, which may be assessed against the Lessor as a result of this Lease.

The Lessee may not mortgage or otherwise encumber the property which is the subject matter of this Lease.

Lessee shall indemnify and defend the Lessor and its elected and appointed officials, employees and agents from and against any claim for bodily injury, death and/or damage to property arising out of the use and/or occupancy of the Premises by Lessor and/or invitees of the Lessee, except to the extent that such claims arise out of the negligent acts or omissions of the Lessor and/or its employees and/or agents.

All notices to be made or given pursuant to this Lease shall be in writing and shall be served by personal service or by certified mail, return receipt requested as follows: if to Landlord, then to the City Manager, City of Crystal Lake, 100 W. Woodstock Street, Crystal Lake, IL 60014 or if to Tenant, then to 40 N Williams, LLC, 2010 Swinford Road, McHenry, IL 60050.

IN WITNESS WHEREOF, the said parties have hereunto set their hands and seals the day and year first above written.

CITY OF CRYSTAL LAKE

By:_____
Eric T. Helm, City Manager

40 N WILLIAMS, LLC, d/b/a Benedict's La Strata

By:_____

By:_____

Draft

EXHIBIT A

Site Plan

Draft

City of Crystal Lake Web Map



11/17/2022, 9:08:33 AM

Override 1 — Municipal Boundary (Edit)

Override 1

Parcels

images.GIS.MC2021CL

Red: Band_1

Green: Band_2

Blue: Band_3

1:282

0 0 0.01 0.01 mi

0 0 0.01 0.02 km

Esri Community Maps Contributors, County of McHenry, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

This map was generated using the City of Crystal Lake's GIS Web Mapping Application. This map is a user generated static output from an Internet Mapping Site and is for reference only.

EXHIBIT B

City of Crystal Lake Insurance Provisions:
Use of City Owned Property

For the use of City Owned Property, the following must be completed:
1. Agree to, and provide, the required insurance as outlined in these provisions.
2. Sign the City's Hold Harmless agreement.
3. Provide the City the necessary Certificate of Insurance and Endorsements

Overview
The individual, corporation, or organization ("user"), which uses City owned property (including parks and open spaces, roads, sidewalks, right-of-way, parking lots and buildings or structures or equipment) shall abide by the following required insurance provisions and sign a hold harmless agreement as required by the City.

Required Insurance Provisions
In the use of City property, the individuals, corporations, or organizations ("user") that use City owned property is certifying that he/she has all insurance coverages required by law or required by the City of Crystal Lake. The user shall procure and maintain, for the duration of the allowable use of the City owned property, insurance against claims for injuries to persons or damages to property, which may arise from or in connection with the use by the user, his agents, representatives, employees or subcontractors. Based on the scope and/or type of the use, the City may request the user provide the following coverage(s):

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X **Required if Checked:** Insurance Services Office Commercial General Liability, with the City named as additional insured on a form at least as broad as the attached sample endorsement including ISO Additional Insured Endorsement CG 2010, CG 2026, or if requested by the City, CG2037 - Completed Operations. **Minimum Limits:** The user shall maintain limits no less than the following, $1,000,000 combined single limit per occurrence for bodily injury, and property damage and $1,000,000 per occurrence for personal injury. The general aggregate shall be twice the required occurrence limit. Minimum General Aggregate shall be no less than $2,000,000 or a project/contract specific aggregate of $1,000,000. **General Provisions:**

1. The City, its officials, agents, employees and volunteers are to be covered as additional insureds as respects: liability arising out of the user's activities, ioc1udiog activities performed by or on behalf of the user; products and completed operations of the user; premises owned, leased or used by the user; or automobiles owned, leased, hired or borrowed by the user. The coverage shall contain no special limitations on the scope of protection afforded to the City, its officials, agents, employees and volunteers.
2. The user's insurance coverage shall be primary as respects the City, its officials, agents, employees and volunteers. Any insurance or self-insurance maintained by the City, its officials, agents, employees and volunteers shall be excess of user's insurance and shall not contribute with it.

3. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the City, its officials, agents, employees and volunteers.
4. The user's insurance shall contain a Severability of Interests/Cross Liability clause or language stating that user's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.
5. If any commercial general liability insurance is being provided under an excess or umbrella liability policy that does not "follow form," then the user shall be required to name the City, its officials, agents, employees and volunteers as additional insureds. A copy of the actual additional insured endorsement shall be provided to the City.
6. All general liability coverages shall be provided on an occurrence policy form. Claims-made general liability policies will not be accepted.

X **Required if Checked:** Insurance Services Office Business Auto Liability Coverage, form number CA 0001, Symbol 01 "Any Auto." **Minimum Limits:** The user shall maintain limits no less than the following, $1,000,000 combined single limit per accident for bodily injury and property damage. (This insurance must include non-owned, hired, or rented vehicles, as well as owned vehicles).

X **Required if Checked:** Workers' Compensation and Employers' Liability. **Minimum Limits:** The user shall maintain limits no less than the following, Workers Compensation coverage with statutory limits and Employers' Liability limits of $500,000 per accident. **General Provisions:** The insurer/user shall agree to waive all rights of subrogation against the City, its officials, agents, employees and volunteers for losses arising from the user's activity.

Draft

Applicable to All Coverages

The policies are to contain, or be endorsed to contain, the following provisions:

- Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, cancelled, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the City.
- Deductibles and Self-Insured Retentions: Any deductibles or self-insured retentions must be declared to, and approved by the City. At the option of the City, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the member, its officials, agents, employees and volunteer; or the User shall procure a bond guaranteeing payment of losses and related investigation, claim administration and defense expenses.

Acceptability of Insurers

Insurance is to be placed with insurers with a Best's rating of no less than A-, VII and licensed to do business in the State of Illinois.

Verification of Coverage

The user shall furnish the City with certificates of insurance naming the City, its officials, agents, employees and volunteers as additional insureds (Exhibit C), and with original endorsements

affecting coverage required by this clause. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements may be on forms provided by the City and are to be received and approved by the City before the use by the third party if possible. The attached Additional Insured Endorsement (Exhibit D) shall be provided to the insurer for their use in providing coverage to the additional insured. Other additional insured endorsements may be utilized, if they provide a scope of coverage at least as broad as the coverage stated on the attached endorsement (Exhibit D), such as ISO Additional Insured Endorsements CG 2010 or CG 2026. The City reserves the right to request fully certified copies of the insurance policies and endorsements.

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Indemnity/Hold Harmless For Use of City Owned Property

In consideration of the undersigned ("User") requesting to use the following City property 40 N. Williams Street, the undersigned hereby recognizes, acknowledges and assumes any and all risk pertaining to the use of the following City property: 40 N. Williams Street.

To the fullest extent permitted by law, the undersigned hereby agrees to defend, indemnify and hold harmless the City of Crystal Lake, its elected and appointed officials, agents and employees, against all injuries, deaths, loss, damages, claims, suits, liabilities, judgments, cost and expenses (including attorney's fees), which may in anywise accrue against the City of Crystal Lake, its elected and appointed officials, agents and employees, arising in whole or in part or in consequence of the use of City property by the undersigned, its employees, agents, subcontractors or any third party, or which may in anywise result therefore, except that arising out of the sole legal cause of the City of Crystal Lake, its agents or employees. The User shall, at its own expense, appear, defend and pay all charges of attorneys and all costs and other expenses arising therefore or incurred in connections therewith, and, if any judgment shall be rendered against the City of Crystal Lake, its elected and appointed officials, agents and employees, in any such action, the User shall, at its own expense, satisfy and discharge the same.

Agreed to this ___ day of _____, 2023.

_____ _____

Printed Name of User's Representative Signature of User

City Facility or Area to be used, including address: A portion of the Brink Street Market Public Plaza at 40 N. Williams Street, Crystal Lake, IL to be used for outside food service from a food service establishment.

Draft

EXHIBIT C

(Example)

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Producer/Ins. Broker Contact Info.
Name of Insurance Broker	PHONE (A/C, No, Ext): FAX (A/C, No):
	E-MAIL ADDRESS:
	INSURER(S) AFFORDING COVERAGE — NAIC #
INSURED	INSURER A: Name of Insurance Company — Completed
Name of Contractor	INSURER B: Name of Insurance Company — Completed
	INSURER C:
	INSURER D:
	INSURER E:
	INSURER F:

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY PRO-JECT LOC	Y	Y	Policy Number Inserted	Policy Start Date	Policy Start Date	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 50,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 1,000,000
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS			Policy Number Inserted	Policy Start Date	Policy Start Date	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
A	UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED RETENTION $	Y	Y	Policy Number Inserted	Policy Start Date	Policy Start Date	EACH OCCURRENCE AGGREGATE	$ Per Request $ Per Request
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: N If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		Policy Number Inserted	Policy Start Date	Policy Start Date	X WC STATU-TORY LIMITS OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 500,000 $ 500,000 $ 500,000
	Professional Liability (other specialty coverages as requested.			Policy Number Inserted	Policy Start Date	Policy Start Date	$1,000,000 per occurrence or as requested.	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

List project number, location and description.
No additional endorsements limit coverage to additional insured beyond terms of actual additional insured endorsement (CG 2010 or CG 2026).
Coverage to additional insured is primary and non-contributory. Additional Insured: Member, its officials, employees, agents and volunteers.
Member named as cancellation notice recipient.

CERTIFICATE HOLDER	CANCELLATION
Name of Member	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE Signature of authorized insurance company representative

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Draft

EXHIBIT D

Additional Insured Endorsement

Name of Insurer:
Name of Insured:
Policy Number:
Policy Period:
Endorsement Effective Date:

This endorsement modifies coverage provided under the following:

Commercial General Liability
Coverage Part

Name of Individuals or Organization

Draft

WHO IS AN INSURED section of the policy / coverage document is amended to include as an insured, the individuals or organization shown above, but only with respect to liability "arising out of your use".

For purposes of this endorsement, "arising out of your use" shall mean:

1. Liability the Additional Insured may incur resulting from the actions of the user.
2. Liability the Additional Insured may incur for negligence in the supervision of the Named Insured users.
3. Liability the Additional Insured may incur for failure to maintain safe conditions.
4. Liability the Additional Insured may incur due to joint negligence of the Named Insured User and the Additional Insured.

Agenda Item No: 9c

City Council
Agenda Supplement

Meeting Date: January 17, 2023

Item: Special Event Request – Smith Therapy Crystal Lake Aquathon at the Three Oaks Recreation Area, Sunday, July 30, 2023

Staff Recommendation: Motion authorizing approval of the Crystal Lake Aquathon, to be held on Sunday, July 30, 2023, at the Three Oaks Recreation Area, subject to the recommended conditions, including a waiver of parking fees for non-resident volunteers.

Staff Contact: Nick Hammonds, Assistant City Manager

Background:

Smith Physical Therapy and Running Academy (Smith PT/RA) is requesting approval to organize the Crystal Lake Aquathon at the Three Oaks Recreation Area on Sunday, July 30, 2023. The event was successfully held from 2017 through 2022. **All event details remain unchanged from the 2017 through 2022 events, which were previously approved by the City Council. From 2017 through 2022, the City Council waived the fees for non-resident volunteer parking.**

An Aquathon is a continuous, two-stage race involving swimming followed by running. There are two distances: an Olympic Aquathon and a Sprint Aquathon. There will also be a swim only option for a long-distance swim. The swim only option would attract those triathletes who are training for an Ironman race (Ironman Wisconsin is held approximately four weeks after the CL Aquathon). The addition of a Kid's Race was added in 2019 with a 250-meter swim and one-mile run for athletes aged 7 – 12 years old. A proposed addition to the 2021 event was an adaptive swim race of one mile for those athletes with a disability, which will continue in 2023.

The event will begin at approximately 7:00 a.m. and end at approximately 12:00 p.m. Setup at the Three Oaks Recreation Area would begin on the evening of Saturday, July 29th. The race format will include an Olympic Aquathon, a Sprint Aquathon, Kid's Race, adaptive one-mile swim, and a long-distance swim only option (2 Mile Swim). The Olympic Aquathon will consist of a one mile swim and 10k run. The Sprint Aquathon consists of a 500m swim, and 5k run. The one and two Mile Swim will be a one and two mile swim only. The entire event will take place within the Three Oaks Recreation Area and it is anticipated that 150-200 attendees will participate.

The petitioner may request approval to serve alcohol at the conclusion of the event for attendees and volunteers. The petitioner must provide proof that a nonprofit organization is partnering with

the petitioner to host the event, and the nonprofit organization must receive approval for a temporary liquor license.

Petitioner Background:

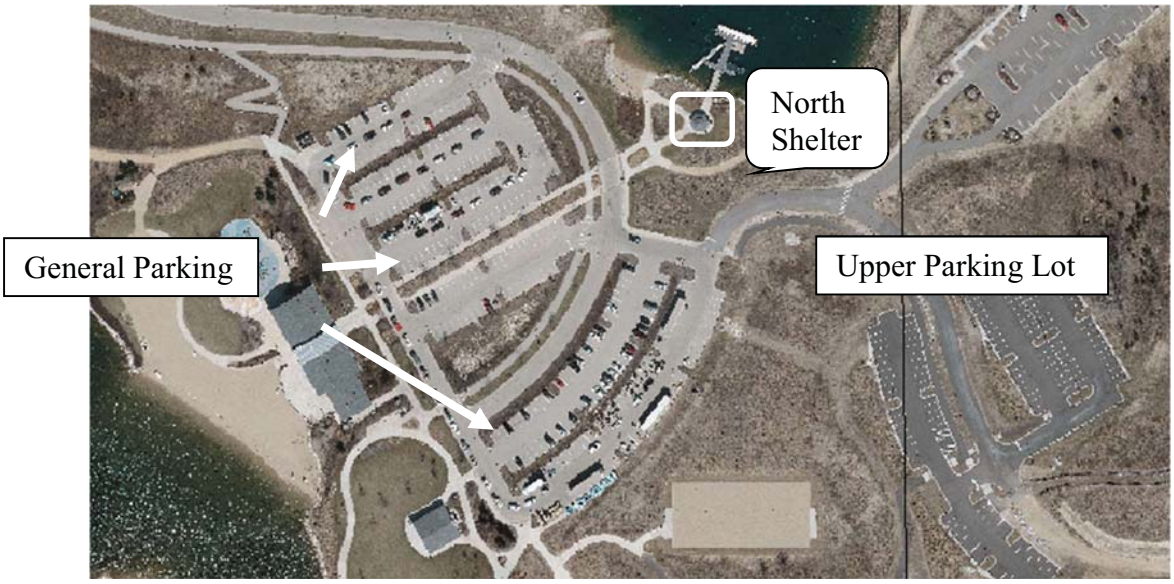
Smith PT/RA is owned by Crystal Lake resident Denise Smith, a certified manual physical therapist who has been practicing for over 20 years. She is also a certified running technique coach and the only Pose Method Master Coach in the Midwest. Her passion lies in injury prevention and showcasing Crystal Lake for its community support, natural beauty, and athletic population. Smith coordinated the 2017 through 2022 Aquathons. In addition, she was a coordinator for the 2021 and 2022 Crystal Lake Half Marathon.

Three Oaks Recreation Area Impact:

Use Location	*Hours of Use*	*Exclusive Use?*	*Level Of Public Impact*	
Swim Beach	3 Hours	Yes	Low	The swim beach will be utilized from 7:00 a.m. – 10:00 a.m. The petitioner will have all equipment removed from the beach prior to beach opening at 10:00 a.m.
Marina/Lake Usage	7:00 a.m. – 9:00 a.m.	No	Moderate	The northern portion of the south lake will be restricted from public access by buoy markers during the event.
Trails	8:00 a.m. – 12:00 p.m.	No	Moderate	The running portion of the triathlon will occur on existing trails. Signage will be posted. The public will have access to trails during the event.
North Lake Pavilion D	7:00 p.m. – 7:30 a.m.	No	Low	Petitioner is requesting to use the North Marina pavilion for event registration. The pavilion will be cleared before 8:00 a.m.
Picnic Grove	7:00 a.m. – 12:00 p.m.	Yes	Moderate	Running portion of the event will finish at the Picnic Grove pavilion. The post-event celebration will end at 12:00 p.m.
Parking Lot	7:00 a.m. – 12:00 p.m.	No	Moderate	Event participants and guests will be directed to park in the upper parking lot.
Quarry Cable Park	-	-	Low	No impact. Tenant has no issues with the event.
Board House	-	-	Low	No impact. Tenant has no issues with the event.
Cottage on the Beach	-	-	Low	No impact. Tenant has no issues with the event.

The event will occur on the last Sunday in July. Although this is a popular day for residents to visit Three Oaks, care will be taken to ensure guests can still enter the park and use the marina and beach facilities. Aquathon participants and guests will park onsite in the upper parking lot as depicted below. The $5 parking fee will be incurred for all non-residents that park at Three Oaks through collection during registration. Smith is requesting that all non-resident volunteers have their parking fee waived by the City as a show of appreciation for their time and talent, which has been approved in previous years. The North Lake shelter will be used for race registration and will be cleared immediately after the start of the race to allow for usage as needed by guests. The pavilion will still be rented to the public for the day following the event.

There will be no impact to the Board House, Quarry Cable Park and Grille, concession area or the Beach as the race will be completed by 10:00 a.m. The marina will be open during the event, however, portions of the lake will be closed to watercraft until the event is completed. The event may draw participants to utilize the Beach and Quarry Cable Park and Grille after the completion of their race. Past races yielded increased exposure for the entire park area with race attendees coming from Michigan, Indiana, Wisconsin, downtown Chicago, and southern Illinois.



On Sunday, July 30th, visitors to the park may be inconvenienced in the following ways:

- The public access to the swim beach will be limited during the swim portion of the race. Since public swimming does not begin until 10:00 a.m., it is anticipated that public access to the swim beach will be minimally impacted.
- The swim beach would be used between 7:00 a.m. and 9:00 a.m. The swim portion takes approximately one to two hours to complete. Staff will begin cleaning the beach as soon as the last swimmer is done to get the beach open to the public by 10:00 a.m. The swim course will be set up inside the islands, reserving the majority of the lake for fishermen, as shown in the swim map below.
- The marina will be open, however, a portion of the lake will be closed to watercraft until the event is completed at 10:00 a.m. The northern portion of the south lake would be restricted from public access by buoy markers. In addition, public access to this area of the lake may be delayed while swimmers are in the water. Guests renting boats will be notified of the race on the lake and instructed to stay clear of the race area. The Fire Rescue Department and Three Oaks staff will have emergency service boats on the water to ensure the public's safety.
- Signage will be utilized to notify guests that the race may interfere with trail walking. In addition, gate attendees will be on hand to alert guests of the race status.

The City Council has approved a similar swim course for previous triathlons and A Long Swim events.



Proposed Swim Map



Kid's Race

The running portion of the Aquathon will occur on existing trails. It is not anticipated that these areas will need to be closed to the general public during the race, but signage will alert the general public of the trail usage. The run portion of the event will finish at the Picnic Grove Pavilion where a post-race celebration will take place.



Required Costs to be Paid by Petitioner:

1. Fire Rescue requires an ambulance with two personnel to standby for the race, as well as a boat with three personnel. The anticipated cost for Fire Rescue services with the Aquathon is a minimum of $2,170.00. The following is a breakdown of Fire Rescue Department costs:

Ambulance with two personnel:	$124.00/hour
Boat 399 with three personnel:	$186.00/hour
Boat 398 with two personnel:	$124.00/hour
Shift Commander	Salary
Total for 1 hour:	$434.00
Four hour minimum:	x 4
Minimum Total:	**$2,170.00**

2. Three Oaks Recreation Area Costs:

Non-Refundable	*Fee*
Application Fee	$75
Three Oaks Service Boat Fee	$36 ($12 per hour x 3 hours)
Three Oaks General Staff Fee	$450 ($15 per hour x 6 staff (5 hours))
Three Oaks Lifeguard Fee	$585 ($16.25 per hour x 12 guards (3 hours))
Pavilion A Fee	$180
Non-Refundable Fee	**$1,326**
Refundable	*Fee*
Refundable Event Damage	$500
Refundable Fee	**$500**

3. Total Costs:

Non-Refundable Fee	$3,496
Refundable Fee	$500
Total Due by July 11, 2023	**$3,996**

Recommended Conditions:

City staff has reviewed the petitioner's request and offers the following conditions:

1. Comply with all City Code regulations, Special Event requirements, and Pavilion rental requirements, including all insurance requirements. Insurance certificates need to be provided annually. Petitioner must adhere to the required City insurance provisions for the use of City-owned property by providing a certificate of insurance naming the City as additional insured, and sign the required Indemnity/Hold Harmless agreement. Also, all participants must sign a waiver releasing the City from any liability related to their participation in the triathlon that will be collected upon race registration.
2. If alcohol will be provided at the conclusion of the event, Smith PT/RA must partner with a nonprofit organization that has applied for and received a temporary liquor license.
3. If tents or canopies will be used, the petitioner shall contact the Fire Rescue Department for further review. The use of tents or canopies is subject to review by the Fire Prevention Bureau. The petitioner shall provide a detailed site plan for tents or canopies prior to the event.
4. Maintain access to all fire lanes and the south lake marina boat ramp. Provide a plan for all on-site signage prior to the event, which shall be reviewed by the City and approved prior to placement.
5. Receive approval from 3rd party property owners for any off-site parking. Following the filling of the upper parking lots, participants will be directed to park off-site.
6. Submit for City approval, severe weather plans and an evacuation plan.
7. Sound system shall not disturb other users of the park.
8. All temporary electrical items shall comply with the 2017 Electric Code and shall be subject to City inspection.
9. The City will have flexibility in designing the race course based on any concerns from City Departments.
10. Smith PT/RA must provide the City with a site plan for set-up at the Three Oaks Recreation Area and parking plan for the event for review by City Departments.
11. All debris created by the event shall be cleaned up during and after the event.
12. In the case of inclement weather, an alternate date can be approved by the City Manager. The alternate date for the event is tentatively scheduled for Sunday, August 6, 2023.
13. The petitioner is responsible for the required costs, which are the costs for Fire Rescue and use of the Three Oaks Recreation Area.
14. Smith PT/RA must provide the proof of volunteers, insurance, off-site parking approval, severe weather and evacuation plan, and liability waivers by July 1, 2023 or the event may be cancelled.

Votes Required to Pass:

Simple majority vote of the City Council

Smith Physical Therapy + Running Academy

January 7, 2023

Dear Crystal Lake City Council:

I am writing to request permission to host the Fifth Annual Crystal Lake Aquathon at Three Oaks Recreation Area on Sunday, July 30th, 2023.

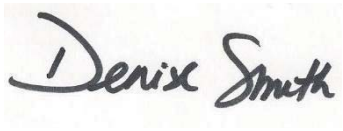
We have had 5 successful years in 2017, 2018, 2019, 2021 and 2022. We were excited to bring the race back for 20213 with the combination of swimming and running, offering various distances for various athletic levels. The goal as always is to showcase Three Oaks and its facilities as a destination area for endurance athletes who may be training for various races or for local athletes to simply participate in a race within their hometown. Three Oaks offers a beautiful setting for both swimming and running due to the lake and the trails within the park.

This race also offers an opportunity for the park visitors to utilize all of the facilities, such as the beach, boat house, and Quarry Cable Park. We had 83 participants in 2017, 132 participants in 2018, 162 participants in 2019, 175 participants in 2021, and 139 participants in 2022. Each year, the event brings in new volunteers, sponsors, and spectators. The race will be completed by the time the park opens so it will have little impact to the daily operation but will encourage the participants to stay and enjoy all that is offered. We again plan to rent the large pavilion as a finish line party location to allow our participants extra time to enjoy the view and the company of all those that participate in the day. We will also be requesting permission to serve alcohol (beer) to allow all over 21 participants to have one celebratory drink after they compete.

I can be in attendance at a meeting as needed to request permission for this event. As always, I believe that Crystal Lake should be a training destination for athletes and this event allows us to showcase a beautiful portion of our town.

Thank you for your time.

Sincerely,



Denise Smith
Owner – Smith Physical Therapy+
Race Director – Crystal Lake Aquathon

Agenda Item No: 9d

City Council
Agenda Supplement

Meeting Date: January 17, 2023

Item: Special Event Request - Medela LLC Company Picnic at the Three Oaks Recreation Area, Saturday, June 17, 2023, with set-up on Friday, June 16, 2023.

Council Discretion: Motion authorizing approval of the Medela LLC company picnic, to be held on Saturday, June 17, 2023, with set-up on Friday, June 16, 2023 at the Three Oaks Recreation Area, subject to the recommended conditions.

Staff Contact: Nick Hammonds, Assistant City Manager

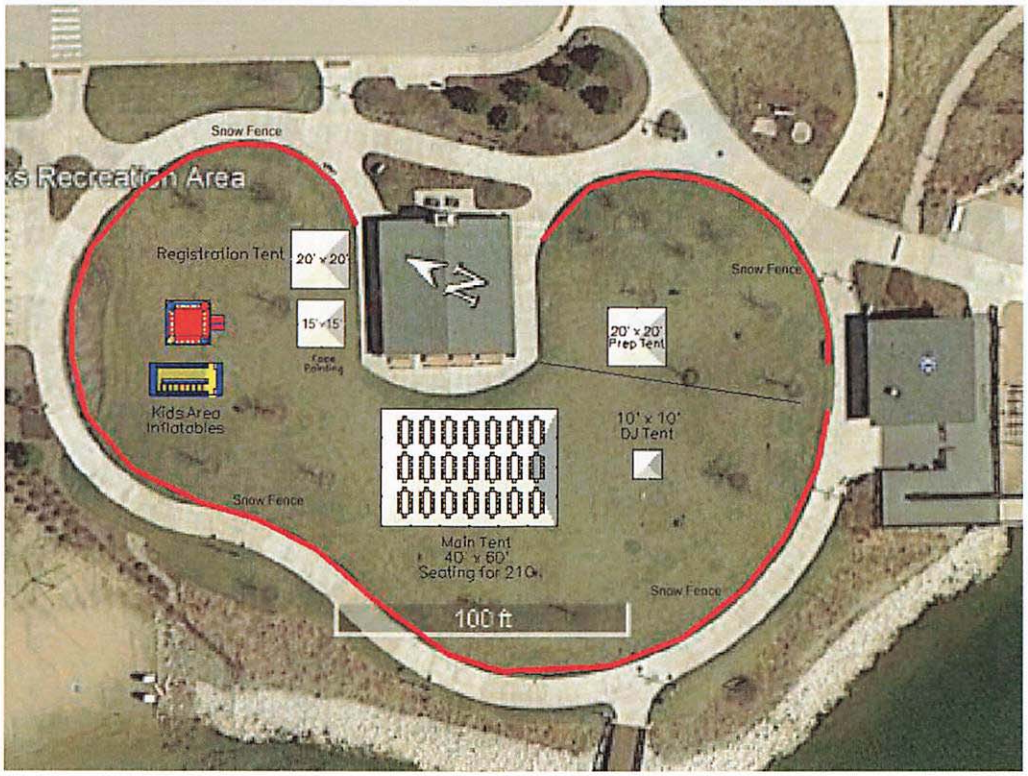
Background:
Medela LLC is requesting approval for their company picnic at the Three Oaks Recreation Area on Saturday, June 17, 2023 from 6:30 a.m. (event set-up) to 9:00 p.m. The actual event time will be from 11:30 a.m. to 3:00 p.m. The remainder of the evening will be spent dismantling. In addition, Medela would like to use Friday, June 16, 2023 from 7:00 a.m. to 3:30 p.m. to begin tent set-up. Medela was founded in 1961 by Olle Larsson in Zug, Switzerland and provides medical devices for nursing mothers. The first USA subsidiary was established in Crystal Lake in 1981. Medela moved their U.S. headquarters to McHenry in 1999. The Three Oaks Recreation Area is their preferred location based on the great amenities and close proximity to the homes of many of their employees.

Medela held their annual employee picnic at the Three Oaks Recreation Area in 2018, 2019, and 2022. The 2018, 2019, and 2022 events were successful and the City was pleased with the applicant's performance. Medela received approval from the City Council for the same event in 2020, however the event was canceled due to Covid-19. **All event details remain unchanged from the 2018, 2019, and 2022 events, which were previously approved by the City Council.**

Medela is requesting approval for rental of the Picnic Grove Pavilion, the surrounding grass area, and the Volleyball Court Pavilion for 450 guests, and exclusive use of the upper parking lot (135 parking spaces). During this event, the public will be inconvenienced in the following ways:

- The petitioner will have exclusive use of the picnic grove, including the pavilion and the volleyball court pavilion with exclusive use of one (1) volleyball court.

- The petitioner is requesting exclusive use of the upper parking lot in order to accommodate a majority of the attendees from 11:30 a.m. – 3:00 p.m. 135 vehicles can be accommodated in the upper lot. The remaining vehicles will be directed to park off site. Medela is requesting a shuttle from off-site parking be approved to run from the lot to a designated drop off location. *No event parking will be allowed in the Quarry Cable Park parking lot or the main parking lot.*
- The City expects that the park's amenities will be busier than usual, which could create longer lines and wait times for entry to the parking lot, beach, marina and other park amenities.



City Staff Review

City Staff has reviewed the event and recommended several conditions in order to minimize inconvenience to the public. The operations at the park will be open as normal throughout the day. Staff suggests the installation of a barrier (snow fence around the Picnic Grove) by the petitioner to separate event activities from the general public. Signage will also be utilized to notify guests of Three Oaks that the picnic may interfere with parking availability. Finally, the main parking lot and the Quarry Cable parking lot will be reserved for the general public and attendees will not be allowed to park in these areas. When the upper parking lot is filled with event attendees, additional attendee vehicles will be directed to off-site parking.

The City of Crystal Lake, along with the Crystal Lake Police and Fire Rescue Departments, have provided support and feedback. The Police Department advised that additional staff at the park on the day of the event will not be necessary. Staff will notify the Police Department prior to the event and an Officer will be available to respond to any incident at the park. The Fire Rescue Department will be on site to inspect any tents or objects that are larger than 400 square feet. Fire safety hazards and placement of the portable toilets will be inspected as well.

There will be no impact to the Board House or Quarry Cable Park and Grille. The marina will be open during the event, and the event may draw participants to utilize the marina, beach, and Quarry Cable Park and Grille after the completion of their company picnic. A staff member will be positioned at the entrance of the Quarry Cable Park parking lot to ensure that only Quarry Cable Park customers use this lot.

With great success in 2018, 2019, and 2022, Medela will again pay for car passes for employees who are not Crystal Lake residents, and all Medela guests will receive a wristband with beach tear off tags. The coordination of a shuttle service for the company's employees to park in an off-site location functioned without issue in previous years. The City and Medela would like to continue this plan as this would reduce the amount of parking spaces used for the event and maintain non-event patron access to the park.

Public/Visitor Impact:

Use Location	*Hours of Use*	*Exclusive Use?*	*Level Of Public Impact*	
Swim Beach	11:30 a.m. – 3:00 p.m.	No	Low	The swim beach will be open to the public during the event. Event guests may visit the beach during or after the event.
Marina/Lake Usage	11:30 a.m. – 3:00 p.m.	No	Moderate	The petitioner anticipates some guests may visit the Marina. Staff anticipates a moderate increase in marina use due to the event.
Trails	-	No	Low	The group may use the trails for hiking and will not impact other guests.
Pavilions (A & C)	6:30 a.m. - Sunset	Yes	High	Petitioner is requesting exclusive use of Pavilion A and the surrounding Picnic Grove, and the Volleyball Court Pavilion.
Pavilions (B & D)	-	No	Low	The petitioner is not requesting use of Pavilion B and D. Low impact is anticipated.
Picnic Grove	6:30 a.m. - Sunset	Yes	High	The petitioner is requesting exclusive use of the Picnic Grove. Non-event guests will not have access to the Picnic Grove until the event concludes.
Parking Lot	6:30 a.m. – Sunset	No	High	The petitioner is requesting exclusive use of the upper parking lot. The parking lot fills quickly on weekend days in June and will reduce the number of available parking for non-event guests. Off-site parking will be utilized when the upper lot is full.
Quarry Cable Park	-	-	Low	No impact. Tenant has no issues with the event.
Board House	-	-	Low	No impact. Tenant has no issues with the event.
Cottage on the Beach	-	-	Low	No impact. Tenant has no issues with the event.

Required Petitioner Fees

Fee Type	*Amount*
Refundable Pavilion Deposit – Picnic Grove Pavilion June 16, 2023	$150
Refundable Pavilion Deposit – (Picnic Grove Pavilion & Volleyball Court Pavilion) June 17, 2023	$200
Refundable Tent Damage Deposit (over 200 people)	$1,000
Total Refundable Fees	**$1,350**
Application Fee	$75
Out of Town Fee	$150
Non-Resident Pavilion Rental Fee (Picnic Grove Pavilion) June 16, 2023	$360
Non-Resident Pavilion Rental Fee (Picnic Grove Pavilion & Volleyball Court Pavilion) June 17, 2023	$510
Three Oaks Staffing Fee (4 employees/$15 per hour/5 hours)	$300
Preparation, Cleaning & Restoration Fee (as needed/ 3 staff members / $30 per hour/ 2 hours)	$180
Table Moving Fee (as needed)	$25
Sound System Fee	$75
Total Non-Refundable Fees	**$1,675**

Recommended Conditions:

City staff has reviewed the petitioner's request and offers the following conditions:

1. Comply with all City Code regulations, Special Event requirements, and Pavilion rental requirements, including all insurance requirements. Insurance certificates need to be provided annually. Petitioner must adhere to the required City insurance provisions for the use of City-owned property by providing a certificate of insurance naming the City as additional insured, and sign the required Indemnity/Hold Harmless agreement.
2. The petitioner shall contact the Fire Rescue Department for further review of tent/canopy locations. Locations must be approved by the Fire Rescue Department. Tents/canopies must be installed on Friday, June 16, 2023 during regular business hours of the Fire Rescue Department and removed the day of the event. The petitioner shall be responsible for paying to the City the amount of the pavilion rental fees for Sunday, June 18, 2023 if the tents/canopies are not removed from the site. Should safety concerns arise, Three Oaks Staff reserves the right to request the removal of tents/canopies. Tents and canopies must be secured using rain barrels only. The petitioner shall be responsible for any damage resulting from the use of stakes.

3. Maintain access to all fire lanes and the south lake marina boat ramp. Provide a plan for all on-site signage prior to the event, which shall be reviewed by the City and approved prior to placement.
4. Receive approval from third party property owners for any off-site parking. Following the filling of the upper parking lot, participants will be directed to park off-site. Remote parking / shuttle service locations and signage plans will need to be submitted. A sign plan for the remote parking locations will be submitted to the City's Building Division for approval. The City must receive the written authorization by the third party property owner for parking prior to June 1, 2023.
5. Submit severe weather plans and an evacuation plan for City approval.
6. Sound system shall not disturb other users of the park.
7. All temporary electrical items shall comply with the 2017 Electric Code and shall be subject to City inspection.
8. Medela, LLC must provide the City with a site plan for set-up at the Three Oaks Recreation Area and parking plan for volunteers and event workers for review by City Departments.
9. All debris created by the event shall be cleaned up during and after the event.
10. In the case of inclement weather, an alternate date can be approved by the City Manager.
11. Installation of a barrier (snow fence) around the Picnic Grove Area. Location to be approved by City staff.
12. Number and location of portable toilets to be determined by petitioner and approved by City Staff prior to event.
13. The petitioner is responsible for the required costs, which are for use of the Three Oaks Recreation Area, as stated on page 4 of this Agenda Supplement. These are estimated costs, and actual costs could be more.
14. Once the upper parking lot is full, all attendees will utilize off-site parking.
15. Medela, LLC must provide shuttle buses for attendees utilizing off-site parking. Petitioner shall provide an adequate evacuation plan for attendees utilizing shuttle buses.
16. Medela, LLC must provide payment, proof of volunteers, severe weather and evacuation plan, hold harmless, and liability waivers by June 1, 2023 or the event may be cancelled.

The petitioner is aware of the recommended conditions and will have a representative of the company present at the meeting.

Votes Required to Pass:
Simple majority vote of the City Council

medela
THE SCIENCE OF CARE™

Medela LLC
1101 Corporate Drive
McHenry, IL 60050, USA
Phone 1+815-363-1166 or 800-435-8316
www.medela.com

January 5, 2023

Mayor Haig Haleblian and the Crystal Lake City Council
City of Crystal Lake
100 West Woodstock St.
Crystal Lake, IL 60014

Dear Mayor Haleblian and the Members of the City Council:

I write on behalf of Medela to request a special event application for the annual Medela Family Picnic on **Saturday, June 17, 2023.** It is our hope to hold the event at Three Oaks Recreation Area again in June. The event will be held from 11:30 am – 3:00 pm. We will do the major tent set up beginning on Friday, June 16 so that the fire department inspection can happen late that afternoon and the breakdown will happen once the event is complete on the 17th. The picnic was a huge success last year despite some weather challenges and every one loves the park. We request the use of Pavilion A, the volleyball area and the surrounding grassy area for the event. In addition, we will need exclusive use of the upper parking lot until 3:00pm on the 17th.

Medela was founded in 1961 by Olle Larsson in Zug, Switzerland, and it continues to grow under the ownership of the Larsson family. The first USA subsidiary was established in Crystal Lake in 1981. We enjoyed being a part of the Crystal Lake community for 18 years. Medela moved the U.S. headquarters to McHenry, Illinois in 1999. The Medela Family Picnic is a favorite event of the year for all local employees and their families. Three Oaks is our preferred location for 2023 based on the great amenities and close proximity to the homes of many of our employees.

Our vendors for this event are the premier providers in their field and great care is taken for set up/break down and event execution. We will do everything possible to ensure that the event is a positive experience for the Medela employees and does not cause any problems for the public sharing the public areas on June 17. I will be happy to answer any questions about the plans prior to the council meeting and will have a representative in attendance for the meeting when this proposal is discussed.

We appreciate your consideration of this request and look forward to once again working with the City of Crystal Lake on the 2023 Medela Family Picnic.

Sincerely,

Amy Kenrich Woods

Amy Kenrich Woods

Event Manager, Medela

(312) 315-7102

MEDELA FAMILY PICNIC

Saturday, June 17, 2023 11:30am-3:00pm

Proposed Location: Three Oaks Recreation Area, Crystal Lake, IL

Projected number of attendees: 250 adult employees and adult guests, 200 children

All Medela Guests receive a wristband with beach tear off tag. Medela will pay for car passes for employees who are not Crystal Lake residents. If needed, a shuttle from off site parking approved to run from lot to designated drop off location.

Proposed Event Agenda:

Friday, June 16

7:00am	Tent set up and fencing set up begins
3:30 pm	Tent Fire Inspection

Saturday, June 17

6:30 am	Final Tent Set up
8:00 am	Catering arrives, Four Seasons inflatables arrives, Portable toilets arrive
11:00 am	Set up complete
11:30 am	Registration begins, Lunch Buffet open, kids activities open
12:45 pm	Welcome speeches
1:30 pm	Kids games contest
2:30 pm	Lunch Buffet closes
3:00 pm	Event concludes, Employees can enjoy the beach or boating options

Vendors:

Event Coordinator: Amy Kenrich Woods amykenrich@att.net 312-315-7102

Food Service: Catering by Michaels Shannon Sherwood 847-892-6299

Kids Activities: Four Seasons Amusements, Jazzi Entertainment (face painting, balloon art)

Event Rentals (Tents, Tables, Chairs): TBD

Event Special requests:

1) Upper parking lot reserved for Medela employees from 11:00am – 3:00pm. Security staff provided by Medela to give out special parking pass.
2) Early set up time for tents. (see schedule) Medela event manager on site with tent company arrival.
3) Portable restrooms onsite to enhance existing restrooms. Mutually agreeable location.
4) ~~Ability for Catering by Michaels to park truck on path near prep tent~~ See email
5) Medela will provide security near kids activities to ensure all participants have event wristbands

CITY OF Crystal Lake ILLINOIS

SPECIAL EVENTS APPLICATION

Please PRINT or TYPE

EVENT NAME Medela Family Picnic 2023

EVENT LOCATION Three Oaks Recreation Park

This application should be completed by the "Event Manager", who will be the main coordinator and contact person for the event. Completing the application form will give you a good idea of the types of arrangements, approvals and documents that will be necessary for your special event. Please complete as much of the following information as possible before turning in the application. Once the application is turned in, a staff liaison will be in contact with you who will guide you in completing the remainder of the application and fulfilling City requirements for the event.

Please note that City Council approval may be required for certain special events/requests

GENERAL EVENT INFORMATION

1. TYPE OF EVENT (Check all that apply)

☐ Carnival*	☐ General use of City-owned property
☐ Circus*	☐ Parade*
☐ Festival*	☒ Special Event at Three Oaks Recreation Area*
☐ Filming*	☐ Run/Walk Event
☐ Other _____	

*Requires separate application in addition to Special Events Application

2. General Description/Purpose of the event:
Employee family picnic/celebration event hosted by Medela LLC based in McHenry. Many employees live in Crystal Lake and the surrounding area.

3. Will the event require the use of City-owned property?	☐ Yes	☐ No
4. Is a Site Map/Route Map attached?	☒ Yes	☐ No
5. Is the event an annual/recurring event?	☒ Yes	☐ No
6. Will the event require a public street/sidewalk to be blocked or closed?	☐ Yes	☒ No
7. Will the event require use of a public parking lot?	☒ Yes	☐ No

8. Number of persons scheduled to monitor and work the event: 15 event staff plus catering co. staff

9. Estimated attendance: 450

10. Is a "rain date" proposed? Y ☐ or N ☒ If yes, what is the rain date? _____

ORGANIZATION INFORMATION

11. ☐ Organization is registered with the State of Illinois as a Non-Profit Organization

12. Name of Event Manager: Amy Woods

13. Contact Information for Event Manager:

Address: 1712 West Pearson St. Chicago, IL 60622

(Please check preferred means of contact)

Daytime phone: 312-315-7102 ☒

Emergency phone: _____ ☐

Cell phone: same as daytime phone ☐

Email: [redacted] ☐

EVENT OPERATION

14. Date(s) of the event (including time for assembling and/or dismantling support structures):

Set Up: Friday, June 16 7:00am

Event: Saturday, June 17th 6:30am

Dismantling: Saturday, June 17th 3:30pm

15. Hours of the event:

Set Up: June 16, 7:00am - 8:00pm

Event: June 17, 11:30am - 3:00pm

Dismantling: June 17, 3:30pm - 9:00pm

CITY MANAGER'S OFFICE

16. Will the event hold a raffle of any kind? ☐ Yes* ☒ No

***If yes, please complete attached Raffle License Application**

17. Is the Certificate of Insurance and Hold Harmless Agreement attached? ☒ Yes ☐ No

***Attached please see the City's insurance provisions (Required for all special events)**

18. Will alcoholic beverages be served or sold at the event? ☐ Yes* ☒ No

If yes, what type of alcoholic beverages will be served?

_____

_____

_____

Please complete the attached Temporary Liquor License Application

COMMUNITY DEVELOPMENT

19. Will the event require tents or temporary structures? ☒ Yes ☐ No

20. What signs or advertising do you anticipate needing for the event?

    Temporary community event signs ☐ Yes ☒ No

    Temporary neighborhood event signs ☐ Yes ☒ No

    Directional signs ☒ Yes ☐ No

    Banner ☒ Yes ☐ No

21. Will food be served or sold at the event? ☒ Yes* ☐ No

    If yes, please contact the McHenry County Health Department and please provide the City with a copy of the approval from the McHenry County Health Department.

22. Will the event include vendors selling products? ☐ Yes ☒ No

    Description of Products_____

23. Will the event require portable sanitation facilities? ☒ Yes ☐ No

    Name of Company_____
    Address_____
    Phone_____

24. Will the use of electricity be required for the event? ☒ Yes ☐ No

    If yes, please specify the power requirements and plan for provision
    Pavillion electric for popcorn machine and small sound system, generators for inflatables

    _____

PUBLIC SAFETY *Please remember to post the Firearm Concealed Carry Act sign*

25. Does this event require assistance from the Police Department? ☐ Yes ☒ No

26. Does this event require an on-site ambulance? ☐ Yes ☒ No

27. Will the event require sound amplification of any kind? ☒ Yes ☐ No

28. Please state what provisions have been made for first aid and emergency medical services, if any:
First aid kit onsite, event staff trained in CPR and basic first aid onsite

PUBLIC WORKS

29. Will the event require barricades for traffic control? ☐ Yes* ☒ No

If yes, please complete the attached Barricade Borrowing Application

30. Will the event require water? ☒ Yes ☐ No

Specify to fill water barrels for tents

Please remember to include the necessary attachments, if possible. (Please check those included)

- ☐Barricade Borrowing Application
- ☐Carnival License Application
- ☒Certificate of Insurance/Hold Harmless Agreement
- ☐Circus License Application
- ☐Festival License Application
- ☐Film Production Application
- ☐Parade Permit/Open Air Application
- ☐Raffle License Application
- ☐Temporary Liquor License Application
- ☐Temporary Use Application

The undersigned has read the foregoing application and knows the contents thereof, and affirms that the information is true and correct to the best of his/her knowledge, information and belief. For special events, the undersigned agrees to indemnify and hold harmless the City, together with its officers, agents, volunteers, and employees from all losses, damages, injuries, claims, demands and expenses arising out of, or as the result of, the operation of the event, the special City services provided for the event, and/or the permit issued for same, and/or the condition, maintenance and use of the public property in connection with the event, as well as for any injury to or sustained by a City employee, agent, or contractor in conjunction with the event authorized by the City.

Signature

January 5, 2023
Date

Amy Woods
Print Name

STAFF USE ONLY

Assigned City Department:

Assigned City Staff Liaison:

Meeting with Event Organizer Required: ☐ Yes ☐ No

City Council Approval Required: ☐ Yes ☐ No

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/24/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Arthur J. Gallagher Risk Management Services, Inc 300 Madison Avenue 28th Floor New York NY 10017	CONTACT NAME: Lettie Abdelaziz PHONE (A/C, No, Ext): 212-994-7100 FAX (A/C, No): 212-994-7047 E-MAIL ADDRESS: lettie_abdelaziz@ajg.com
INSURED MEDELLC-02 Medela LLC 1101 Corporate Drive McHenry, IL 60050-7006	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A: Federal Insurance Company — 20281 INSURER B: INSURER C: INSURER D: INSURER E: INSURER F:

COVERAGES **CERTIFICATE NUMBER:** 555929705 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY			9951-0604	1/1/2023	1/1/2024	EACH OCCURRENCE	$1,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$100,000
							MED EXP (Any one person)	$5,000
							PERSONAL & ADV INJURY	$1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$2,000,000
	X POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$5,000,000
	OTHER:							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$
	ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
A	X UMBRELLA LIAB X OCCUR			7619-7645	1/1/2023	1/1/2024	EACH OCCURRENCE	$4,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$4,000,000
	DED X RETENTION $ 10,000							$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N						PER STATUTE / OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) N/A						E.L. EACH ACCIDENT	$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Certificate Holder is an Additional Insured as respects to General Liability Per Policy form 80-02-2367 as required by written contract, pursuant to and subject to the policy's terms, definitions, conditions and exclusions. Waiver of Subrogation applies as required by written contract per form 80-02-2000. Coverage can be Primary and Non Contributory as required by written contract Form 80-02-2367, pursuant to and subject to the policy's terms, definitions, conditions and exclusions.

City of Crystal Lake is included as Additional Insured in accordance with the policy provisions of the General Liability policy.

CERTIFICATE HOLDER

Three Oaks Recreation Area
5517 Northwest Highway
Crystal Lake IL 60014
USA

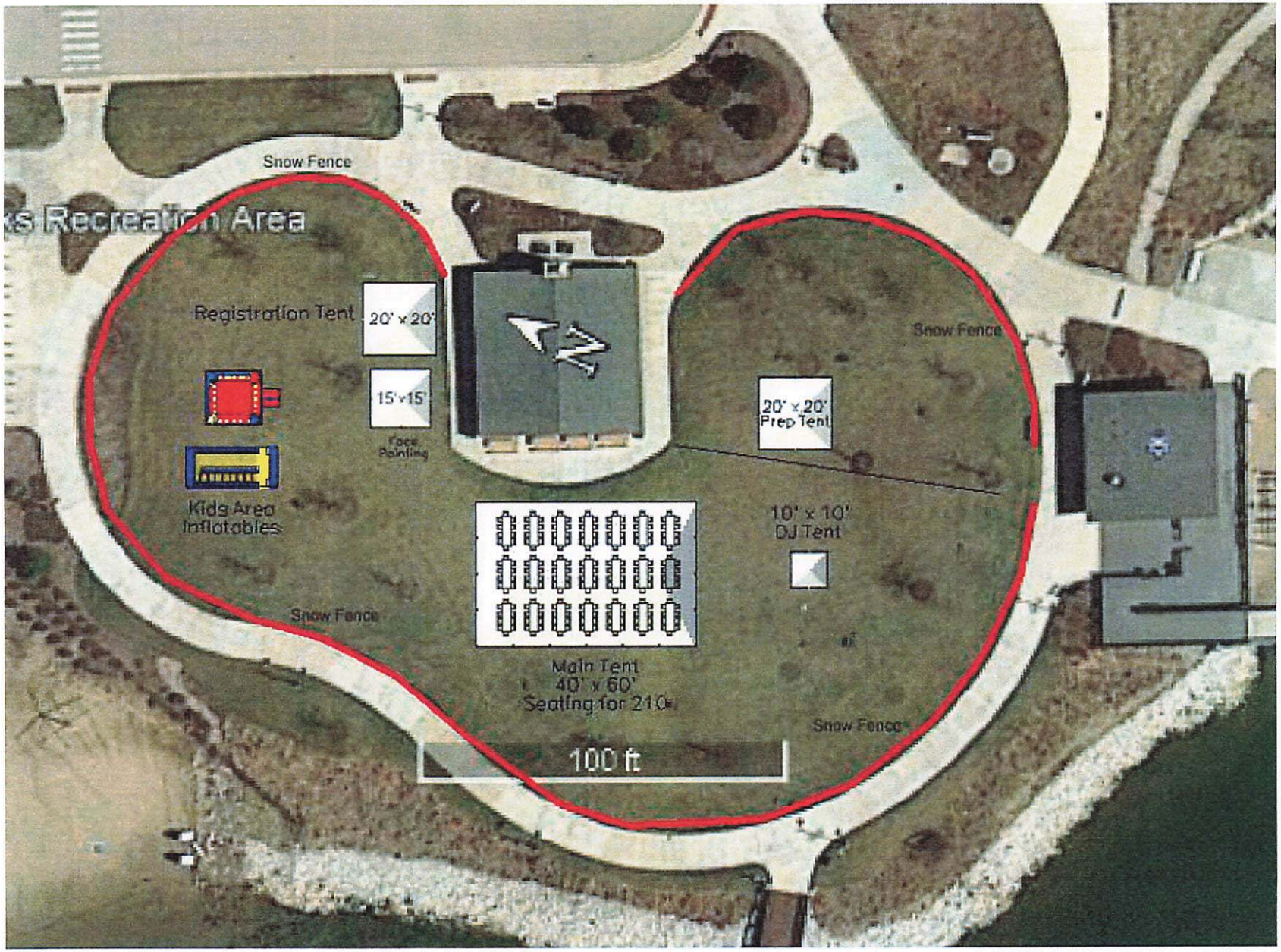
CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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Snow Fence
Registration Tent
20' x 20'
15' x 15'
Face Painting
Kids Area
Inflatables
Snow Fence
20' x 20'
Prep Tent
10' x 10'
DJ Tent
Snow Fence
Main Tent
40' x 60'
Seating for 210
Snow Fence
100 ft

Indemnity/Hold Harmless For Use of City Owned Property

In consideration of the undersigned ("User") requesting to use the following City property 5517 Northwest Highway, Three Oaks Recreation Area, the undersigned hereby recognizes, acknowledges and assumes any and all risk pertaining to the use of the following City property 5517 Northwest Highway, Three Oaks Recreation Area.

To the fullest extent permitted by law, the undersigned hereby agrees to defend, indemnify and hold harmless the City of Crystal Lake its elected and appointed officials, agents and employees, against all injuries, deaths, loss, damages, claims, suits, liabilities, judgments, cost and expenses (including attorneys fees), which may in anywise accrue against the City of Crystal Lake, its elected and appointed officials, agents and employees, arising in whole or in part or in consequence of the use of City property by the undersigned, its employees, agents, subcontractors or any 3rd party, or which may in anywise result therefore, except that arising out of the sole legal cause of the City of Crystal Lake, its agents or employees. The User shall, at its own expense, appear, defend and pay all charges of attorneys and all costs and other expenses arising therefore or incurred in connections therewith, and, if any judgment shall be rendered against the City of Crystal Lake, its elected and appointed officials, agents and employees, in any such action, the User shall, at its own expense, satisfy and discharge the same.

Agreed this 9 day of January, 2023

Anita Matheson
(Name of User's representative)

Anita Matheson
(Signature of User)

Medela
(Organization of User)

City Facility or Area to be used, including address:

5517 Northwest Highway, Three Oaks Recreation Area.

Description of Use (Type of Use and Dates of Use):

Alaina Skurski

From: Amy Kenrich [redacted]
Sent: Tuesday, January 10, 2023 1:49 PM
To: Alaina Skurski
Subject: Re: Signed Medela Hold Harmless

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi, I have been asked to get some catering quotes this year so we are not for sure working with Catering by Michaels so you can take that truck issue off the table. I will make sure that whoever we work with sets things up the same way it has been done in the past. Let me know if you have any questions. Thanks. Amy

On Tuesday, January 10, 2023 at 10:58:55 AM CST, Alaina Skurski <askurski@crystallake.org> wrote:

Hi Amy,

Thanks for submitting this. The last item I am waiting on is in regards to the caterer and where they are planning to park. I do need an answer on this so that the council has all of the information they need to make their decision. This seemed like the only recent change from previous years.

Thank you,

Alaina Skurski

Alaina Skurski | Administrative Assistant | City Manager's Office
City Of Crystal Lake | 100 W. Woodstock St. | Crystal Lake, IL 60014
Website: www.crystallake.org | Phone: 815-459-2020 x4083

From: Amy Kenrich [redacted]
Sent: Tuesday, January 10, 2023 8:29 AM
To: Alaina Skurski <askurski@crystallake.org>
Subject: Signed Medela Hold Harmless

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

HI Alaina, here it is. Do you need anything else for the meeting next Tuesday? Thanks. Amy

This electronic message and any attached files contain information intended for the exclusive use of the individual or entity to whom it is addressed and may contain information that is proprietary, confidential and/or exempt from disclosure under applicable law, including protected health information (PHI). If you are not the intended recipient, you are hereby notified that any viewing, copying, disclosure or distribution of the information may be subject to legal restriction or sanction and is strictly prohibited. If you have received this communication in error, please notify the sender by return electronic message or telephone, and destroy the original message without making any copies.

Agenda Item No: 9e

City Council
Agenda Supplement

Meeting Date: January 17, 2023

Item: Three Oaks Recreation Area Beach Concessionaire Lease Agreement Extension

City Council Discretion: A motion to approve an Agreement Amendment authorizing an extension of the agreement for the Three Oaks Recreation Area Beach Concessions with Contemporary Kitchens, LTD, d/b/a The Cottage on the Beach, and adopt a Resolution authorizing the City Manager to execute a three-year Agreement Amendment and Extension for Three Oaks Recreation Area Beach Concessions.

Staff Contact: Nick Hammonds, Assistant City Manager

Background:
At its March 20, 2018 meeting, the City Council selected The Cottage on the Beach to operate the beach concessions at the Three Oaks Recreation Area. The initial five-year agreement terms allow for two optional three- year agreement extensions to be authorized at the discretion of the City. The Cottage on the Beach has notified the City of their intent to extend the lease agreement to continue operations of the concessions at the beach through the 2025 season. Pursuant to the 2018 lease agreement terms, during any additional term the monthly lease fee shall be 9.5% of all Gross Revenue derived from the Concession Operations during each year of the additional term.

One proposed modification to the lease agreement addresses cost sharing for the replacement of equipment. Currently, the lease terms require 50 percent cost sharing for equipment repairs, and the City is responsible for 75 percent of full replacement costs, with the concessionaire responsible for 25 percent. The agreement amendment will maintain the 50 percent repair cost sharing, but the City will bear full responsibility for replacement costs. This is due to the age of equipment (the kitchen equipment was purchased in 2010 at park opening). The City will maintain ownership of repaired or replaced equipment.

The Cottage on the Beach has provided satisfactory services at the beach since assuming concession operations. The concessionaire will continue to serve their menu items including chicken tenders, burgers, hot dogs, snacks and ice cream. As defined in the lease agreement terms, the Cottage on the Beach will continue to propose their annual menu for the City Council's approval.

Authorization to extend the agreement is performed at the discretion and approval of the City Council. If the extension is authorized, The Cottage on the Beach will be bound to the original terms and conditions of the agreement for the duration of the agreement extension, in addition to the terms set forth in the Agreement Amendment.

Recommendation:

It is staff's recommendation to extend the current agreement with Contemporary Kitchens, LTD, d/b/a The Cottage on the Beach for three years, expiring on October 1, 2025. City legal counsel has reviewed the agreement extension language and has determined that the City Council has the authority to extend the agreement with Contemporary Kitchens, LTD, d/b/a The Cottage on the Beach per the existing agreement language.

Votes Required to Pass:

Simple majority vote of the City Council.

RESOLUTION

WHEREAS the CITY OF CRYSTAL LAKE entered into an Agreement with Contemporary Kitchens, LTD, d/b/a The Cottage on the Beach on March 20, 2018 as the sole concessionaire at the Three Oaks Recreation Area Beach; and

WHEREAS the Agreement for Three Oaks Recreation Area Beach Concessions expired on October 1, 2022; and

WHEREAS the City and Contemporary Kitchens, LTD, d/b/a The Cottage on the Beach desire to amend the Agreement in order to extend the term through October 1, 2025 and make such further modifications to the Agreement, as set forth herein;

NOW THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF CRYSTAL LAKE that the foregoing recitals are repeated and incorporated as though fully set forth herein; and

BE IT FURTHER RESOLVED that the City Manager is hereby authorized to execute and Agreement Amendment and Extension with Contemporary Kitchens, LTD, d/b/a The Cottage on the Beach for Three Oaks Recreation Area Beach Concessions through October 1, 2025.

DATED this 17th day of January, 2023.

Draft

CITY OF CRYSTAL LAKE,
an Illinois municipal corporation,

By:_____
Haig Haleblian, MAYOR

SEAL:
ATTEST:

_____
Nick Kachiroubas, CITY CLERK

PASSED: January 17, 2023
APPROVED: January 17, 2023

AMENDMENT TO LEASE AGREEMENT BETWEEN CONTEMPORARY KITCHENS, LTD. d/b/a THE COTTAGE ON THE BEACH AND THE CITY OF CRYSTAL LAKE FOR THREE OAKS RECREATION AREA CONCESSIONS

This Amendment to the Concessionaire Lease Agreement for Three Oaks Recreation Area Concessions Operations, between the City of Crystal Lake and Contemporary Kitchens, Ltd. d/b/a The Cottage on the Beach, dated April 20, 2018, is made and entered into this _____ day of _____, 2023 between the City of Crystal Lake, 100 W. Woodstock Street, Crystal Lake, IL 60014, an Illinois municipal corporation, (hereinafter referred to as the "City"), and Contemporary Kitchens, Ltd. d/b/a The Cottage on the Beach (hereinafter referred to as "The Cottage on the Beach").

WHEREAS, on April 20, 2018, the City entered into a Lease Agreement with The Cottage on the Beach for the operation of the Three Oaks Recreation Area beach concessions; (the "Agreement") and,

WHEREAS, the Lease Term of the Agreement is scheduled to expire on October 1, 2022; and,

WHEREAS, Section 2.3 of the Agreement allows The Cottage on the Beach to request an Additional Term of three (3) years ("the Additional Term") and a Second Additional Term of three (3) years (the "Second Additional Term"); and,

WHEREAS, the City and The Cottage on the Beach desire to amend the Agreement in order to extend the Lease Term for an Additional Term, commencing on October 2, 2022 and terminating on October 1, 2025 and make such further modifications to the Agreement, as set forth herein;

NOW THEREFORE, it is hereby agreed between the City of Crystal Lake and The Cottage on the Beach, that the Agreement is amended as follows:

Terms and Termination:

1.1 Pursuant to Section 2.3 of the Agreement, the Lease Term of the Agreement shall be extended for an Additional Term, commencing on October 2, 2022 and terminating on October 1, 2025

1.2 Pursuant to Section 3.1 of the Agreement, the Monthly Lease Fee during the Additional Term shall be 9.5% of all Gross Revenues derived from the Concession Operation during each year of the Additional Term.

1.3 The final two sentences in Section 5.1 of the Agreement shall be deleted and shall be replaced with the following:

> "In the event that the CITY determines that any item of the CITY Equipment is to be replaced, the CITY shall pay 100% of the replacement cost of such CITY Equipment. Any item of City Equipment which is repaired as well as all items of City Equipment for which the City pays the cost of replacement pursuant to this Section 5.1 shall be owned by the CITY, notwithstanding any cost participation by the CONCESSIONAIRE with respect to the cost of repairs."

Draft

1.4 Except as otherwise modified herein, the Agreement dated April 20, 2018, including all exhibits incorporated and adopted by reference therein, and The Cottage on the Beach's response to the Request for Proposal for the operation of the Three Oaks Recreation Area beach concessions shall remain in full force and effect. To the extent that a conflict exists between the aforementioned documents and this Amendment, the terms of this Amendment shall control.

IN WITNESS WHEREOF, the parties' authorized representatives have executed this Agreement as of the dates set forth below.

CITY OF CRYSTAL LAKE	CONTEMPORARY KITCHENS, LTD. d/b/a The Cottage on the Beach
By: _____	By: _____
Printed Name: Eric T. Helm	Printed Name: _____
Title: City Manager	Title: _____
Date: _____	Date: _____

Draft

Agenda Item No: 10

City Council
Agenda Supplement

Meeting Date: January 17, 2023

Item: Retailer Facade and Commercial Tenant Improvement Grant Funds request for Heisler's Bootery, 50 N. Williams Street, requesting $1,162.50 in matching grant funds

Recommendation: City Council's discretion:

1. Motion to award $1,162.50 in Retailer Façade and Commercial Tenant Improvement Grant Funds to Heisler's Bootery located at 50 N. Williams Street, and to adopt a Resolution authorizing the City Manager to execute the Grant Agreement with Heisler's Bootery.
2. Motion to deny the grant application request.

Staff Contact: Kathryn Cowlin, Director of Community Development
Heather Maieritsch, Economic Development Manager

Background:

The Retailer and Manufacturer Job Creation and Investment Program was introduced in 2011. This program includes the Retailer Façade and Commercial Tenant Improvement grant and provides 50/50 matching grant funds.

KEY FACTORS

- Heisler's Bootery has been in the City of Crystal Lake since 1908.
- Heisler's Bootery is proposing an awning replacement and is eligible for a 50/50 matching grant under the program guidelines to reimburse the business for fifty percent of the project costs.
- Heisler's Bootery is requesting matching grant funds for a new awning for the storefront (same design as current awning).

Upon approval of the grant by the City Council, the City and applicant will enter into an agreement that includes all the stipulations for the grant award. The agreement specifies what documentation must be submitted before the payment is disbursed. Additionally, it has provisions to recoup the grant in case the business closes before the required four-year period.

In order to objectively analyze the applications for funding, eligibility criteria have been established in the Ordinance approving this program. The list below outlines the evaluation of the applicant's request in relation to our eligibility criteria:

1. The program is open to sales-tax generating business that will occupy retail space or a building or that will construct a new building for its business.
   ☒ *Meets* ☐ *Does not meet*

2. Applicant must meet a minimum annual taxable sales threshold of at least $150,000.
   ☒ *Meets* ☐ *Does not meet*

3. Applicant's business must provide a stocked retail showroom for retail products.
   ☒ *Meets* ☐ *Does not meet*

4. Applicant must provide written proof of façade, fixture, furniture, and equipment (FFE) costs.
   ☒ *Meets* ☐ *Does not meet*

5. Applicant must file an application for grant funding prior to commencing improvements.
   ☒ *Meets* ☐ *Does not meet*

6. Grant recipient may re-apply after five years from the date of recipient's previous award.
   ☒ *Meets* ☐ *Does not meet*

7. Eligible façade improvements include, but are not limited to; exterior brick cleaning; exterior tuck pointing; exterior painting; wall façade construction, repair, and treatment; original exterior architectural features repair or replacement; interior/exterior demolition; and historic renovation to interior/exterior.
   ☒ *Meets* ☐ *Does not meet*

The applicant's request has been evaluated based on the above eligibility criteria and their planned façade improvements. The current application would meet seven of the seven eligibility criteria.

FUNDING STATUS OF 2022-2023 PROGRAM
For the 2022-2023 Fiscal Year, there is $80,000 budgeted for the Retailer and Manufacturer Job Creation and Investment Program. This is the eighth application received this fiscal year for the program, so there are sufficient funds for the grant.

Applicant Name/ Business Name	**Address**	**Total Requested**	**Date Approved**	**Amount Approved**
Vine & Plate Wine Bar + Provisions	414 W. Virginia Street	$5,000	***6/7/2022***	***$5,000***
General Kinematics	5050 Rickert Road	$10,000	***6/21/2022***	***$10,000***
Jalsa Bar & Restaurant	1295 Randall Road, Suite 112	$5,000	***6/21/2022***	***$5,000***
Conscious Cup Coffee Roasters	110 W. Woodstock Street, Suite 2R	$10,000	***7/19/2022***	***$10,000***
Rookies	72 N. Williams Street	$10,000	***10/4/2022***	***$10,000***
Kruger Plastic Products LLC doing business as Springboard Manufacturing	815 Tek Drive	$10,000	***12/6/2022***	***$10,000***
Heartland Cabinet Supply	301 Industrial	$10,000	***12/6/2022***	***$10,000***
Heisler's Bootery	50 N. Williams Street	$1,162.50	***Pending***	***Pending***
Totals		***$61,162.50 Pending***		Pending

Votes Required to Pass:
A simple majority vote.

2023- Heisler's Bootery

50 N Williams Street





Res. 23R-10

The City of Crystal Lake Illinois

RESOLUTION

BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF CRYSTAL LAKE that the City Manager is hereby authorized and directed to execute an agreement with the owner of the property for Heisler's Bootery at 50 N. Williams Street, for a Retail Façade and Commercial Tenant Improvement Matching Grant in an amount in the amount of $1,162.50.

DATED at Crystal Lake, Illinois, this 17th day of January 2023.

CITY OF CRYSTAL LAKE, an Illinois Municipal Corporation

BY: _____
Haig Haleblian, MAYOR

SEAL

ATTEST:

_____
Nick Kachiroubas, CITY CLERK

PASSED: January 17, 2023

APPROVED: January 17, 2023

Draft

CITY OF CRYSTAL LAKE
Retailer Façade and Commercial Tenant Improvement Grant Application

Please completely fill out this application and return it to the City of Crystal Lake with the items listed in the checklist on page 2.

Applicant Information	Name JAMES HEISLER	Phone [redacted]
	Mailing Address HEISLER'S Rootery 50 N. WILLIAMS ST. CRYSTAL LAKE, ILL. 60014	Fax —
	Email JIM @ HEISLERSBOOTERY.COM	IL Business Tax# 3975-2372

Property Information	Address for building for which grant is sought: 50 N. WILLIAMS ST.	
	Property Identification Number(s) 14-32-479-023	Phone 815 459-0171

Check one:

☐	New business occupying vacant retail space
☒	Existing retail business making improvements to my building or tenant space

Description of furniture, fixtures, and equipment to be utilized:

AWNING REPLACEMENT for front display WINDOW

Continued on the next page

Application Checklist

The following items must be submitted with the Improvement Application form (Page 1):

- ☒ Completed and signed Crystal Lake Improvement Grant Application;
- ☒ Written estimates for the furniture, fixtures, and equipment to be purchased;
- ☒ Written estimates for the façade improvements;
- ☒ A floor plan, illustrating the locations for the furniture, fixtures, and equipment (drawings do not have to be architectural renderings, but should be to scale so that the City can understand the scope of the proposed project);
- ☐ Written description of the scope of the proposed project (letter to the Mayor and City Council);
- ☐ Taxable sales records and/or projections.

I agree to comply with the guidelines and standards of the City of Crystal Lake Job Creation and Investment Program and I understand that this is a voluntary program, under which the City has the right to approve or deny any project or proposal or portions thereof.

Applicant(s) Signature _____ Date 1/6/23

27982 W Commercial ave #1
Barrington, IL 60010
(847) 381-1878
info@hwawnings.com

Estimate

ESTIMATE#	1005379991
DATE	09/22/2022
PO#	

CUSTOMER

Heisler's Bootery
50 N Williams
Crystal Lake IL 60014

SERVICE LOCATION

Heisler's Bootery
50 N Williams
Crystal Lake IL 60014

DESCRIPTION

Estimate

Description	Qty	Rate	Total

Description	Qty	Rate	Total
Lift Style M/I DIMENSIONS: - Width: 17' 6" - Height: 5' 0" - Projection: 5' 0" MATERIAL: - Fabric: Sunbrella 100% Solution Dyed Acrylic - Color: Beaufort Black/White 6 Bar #5704 [To be confirmed] VALANCE: - Type: Loose - Height: 10" - Corners: Straight - Scallop Style: #5 Regular - Braid Color: Black FABRIC MOUNTING: - Top: Track - Sides: Pocket - Bottom: Pocket	1.00		2,325.00
FRAME: - 1.75" Round steel tubing - Paint Frame: No FRAME MOUNTING: - Surface: Brick - Bracket Type: Rod Hinge and holder - Footing Needed: No - Height: CUT OUTS AND CUT BACKS: - No GRAPHICS: - No MISC: -We propose to manufacture and install one (1) lift style awning using Sunbrella fabric in your choice of available colors. The framework will be of welded 1" x 1" squared aluminum tubing.			

CUSTOMER MESSAGE

Deposit due at time of order: $1,860.00
Balance due upon completion: $465.00

All taxes are included.

All permits required must be obtained by you at no cost to us. Assistance will be provided.

Delivery in approximately 5-7 weeks from the date the deposit is received, the signed proposal is received, color choices are made and the permit is received.

Field measurements will need to be taken.

Estimate Total: **$2,325.00**

PRE-WORK SIGNATURE

Signed By:

Terms and Conditions

Make checks payable to Hunzinger Williams Inc

Deposits are not refundable.

TERMS: deposit with the signed proposal. The balance will be due on installation/delivery.

Delivery and installation are estimated at approximately 4-5 weeks from the date of deposit and signed quotes are received as well as material options (fabric choices, colors, etc.) are finalized and permitting is obtained if needed.

For all commercial projects, we require a copy of the permit before beginning manufacturing.

This proposal may be withdrawn if not accepted within 30 days from the day was sent.

1. Purchaser shall have no right of the recession on special order or custom made goods and shall forfeit all down payments and be fully responsible to pay the entire balance due under all circumstances.
2. When goods are not installed by Seller, Purchaser acknowledges that he has inspected said goods and accepts them as conforming to the specifications herein and they are free of any/all defects.
3. If the customer requests total installation or any part of the installation to be delayed for whatever reason, full payment will be due for an entire contract at the time of originally scheduled installation.
4. Awnings purchased hereunder shall be manufactured and installed according to the specifications stated herein and following industry standards.
5. Purchaser shall be solely responsible for obtaining all necessary permits and the approval of any government entities at the purchaser's cost.
6. Any plans, drawings (whether to scale or freehand) requested by Purchaser after the contract has been accepted due to changes in the design or specifications hereof, or for any reason shall be an additional charge to Purchaser based on the detail and time expended by Seller.
7. All fabrics used in the construction of awnings are water repellent but not waterproof. Wrinkles or small flaws are generally anticipated for normal fabrication and will not affect the warranty. Distortions in the metal framework or minor variations in dimensions shall not affect the validity of this contract.
8. The product sold is designed to attach to a building based on visible representations or information as to the construction of the said building at the time of sale. In the event, the product sold cannot be
supported by said building due to incorrect or incomplete information, modifications to support structure will be made as necessary with the consent of Purchaser at additional cost to Purchaser.
9. ELECTRIC WORK - All electric work, parts, labor, and components are by the owner or a registered electrician. Costs are not included unless specifically noted on the contract.
10. All agreements contingent upon strikes, fire, accidents, natural disasters, acts of God, or delays beyond our control to obtain necessary materials. Owner to carry fire, tornado, and other necessary
insurance. Our workers are fully covered by Workers' Compensation Insurance.
Delays or failure of performance caused by "any act, event, or condition that has a material adverse effect on the ability of a party to this Agreement to perform its obligations hereunder if such act, event, or condition is beyond the reasonable control of such party and is not the result of such party's willful or negligent action or inaction and shall include, without limitation, (i) acts of God, war, public disorders, insurrection, rebellion, floods, hurricanes, earthquakes, lightning, or other natural calamities; (ii) acts or inaction of governmental or regulatory agencies or judicial bodies or changes in laws; (iii) explosions or fires; (iv) strikes or labor disturbances; (v) delays in obtaining goods or services from any subcontractor, materialman, or supplier by reason of any occurrence of any of the foregoing causes; or (v) any unforeseeable act or omission of any third party."

NOTE:
Cost Protection: Due to cost volatility for materials prices subject to change.

Past due balances are subject to a late charge of 1.5% monthly,18% annually, or the maximum per states law. If balances/invoices must be placed with a third party for collection, the customer is responsible for these additional collections and legal fees.

Do not email/mail credit card information.
We are not accepting PAYPAL.

Heisler's Bootery

is conveniently located in the heart of Downtown Crystal Lake. Just 2 short blocks from the train station with frequent service from Chicago Northwest suburbs.

PLENTY OF FREE PARKING
(See map below)



CITY OF CRYSTAL LAKE
Grant Agreement

THIS AGREEMENT, entered into this 17th day of January, 2023, between the City of Crystal Lake, Illinois (hereinafter referred to as "CITY") and the following designated business owner, (hereinafter referred to as "OWNER"), to witness:

Owner's Name: James Heisler

Business Name: Heisler's Bootery

Owner's Federal Tax ID#: 26-3880-192

Address of Property to be improved:

50 N. Williams Street

Crystal Lake, Illinois 60014

WITNESSETH:

WHEREAS, the CITY has the authority, pursuant to the laws of the State of Illinois and its home rule authority, to promote the health, safety, and welfare of the CITY and its residents, to encourage private development in order to enhance the local tax base, to increase employment, and to enter into contractual agreements with third parties for the purpose of achieving these purposes; and

WHEREAS, to promote the vitality of the CITY's commercial business areas, the CITY established its Economic Development Matching Grant Programs; and

WHEREAS, the Retailer Job Creation and Investment Programs provide financial assistance to building and business owners who occupy vacant space and facilitate job creation in Crystal Lake; and

WHEREAS, the City Council has found and determined that increased participation in the Retailer Job Creation and Investment Programs will encourage the maintenance and improvement of businesses within Crystal Lake and will stimulate economic activity in Crystal Lake, including the creation and maintenance of jobs and the attraction of consumers to Crystal Lake and will otherwise generally benefit the well-being of the residents of Crystal Lake by stimulating commercial growth, and provide crucial economic support to allow the CITY to continue to provide the level of municipal services to its commercial and residential citizens; and

WHEREAS, the CITY is authorized to expend public funds for a public benefit and by participating in the Retailer Job Creation and Investment Programs, the CITY will provide a benefit to the public, generally; and

WHEREAS, the OWNER has applied for reimbursement under the Retailer Job Creation and Investment Program; and

WHEREAS, The CITY has determined that the OWNER is eligible for the Retailer Job Creation and Investment Program, subject to the condition and limitation set forth in the City Code and this Agreement.

NOW THEREFORE, in consideration of the mutual covenants and agreements obtained herein, the CITY and the OWNER do hereby agree as follows:

SECTION 1

The CITY shall reimburse the OWNER for the cost of furniture, fixtures and equipment at OWNER'S property. Reimbursements to the OWNER will be made at a rate of fifty percent (50%) for the cost of façade improvements or of eligible furniture, fixtures, and equipment for the OWNER's business, up to a maximum amount of $10,000 for new retailers. Façade improvements must comply with all applicable codes and ordinances. The OWNER must follow all laws regarding prevailing wages for façade improvements. The actual total reimbursement amounts per this Agreement shall not exceed $10,000.

SECTION 2

The CITY's approval of a grant shall not be construed as permission to commence construction on the subject property. No improvements or construction shall be undertaken by the OWNER on the location of their business until applications for Building Permits and Occupancy have been submitted to the Building Division and approved by the CITY. Following approval, the OWNER shall occupy the subject property and commence full-time business operations within one hundred eighty days (180) from the date of City Council approval. The OWNER may request a ninety-day (90) extension provided there is a demonstrated hardship.

SECTION 3

Upon completion of the improvements and upon their final inspection and approval by the City Building Commissioner, the OWNER shall submit to the CITY properly executed documentation, including: receipts and cancelled checks for the purchase of the approved furniture, fixtures, and equipment; copies of material costs and certified payrolls verifying prevailing wages were paid for all façade improvements; copy of a final Certificate of Occupancy for the business. The CITY shall issue a check to the OWNER as reimbursement for one-half of the furniture, fixtures, and equipment, subject to the limitations set forth in Section 1 hereof once one year of sales tax data has been verified. The OWNER shall only be entitled to the reimbursement set forth in Section 1 hereof if the taxable sales exceed $150,000 in the first year of operation.

SECTION 4

If the OWNER fails to purchase furniture, fixtures, or equipment, or fails to construct improvements to the façade, consistent with the conditions of the approval by the Mayor and City Council, then upon written notice being given by the City Manager to the OWNER, by certified mail to the address listed above, this Agreement shall terminate and the financial obligation on the part of the CITY shall cease and become null and void.

SECTION 5

Upon completion of the improvement work pursuant to this Agreement, the OWNER shall be responsible for properly maintaining the façade, furniture, fixtures, and equipment without change or alteration thereto, as provided in this Agreement for a period of four (4) years following completion of the construction and/or business commencement.

SECTION 6

This Agreement shall be binding upon the CITY and upon the OWNER and its successors, to said property for a period of four (4) years from and after the date of completion and approval of the improvements provided herein. It shall be the responsibility of the OWNER to inform subsequent OWNER(S) of the provisions of this Agreement.

In the event that at any time, subsequent to the reimbursement payment required by this Agreement have been paid by the City, the OWNER abandons, closes, transfers, sells or terminates the OWNER's business upon the Property during the four (4) year term of this Agreement (hereinafter collectively referred to as the "Terminating Event"), the OWNER shall, within thirty (30) days from the date of the Terminating Event or such later date as the City may agree to in writing (hereinafter, the "Refund Payment Due Date"), refund to the City a portion of the Improvement Grant received from the City prior to the Terminating Event, in accordance with the following schedule (hereinafter, the "Refund Payment").

Date of Terminating Event	**% of the Total Grant Payment to be Refunded**
Within one year of the completion date	100%
Within two years of the completion date	75%
Within three years of the completion date	50%
Within four years of the completion date	25%

Such Refund Payment shall be paid to the City within thirty (30) days from the date of the Terminating Event (hereinafter, the "Refund Payment Due Date").

OWNER agrees on its own behalf and on behalf of its heirs, successors, and assigns that the City's right to the Refund Payment pursuant to this paragraph shall constitute both a personal obligation of the OWNER and a lien against the Property, and OWNER agrees that the City may record this Agreement with the McHenry County Recorder of Deeds. To further secure the repayment of Reimbursement Payments pursuant to this paragraph, OWNER agrees to execute and deliver to the City a UCC financing statement, in a form acceptable to the City Attorney, pledging inventory, accounts held at financial institutions, accounts receivables, and such other assets of the OWNER as the parties may agree to in writing, and OWNER further consents to the filing and/or recording of such financing statements as may be appropriate under the laws of the State of Illinois. Such financing statement shall be delivered to the City upon request.

SECTION 7

The OWNER releases the CITY from, and covenants and agrees that the CITY shall not be liable for, and covenants and agrees to indemnify and hold harmless the CITY and its officials, officers, employees, and agents from and against any and all losses, claims, damages, liabilities, or expenses, of every conceivable kind, character and nature whatsoever arising out of, resulting from or in any way connected directly or indirectly with the façade, furniture, fixtures, and equipment. The OWNER further covenants and agrees to pay for or reimburse the CITY and its officials, officers, employees, and agents for any and all costs, reasonable attorney's fees, liabilities, or expenses incurred in connection with investigating, defending against or otherwise in connection with any such losses, claims, damages, liabilities, or causes of action. The CITY shall have the right to select legal counsel and to approve any settlement in connection with such losses, claims, damages, liabilities, or causes of action.

IN WITNESS THEREOF, the parties hereto have executed this Agreement on the date first appearing above.

OWNER

CITY OF CRYSTAL LAKE

City Manager

ATTEST:

Agenda Item No: 11

City Council
Agenda Supplement

Meeting Date: January 17, 2023

Item: REPORT OF THE PLANNING & ZONING COMMISSION

269 Liberty Road - Monopine Wireless Communication Tower

Request: Special Use Permit for a Wireless Communication Tower and Variations from Article 2-400 to allow the Monopine style tower and for the tower to be setback less than 110% of the height of the tower from the west and south property lines

Petitioner: Michael Howley, Petitioner
660 Midwest Road, Suite 140, Oakbrook Terrace

PZC Recommendation: To deny the proposed Monopine Wireless Communication Tower

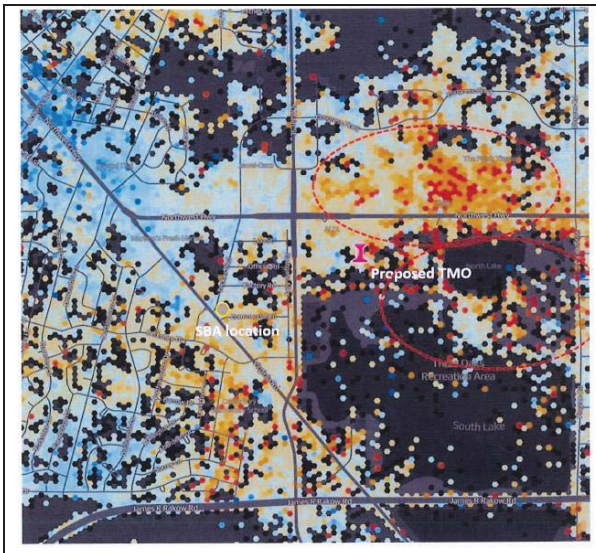
Staff Contact: Kathryn Cowlin, Director of Community Development
Elizabeth Maxwell, City Planner

Background:

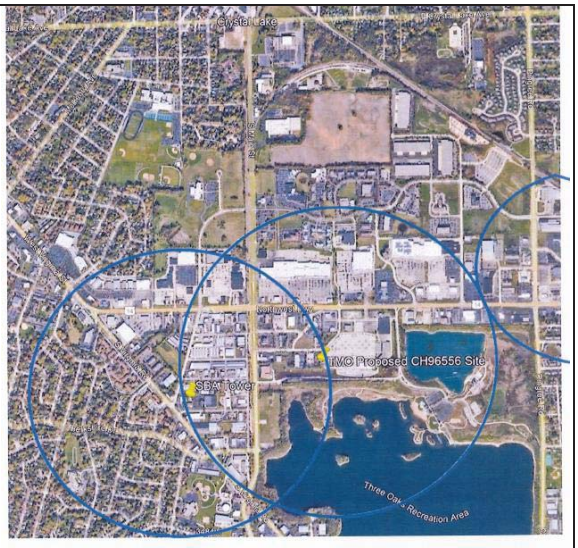
- This request was presented to the City Council on November 2, 2022. The Council reviewed the request and asked the petitioner to resubmit with the tower moved to the west, negating the variation from the Water's Edge development, and extending the branches down the base of the pole. The petitioner has made these changes and resubmitted their tower request.
- The location selected is an existing lot zoned Manufacturing, which is the appropriate zoning for wireless towers. Wireless towers are only permitted by a special use permit in the Manufacturing, Manufacturing-Limited and Estate zoning districts.
- This location was selected since it contained an existing tree line that would screen and blend with the proposed Monopine design. A variation is required for the Monopine design since the special use permit criteria require towers to be painted to match the sky. The Monopine design provides greater camouflage than simple paint.
- The narrowness of the existing lot is resulting in the tower not meeting the 110% (115.5-foot) setback requirement.
    - The tower would be 37 feet 10 inches from the west property line (adjacent property is industrial)

- The tower would be 64 feet 9 inches from the south (adjacent property is the Three Oaks Recreation Area retention basin)

- Recent tower approvals:
  - In 2015 at 6521 Commercial. The tower is 130 feet high, requiring a 143-foot setback. The variations were to allow a 76.5-foot setback to the north, 117-foot setback to the west, and a 58.3-foot setback to the east. The discussion during the PZC meeting was that since the tower collapses on itself and is surrounded by industrial properties the variations were appropriate.
  - In 2010 at 1100 Coventry Lane (Crystal Lake Wastewater Treatment Plant). The tower received a Special Use Permit and variations for location and illumination of the pole due to the location near the LITH airport. The tower is 139 feet high and met the setback requirements.
- There are also numerous towers around the City that were annexed as is and variations were not granted from setbacks by the City.
- Below is an exhibit submitted by the petitioners illustrating that existing tower facilities in the surrounding area would not provide the coverage needs.



Existing coverage map. Red/orange areas have poor coverage.



Map of coverage areas comparing the existing towers on Commercial and Cog Circle vs. the proposed location.

PZC Highlights:

- Attorney and Structural Engineer for the SBA wireless communication tower located 2,400 feet away objected to the proposed tower. They stated it did not meet the review criteria requirements. The petitioner shared SBA does not have T-Mobile proprietary data and therefore cannot comment on coverage abilities.
- The majority of the Commission stated they did not believe the petitioner proved they had a hardship. One member felt that they did meet the hardship criteria.

- The majority of the PZC found that this request did not meet the Findings of Fact.

The PZC recommended **denial (3-1)** of the petitioner's request.

If the City Council chooses to deny the request, there is a draft resolution.

If the City Council chooses to approve the request, the following conditions are recommended:

1. Approved plans, reflecting staff and advisory board recommendations, as approved by the City Council:
   A. Application (Koch, received 07/28/22)
   B. Narrative Letter (Insite, dated 12/14/22, received 12/14/22 and 08/18/22, received 08/26/22)
   C. Fall Zone Letter (Valmont, dated 08/24/22, received 08/26/22)
   D. Site Design (Edge, dated 12/08/22, received 12/09/22)
   E. Site Photos (Edge, dated 12/07/22, received 12/09/22)
   F. Radio Frequency Letters (Bernardo, undated, received 08/26/22 and 10/25/22)
   G. Coverage Map (undated, received 08/26/22)
   H. Emission Report (Waterford, dated 07/18/22, received 08/26/22)

2. No outside storage shall be allowed on any facility site.

3. Towers shall not be artificially lighted, unless required by the FAA or other applicable authority.

4. A single sign measuring no more than two square feet in size can be located on or near the tower, and shall identify the tower owner, the street address of the tower, the owner's identification code for the tower, and a twenty-four-hour emergency contact telephone number.

5. No commercial advertising shall be allowed on the tower or its related facilities.

6. The petitioner shall work with staff to enhance the landscaping buffer along the property lines, especially to the east.

7. The driveway leading to the new cell tower will need to be paved per City standards.

8. If any portion of the equipment structure is visible above the fence the entire structure shall be constructed of brick. Any metal structure shall be painted a light grey or sky color to blend in.

9. The structural integrity of the tower and antenna will continue to comply with state and federal standards, local building codes, and the applicable standards for towers published by the American National Standards Institute (ANSI), as amended. If, upon inspection, it is determined a tower fails to comply with such standards and constitutes a danger to persons or property, the owner shall be notified that he/she has 30 days to bring the tower into compliance. Failure to bring the tower into compliance within 30 days shall constitute grounds for the removal of the tower at the owner's expense.

10. The tower and antennas shall meet or exceed current standards and regulations of the FAA, the FCC, and any other agency of the state or federal government that regulates towers and antennas. If such standards and regulations change, owners shall be responsible for bringing the towers and antennas into compliance with the changed standards and regulations within six months of their effective date, unless a different compliance schedule is mandated by the controlling regulations (Failure to bring towers and antennas into compliance shall constitute grounds for removal of the tower or antenna, at the owner's expense.).

11. The monopine pole camouflaging elements must be maintained and the upkeep of the appearance/finish of the materials is the responsibility of the pole owner or property owner. Any missing camouflaging elements must be replaced if found missing, any debris that is blown into the camouflaging must be removed and any debris that sheds from the pole must be cleaned by the pole owner or property owner.

12. The petitioner shall address all of the review comments and requirements of the Community Development, Public Works and Engineering, Fire and Police Departments.

Votes Required to Pass: A simple majority (4 votes).

Monopine Design

Original request tree design



Revised request tree design with extended branches



Acknowledgement Form

Regarding the Special Use Permit with Variations at 269 Liberty Drive. Please check one of the choices and sign below.

X I hereby acknowledge that I have read, understand, and agree to the staff review comments and recommended conditions contained in the staff report, city staff reviews, and consultant reviews (if applicable).

☐ I hereby acknowledge that I have read, understand, and agree to most of the staff review comments and recommended conditions contained in the staff report, city staff reviews, and consultant reviews (if applicable) but have concerns with the following items:

_____

_____

Petitioner's Name: */s/ Zeke Katz* (attorney for Petitioner Vertical Bridge) Date: January 11, 2023
Signature

Recommended Conditions:

1. Approved plans, reflecting staff and advisory board recommendations, as approved by the City Council:
   A. Application (Koch, received 07/28/22)
   B. Narrative Letter (Insite, dated 12/14/22, received 12/14/22 and 08/18/22, received 08/26/22)
   C. Fall Zone Letter (Valmont, dated 08/24/22, received 08/26/22)
   D. Site Design (Edge, dated 12/08/22, received 12/09/22)
   E. Site Photos (Edge, dated 12/07/22, received 12/09/22)
   F. Radio Frequency Letters (Bernardo, undated, received 08/26/22 and 10/25/22)
   G. Coverage Map (undated, received 08/26/22)
   H. Emission Report (Waterford, dated 07/18/22, received 08/26/22)

2. No outside storage shall be allowed on any facility site.

3. Towers shall not be artificially lighted, unless required by the FAA or other applicable authority.

4. A single sign measuring no more than two square feet in size can be located on or near the tower, and shall identify the tower owner, the street address of the tower, the owner's identification code for the tower, and a twenty-four-hour emergency contact telephone number.

5. No commercial advertising shall be allowed on the tower or its related facilities.

6. The petitioner shall work with staff to enhance the landscaping buffer along the property lines, especially to the east.

7. The driveway leading to the new cell tower will need to be paved per City standards.

8. If any portion of the equipment structure is visible above the fence the entire structure shall be constructed of brick. Any metal structure shall be painted a light grey or sky color to blend in.

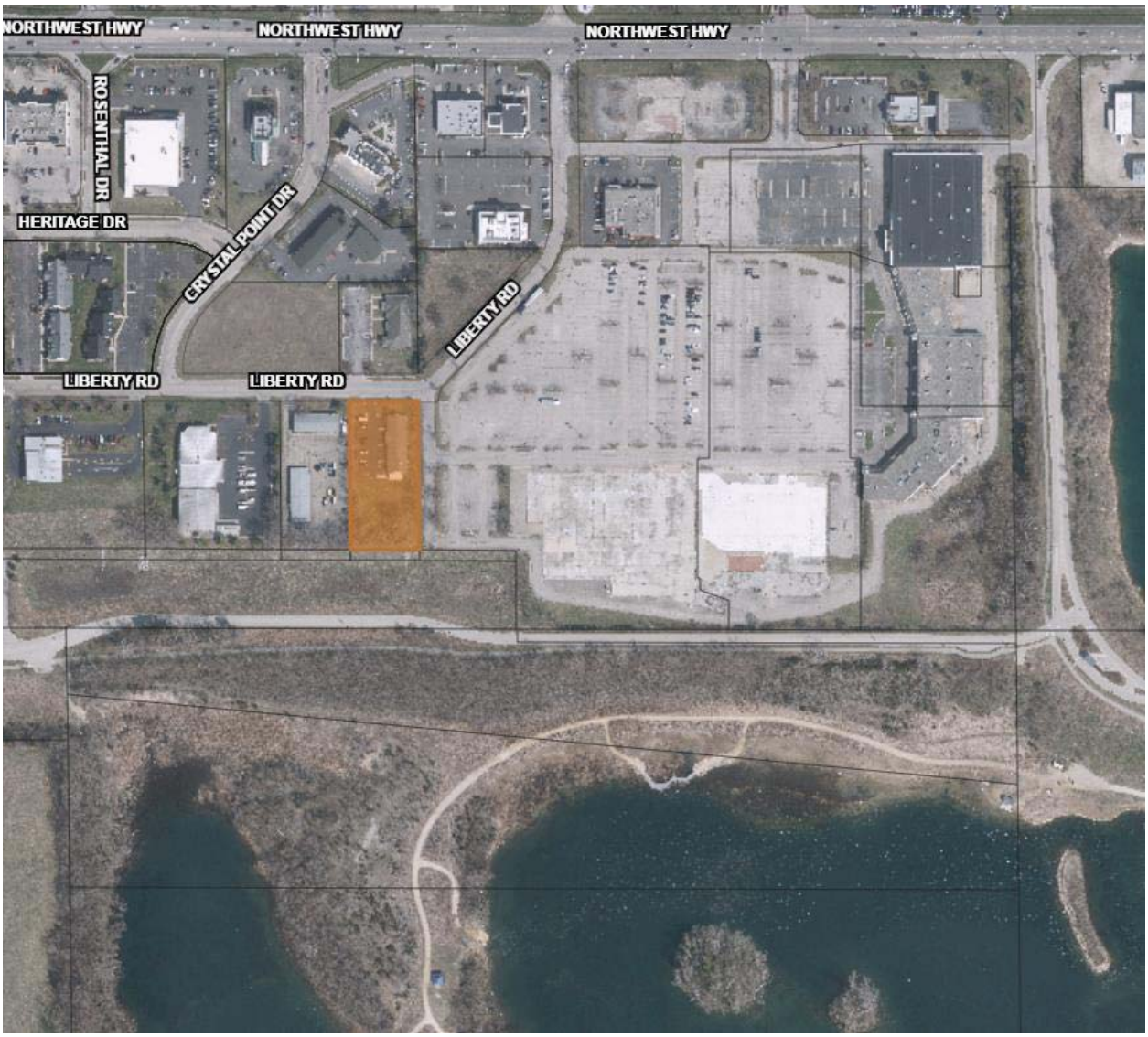
9. The structural integrity of the tower and antenna will continue to comply with state and federal standards, local building codes, and the applicable standards for towers published by the American National Standards Institute (ANSI), as amended. If, upon inspection, it is determined a tower fails to comply with such standards and constitutes a danger to persons or property, the owner shall be notified that he/she has 30 days to bring the tower into compliance. Failure to bring the tower into compliance within 30 days shall constitute grounds for the removal of the tower at the owner's expense.

10. The tower and antennas shall meet or exceed current standards and regulations of the FAA, the FCC, and any other agency of the state or federal government that regulates towers and antennas. If such standards and regulations change, owners shall be responsible for bringing the towers and antennas into compliance with the changed standards and regulations within six months of their effective date, unless a different compliance schedule is mandated by the controlling regulations (Failure to bring towers and antennas into compliance shall constitute grounds for removal of the tower or antenna, at the owner's expense.).

11. The monopine pole camouflaging elements must be maintained and the upkeep of the appearance/finish of the materials is the responsibility of the pole owner or property owner. Any missing camouflaging elements must be replaced if found missing, any debris that is blown into the camouflaging must be removed and any debris that sheds from the pole must be cleaned by the pole owner or property owner.

12. The petitioner shall address all of the review comments and requirements of the Community Development, Public Works and Engineering, Fire and Police Departments.

PIQ Map
269 Liberty Road



The City of Crystal Lake Illinois

RESOLUTION DENYING A REQUEST FOR SPECIAL USE PERMIT WITH VARIATIONS FOR A MONOPINE WIRELESS COMMUNICATIONS TOWER AT 269 LIBERTY ROAD

WHEREAS, pursuant to the terms of a Petition (File #PLN-2022-199) before the Crystal Lake Planning and Zoning Commission, the Petitioner has requested a Special Use Permit with Variations from the SUP criteria for style/design and from the required setbacks to allow a new Monopine Wireless Communications Tower at the lot commonly known as 269 Liberty Road and identified as P.I.N. 19-09-104-015 (the "***Property***"); and

WHEREAS, the Planning and Zoning Commission of the City of Crystal Lake, pursuant to notice duly published on December 1, 2022 in the *Northwest Herald*, held a public hearing at 7:00 p.m., on December 21, 2022, at City Hall at 100 W. Woodstock Street, Crystal Lake, Illinois to consider the proposed Special Use Permit; and

WHEREAS, on December 21, 2022, the Planning and Zoning Commission, having fully heard and considered the testimony of all those present at the public hearing who wished to testify, made findings of fact as required by law and recommended to the Mayor and City Council of the City of Crystal Lake that the proposed Special Use Permit be denied, as documented in the minutes, and

WHEREAS, under the City's Unified Development Ordinance (the "***UDO***"), wireless communication towers are required to be set back from all lot lines a distance of at least 110% of the height of such tower; and

WHEREAS, notwithstanding the establishment of the 110% setback for wireless communication towers, the Petitioner has requested a variation from this setback requirement along the west and south lot line of the Property; and

WHEREAS, the neighboring lots to the south and west of the Property are nonresidential in character; and

WHEREAS, the Property is located immediately west of a parcel zoned for residential development (the "***Residential Property***"); and

WHEREAS, the UDO regulations pertaining to wireless communication towers (including the

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110% setback), *see* UDO §2-400.C.48, are intended to "protect residential areas and land uses from potential adverse impacts of towers," and to this end the UDO encourages the location of wireless communication towers "in nonresidential areas" "where the adverse impact on the community is minimal," UDO §2-400.C.48(a)(i, ii); and

WHEREAS, the 110% setback helps protect adjoining properties from risk of debris falling from a wireless communication towers, as well as provides a buffer between a wireless communication towers and adjoining properties; and

WHEREAS, although the Petitioner contended that the design of the proposed wireless communication tower would preclude the tower from falling directly onto the adjacent property, the Petitioner offered no information on how the adjoining adjacent property will be protected from falling snow, ice, and other debris that forms on or may otherwise accumulate on the tower and its design elements; and

WHEREAS, the City Council of the City of Crystal Lake has determined that the granting of a special use permit and variations for a wireless communication tower on the Property as presented in the Petition will disserve the public health, safety, and welfare;

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF CRYSTAL LAKE, McHENRY COUNTY, ILLINOIS, as follows:

SECTION 1: The foregoing recitals are incorporated into and made a part of this Resolution.

SECTION 2: The Petition for zoning relief to install a wireless communication tower at 269 Liberty Road is hereby denied for the reasons hereinabove set forth.

SECTION 3: This Resolution shall be in full force and effect from and after its passage, approval and publication as provided by law.

DATED at Crystal Lake, Illinois, this 17th day of January, 2023.

City of Crystal Lake, an
Illinois municipal corporation

_____
Haig Haleblian, MAYOR

SEAL

ATTEST:

_____
Nick Kachiroubas, CITY CLERK
Passed: January 17, 2023
Approved: January 17, 2023

Draft

Ord. No.
File No.

The City of Crystal Lake Illinois

AN ORDINANCE GRANTING A SPECIAL USE PERMIT WITH VARIATIONS FOR A MONOPINE WIRELESS COMMUNICATIONS TOWER AT 269 LIBERTY ROAD

WHEREAS, pursuant to the terms of a Petition (File #PLN-2022-199) before the Crystal Lake Planning and Zoning Commission, the Petitioner has requested a Special Use Permit with Variations from the SUP criteria for style/design and from the required setbacks to allow a new Monopine Wireless Communications Tower at 269 Liberty Road; and

WHEREAS, the Planning and Zoning Commission of the City of Crystal Lake, pursuant to notice duly published on December 1, 2022 in the Northwest Herald, held a public hearing at 7:00 p.m., on December 21, 2022, at City Hall at 100 W. Woodstock Street, Crystal Lake, Illinois to consider the proposed Special Use Permit; and

WHEREAS, on December 21, 2022, the Planning and Zoning Commission, having fully heard and considered the testimony of all those present at the public hearing who wished to testify, made findings of fact as required by law and recommended to the Mayor and City Council of the City of Crystal Lake that the proposed Special Use Permit be denied, as documented in the minutes, and

WHEREAS, it is in the best interests of the CITY OF CRYSTAL LAKE that the Special Use Permit be issued as requested in said Petition.

NOW, THEREFORE, BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF CRYSTAL LAKE, McHENRY COUNTY, ILLINOIS, as follows:

Section I: That a Special Use Permit with Variations to allow the Monopine Wireless Communication Tower at the property commonly known as at 269 Liberty Road (19-09-104-015), Crystal Lake, Illinois is hereby approved.

Section II: Said Special Use Permit is issued with the following conditions:

1. Approved plans, reflecting staff and advisory board recommendations, as approved by the City Council:
   A. Application (Koch, received 07/28/22)
   B. Narrative Letter (Insite, dated 12/14/22, received 12/14/22 and 08/18/22, received 08/26/22)

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C. Fall Zone Letter (Valmont, dated 08/24/22, received 08/26/22)
D. Site Design (Edge, dated 12/08/22, received 12/09/22)
E. Site Photos (Edge, dated 12/07/22, received 12/09/22)
F. Radio Frequency Letters (Bernardo, undated, received 08/26/22 and 10/25/22)
G. Coverage Map (undated, received 08/26/22)
H. Emission Report (Waterford, dated 07/18/22, received 08/26/22)

2. No outside storage shall be allowed on any facility site.

3. Towers shall not be artificially lighted, unless required by the FAA or other applicable authority.

4. A single sign measuring no more than two square feet in size can be located on or near the tower, and shall identify the tower owner, the street address of the tower, the owner's identification code for the tower, and a twenty-four-hour emergency contact telephone number.

5. No commercial advertising shall be allowed on the tower or its related facilities.

6. The petitioner shall work with staff to enhance the landscaping buffer along the property lines, especially to the east.

7. The driveway leading to the new cell tower will need to be paved per City standards.

8. If any portion of the equipment structure is visible above the fence the entire structure shall be constructed of brick. Any metal structure shall be painted a light grey or sky color to blend in.

9. The structural integrity of the tower and antenna will continue to comply with state and federal standards, local building codes, and the applicable standards for towers published by the American National Standards Institute (ANSI), as amended. If, upon inspection, it is determined a tower fails to comply with such standards and constitutes a danger to persons or property, the owner shall be notified that he/she has 30 days to bring the tower into compliance. Failure to bring the tower into compliance within 30 days shall constitute grounds for the removal of the tower at the owner's expense.

10. The tower and antennas shall meet or exceed current standards and regulations of the FAA, the FCC, and any other agency of the state or federal government that regulates towers and antennas. If such standards and regulations change, owners shall be responsible for bringing the towers and antennas into compliance with the changed standards and regulations within six months of their effective date, unless a different compliance schedule is mandated by the controlling regulations (Failure to bring towers and antennas into compliance shall constitute grounds for removal of the

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tower or antenna, at the owner's expense.).

11. The monopine pole camouflaging elements must be maintained and the upkeep of the appearance/finish of the materials is the responsibility of the pole owner or property owner. Any missing camouflaging elements must be replaced if found missing, any debris that is blown into the camouflaging must be removed and any debris that sheds from the pole must be cleaned by the pole owner or property owner.

12. The petitioner shall address all of the review comments and requirements of the Community Development, Public Works and Engineering, Fire and Police Departments.

Section III: That the City Clerk be and is hereby directed to amend all pertinent records of the City of Crystal Lake to show the issuance of a Special Use Permit in accordance with the provisions of this Ordinance, as provided by law.

Section IV: That this Ordinance shall be in full force and effect from and after its passage, approval and publication as provide by law.

DATED at Crystal Lake, Illinois, this 17th day of January, 2023.

City of Crystal Lake, an
Illinois municipal corporation

_____
Haig Haleblian, MAYOR

SEAL

ATTEST:

_____
Nick Kachiroubas, CITY CLERK

Passed: January 17, 2023
Approved: January 17, 2023

Draft

#2022-199 Vertical Bridge Monopine Tower
Special Use Permit & Zoning Variation
Project Review for Planning and Zoning Commission

Meeting Date:	December 21, 2022
Request:	A Special Use Permit (SUP) for a wireless communication tower and variations from the SUP criteria in Article 2-400 to allow the Monopine style tower and for the tower to be setback less than 110% of the height of the tower from the west and south property lines.
Location:	269 Liberty Drive
Acreage:	Approximately 1.2 acres
Existing Zoning:	M (Manufacturing)
Surrounding Properties:	North: B-2 (General Commercial) South: M (Manufacturing) Three Oaks Recreation Area East: B-2 PUD (General Commercial) future Water's Edge West: M PUD (Manufacturing)
Staff Contact:	Elizabeth Maxwell (815.356.3738)

Background:

- Existing Use: The property is currently improved with a commercial recreation building that teaches scuba diving.
- The request was originally presented at the November 2nd meeting and was referred to the City Council with a denial recommendation. The Council suggested moving the tower to the west away from the future residential and extending the "branches" down the trunk.
- The petitioner has moved the tower to the west and extended the branches down. Public notifications were completed for the revised request.
- The petitioner explored locating the wireless communication facilities on existing private towers and public utilities. According to the petitioner, there are currently no existing structures that could accommodate the communications facility within the petitioner's targeted area.
- The proposed tower is designed as a Monopine to look like a large pine tree. There is a tree line behind the property so the Monopine tower tree will blend with other nearby vegetation.
- UDO Requirements: A special use permit is required for wireless communication towers.
- SUP Criteria: The petitioner is deviating from two of the criteria:

  - The requirements to paint the tower a grey or sky color requires a variation since they have selected a Monopine design.
  - The requirement for wireless communication facilities to be setback 110% of the height of the tower, or 115.5 feet from all property lines. The tower would be setback:
    - 37 feet 10 inches from the west property line
    - 64 feet 9 inches from the south property line
  - It should be noted that the tower meets the setback to the north and east.
- Land Use: The land use map shows the area as Industry. This land use designation is appropriate for this use.
- Zoning: The site is zoned M (Manufacturing).

Proposed Development Description

- The proposed improvement is for a 105-foot Monopine tower in a 50-foot by 50-foot fenced area.
- The fenced area is setback about 260 feet from the roadway. The fence will be an eight-foot solid screening fence and inside will house the equipment.
- There is additional room within the fenced area to accommodate multiple carriers.
- The "pine" branches are manufactured of steel and the "needles" are an artificial material, which has been wind tunnel tested to over 100 mph winds.



Wind tunnel testing.


Revised illustration with lower "branches".

2030 Comprehensive Land Use Plan Review:

The Comprehensive Plan designates the subject property as Industry, which allows for existing and future manufacturing uses. The proposed wireless communication tower falls under Community Facilities. This project meets the following goal:

Community Facilities – Public Facilities

Goal: Support the specific needs and goals of public facilities to ensure cooperation between public and city facilities for the health, safety, and needs of the community.

This can be accomplished with the following supporting action:

Supporting Action: Carefully plan for utility service extensions to ensure compatibility with existing infrastructure and land uses.

Findings of Fact:

SPECIAL USE PERMIT

Special Uses require a separate review because of their potential to impact surrounding properties and the orderly development of the City. Section 2-400 of the Unified Development Ordinance establishes standard for all Special Uses in Crystal Lake. The criteria are as follows:

1. That the proposed use is necessary or desirable, at the location involved, to provide a service or facility which will further the public convenience and contribute to the general welfare of the neighborhood or community.

   ☒ *Meets* ☐ *Does not meet*

2. That the proposed use will not be detrimental to the value of other properties or improvements in the vicinity.

   ☒ *Meets* ☐ *Does not meet*

3. That the proposed use will comply with the regulations of the zoning district in which it is located and this Ordinance generally, including, but not limited to, all applicable yard and bulk regulations, parking and loading regulations, sign control regulations, watershed, wetlands, and flood plain regulations, Building and Fire Codes and all other applicable City Ordinances.

   ☐ *Meets* ☒ *Does not meet*

4. That the proposed use will not negatively impact the existing off-site traffic circulation; will adequately address on-site traffic circulation; will provide adequate on-site parking facilities; and, if required, will contribute financially, in proportion to its impact, to upgrading roadway and parking systems.

   ☒ *Meets* ☐ *Does not meet*

5. That the proposed use will not negatively impact existing public utilities and municipal service delivery systems and, if required, will contribute financially, in proportion to its impact, to the upgrading of public utility systems and municipal service delivery systems.

   ☒ *Meets* ☐ *Does not meet*

6. That the proposed use will not impact negatively on the environment by creating air, noise, or water pollution; ground contamination; or unsightly views.

   ☒ *Meets* ☐ *Does not meet*

7. That the proposed use will maintain, where possible, existing mature vegetation; provide adequate screening to residential properties; provide landscaping in forms of ground covers, trees and shrubs; and provide architecture, which is aesthetically appealing, compatible or complementary to surrounding properties and acceptable by community standards, as further detailed in Article 4, Development and Design Standards.

   ☒ *Meets* ☐ *Does not meet*

8. That the proposed use will meet standards and requirements established by jurisdictions other than the City such as Federal, State or County statutes requiring licensing procedures or health/safety inspections, and submit written evidence thereof.

   ☒ *Meets* ☐ *Does not meet*

9. That the proposed use shall conform to any stipulations or conditions approved as part of a Special Use Permit issued for such use.

   ☒ *Meets* ☐ *Does not meet*

10. That the proposed use shall conform to the standards established for specific special uses as provided in this section.

    ☒ *Meets* ☐ *Does not meet*

Radio transmission towers, wireless communication facilities. All radio transmission towers and wireless communication facilities must comply with the following standards:

1. Towers shall be designed to meet the wind loading requirements specified in the American National Standards Institute TIA-222-F Report, as amended.

   ☒ *Meets* ☐ *Does not meet*

   They have submitted documents which show they are complying with this criterion.

2. The owner/applicant shall provide documentation to the City demonstrating that the structural integrity of the towers and antenna will continue to comply with state and federal standards, local building codes, and the applicable standards for towers published by the American National Standards Institute (ANSI), as amended. If, upon inspection, it is determined a tower fails to comply with such standards and constitutes a danger to persons or property, the owner shall be notified that he/she has 30 days to bring the tower into compliance. Failure to bring the tower into compliance within 30 days shall constitute grounds for the removal of the tower at the owner's expense.

   ☒ *Meets* ☐ *Does not meet*

   They have submitted documents which show they are complying with this criterion.

3. Freestanding wireless communication or radio transmission towers shall not exceed 200 feet in height as measured from the tower base to the highest point of the tower and any attached receiving or transmitting device.

   ☒ *Meets* ☐ *Does not meet*

They have submitted documents which show they are complying with this criterion.

4. Franchises and licenses: The operator shall provide documentation to the City to demonstrate that all franchises and licenses required by law for the construction and/or operation of a tower or antenna have been obtained.

   ☒ *Meets* ☐ *Does not meet*

   They have submitted documents which show they are complying with this criterion.

5. Towers shall either maintain a galvanized steel finish or, subject to any applicable standards of the FAA, be painted a neutral color (i.e., light grey) to reduce visual obtrusiveness or painted in a sky-tone above the top of surrounding trees and in an earth-tone below the treetop level.

   ☐ *Meets* ☒ *Does not meet*

   The proposed tower is a Monopine style to look like a pine tree.

6. At a tower site, the design of buildings and related structures shall, to the maximum extent practicable, use materials, colors and architectural styles that blend into the natural setting and surrounding buildings.

   ☒ *Meets* ☐ *Does not meet*

   They have submitted documents which show they are complying with this criterion.

7. Storage: No outside storage shall be allowed on any facility site.

   ☒ *Meets* ☐ *Does not meet*

   They have submitted documents which show they are complying with this criterion.

8. Lighting: Towers shall not be artificially lighted, unless required by the FAA or other applicable authority.

   ☒ *Meets* ☐ *Does not meet*

   They have submitted documents which show they are complying with this criterion.

9. A single sign measuring no more than two square feet in size shall be located on or near the tower, and shall identify the tower owner, the street address of the tower, the owner's identification code for the tower, and a twenty-four-hour emergency contact telephone number.

   ☒ *Meets* ☐ *Does not meet*

   They have submitted documents which show they are complying with this criterion.

10. No commercial advertising shall be allowed on the tower or its related facilities.

    ☒ *Meets* ☐ *Does not meet*

    They have submitted documents which show they are complying with this criterion.

11. Single lot: Towers, guy anchors, equipment buildings, and any other appurtenances related to the tower shall be considered as being located on one zoning lot.

    ☒ *Meets* ☐ *Does not meet*

    They have submitted documents which show they are complying with this criterion.

12. Setbacks: Wireless communications facilities shall comply with the following setback standards. Self supporting and monopole towers shall be setback from all property lines by a distance of 110% of the height of the tower.

    ☐ *Meets* ☒ *Does not meet*

    They have requested a deviation from this setback requirement from the west and south property lines.

13. Equipment buildings associated with a wireless communication facility shall meet the minimum setback requirements for the zoning district where located.

    ☒ *Meets* ☐ *Does not meet*

    They have submitted documents which show they are complying with this criterion.

14. Separation: If an applicant proposes a new wireless communications tower or radio transmission tower within 1,200 feet of an existing tower, the applicant shall submit a statement indicating the reasons why the existing tower(s) was inadequate or unavailable. The Zoning Administrator shall allow the owner of such existing tower an opportunity to comment prior to making a decision.

    ☒ *Meets* ☐ *Does not meet*

    They have submitted documents which show they are complying with this criterion.

15. Collocation: New wireless communication or radio transmission towers shall provide evidence that the tower is structurally designed to support at least three additional users, and provide a written statement that the owner of the tower is willing to permit other user(s) to attach communication facilities, on a commercially reasonable basis, which do not interfere with the primary purpose of the tower. The site plan shall indicate a location for at least one equipment building in addition to that proposed for use by the applicant. A tower which is modified or reconstructed to accommodate the collocation of an additional antenna shall be of the same tower type as the existing tower, unless a monopole is determined more appropriate at the specific location. If an existing tower is increased in height or reconstructed to accommodate the collocation of additional antenna it shall meet the height restrictions outlined within this section of the Ordinance.

    ☒ *Meets* ☐ *Does not meet*

    They have submitted documents which show they are complying with this criterion.

16. Landscaping: Unless existing vegetation provides a buffer strip, all property lines along roadways or visible to existing abutting or nearby buildings (within 1/4 mile radius), for all facilities shall be landscaped as follows:

a. With six-foot to eight-foot evergreen shrubs planted in an alternate pattern, five feet on center and within 15 feet of the site boundary; or
b. With at least one row of deciduous trees, not less than 2 1/2 inch to three inches caliper measured three feet above grade, and spaced not more than 30 feet apart and within 25 feet of the site boundary; or
c. With at least one row of evergreen trees at least four to five feet in height when planted, and spaced not more than 15 feet apart within 40 feet of the site boundary.
d. In lieu of the foregoing, the Planning and Zoning Commission may determine that the existing vegetation must be supplemented to meet an equivalent means of achieving the desired goal of minimizing the visual impact.

☒ *Meets* ☐ *Does not meet*

They have submitted documents which show they are complying with this criterion.

17. Security fencing: Towers, guy anchor supports, and ground-based equipment buildings shall be enclosed by security fencing not less than eight feet in height and equipped with an appropriate anti-climbing device.

☒ *Meets* ☐ *Does not meet*

They have submitted documents which show they are complying with this criterion.

18. Radiation reporting: It shall be demonstrated that the proposed tower, antenna, and supporting equipment complies with FCC nonionizing radiation requirements for individual and combined facilities.

☒ *Meets* ☐ *Does not meet*

They have submitted documents which show they are complying with this criterion.

19. Interference: No wireless communications tower, antenna, or supporting equipment shall interfere with equipment operated by the City of Crystal Lake.

☒ *Meets* ☐ *Does not meet*

They have submitted documents which show they are complying with this criterion.

Recommended Conditions:

If a motion to recommend approval of the petitioner's request is made, it should be with the following conditions:

1. Approved plans, reflecting staff and advisory board recommendations, as approved by the City Council:
   A. Application (Koch, received 07/28/22)
   B. Narrative Letter (Insite, dated 12/14/22 and 08/18/22, received 12/14/22 and 08/26/22 respectively)
   C. Fall Zone Letter (Valmont, dated 08/24/22, received 08/26/22)
   D. Site Design (Edge, dated 12/08/22, received 12/09/22)
   E. Site Photos (Edge, dated 12/07/22, received 12/09/22)
   F. Radio Frequency Letters (Bernardo, undated, received 08/26/22 and 10/25/22)

G. Coverage Map (undated, received 08/26/22)
H. Emission Report (Waterford, dated 07/18/22, received 08/26/22)

2. No outside storage shall be allowed on any facility site.

3. Towers shall not be artificially lighted, unless required by the FAA or other applicable authority.

4. A single sign measuring no more than two square feet in size can be located on or near the tower, and shall identify the tower owner, the street address of the tower, the owner's identification code for the tower, and a twenty-four-hour emergency contact telephone number.

5. No commercial advertising shall be allowed on the tower or its related facilities.

6. The petitioner shall work with staff to enhance the landscaping buffer along the property lines, especially to the east.

7. The driveway leading to the new cell tower will need to be paved per City standards.

8. If any portion of the equipment structure is visible above the fence the entire structure shall be constructed of brick. Any metal structure shall be painted a light grey or sky color to blend in.

9. The structural integrity of the tower and antenna will continue to comply with state and federal standards, local building codes, and the applicable standards for towers published by the American National Standards Institute (ANSI), as amended. If, upon inspection, it is determined a tower fails to comply with such standards and constitutes a danger to persons or property, the owner shall be notified that he/she has 30 days to bring the tower into compliance. Failure to bring the tower into compliance within 30 days shall constitute grounds for the removal of the tower at the owner's expense.

10. The tower and antennas shall meet or exceed current standards and regulations of the FAA, the FCC, and any other agency of the state or federal government that regulates towers and antennas. If such standards and regulations change, owners shall be responsible for bringing the towers and antennas into compliance with the changed standards and regulations within six months of their effective date, unless a different compliance schedule is mandated by the controlling regulations (Failure to bring towers and antennas into compliance shall constitute grounds for removal of the tower or antenna, at the owner's expense.).

11. The monopine pole camouflaging elements must be maintained and the upkeep of the appearance/finish of the materials is the responsibility of the pole owner or property owner. Any missing camouflaging elements must be replaced if found missing, any debris that is blown into the camouflaging must be removed and any debris that sheds from the pole must be cleaned by the pole owner or property owner.

12. The petitioner shall address all of the review comments and requirements of the Community Development, Public Works and Engineering, Fire and Police Departments.

City of Crystal Lake
Development Application
Ownership Sign-off Acknowledgement Form

The following information is related to a development application. As the owner of the property in question, I (we) acknowledge that the information provided in the submittal was reviewed and approved.

Owner Information

Name: Arthur Koch

Address: 269 Liberty Road

Crystal Lake, IL 60014

Phone: 815-479-0996

E-mail: sealevel@sealeveldiving.com

Project Name & Description: Proposed Monopine Design Cell Tower at 269 Liberty Road

Project Address/Location: 269 Liberty Road (Sea Level Diving)

Signature

Arthur Koch July 28/2022

Owner: Print and Sign name Date

NOTE: If the property is held in a trust, the trust officer must sign this petition as owner. In addition, the trust officer must provide a letter that names all beneficiaries of the trust.

To whom it may concern,

Calypso Ventures, LLC an Illinois limited partnership, is owned by Arthur and Gina Koch of 828 Oak Hollow Dr, Crystal Lake, IL. Arthur Koch, as owner, has the authority to sign on behalf of Calypso Ventures, LLC.

Arthur Koch
Sea Level Diving
269 Liberty rd
Crystal Lake, IL 60014
815-479-0996

CRYSTAL LAKE PLANNING AND ZONING COMMISSION
WEDNESDAY, DECEMBER 21, 2022
HELD AT THE CRYSTAL LAKE CITY COUNCIL CHAMBERS

The meeting was called to order by Mr. Greenman at 7:00 p.m.

CALL TO ORDER

On roll call, members, Atkinson, Greenman, Skluzacek, Smith, and Teetsov were present. Mr. Gronow and Ms. Repholz were absent.

Elizabeth Maxwell, City Planner was present from Staff.

Mr. Greenman said this meeting is being recorded for broadcast and future playback on the City's cable channel. He led the group in the Pledge of Allegiance.

2022-199 – 4504 NORTHWEST HIGHWAY – FINAL PUD AMENDMENT AND VARIATIONS

Request for a Special Use Permit with Variations from the criteria, from the required 115.5-foot setback from the west and south property lines and the color/design requirement of a grey or sky color to allow a new monopine wireless communication tower.

Commission Member Scott Smith recused himself for a conflict of interest.
Mr. Zeke Katz, attorney, Mr. Art Koch, owner, and Mr. Mike Howley, site acquisition specialist, were present to represent the petition. Mr. Katz presented the history of their request. They previously submitted for a tower more in the center of the lot, at the City Council meeting, the Council requested the tower be moved west farther away from the future residential and to increase the number of branches on the tree post to cover more of the tower structure. The petitioners have made both of those changes and are back before the Planning and Zoning Commission to share the new request. Mr. Katz presented the look of the tower on the site and how the additional branches will better blend with the existing tree line. He also addressed the hardship criteria for the variations. There are a limited number of lots zoned Manufacturing in the area that is lacking coverage. Out of the five lots available, four would require setback variations. One lot could accommodate a pole, but it would be in the middle of the open lot not screened by trees and so very visible and it would look out of place. The selected lot works best because of the existing trees so the tower will blend in. The hardship for the existing lot is its narrowness that requires the setback variations. They have spoken with the property owner to the west and he is supportive of the tower.

Mr. Howley presented information about the current 5G technology and referenced a flashlight shining down on a table. The light only shines in a narrow beam from the end of the flashlight, which is similar to the new wireless technology. Mr. Howley referenced the letter by Ms. Rosmarie Bernardo, the Senior Radio Frequency Engineer, stating to meet the coverage needs at Three Oaks Recreation Area and the commercial shopping center to the north a tower needs to be between Main Street and the recreation area and south of Route 14. The City requires properties to be zoned Manufacturing which also limits the

available properties. This site meets their criteria to fix two major coverage issues. The properties along here are already developed so they cannot just add property to this lot to increase the width and depth. They are stuck with an existing lot and its narrowness. .

Mr. Greenman opened the public hearing.

Mr. Patrick Turner and Mr. Chiyu Zhang approached the podium. Mr. Turner stated that he represents SBA. They were happy that at the last Planning and Zoning Commission meeting this request was recommended for denial and they hope this will be the same outcome. They think creating a monopine tower is like putting lipstick on a pig and it is still just a cell tower. Mr. Turner stated that the petitioner has failed to meet the Special Use Permit standards nor the hardship criteria. He says that the SBA tower about a half mile away could be modified to accommodate the T-Mobile equipment. They talked with their radio engineer saying that the coverage could be accommodate on the SBA tower.

Mr. Zhang noted he is a structural engineer for SBA and states that the tower could be modified to accommodate a larger canister to house the 5G equipment or to also be a monopine tower.

Mr. Turner went through the standards to show how they are not being met.

There being no one else to speak, Mr. Greenman closed the public hearing.

Mr. Katz responded to the SBA concerns. He noted that this is an inappropriate forum for SBA to try to limit fair competition. They have dealt with these tactics elsewhere where SBA comes in and creates a false narrative to get other towers denied. Mr. Katz noted that new towers are expensive and if T-Mobile and their experts thought they could go on an existing tower they would. To have SBA playing the role of a T Mobile radio engineer is wrong. Vertical Bridge and T Mobile have their own experts that have evaluated the tower and the required siting location. The SBA tower is higher and was also granted setback variations for the property they are located on. They did not contact SBA to discuss tower options because T Mobile locating on the SBA tower was not an option, it would not solve their coverage issues.

Mr. Koch noted that the representative from the future Water's Edge development is not present since they no longer have a concern. Also, the property owner to the west is supportive and has no concerns with the location of the tower close to his property line. He also stated that the new technology to support the increased bandwidth means the tower signal cannot go as far. He asked when the wireless tower regulations were drafted. Staff said the UDO was created in 2009, but these regulations may have been updated through the years. Mr. Koch thought that the regulations were likely outdated due to the new technology requirements for tower locations, plus the safety designs.

Mr. Atkinson said he remembers that the owner stated the financial hardship and asked if that was still valid. Mr. Koch agreed that the tower would bring another source of revenue and help him to keep his business running. Mr. Atkinson said he drove by a few other towers that were designed like trees and he did not like the look of them and would prefer the standard grey pole. He is confused and not sure what to believe about coverage. There are experts on both sides saying different things. He also stated the top of the tower will snap off and fly into someone's living room.

Ms. Teetsov asked if this was the minimum height for adequate coverage. Mr. Katz confirmed that yes this was the minimum height for the equipment and also to allow for co-location of other users. She would want a study as it looked at the impact to property values.

Mr. Skluzacek asked if the cost to put equipment on the SBA tower would be the same as building the new tower. Mr. Katz said no the new tower is much more expensive and T Mobile is willing to pay these cots to be able to provide adequate service to its customers.

Mr. Howley said the first thing he does as a site acquisition specialist is to look at other towers in the area, since that is a fast process where they just need a building permit. They reviewed the existing towers and none of them would allow them to fix the coverage issues. He has worked with Kent Meier and he is a sales person for SBA. SBA does not have any T Mobile proprietary data so they would not be able to determine if their tower can provide coverage needs. That is why they have presented the analysis from Rosemarie Bernardo in the packet. They know that this new tower could cause SBA to lose future revenue which is why they are fighting against it so hard. Mr. Atkinson said he is not sure what expert to believe. Mr. Greenman said that the viability of the tower or whose expert is the best is not why they are here, they need to review the SUP and hardship criteria.

Mr. Katz addressed the comment about how towers disguised as trees look. He said that older towers were not designed as well. This tower will use current technology and the design of the branches has gotten better.

Mr. Greenman said he supports the monopine over the standard grey pole. He thinks this is just a business hardship, one that will support Vertical Bridge and the property owner financially and there is no true hardship regarding the lot.

Mr. Atkinson made a motion to deny 2022-199 the Special Use Permit and Variations for the cell tower at 269 Liberty Drive. Ms. Teetsov seconded the motion. On roll call Members Atkinson, Teetsov, and Greenman voted aye. Mr. Skluzacek voted no. Motion to deny passed 3-1.

Elizabeth Maxwell AICP

From: Michael Howley <howley@insite-inc.com>
Sent: Wednesday, December 14, 2022 8:48 PM
To: Elizabeth Maxwell AICP
Subject: 269 Liberty Road Proposal

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

PROPOSED WIRELESS TELECOMMUNICATIONS FACILITY 269 LIBERTY ROAD, CRYSTAL LAKE, IL 60014

Below please find an aerial photo that should provide better context to a previous e-mail exhibit submitted on November 7, 2022. The aerial displays a blue rectangular overlay representing the T-Mobile search area as determined by Rosemarie Bernardo, T-Mobile's Senior Radio Frequency Engineer. This search area depicts the location that a new antenna facility would need to be located in order to resolve T-Mobile's voice and data coverage deficiencies in the area. I have expanded the view to display the SBA tower located at 6521 Commercial Road and an existing monopole tower located at 6905 Cog Circle.

As Rosemarie Bernardo addressed in her affidavits, the tower located at 6521 Commercial Road was considered and determined to be too far from the T-Mobile coverage objective of serving the Three Oak Recreation Area and the large commercial shopping area located on the north side of Route 14, east of Main Street. As an aside, even if the SBA tower was a viable alternative to resolving T-Mobile's coverage problems, the SUP granted to approve the tower would need to be amended in order to accommodate T-Mobile's larger equipment.

In the aerial, I also have identified T-Mobile's existing site CH76364E that is located at 6502 S. State Route 31, on the First Baptist Church property. This site is a SBA owned tower that is designed to serve the surrounding residential areas near Route 31. T-Mobile already is located on the 6905 Cog Circle tower. The Cog Circle site provides coverage to the surrounding area and, importantly, provides added service capacity to the adjacent commercial areas.

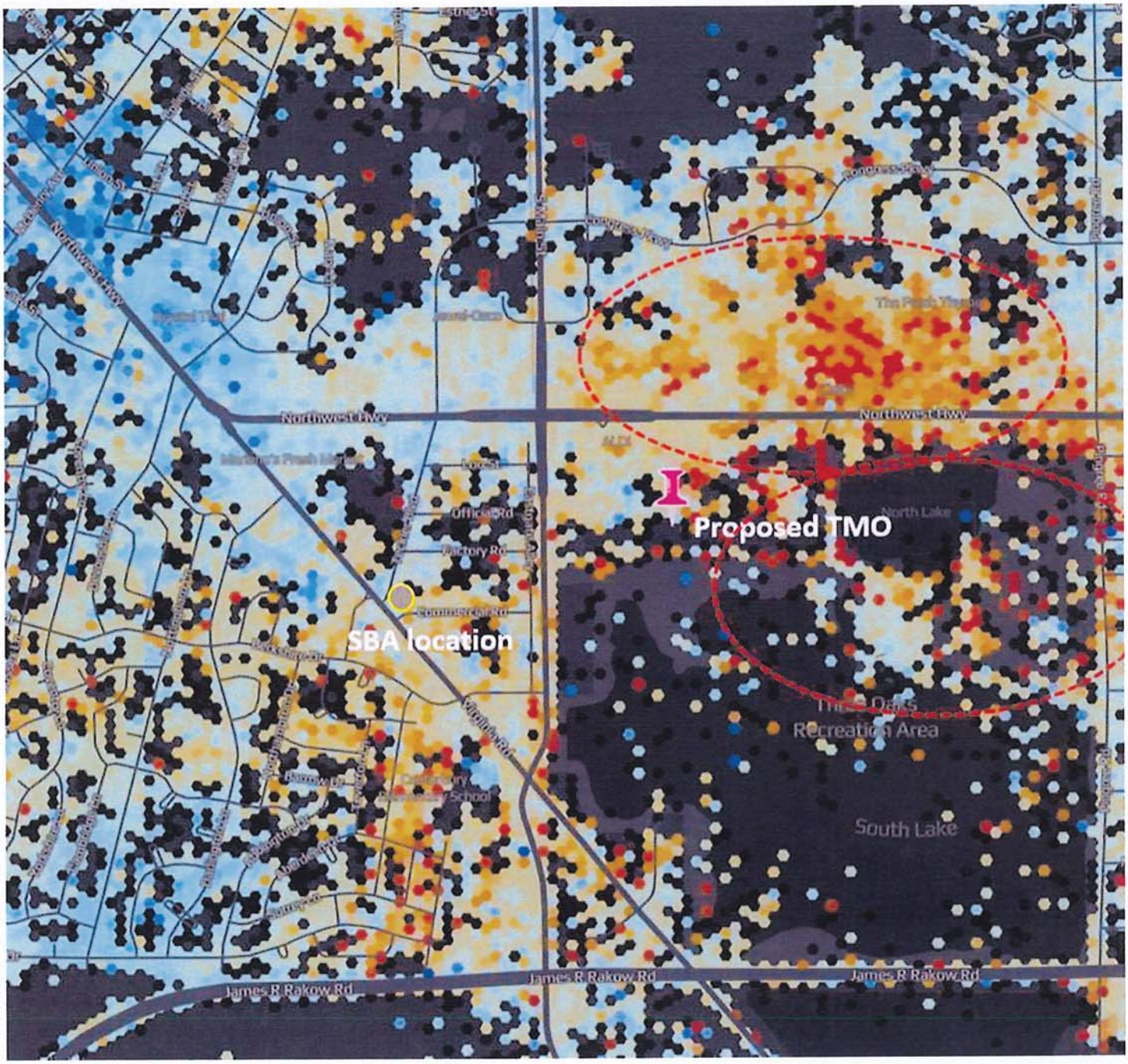


T-Mobile Senior Radio Frequency Engineer, Rosemarie Bernardo, provided the below Signal to Interference & Noise Ratio (SINR) exhibit that depicts the current T-Mobile signal quality in the area surrounding 269 Liberty Road. The red circled areas identify the geographic areas of Crystal Lake, including the large commercial area north of Route 14 and the Three Oaks Recreation Area, that have poor to at best fair signal quality. The coverage objective of the proposed antenna facility at 269 Liberty Road is to resolve the deficient wireless service in these geographic areas. Importantly, the aerial image below the SINR signal map, identified as AERIAL DEPICTION OF WIRELESS COVERAGE, demonstrates how the proposed antenna facility at 269 Liberty Road will resolve the coverage problems within these red circled areas of the SINR map, specifically the commercial area north of Route 14 and the Three Oaks Recreation Center.

SINR (**Signal to Interference & Noise Ratio**) measures signal quality: the strength of the wanted signal compared to the unwanted interference and noise.

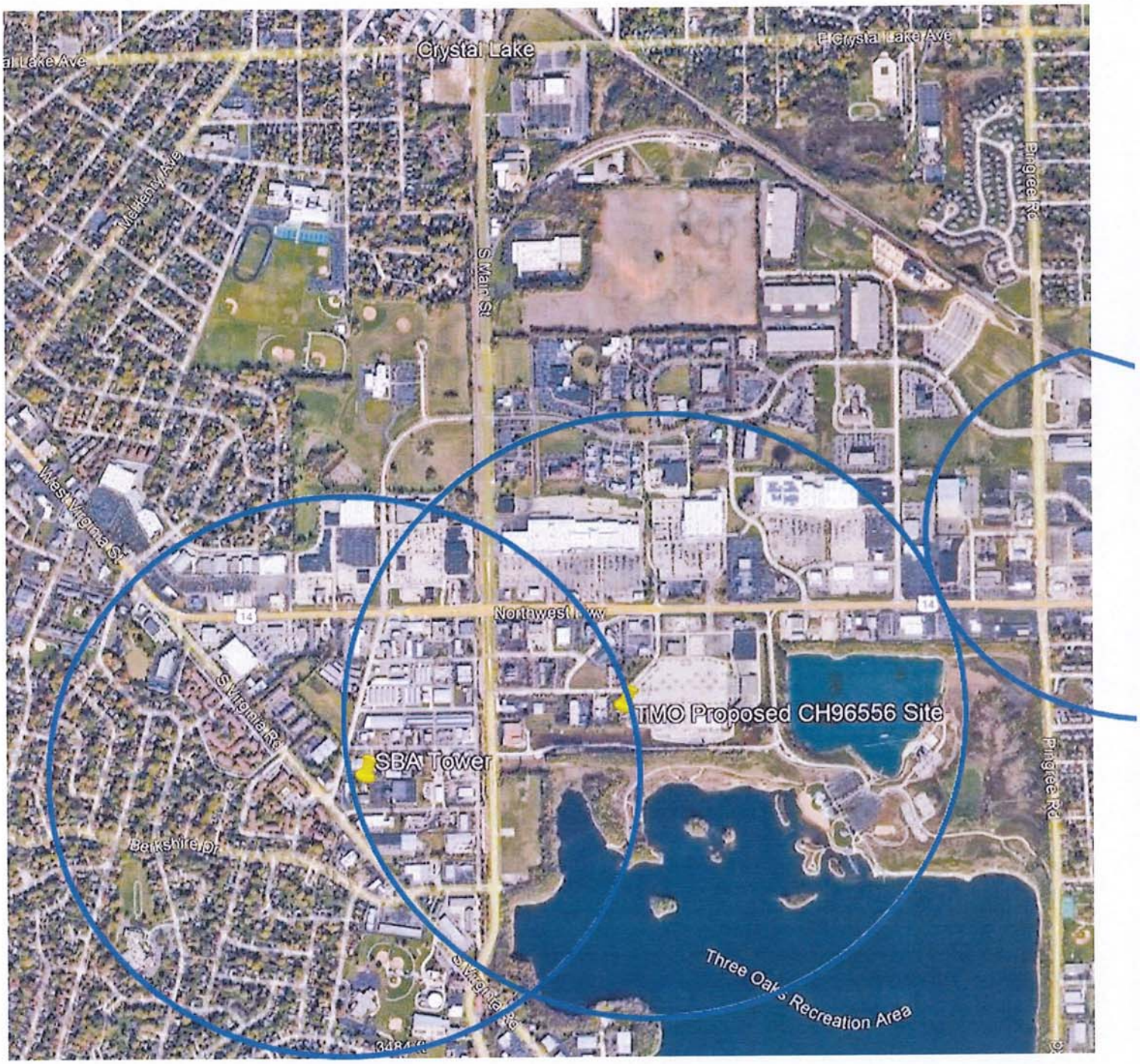


SINR	Signal strength
>= 20 dB	Excellent
13 dB to 20 dB	Good
0 dB to 13 dB	Fair to poor
<= 0 dB	No signal

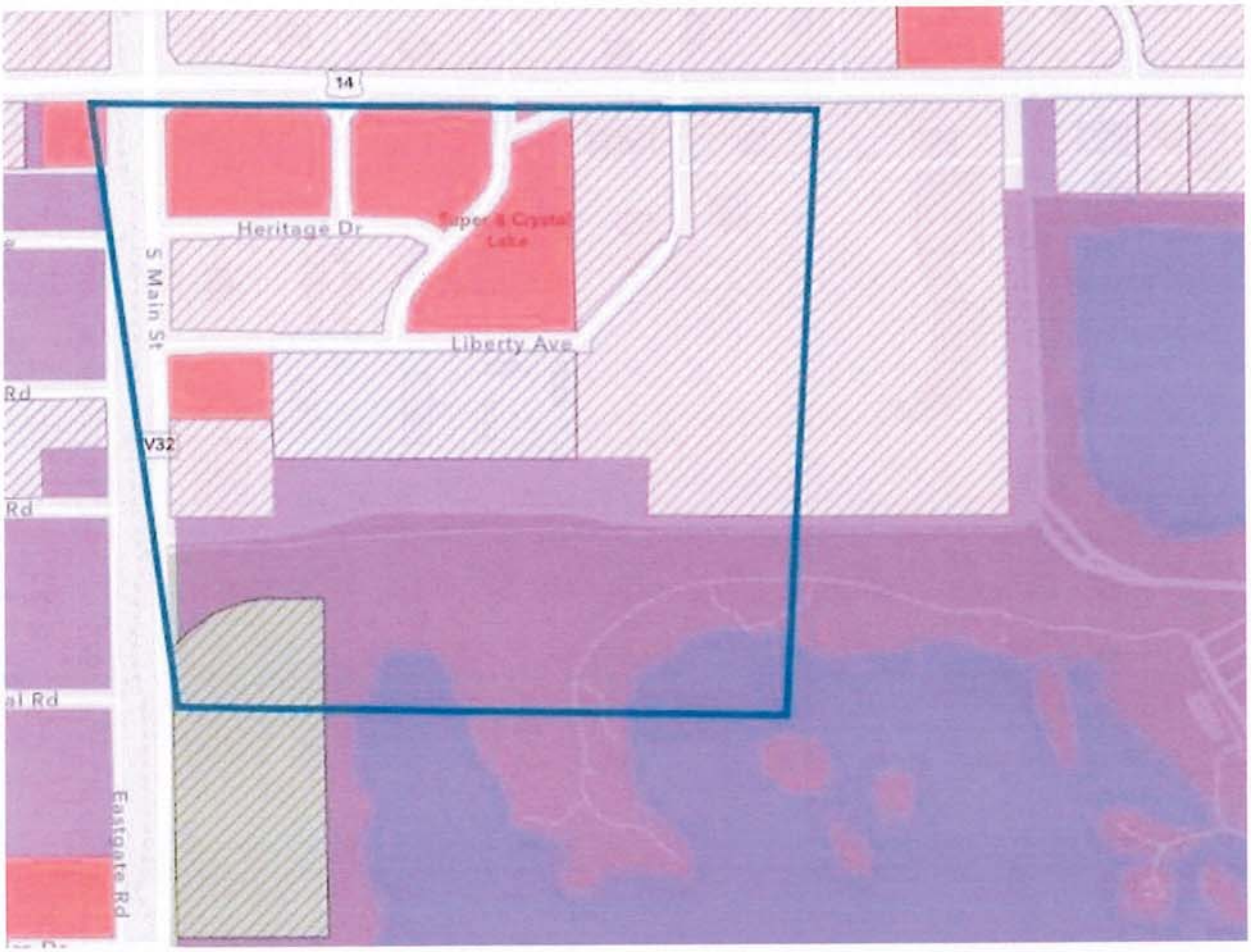


AERIAL DEPICTION OF WIRELESS COVERAGE
The blue circles represent the areas of coverage provided by:

- if T-Mobile was to locate proposed antenna facility at 269 Liberty Road;
- if T-Mobile was to locate antenna facility on the existing 6521 Commercial Road existing SBA tower;
- existing sites located at 6502 S. Illinois Route 31 and 6905 Cog Circle.



With the above system needs identified, T-Mobile sought to identify and lease a suitable property within the blue boxed search area. Based on the City of Crystal Lake Zoning Code, only M Zoned properties were viable considerations since towers are prohibited in the commercially zoned areas.

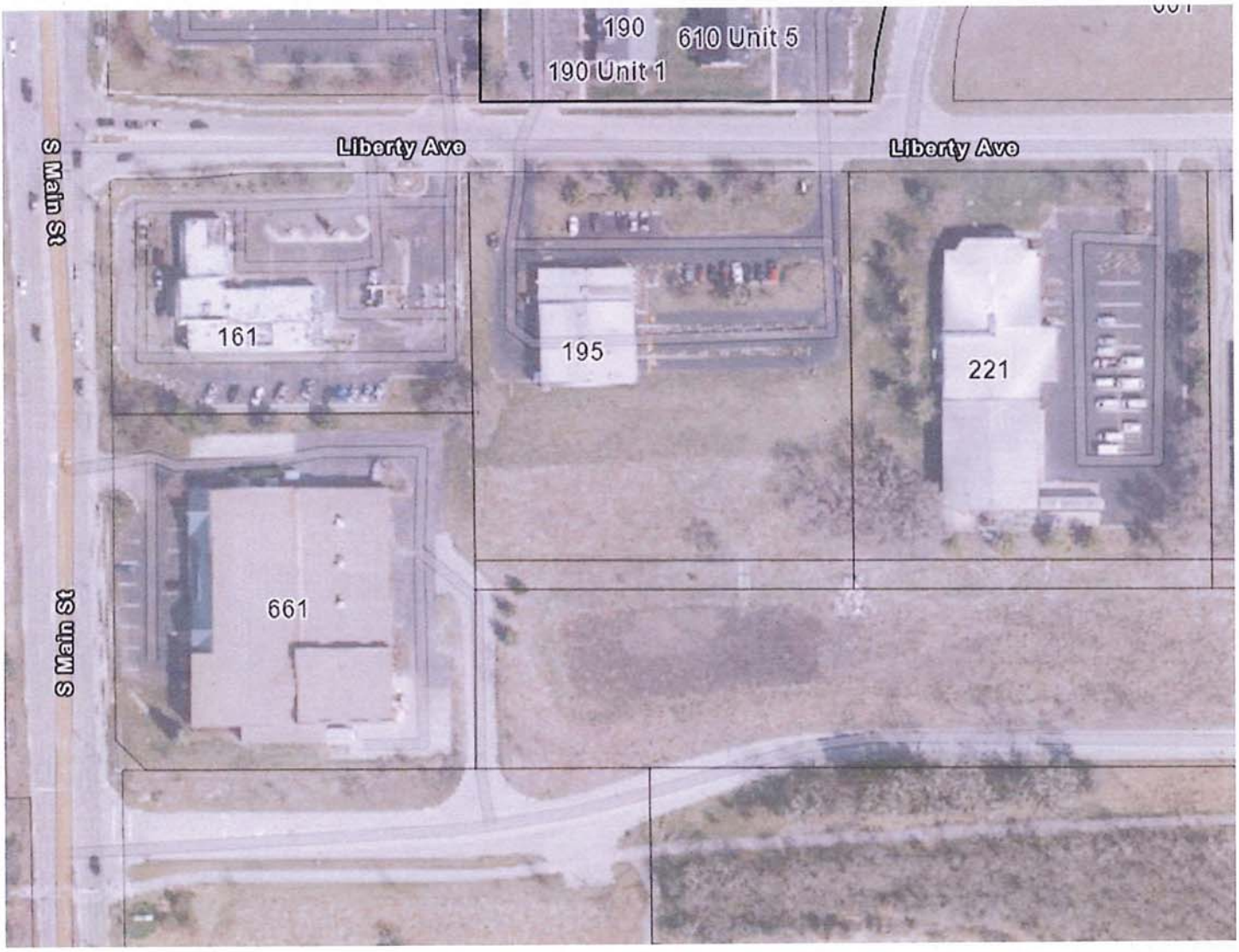


According to the Crystal Lake Zoning Map, the only M zoned properties within the blue boxed area are the city owned Three Oaks Recreation Area to the south and the following parcels:

269 Liberty	Proposed Tower Site at Sea Level Diving
261 Liberty	Auto Service Center (parcel immediately west of 269 Liberty)
221 Liberty	School District Administration Building
195 Liberty	State of Illinois Vehicle Emissions Testing

Importantly, the 269 and 261 Liberty parcels would require setback variances since the lots are only 152' wide. The 221 Liberty parcel is approximately 302' wide, but due to the existing building layout, placing the tower in the middle of the parking lot and so near to the existing building was deemed not feasible.

The 195 Liberty Avenue location is 325' wide. A tower site could be designed at this location without the need for setback relief. However, the only location for the tower was in a treeless area south of the building and would be much more visible from the Three Oaks Recreation Area Drive, Main Street and the surrounding area generally. Parcel map of these properties is shown below.



Mike Howley

Insite inc.
Wireless Consulting Services
1S660 Midwest Road, Suite 140
Oakbrook Terrace, IL 60181
630/240-3253
howley@insite-inc.com
www.insite-inc.com

August 25, 2022

Elizabeth Maxwell AICP/City Planner
City of Crystal Lake, Community Development
100 W. Woodstock Street
Crystal Lake, Illinois 60014

RE: 269 Liberty Road Special Use Zoning Petition; Letter to Address City SUP and Variance to Tower Setback Standards

Ms. Maxwell:

Please allow the following responses to address the applicable City of Crystal Lake Special Use Standards for wireless communication facilities.

2-400 Par. 48 Radio transmission towers, wireless communication facilities. …wireless communication facilities must comply with the following standards:

(a) Purpose and Intent: The purpose of this section is to establish general standards for the siting of …, wireless communication towers and antennas. The intent is that facilities must comply with the following standards:

(i) The proposed wireless communication facility is located in a manufacturing zoning district that is a significant from the nearest residential area. Moreover, to further limit any potential adverse impact, the applicant has designed a monopine style tower that visually blends in with the surrounding mature tree line. Photo simulations of the proposed tower are provided with this application;

(ii) The proposed wireless communication facility is consistent with the Crystal Lake standards for siting wireless communication towers because the subject site is located in a M District and is a significant distance from the nearest existing residential area;

(iii, iv) A new wireless communication tower is proposed only because there is no existing suitable existing structure within the required area of coverage need. A signed statement from the radio frequency engineer has been provided as further support. However, the subject tower will be designed to accommodate multiple wireless carriers and thereby, help minimize the future need for new towers in the City;

(v) The proposed wireless communication tower will be a monopine style tower so as to better blend in with the existing tree canopy. This innovative camouflage technique will minimize any adverse visual impacts on the area. Moreover, the proposed site will include an opaque fence that will visually screen all ground equipment at street level;

(vi) The construction of the proposed wireless communication tower will enable T-Mobile and any future wireless carriers to provide cutting edge wireless and data services to the community quickly, effectively and efficiently;

(vii) The subject wireless communication tower will be engineered in a way that in the event of a catastrophic event that causes tower failure, the structure will collapse on itself so as not to impact or damage adjacent properties. An engineer stamped fall zone letter is provided as part of this application for zoning relief;

d. Standards for ….wireless communication towers: Freestanding wireless communication….towers, …, shall comply with the following standards:

(i) Safety:

I. The proposed wireless communication facility will be designed to meet the wind loading requirements specified in American National Standards Institute TIA-222-F Report, as amended.

II. The applicant will provide documentation to the City that demonstrates that the structural integrity of the towers and antennas will continue to comply with state and federals standards, local building codes, and the applicable standards for towers published by the ANSI, as amended;

(ii) Height:
The proposed height of the wireless antenna facility is well below the city's maximum tower height of 200 feet;

(iii) Franchises and licenses:
The operator will provide City with documentation to demonstrate that all franchises and licenses required by law for the construction and/or operation of a tower or antenna have been obtained;

(iv) Color:

I. The proposed monopine design tower is designed to reduce visual obtrusiveness;

II. The applicant has selected opaque fencing that will screen all carrier ground equipment and the fencing will be a color that blends with the natural surroundings of the tree lined subject parcel;

(v) Storage:
There will be no outside storage of materials on site;

(vi) Lighting:
The proposed wireless communication tower will not be artificially lit;

(vii) Signage:

I and II A single sign no more than two square feet in size will identify the tower and there will be no commercial advertising on site;

(viii) Single lot:

The proposed wireless communication tower and related equipment will be placed on one zoning lot;

(ix) Setbacks:

I. The proposed wireless communication tower does not satisfy the 110% of tower height setback from all property lines so a setback variance is requested as part of this application for zoning relief.

II. Not applicable to the proposed tower as this is not a guyed tower design;

III. There are no proposed equipment buildings related to the current proposal. T-Mobile uses outdoor cabinets to house its radios and related equipment. The outdoor cabinets satisfy the minimum setback in the M zoning district from the nearest property line;

x. Separation:

The proposed wireless communication tower is located greater than 1,200 feet from the nearest existing cell tower;

xi. Collocation:

The applicant will provide evidence that the tower is structurally designed to support at least three additional users and will provide a written statement that the tower owner is willing to permit other users on the tower on a commercially reasonable basis. The submitted site plan depicts the potential location for a second wireless provider;

xii. Landscaping:

No landscaping is included in design given the tree lined nature of the subject parcel and the opaque fence will shield all ground-based equipment from view;

xiii. Security fencing:

The proposed wireless communication tower will be surrounded with an 8' opaque fence and the tower will include anti-climbing safeguards;

xiv. Radiation reporting:

The applicant has included an independent EME study that confirms that the proposed wireless antenna facility will comply with all FCC emission standards;

xv. Interference:

The proposed wireless antenna facility will not interfere with equipment operated by the City of Crystal Lake;

e. Compliance with state or federal laws and regulations:

The proposed wireless antenna facility will meet all FAA, FCC and any other state or local standards or regulations governing such facilities. The tower owner and any wireless carriers utilizing the tower will maintain compliance with said applicable laws and regulations and shall achieve compliance within 6 months of the effective date of any change in standards, laws or regulations, unless a different compliance schedule is mandated by the controlling regulations. It is understood that failure to bring towers and antennas into compliance shall constitute grounds for removal of the tower or antennas, at the owner's expense.

The subject proposal also will require zoning relief from the applicable City of Crystal Lake setback requirement that tower be setback from property line by 110% of tower height. Since a variance from the tower setback will be required, the following addresses the City of Crystal Lake Variance Standards:

B.

Standards.

(1)

The enforcement officer may grant variances to the provisions of this chapter if the petitioner provides evidence demonstrating that:

(a)

Failure to grant the variance would result in an unreasonable hardship;

The proposed facility is designed to fill a coverage gap in T-Mobile's network. Coverage gaps result in a substandard wireless signal, which, to the end user, means a dropped call or weak data connection. At this location, the antennas and hence, the tower, must be located at the proposed height to meet the coverage objectives. Carrying out the strict letter of the code would result in a unreasonable hardship since meeting the setback would result in a tower that is too low to adequately fill the coverage gap and would not provide adequate wireless service to your community;

and

(b)

The variance is necessary due to unique and exceptional physical circumstances or a condition of a particular property;

The property owner's situation is a result of the unique circumstance of the operation of wireless technology. Indeed, the need to locate wireless antennas at a height necessary to receive and transmit

signals has resulted in the owner's plight. Such hardship is a result of wireless technology and topography of the physical surroundings of the subject property, not anyone having an ownership interest in the property.

and

(c)

The variance is the minimum necessary to afford relief;

The applicant is proposing a tower that is the minimum height necessary for T-Mobile to adequately improve its wireless voice and data needs in the area of coverage need;

and

(d)

The variance will not cause detriment to the public good, safety or welfare;

The establishment, maintenance and operation of this wireless antenna facility will not be injurious to the public health, safety, morals, or general welfare of the community. To the contrary, improved wireless service in your community provides vital communications and residents and emergency personnel commonly will use the service for a wide variety of business, personal, "911" and other uses; thereby actively promoting the general public's health, safety and welfare.

The wireless telecommunications facility will not create any material noise, glare, smoke, debris, traffic flow or any other nuisance.

The proposed wireless communication facility will be licensed and regulated by the Federal Communications Commission ("FCC"), which imposes strict health, safety and interference standards. These standards are set by independent safety and standard groups such as the American National Standards Institute ("ANSI") and the Institute of Electrical Electronics ("IEEE").

and

(e)

The variance will not cause an increase in the water surface profile within a floodway;

The proposed wireless antenna facility has no impact on this standard.

and

(f)

The variance will not cause an increase in the water surface profile upstream of the development site,

The proposed wireless antenna facility has no impact on this standard.

and

(g)

The variance will not be contrary to the spirit, purpose and intent of this chapter;

The variance, if granted, would be in harmony with the City of Crystal Lake Ordinance since it would be constructed at a suitable height to accommodate multiple wireless providers and thereby would limit the number of future towers needed to serve this area of the community. The proposed facility meets all other provisions of this ordinance and, therefore will be in harmony with the provisions thereof and with the general purpose and intent of this chapter;

and

(h)

The regulated development meets the minimum federal, state, and other local regulations, including those of IDNR/OWR and FEMA for participation in the NFIP.

The proposed development will meet all applicable federal, state and other local regulations noted above.

verticalbridge

August 18, 2022

Elizabeth Maxwell AICP/City Planner
City of Crystal Lake, Community Development
100 W. Woodstock Street
Crystal Lake, Illinois 60014

RE: 269 Liberty Road Special Use Zoning Petition; Letter to Address City SUP Standards

Ms. Maxwell:

Please allow this letter to address a number of the City of Crystal Lake SUP Standards applicable to the applicant's proposal to construct a wireless communication facility at 269 Liberty Road.

1) The proposed tower will be designed to meet the wind loading requirements specified in the American National Standards Institute TIA-222-F Report, as amended.

2) The proposed tower will be designed to support at least three additional users and Vertical Bridge is willing to permit other users to attach communication facilities, on a commercially reasonable basis, which do not interfere with the primary purpose of the tower.

3) Vertical Bridge shall provide the City of Crystal Lake with documentation that demonstrates that the structural integrity of the tower and antenna will continue to comply with state and federal standards, local building codes, and the applicable standards for towers published by the American National Standards Institute (ANSI), as amended.

vertical bridge

4) Vertical Bridge shall provide documentation to the City of Crystal Lake to demonstrate that all franchises and licenses required by law for the construction and/or operation of a tower or antenna have been obtained.

5) The proposed tower and antennas shall meet or exceed current standards and regulations of the FAA, the FCC, and any other agency of the state or federal government that regulates towers and antennas. If such standards and regulations change, Vertical Bridge shall be responsible for bringing the tower and antennas into compliance with the changed standards and regulations within six months of their effective date, unless a different compliance schedule is mandated by the controlling regulations

Sincerely,



Ariel Rubin

Vice President of Tower Development

VB BTS II, LLC

750 Park of Commerce Drive, Suite 200

Boca Raton, FL 33487

September 27, 2022

Elizabeth Maxwell AICP/City Planner
City of Crystal Lake, Community Development
100 W. Woodstock Street
Crystal Lake, Illinois 60014

RE: 269 Liberty Road Special Use Zoning Petition; Letter to Address City Variance Standards for Tower Color

Ms. Maxwell:

The subject proposal also will require zoning relief from the applicable City of Crystal Lake tower color requirement in Section 2-400 (48)(d)(iv) that provides:

(iv) Color: I. Towers shall either maintain a galvanized steel finish or, subject to any applicable standards of the FAA, be painted a neutral color (i.e., light grey) to reduce visual obtrusiveness or painted in a sky-tone above the top of surrounding trees and in an earth-tone below the treetop level. II. At a tower site, the design of buildings and related structures shall, to the maximum extent practicable, use materials, colors and architectural styles, that blend into the natural setting and surrounding buildings.

Since a variance from the tower color will be required, the following addresses the City of Crystal Lake Variance Standards:

B.

Standards.

(1)

The enforcement officer may grant variances to the provisions of this chapter if the petitioner provides evidence demonstrating that:

(a)

Failure to grant the variance would result in an unreasonable hardship;

The proposed facility is designed to fill a coverage gap in T-Mobile's network. Coverage gaps result in a substandard wireless signal, which, to the end user, means a dropped call or weak data connection. At this location, the antennas and hence, the tower, must be located at the proposed height to meet the coverage objectives. The applicant designed this monopine style tower based on the particular treelined characteristics of this property with the belief that the monopine style would offer the most appealing appearance. As such, the applicant contends that the monopine should be allowed as an alternative to the UDO's design and color requirements since it best blends with the immediate surroundings and is therefore consistent with the spirit and intent of the UDO. It is applicant's position that not allowing this variance would result in a tower that is more visually obtrusive to your community;

and

(b)

The variance is necessary due to unique and exceptional physical circumstances or a condition of a particular property;

The property owner's situation is a result of the unique circumstance of the operation of wireless technology. Indeed, the need to locate wireless antennas at a height necessary to receive and transmit signals has resulted in the owner's plight. Such hardship is a result of wireless technology and topography of the physical surroundings of the subject property, not anyone having an ownership interest in the property. As depicted in the photo simulations provided, given the treelined nature of this property, it is applicant's contention that the proposed monopine design provides the least visual intrusiveness and better reflects the spirit and intent of the zoning code to camouflage the tower;

and

(c)

The variance is the minimum necessary to afford relief;

The applicant is proposing a tower that is the minimum height necessary for T-Mobile to adequately improve its wireless voice and data needs in the area of coverage need. Furthermore, it is applicant's belief that as set adjacent to the mature treeline to the south and west, the proposed monopine style tower presents the least visually intrusive design;

and

(d)

The variance will not cause detriment to the public good, safety or welfare;

The establishment, maintenance and operation of this wireless antenna facility will not be injurious to the public health, safety, morals, or general welfare of the community. To the contrary, improved wireless service in your community provides vital communications and residents and emergency personnel commonly will use the service for a wide variety of business, personal, "911" and other uses; thereby actively promoting the general public's health, safety and welfare.

The wireless telecommunications facility will not create any material noise, glare, smoke, debris, traffic flow or any other nuisance.

The proposed wireless communication facility will be licensed and regulated by the Federal Communications Commission ("FCC"), which imposes strict health, safety and interference standards. These standards are set by independent safety and standard groups such as the American National Standards Institute ("ANSI") and the Institute of Electrical Electronics ("IEEE").

and

(e)

The variance will not cause an increase in the water surface profile within a floodway;

The proposed wireless antenna facility has no impact on this standard.

and

(f)

The variance will not cause an increase in the water surface profile upstream of the development site,

The proposed wireless antenna facility has no impact on this standard.

and

(g)

The variance will not be contrary to the spirit, purpose and intent of this chapter;

The variance, if granted, would be in harmony with the City of Crystal Lake Ordinance since the monopine design is intended to reduce visual obtrusiveness through utilization of tower materials and color that help it blend with the surrounding tree line far better than simply painting the tower a neutral grey or sky color above the tree line. The portion of the monopine tower up to the existing tree line utilizes earth tones that mimic the surrounding treescape. Therefore, it is applicant's position that given the surrounding environment at this location, the proposed monopine facility will be in harmony with the provisions thereof and with the general purpose and intent of this chapter;

and

(h)

The regulated development meets the minimum federal, state, and other local regulations, including those of IDNR/OWR and FEMA for participation in the NFIP.

The proposed development will meet all applicable federal, state and other local regulations noted above.

Date: 24th August, 2022

VB BTS II, LLC

Attn: Christopher Molloy

SUBJECT: Project Number: 561031-P1
Site Name: Northwest Hwy - US-IL-5744
Structure to be Designed with a Theoretical Fall Radius of less than 50-ft

Communications structures designed by Valmont are sized in accordance with the latest governing revision of the ANSI/TIA 222 standard unless otherwise requested by our customer. This standard has been approved by ANSI/ASCE, which has dealt with the design of antenna support structures for over 50 years. The TIA standard, based on provisions of this nationally known specification, has a long history of reliability. Its core philosophy is first and foremost to safeguard and maintain the health and welfare of the public.

Valmont's communication structures have proven to be very reliable products. To our knowledge Valmont has never experienced an in-service failure of a communication structure due to weather induced overloading. We use the latest standards, wind speed information, and sophisticated analytical tools to ensure that we maintain our unblemished record for quality.

This structure will be designed to the following criteria:

- ANSI/TIA-222-H & ANSI/TIA-222-G
- Exposure Category C
- Topographical Category 1
- Risk Category II
- Site Elevation 887 feet
- 107 MPH Ultimate Wind Speed (no ice) per ASCE 7-16
- 40 MPH with 1.50 inch ice

The theoretical failure point will be designed at 50-ft or less from top of tower, by purposely over designing the structural components below this point. The predicted mode of wind induced failure would be local buckling of the shaft at or above this failure point with the upper section(s) folding over onto the intact lower section(s). The result, if it were to fail, would be a maximum theoretical fall zone equal to the height above the failure point at ground level.

I hope these comments address any issues that you might encounter relative to the anticipated performance of this structure.

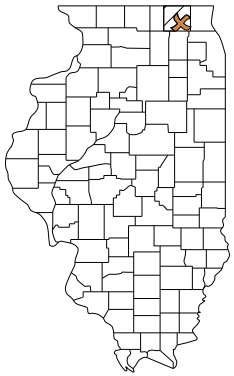
Sincerely,

Chandra Sekhar Rugada,
Assistant Manager - Design
Email: Chandra.Rao@Valmont.Com

LICENSED STRUCTURAL ENGINEER
RONALD E. GLOVER, JR.
081007768
EXP. 11/30/22
STATE OF ILLINOIS

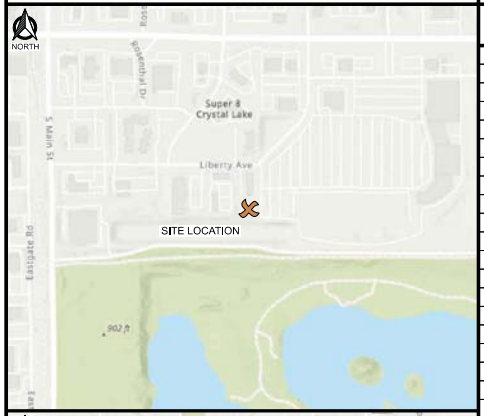
08/24/2022

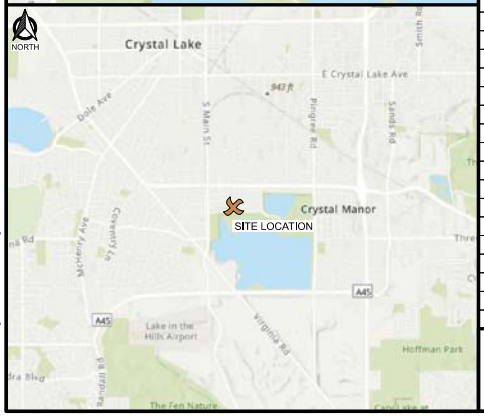
Valmont Microflect
3575 25th Street SE
Salem, OR 97302 USA



US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, ILLINOIS
CONSTRUCTION DRAWINGS
105' MONOPOLE

SITE LOCATION MAPS





SHEET INDEX

NO.:	SHEET TITLE
G-001	TITLE SHEET
G-002	GENERAL SPECIFICATIONS
G-003	GENERAL SPECIFICATIONS
-	SURVEY *
C-101	SITE PLAN
C-102	ENLARGED SITE PLAN
C-501	CONSTRUCTION DETAILS
C-502	FENCE DETAILS
A-001	EQUIPMENT CABINET SPECIFICATIONS
A-002	GROUND EQUIPMENT SPECIFICATIONS
A-101	EQUIPMENT PAD PLAN
A-201	EQUIPMENT PAD ELEVATIONS
A-501	EQUIPMENT PAD DETAILS
T-001	ANTENNA SPECIFICATIONS
T-002	EQUIPMENT SPECIFICATIONS
T-201	SITE ELEVATION
T-301	ANTENNA AND EQUIPMENT CONFIGURATION
T-501	INSTALLATION DETAILS
T-502	CABLE ROUTING DETAILS
T-503	PLUMBING DIAGRAM
T-504	CABLING DETAILS
E-001	UTILITY EQUIPMENT SPECIFICATIONS
E-101	GROUNDING PLAN
E-102	UTILITY PLAN
E-103	T-MOBILE UTILITY PLAN
E-501	GROUNDING DETAILS
E-502	GROUNDING DETAILS
E-503	UTILITY DETAILS
E-504	UTILITY DETAILS
R-901	SITE PHOTOS
	* COMPLETED BY OTHERS

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS/CONDITIONS ON SITE. IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PERFORMING ANY WORK OR BE RESPONSIBLE FOR THE SAME.

DIRECTORY

CLIENT:
VERTICAL BRIDGE DEVELOPMENT, LLC
750 PARK OF COMMERCE DRIVE, SUITE 200
BOCA RATON, FL 33487
CONTACT: STEVE HEDGES
PHONE: 773.988.1715

ENGINEERING COMPANY:
EDGE CONSULTING ENGINEERS, INC.
624 WATER STREET
PRAIRIE DU SAC, WI 53578
CONTACT: KEN BAUMGARDT
PHONE: 608.644.1449

SITE ACQUISITION:
INSITE INC.
1S660 MIDWEST ROAD
SUITE 140
OAKBROOK TERRACE, IL 60161
CONTACT: MIKE HOWLEY
PHONE: 630.240.3253

SURVEYOR:
MERIDIAN SURVEYING, LLC.
N9637 FRIENDSHIP DRIVE
KAUKAUNA, WI 54130
CONTACT: CRAIG KEACH
PHONE: 920.993.0881

PROJECT INFO

SITE LOCATION:
269 LIBERTY ROAD
CRYSTAL LAKE, IL 60014

PROPERTY OWNER:
CALYPSO VENTURES, LLC.
KOCH ARTHUR M.
269 LIBERTY ROAD
CRYSTAL LAKE, IL 60014-8032

SITE COORDINATES (PER 1-A CERTIFICATE):
LAT (NAD 1983/2011): 42°-13'-23.72"
LONG (NAD 1983/2011): 88°-18'-40.81"
GROUND ELEVATION (NAVD 88): 884.47'

PLSS INFORMATION:
A PORT OF THE N 1/2 OF THE NW 1/4,
SECTION 9, T.43N., R.8E., OF THE 3RD P.M.,
ALGONQUIN TOWNSHIP,
MCHENRY COUNTY, ILLINOIS

TAX KEY NUMBER:
19-09-104-015

ZONED:
M PUD

APPROVAL BLOCK

		APPROVED	APPROVED AS NOTED	REVISE
VERTICAL BRIDGE	DATE	☐	☐	☐
SITE ACQUISITION	DATE	☐	☐	☐
CONSTRUCTION MANAGER	DATE	☐	☐	☐
ZONING	DATE	☐	☐	☐
RF ENGINEERING	DATE	☐	☐	☐

UTILITY INFORMATION

ELECTRIC SERVICE PROVIDER:
COMMONWEALTH EDISON COMPANY (COMED)
PHONE: 1.855.433.2700

ONE CALL SYSTEMS INTERNATIONAL

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN ILLINOIS, CALL CHICAGO DIGGERS HOTLINE

TOLL FREE: 1-312-744-7000

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IL STATUTE REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.

ENGINEER SEAL:

PRELIMINARY - NOT FOR CONSTRUCTION

I HEREBY CERTIFY THAT THIS PLAN SET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION OTHER THAN THE EXCEPTIONS NOTED IN THE SHEET INDEX, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF ILLINOIS.

SIGNATURE: _____

DATE: _____

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SHEET TITLE:
TITLE SHEET
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

CHECKED BY	ADP
PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	G-001

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SECTION 1: GENERAL REQUIREMENTS

1.1 PURPOSE AND INTENT

A. THE DRAWINGS ARE SUPPLEMENTAL TO ANY WRITTEN SPECIFICATIONS OR REQUIREMENTS. SHOULD ANYTHING BE SHOWN, INDICATED, OR SPECIFIED IN ONE AND NOT THE OTHER, OR IF ANY DISCREPANCIES OR DISAGREEMENTS ARE IDENTIFIED, THIS SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER AND/OR ENGINEER.

B. THE CONTRACTOR SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.

1.2 CONFLICTS

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL MEASUREMENTS AT THE SITE BEFORE ORDERING MATERIALS OR DOING ANY WORK. NO EXTRA COMPENSATION WILL BE ALLOWED DUE TO DIFFERENCES BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS SHOWN ON THE PLANS. CONTRACTOR MUST SUBMIT NOTICE OF ANY DISCREPANCY IN DIMENSIONS TO OWNER FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK IN THE AFFECTED AREAS.

B. THE CONTRACTOR IS REQUIRED TO VISIT THE SITE TO ASSESS CONDITIONS PRIOR TO BIDDING. IN ADDITION, CONTRACTOR SHALL PERFORM TESTING AND ADDITIONAL INVESTIGATION AS DEEMED NECESSARY TO SUBMIT A FIXED BID. IGNORANCE OF THE SITE OR PROJECT CONDITIONS WILL NOT BE GROUNDS FOR CHANGE ORDERS OR ALTERING THE SCHEDULE.

1.3 CLEANUP

A. THE CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATION OF WASTE CAUSED BY EMPLOYEES. AT THE COMPLETION OF THE WORK, REMOVE ALL WASTE AND NON-CONSTRUCTION MATERIAL, INCLUDING ALL CONTRACTOR TOOLS. LEAVE THE SITE CLEAN AND READY FOR USE.

B. IF CLEARING IS REQUIRED, ALL BRUSH, STUMPS, AND OTHER WASTE MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY. THE OWNER SHALL BE CONSULTED FOR SPECIFICATIONS ON TREE PLACEMENT AND DISPOSAL. IF REQUIREMENTS ARE NOT SPECIFIED, A CONSERVATIVE ASSUMPTION SHALL BE UTILIZED FOR BIDDING PURPOSES.

C. THE SITE SHALL BE LEFT IN A CONDITION EQUIVALENT TO THE PRE-CONSTRUCTION CONDITION AND SATISFACTORY TO THE OWNER.

1.4 CODES

A. CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING ALL FEDERAL, STATE, AND LOCAL LAWS, REGULATIONS, AND RULES. THIS RESPONSIBILITY IS IN EFFECT REGARDLESS OF WHETHER THE LAW, ORDINANCE, REGULATION OR RULE IS MENTIONED IN THE DRAWINGS OR WRITTEN SPECIFICATIONS.

B. IN ADDITION TO ALL CODES, CONTRACTOR SHALL FOLLOW ALL MANUFACTURER RECOMMENDATIONS AND APPLICABLE STANDARDS (ACI, IBC, NEC, ETC).

1.5 QUALITY ASSURANCE

A. THE CONTRACTOR SHALL PROVIDE A PROJECT SCHEDULE PRIOR TO COMMENCING ANY WORK. IN ADDITION, THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY CHANGES TO THE SCHEDULE AS SOON AS THEY ARE KNOWN. THE CONTRACTOR SHALL PROVIDE 48-HOUR ADVANCE NOTICE OF SPECIFIC INSPECTION MILESTONES (SUCH AS FOUNDATION POURING). ADVANCE NOTICE WILL ALLOW FOR COORDINATION WITH INSPECTION COMPANIES.

PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL REQUEST A LIST OF INSPECTIONS FROM THE OWNER OR ENGINEER. AT A MINIMUM THIS WILL TYPICALLY INCLUDE THE FOUNDATION, GROUNDING, SUBSTANITAL COMPLETION, AND FINAL.

B. THE CONTRACTOR SHALL TAKE PHOTOGRAPHS OF ALL COMPLETED WORK AND PROVIDE THESE TO THE OWNER ON A WEEKLY BASIS. PHOTOGRAPHS SHALL INCLUDE DOCUMENTATION OF ALL SUBGRADE WORK THAT CANNOT BE VISIBLY INSPECTED UPON COMPLETION (GROUNDING, FOUNDATION, UTILITIES, ETC.).

C. THE CONTRACTOR IS THE GUARANTOR OF ALL WORK. FAILURE TO IDENTIFY A DISCREPANCY/DEFECT OR IMMEDIATELY NOTIFY THE CONTRACTOR OF SAID DEFECT DOES NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITIES IN THIS REGARD.

D. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT INSPECTIONS OCCUR PRIOR TO COMPLETION OF WORK. IF AN ITEM IS COMPLETED WITHOUT THE REQUESTED INSPECTION, THE OWNER WILL HAVE THE RIGHT TO ASSUME THAT THE WORK WAS NOT COMPLETED PROPERLY AND MUST BE REPLACED.

1.6 BUILDING PERMITS

THE CONTRACTOR IS RESPONSIBLE TO OBTAIN THE BUILDING PERMIT. CONTRACTOR SHALL COORDINATE AND SCHEDULE REQUIRED INSPECTIONS AT THE JOB SITE, COMPLY WITH SPECIFIC PROJECT RELATED REQUESTS AND SUGGESTIONS MADE BY BUILDING INSPECTOR, AND INFORM THE OWNER OF ANY REQUIREMENTS THAT MAY DEVIATE FROM THE CONSTRUCTION DOCUMENTS.

1.7 FAA PERMIT AND TOWER LIGHTING

REFER TO CONSTRUCTION DOCUMENTS AND CONSTRUCTION MANAGER FOR FAA AND STATE LIGHTING REQUIREMENTS. CONTRACTOR SHALL PROVIDE TEMPORARY FAA APPROVED LIGHTING UNTIL PERMANENT LIGHTING IS OPERATIONAL. THE CONTRACTOR SHALL ENSURE THAT ANY FAA ELEVATION LIMITATIONS ARE NOT EXCEEDED.

1.8 TOWER SECURITY

THE CONTRACTOR IS RESPONSIBLE FOR SITE SECURITY THROUGHOUT THE CONSTRUCTION PHASE. THE SITE MUST BE SECURELY FENCED (PERMANENTLY OR TEMPORARILY) WITHIN 24 HOURS OF TOWER ERECTION.

1.9 SITE CONTROL

A. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR CONTAINMENT OF SEDIMENT AND CONTROL OF EROSION AT THE SITE. ANY DAMAGE TO ADJACENT OR DOWNSTREAM PROPERTIES WILL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO OWNER.

B. IF WETLANDS ARE PRESENT IN THE PROJECT VICINITY THE CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THAT THEY ARE NOT DISTURBED IN ANY MANNER. IF DISTURBANCE OCCURS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS AND CONSEQUENCES, INCLUDING FINES (EVEN IF ASSESSED TO THE OWNER).

C. THE CONTRACTOR IS TO MAINTAIN ADEQUATE DRAINAGE AT ALL TIMES. DO NOT ALLOW WATER TO STAND OR POND. ANY DAMAGE TO STRUCTURES OR THE SITE CAUSED BY INADEQUATE MAINTENANCE OF DRAINAGE PROVISIONS WILL BE THE RESPOINSIBILITY OF CONTRACTOR.

D. THE CONTRACTOR SHALL CONTAIN ALL CONSTRUCTION ACTIVITIES, MATERIALS, EQUIPMENT, ETC. TO THE LEASED AREA AND LEGAL EASEMENTS UNLESS PERMISSION TO DO OTHERWISE IS GRANTED BY THE PROPERTY OWNER.

1.10 CHANGE ORDER PROCEDURE

THE CONTRACTOR MUST PROVIDE NOTICE IN WRITING ON PROPER FORMS OF ANY POTENTIAL CLAIM FOR CONCEALED OR UNKNOWN CONDITIONS, OR ANY OTHER ITEM (EVEN IF A REQUEST BY OWNER) THAT MAY RESULT IN A TIME DELAY OR COST CHANGE WITHIN 1 DAY OF FIRST KNOWLEDGE. ANY CLAIM (CHANGE ORDER) MUST BE APPROVED BY THE OWNER PRIOR TO PROCEEDING OR INCURRING ANY COSTS. ANY CHANGES IN SCOPE OF WORK OR MATERIALS WHICH ARE PERFORMED BY THE CONTRACTOR WITHOUT WRITTEN APPROVAL BY THE OWNER SHALL PLACE FULL RESPONSIBILITY OF THESE ACTIONS ON THE CONTRACTOR AND ANY ASSOCIATED COST INCURRED WILL NOT BE PAID.

SECTION 2: EARTHWORK

2.1 SCOPE OF WORK

REFER TO THE SURVEY AND SITE PLAN FOR EXISTING GRADES AND FINAL ELEVATIONS.

2.2 SITE PREPARATION

A. CLEAR TREES, BRUSH AND DEBRIS FROM COMPOUND, ACCESS DRIVE, AND UTILITY PATH AS REQUIRED. SEE SITE PLAN FOR APPROPRIATE AREA TO BE CLEARED. REMOVE STUMPS, ORGANIC SOIL, AND OTHER DETRIMENTAL MATERIAL COMPLETELY UNDER ENTIRE COMPOUND AND DRIVE. ALL WASTE MATERIALS INCLUDING, BUT NOT LIMITED TO, STUMPS AND DEBRIS SHALL BE REMOVED FROM THE PROPERTY AND DISPOSED OF PROPERLY.

B. STRIP ALL ORGANIC MATERIAL FROM COMPOUND AND ACCESS DRIVE. IF SITE CONTAINS WET SOIL, CONTRACTOR SHALL OVER EXCAVATE A MINIMUM OF 18 INCHES OF MATERIAL FROM THE ENTIRE COMPOUND AND ACCESS DRIVE.

C. PRIOR TO PLACEMENT OF FILL OR BASE MATERIALS, CONTRACTOR SHALL REMOVE ALL TOPSOIL, ORGANIC MATERIALS AND WET OR POOR SOILS. IF MORE THAN 2'-0" OF POOR SOILS ARE ENCOUNTERED, CONTRACTOR SHOULD IMMEDIATELY CONTACT CONSTRUCTION MANAGER AND/OR ENGINEER FOR GUIDANCE.

D. CONTRACTOR SHALL FOLLOW RECOMMENDATIONS CONTAINED IN PLANS AND GEOTECHNICAL REPORT.

2.3 EXCAVATION

A. CONTRACTOR SHALL EXCAVATE TO DEPTH, AND GRADES SHOWN ON THE PLANS.

MINIMUM COMPACTION SHALL BE 90% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557 FOR SITE WORK AND 95% MAXIMUM DRY DENSITY UNDER STRUCTURAL ELEMENTS. AREAS OF SETTLEMENT IDENTIFIED WITHIN ONE YEAR OF ACCEPTANCE OF FINAL CONSTRUCTION BY OWNER WILL BE EXCAVATED, FILLED, AND RECOMPACTED AT CONTRACTOR'S EXPENSE.

B. CONTRACTOR SHALL REVIEW THE GRADING PLANS, GEOTECHNICAL REPORT, AND TOWER FOUNDATION PLANS THOROUGHLY PRIOR TO BIDDING. ANY DISCREPANCIES OR INCONSISTENCIES SHOULD BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.

C. IT IS RECOMMENDED THAT THE OWNER HIRE AN INDEPENDENT GEOTECHNICAL ENGINEER TO REVIEW SOIL CONDITIONS AND AN ACI CERTIFIED INSPECTOR TO REVIEW ALL FOUNDATION ELEMENTS.

D. REGARDLESS OF THE ABOVE RECOMMENDATION, THE CONTRACTOR IS RESPONSIBLE TO OBSERVE SITE AND SOIL CONDITIONS THROUGHOUT THE CONSTRUCTION PROCESS AND COMPARE THE ABOVE TO THE GEOTECHNICAL REPORT, THE PLANS, AND THE TOWER DRAWINGS. ANY INCONSISTENCIES, DISCREPANCIES, OR ASSUMPTIONS THAT PROVE TO BE INCORRECT, SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.

2.4 SITE GRADING

ANY INCONSISTENCIES BETWEEN THE GEOTECHNICAL REPORT, SITE DRAWINGS, TOWER PLANS, AND SPECIFICATIONS SHALL BE RESOLVED IN FAVOR OF THE STRICTER REQUIREMENT.

A. CONTRACTOR SHALL USE ON-SITE MATERIALS OR IMPORTED FILL TO MATCH THE LINES, GRADES, AND CROSS SECTIONS SHOWN ON THE DRAWINGS. HOWEVER, IN NO CASE SHALL ORGANIC MATERIALS, WET SOIL, FROZEN SOIL, OR POOR SOIL BE USED AS ON-SITE FILL. IN ADDITION, ALL FILL (ON-SITE OR IMPORTED) SHALL BE ADEQUATELY COMPACTED PER THE EARTHWORK SPECIFICATIONS.

B. IF DISCREPANCIES ARE IDENTIFIED BETWEEN THE GRADING PLAN AND ACTUAL SITE CONDITIONS, THESE SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH WORK. ANY CHANGES TO THE GRADING PLAN CONTOURS MUST BE PREAPPROVED.

C. THE CONTRACTOR SHALL LIMIT ALL SITE GRADING AND CONSTRUCTION ACTIVITIES TO THE LEASED AREA AND ASSOCIATED EASEMENT. IF THIS IS NOT POSSIBLE, CONTACT THE PROJECT MANAGER AND OBTAIN OWNER APPROVAL PRIOR TO WORKING OUTSIDE THE ABOVE LIMITS.

D. REGARDLESS OF THE CONTOURS DEPICTED IN THE PLANS, ALL REQUIREMENTS IN THE TOWER FOUNDATION DRAWINGS (INCLUDING THE MINIMUM SOIL COVER) MUST BE ADHERED TO STRICTLY.

E. ALL FINISHED SURFACES SHOULD BE GRADED TO DRAIN FROM FOUNDATION, PROVIDE PROPER DITCHING AND ROUTING OF SURFACE WATER, AND AVOID PONDING AND EROSION.

F. ALL EXPOSED SOIL SHALL BE PROPERLY SEEDED AND PROTECTED FROM EROSION.

G. THE FINISHED GRADE SHALL EXTEND A MINIMUM OF ONE FOOT BEYOND THE COMPOUND FENCE.

2.5 GRAVEL SURFACING

A. CONSTRUCT GRAVEL DRIVE AND COMPOUND AREAS USING CRUSHED AGGREGATE BASE AND FINISH COURSES AS SPECIFIED IN THE CONSTRUCTION DOCUMENTS OR AS DIRECTED BY THE CONSTRUCTION MANAGER.

B. PLACE FILL OR STONE IN MAXIMUM EIGHT INCH LIFTS AND COMPACT TO SPECIFIED DENSITY PRIOR TO PLACING NEXT LIFT.

2.6 RETAINING WALLS

A. RETAINING WALLS TO BE INSTALLED BY AN EXPERIENCED CONTRACTOR FAMILIAR WITH AT LEAST TEN (10) PROJECTS OF SIMILAR SIZE AND SCOPE.

B. CONTRACTOR SHALL FOLLOW ALL MANUFACTURER DESIGN CHARTS AND INSTALLATION GUIDELINES.

C. ALL BACKFILLED MATERIAL SHALL BE QUALITY SOILS (SAND, GRAVEL, OR SILTY SAND) WITH A MINIMUM SOIL BEARING CAPACITY OF 2,500 P.S.F. LL BACKFILLED MATERIAL SHALL BE COMPACTED TO 95% STANDARD PROCTOR IN MAXIMUM 8" LIFTS.

D. DRAINAGE TILE SHALL BE USED BEHIND THE RETAINING WALL. THE DRAINAGE TILE SHALL RUN TO DAYLIGHT AT A MAXIMUM INTERVAL OF 20'. WHEN SITE CONDITIONS REQUIRE, WRAP DRAINAGE TILE IN 3/4" CRUSHED AGGREGATE AND FILTER FABRIC WITH DRAINAGE COMPOSITE OR AGGREGATE BACK DRAIN.

E. RETAINING WALL EMBEDMENT SHALL BE AT LEAST THE MINIMUM SPECIFIED IN THE DRAWINGS. IN ADDITION, MINIMUM EMBEDMENT MUST EXCEED ANY MANUFACTURER DESIGN GUIDELINES.

F. ALL GEOGRID MATERIAL IS TO BE COATED POLYESTER WITH A MINIMUM ALLOWABLE DESIGN STRENGTH OF LTDS = 1350 PK.

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GENERAL SPECIFICATIONS
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

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SET TYPE	PRELIM. DWGS.
SHEET NUMBER	G-002

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SECTION 3: TRENCHING

3.1 MATERIALS

FILL MATERIALS SHALL BE OBTAINED, WHEN POSSIBLE, FROM MATERIALS EXCAVATED FROM TRENCHES ON-SITE. STRUCTURAL FILL, SAND OR SLURRY SHALL BE APPROVED BY THE CONSTRUCTION MANAGER AND SHALL CONFORM TO LOCAL UTILITY COMPANY REQUIREMENTS. THE FILL MATERIAL SHALL CONTAIN NO ORGANIC MATERIALS OR ROCKS. ALL FILL MATERIAL SHALL BE FREE OF OBJECTIONABLE MATERIALS AND/OR MATERIALS DESIGNATED AS HAZARDOUS OR POTENTIALLY HAZARDOUS. THE FILL MATERIAL SHALL CONTAIN FINES SUFFICIENT TO FILL ALL VOIDS IN THE MATERIAL. COMPACTION OF SOIL SHALL BE IN 8 INCH LOOSE LIFTS WHEN UTILIZING HEAVY COMPACTION EQUIPMENT OR 6 INCH LOOSE LIFTS WHEN UTILIZING HAND OPERATED TAMPERS.

3.2 PIPE DETECTION AND IDENTIFICATION

ALL ELECTRIC SERVICE TRENCHES SHALL BE MARKED WITH DETECTABLE WARNING TAPE.

3.3 TRENCH EXCAVATION

A. DIG TRENCH TO DEPTHS AND GRADES SHOWN ON THE PLANS OR AS DIRECTED BY THE CONSTRUCTION MANAGER.

B. TRENCH LENGTH SHALL BE SUFFICIENT TO ALLOW FOR SATISFACTORY CONSTRUCTION AND INSPECTION OF THE PROJECT, WITHOUT ENDANGERING OTHER CONSTRUCTION WORK OR ADJACENT FACILITIES.

C. DISPOSE OF EXCESS AND UNSUITABLE EXCAVATION MATERIAL PROPERLY.

D. USE HAND EXCAVATION METHODS WHEN REQUIRED BY LOCAL OR STATE GUIDELINES, OR WHEN NECESSARY TO AVOID ENDANGERING EXISTING OR NEW STRUCTURES OR OTHER FACILITIES.

3.4 TRENCH PROTECTION

A. PROVIDE MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO PROTECT TRENCHES AT ALL TIMES.

B. SHEETING AND BRACING SHOULD MEET OR EXCEED OSHA REQUIREMENTS.

3.5 BACKFILLING

A. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER AT LEAST 24 HOURS IN ADVANCE OF BACKFILLING.

B. PROTECT CONDUIT FROM LATERAL MOVEMENT, DAMAGE FROM IMPACT, OR UNBALANCED LOADING TO AVOID DISPLACEMENT OF CONDUIT AND/OR STRUCTURES. DO NOT FREE FALL BACKFILL INTO TRENCH UNTIL THERE IS AT LEAST 12 INCHES OF COVER OVER THE CONDUIT.

3.6 COMPACTION

A. COMPACT BACKFILL TO AT LEAST 95% STANDARD PROCTOR.

B. IF REQUIRED COMPACTION DENSITY IS NOT OBTAINED, REMOVE BACKFILL FROM TRENCH, REPLACE WITH APPROVED BACKFILL, AND RECOMPACT AS SPECIFIED.

C. ANY SUBSEQUENT SETTLEMENT OF TRENCH OR BACKFILL DURING MAINTENANCE PERIOD (1 YEAR MINIMUM) SHALL BE REMOVED, REPLACED, AND RECOMPACTED BY CONTRACTOR AT NO ADDITIONAL EXPENSE TO OWNER.

SECTION 4: CONCRETE WORK

4.1 CONCRETE FORMWORK

CONTRACTOR SHALL FOLLOW ALL APPLICABLE CODES AND STANDARDS (IBC, ACI, ETC.) WHEN COMPLETING CONCRETE WORK.

A. FORMS SHALL BE SMOOTH AND FREE OF SURFACE IRREGULARITIES. CONTRACTOR SHALL UTILIZE FORM RELEASE AGENTS AS NECESSARY.

B. EXPOSED EDGES OF ALL TOWER FOUNDATIONS SHALL RECEIVE A 3/4" CHAMFER. OTHER EXPOSED EDGES SHALL RECEIVE A TOOLED RADIUS FINISH.

C. UPON COMPLETION, CONTRACTOR SHALL REMOVE ALL FORMS, INCLUDING THOSE CONCEALED OR BURIED.

D. REFER TO PLANS AND TOWER DRAWINGS FOR ADDITIONAL REQUIREMENTS.

4.2 CONCRETE REINFORCEMENT

REFER TO PLANS AND TOWER DRAWINGS FOR REINFORCEMENT REQUIREMENTS.

4.3 CAST-IN-PLACE CONCRETE

REFER TO STRUCTURAL DRAWINGS FOR CONCRETE REQUIREMENTS FOR FOOTINGS, FOUNDATIONS, ETC. ANY NON-STRUCTURAL SITE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

A. ALL CONCRETE SUBJECT TO FREEZE-THAW SHALL CONTAIN 4-8% AIR ENTRAINMENT.

B. ALL CONCRETE SHALL BE VIBRATED IN PLACE USING HIGH FREQUENCY, LOW AMPLITUDE MECHANICAL IMMERSION TYPE VIBRATORS. INSERT VIBRATORS IN CONCRETE AT REGULAR INTERVALS AND OVER ENTIRE SURFACE TO SOLIDLY FILL AROUND AND BETWEEN REINFORCEMENT AND INTO CORNERS AND IRREGULARITIES. DISCONTINUE VIBRATION WHEN RISING ENTRAPPED AIR BUBBLES STOP BREAKING THE LEVELING SURFACE. DO NOT OVERVIBRATE AS THIS MAY CAUSE SEGREGATION.

4.4 QUALITY CONTROL

A. ALL STRUCTURAL CONCRETE SHALL BE INSPECTED BY INDEPENDENT, QUALIFIED PERSONNEL (ACI OR OTHERWISE). ALL STRUCTURAL CONCRETE SHALL BE TESTED BY AN INDEPENDENT LAB. AT A MINIMUM, 5 CYLINDERS SHALL BE CAST AND TESTED AT 7, 14, AND 28 DAYS . THE REMAINING CYLINDER SHALL BE RESERVED FOR RE-TESTING, IF NECESSARY.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH THE CONSTRUCTION MANAGER AND/OR TESTING AGENCY A MINIMUM OF 48 HOURS PRIOR TO EACH FOUNDATION POUR. IF A POUR OCCURS WITHOUT THE REQUESTED INSPECTION, THE OWNER CAN ASSUME THAT THE INSTALLATION WAS NOT INSTALLED CORRECTLY AND REQUIRE REPLACEMENT.

B. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE AND REPLACE, AT HIS SOLE EXPENSE, ANY CONCRETE THAT DOES NOT MEET THE ABOVE SPECIFICATIONS, OR SIMILAR SPECIFICATIONS CONTAINED IN THE PLANS OR TOWER DRAWINGS. ANY CONCRETE THAT DOES NOT MEET THE MINIMUM COMPRESSIVE STRENGTH REQUIRED UPON COMPLETION OF LAB TESTING SHALL BE REPLACED. THE AVERAGE OF THE TWO 28 DAY BREAK RESULTS SHALL GOVERN. NO DISPUTES REGARDING THE METHOD USED TO COLLECT THE TEST CYLINDERS OR PERFORM THE LAB TESTING ARE ALLOWED. IF THE CONTRACTOR CHOOSES, HE MAY COLLECT AND TEST ADDITIONAL CYLINDERS AT HIS SOLE EXPENSE.

C. DESPITE THE ABOVE REQUIREMENT, THE CONTRACTOR IS RESPONSIBLE TO PERFORM QUALITY WORK AND IS THE GUARANTOR OF THE FINISHED PRODUCT. IF A DEFECT IS NOT IMMEDIATELY IDENTIFIED BY THE INSPECTOR, OWNER, OR CONSTRUCTION MANAGER, BUT IDENTIFIED SUBSEQUENTLY, THE CONTRACTOR SHALL STILL BE RESPONSIBLE TO CORRECT SAID DEFECT.

D. CONTRACTOR MUST VERIFY THAT CONCRETE MEETS DESIGN REQUIREMENT (FOR STRENGTH AND OTHER PARAMETERS) BEFORE PLACING ANY SERVICE LOADS.

SECTION 5: STRUCTURAL STEEL

A. UNLESS OTHERWISE NOTED, ALL DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL CONFORM TO THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 315).

B. ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL, CONFORMING TO ASTM A-615, GRADE 60, DEFORMED.

C. HEATING AND WELDING OF BARS IS PROHIBITED UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE STRUCTURAL ENGINEER.

D. ALL REINFORCEMENT BARS ARE TO BE FREE FROM LOOSE RUST AND SCALE.

E. UNLESS OTHERWISE NOTED, ALL REINFORCEMENT SHALL HAVE A MINIMUM CONCRETE COVER OF 3 INCHES. CONTRACTOR SHALL UTILIZE SPACERS AND CHAIRS AS REQUIRED.

F. SPLICES IN REINFORCEMENT STEEL ARE PROHIBITED, UNLESS APPROVED BY THE STRUCTURAL ENGINEER. ALL SPLICES MUST THEN MEET ALL APPLICABLE ASTM STANDARDS FOR SPLICING.

G. WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWG) D.1.1-92. STRUCTURAL WELDING CODE.

SECTION 6: GROUNDING

A. GROUND RING IS TO BE CONSTRUCTED OF MATERIALS INDICATED ON THE DRAWINGS. ALL ABOVE GROUND LEADS TO BE SEALED IN CARFLEX CONDUITS.

B. GROUND ALL CORNER POSTS WITH EXOTHERMIC WELDS (CONNECTION TO BE NO MORE THAN 12 INCHES ABOVE GROUND BUT MUST BE VISIBLE).

C. ICE BRIDGE GROUND - GROUND SUPPORT POST TO GROUND RING AND GROUND ICE BRIDGE TO THE POST.

D. A SMOOTH, DOWNWARD PATH TO GROUND IS REQUIRED FOR ALL GROUND LEADS.

E. CONTRACTOR TO BOND PROPOSED GROUND SYSTEM TO EQUIPMENT/BUILDING GROUND RING IN 2 LOCATIONS.

F. PROPOSED GROUND RING SHALL BE INSTALLED A MINIMUM OF 2' FROM ANY STRUCTURE.

G. AT BASE OF ANTENNA TOWER, ATTACH GROUND KITS FROM COAXIAL CABLES TO TOWER GROUND BAR. LOCATE GROUND RING AROUND TOWER AND BOND GROUND BAR TO GROUND RING AS INDICATED ON DRAWINGS. CONTRACTOR TO PROVIDE GROUND BAR AND ALL MOUNTING HARDWARE.

H. DOUBLING UP OR "STACKING" OF CONNECTION IS NOT PERMITTED.

I. OXIDE INHIBITING COMPOUND TO BE USED AT ALL CONNECTIONS.

J. RESISTIVITY TEST SHALL BE PERFORMED BY THE CONTRACTOR PRIOR TO BACKFILLING. A MAXIMUM RESISTIVITY OF 5 OHMS MUST BE ACHIEVED PRIOR TO PROCEEDING. THE RESULTS OF THIS TEST SHALL BE DOCUMENTED, WITH COPIES PROVIDED TO THE OWNER AND CONSTRUCTION MANAGER.

K. DO NOT INSTALL BURIED GROUND RING OUTSIDE OF THE LEASED AREA. CONTRACTOR SHALL NOTIFY THE OWNER 24 HOURS IN ADVANCE OF THE GROUND RING INSTALLATION SO THAT A REPRESENTATIVE CAN INSPECT THE GROUND RING BEFORE IT IS BACKFILLED. IF A REPRESENTATIVE IS NOT PRESENT, CONTRACTOR SHALL PHOTOGRAPH ENTIRE INSTALLATION AND PROVIDE PHOTOGRAPHS TO CONSTRUCTION MANAGER WITHIN 48 HOURS.

SECTION 7: ELECTRICAL

A. PROVIDE 2 PULL STRINGS SECURELY FASTENED AT EACH END OF ALL CONDUITS.

B. THE CONTRACTOR SHALL LOCATE AND MARK ALL EXISTING UNDERGROUND POWER, TELCO, GROUNDING CONDUITS, AND ALL OTHER UTILITY EASEMENTS AND/OR WIRES PRIOR TO TRENCHING. ANY DAMAGE CAUSED TO THE EXISTING UNDERGROUND SERVICES OR SYSTEMS SHALL BE REPAIRED AT THE CONTRACTOR'S SOLE EXPENSE.

C. CONTRACTOR SHALL CONTACT UTILITY PROVIDER PRIOR TO BIDDING AND CONSTRUCTION TO VERIFY THAT SERVICE HAS BEEN ORDERED AND DISCUSS ANY SITE SPECIFIC REQUIREMENTS. CHANGE ORDERS RELATED TO UTILITY REQUIREMENTS OR REQUESTS WILL NOT BE ALLOWED UNLESS THIS CONDITION HAS BEEN MET.

D. CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS SHALL BE PAID BY CONTRACTOR.

E. ALL MATERIALS UTILIZED SHALL BE U.L. LISTED.

SECTION 8: TOWER AND ANTENNA INSTALLATION

A. IF REQUIRED, ERECT FURNISHED TOWER. PRIOR TO ERECTION, CONTRACTOR MUST VERIFY THAT CONCRETE HAS MET THE MINIMUM STRENGTH REQUIREMENTS AS WELL AS ANY OTHER INSPECTION OR TESTING REQUIREMENTS.

B. INSTALL ANTENNAS AND LINES AS INDICATED ON THE DRAWINGS AND PER OWNER SPECIFICATIONS.

C. INSTALL ANTENNA AND COAX MOUNTING HARDWARE AS INDICATED ON THE DRAWINGS OR APPROVED BY THE CONSTRUCTION MANAGER.

D. ASSIST OWNER TECHNICIANS IN PERFORMING SWEEP TEST OF INSTALLED COAX.

E. ANTENNA INSTALLATION TO BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY AND ERECTION OF ANTENNAS, TRANSMISSION LINES AND SUPPORT STRUCTURES.

F. CONTRACTOR SHALL FOLLOW ALL APPLICABLE STANDARDS INCLUDING, BUT NOT LIMITED TO: EIA 222 (LATEST VERSION), FAA ADVISORY CIRCULAR AC70/7460-1A, FCC RULES & REGULATIONS.

SECTION 9: LANDSCAPING & SITE RESTORATION

CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN LANDSCAPE WORK AS SHOWN ON THE CONSTRUCTION DRAWINGS OR REQUIRED IN THE SPECIFICATIONS.

CONTRACTOR SHALL UTLIZE THE SERVICES OF A LANDSCAPE CONTRACTOR TO ENSURE THE LANDSCAPING IS PROPERLY INSTALLED, WATERED, AND OTHERWISE MAINTAINED. CONTRACTOR SHALL GUARANTEE LANDSCAPING FOR A MINIMUM OF 1 YEAR AND SHALL REPLACE ANY DEAD OR VISIBLY DISTRESSED PLANTS WITHIN THIS PERIOD.

9.1 PROTECTION

A. CONTRACTOR SHALL PROTECT SEEDED AREAS FROM EROSION THROUGH THE USE OF AN EROSION CONTROL MESH OR MULCH NET.

B. ALL TREES PLACED IN CONJUNCTION WITH A LANDSCAPE PLAN WILL BE WRAPPED, TIED WITH HOSE PROTECTED WIRE AND SECURED TO A STEEL ANGLE EXTENDING TWO FEET INTO THE GROUND ON FOUR SIDES OF THE TREE.

C. ALL EXPOSED AREAS SHALL BE PROTECTED AGAINST WASHOUTS AND SOIL EROSION.

9.2 INSTALLATION

A. SEED AND FERTILIZER SHALL BE APPLIED TO SURFACE CONDITIONS TO ENCOURAGE ROOTING. RAKE AREAS TO BE SEEDED TO EVEN THE SURFACE AND LOOSEN THE SOIL.

B. SOW SEED IN TWO DIRECTIONS IN TWICE THE QUANTITY RECOMMENDED BY THE SEED PRODUCER.

C. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE GROWTH OF SEEDED AND LANDSCAPED AREAS BY WATERING. CONTINUE TO REWORK BARE AREAS UNTIL COMPLETE COVERAGE IS OBTAINED.

CONSULTANT:
Edge
Consulting Engineers, Inc.
624 WATER STREET
PRAIRIE DU SAC, WI 53578
608.644.1449 VOICE
608.644.1549 FAX
www.edgeconsult.com

CLIENT:
verticalbridge
VERTICAL BRIDGE DEVELOPMENT, LLC
750 PARK OF COMMERCE DRIVE
SUITE 200
BOCA RATON, FL 33487

GENERAL SPECIFICATIONS
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

CHECKED BY	ADP
PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	G-003

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A **AERIAL OVERVIEW OF SITE**

CONSULTANT:

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BOCA RATON, FL 33487

SITE PLAN
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

CHECKED BY	ADP
PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	C-101

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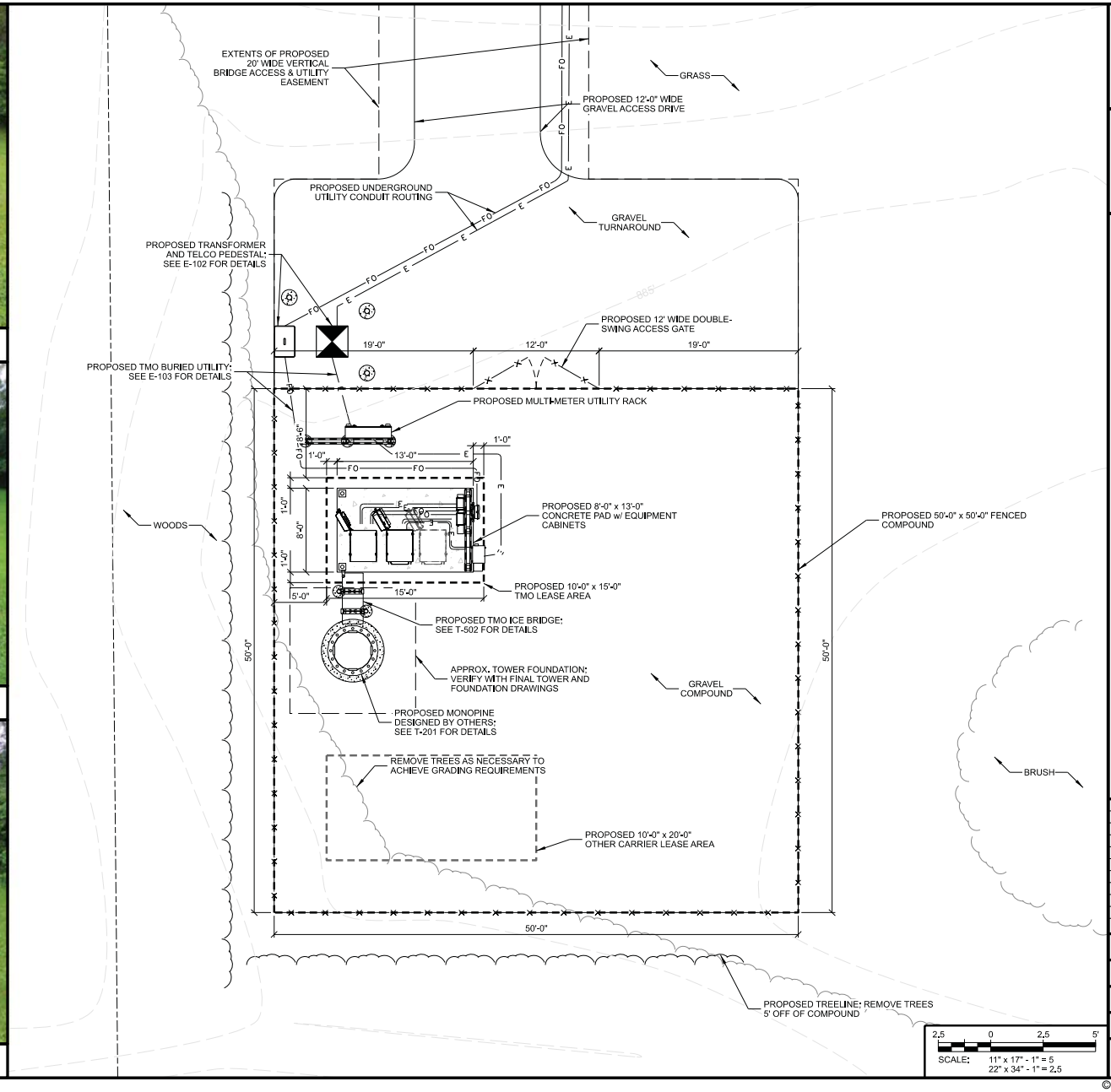
A SITE OVERVIEW



B SITE OVERVIEW



C SITE OVERVIEW



CONSULTANT:
Edge
Consulting Engineers, Inc.
624 WATER STREET
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SUITE 200
BOCA RATON, FL 33487

ENLARGED SITE PLAN
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

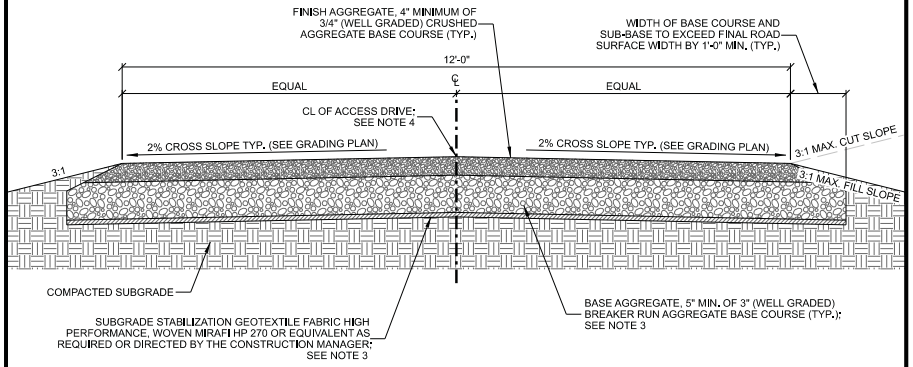
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INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

CHECKED BY	ADP
PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	C-102

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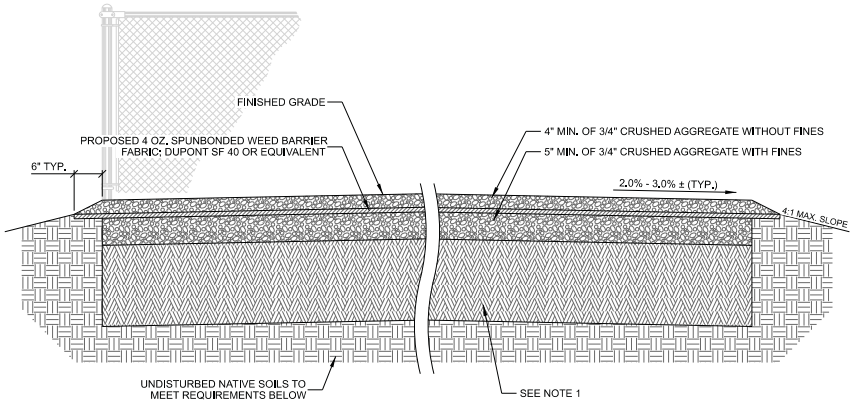
I:\33900\33894\Design\CAD\C2\PlotC-102.dgn



GENERAL NOTES:

1. REMOVE ALL TOPSOIL, ORGANIC MATERIAL AND WET OR POOR SOILS ALONG ACCESS DRIVE. CONTRACTOR TO REVIEW SITE CONDITIONS AND CONSULT GEOTECHNICAL REPORT FOR ANTICIPATED DEPTH OF SOILS THAT WILL REQUIRE REMOVAL. IF POOR SOILS ARE ENCOUNTERED AT A DEPTH OF MORE THAN 12', CONTACT CONSTRUCTION MANAGER FOR GUIDANCE.
2. SUBGRADE TO BE COMPACTED TO 95% MODIFIED PROCTOR AND VERIFIED BY PROOF-ROLL WITH LOADED TRI-AXLE DUMP TRUCK. CONTACT CONSTRUCTION MANAGER FOR GUIDANCE FOR FAILING SUBGRADE SOILS.
3. FAILING AREAS OF SUBGRADE SHALL BE UNDERCUT TO A MINIMUM DEPTH OF 18" BELOW FINISH AGGREGATE AND STABILIZED WITH 3" (WELL GRADED) BREAKER RUN AGGREGATE OVER SUBGRADE STABILIZATION GEOTEXTILE FABRIC.
4. CONSULT GRADING PLAN OR SITE PLAN FOR FINAL SITE GRADES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ASPHALT ACCESS DRIVE REPAIR AND RESTORATION FOLLOWING CONSTRUCTION COMPLETION. ANY DISTURBED OR DAMAGED AREAS SHALL BE RESTORED TO THEIR ORIGINAL OR BETTER CONDITION UPON COMPLETION OF WORK.

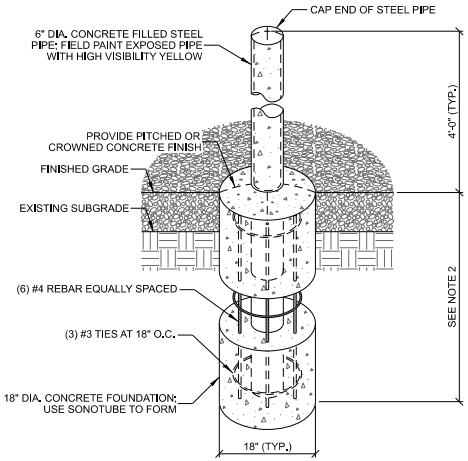
A GRAVEL DRIVE CROSS SECTION



NOTES:

1. REMOVE ALL TOPSOIL, ORGANIC MATERIAL AND WET OR POOR SOILS WITHIN COMPOUND AREA. CONTRACTOR TO REVIEW SITE CONDITIONS AND CONSULT GEOTECHNICAL REPORT FOR ANTICIPATED DEPTH OF SOILS THAT WILL REQUIRE REMOVAL. IF POOR SOILS ARE ENCOUNTERED SELECT FILL MAY BE REQUIRED. CONTACT CONSTRUCTION MANAGER FOR GUIDANCE.
2. FINAL TOWER FOUNDATION DESIGN RECOMMENDATIONS TO SUPERCEDE GRADING PLAN OR SITE PLAN ELEVATIONS.

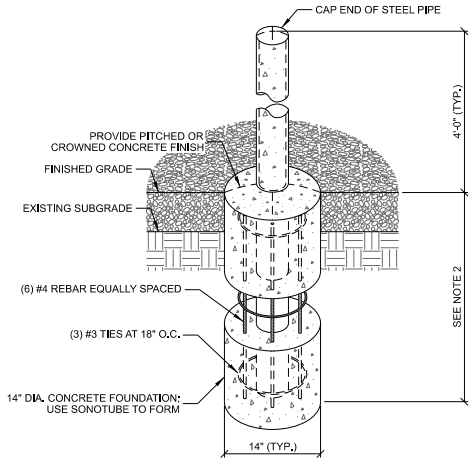
B COMPOUND CROSS SECTION



NOTES:

1. MAINTAIN 3" MINIMUM REBAR COVER IN ALL DIRECTION
2. PIER FOUNDATION DEPTH TO BE A MINIMUM OF 48"; DEPTH TO EXCEED LOCAL FROST DEPTH
3. CONCRETE TO BE A MINIMUM OF 3,000 PSI AT 28 DAYS

C PIPE BOLLARD



NOTES:

1. MAINTAIN 3" MINIMUM REBAR COVER IN ALL DIRECTION
2. PIER FOUNDATION DEPTH TO BE A MINIMUM OF 48"; DEPTH TO EXCEED LOCAL FROST DEPTH
3. CONCRETE TO BE A MINIMUM OF 3,000 PSI AT 28 DAYS

D UTILITY PIER FOUNDATION

THIS SPACE INTENTIONALLY LEFT BLANK

CONSULTANT:
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www.edgeconsult.com

CLIENT:
vertical bridge
VERTICAL BRIDGE DEVELOPMENT, LLC
750 PARK OF COMMERCE DRIVE
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BOCA RATON, FL 33487

CONSTRUCTION DETAILS
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

CHECKED BY	ADP
PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	C-501

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KEYNOTES: (THIS SHEET)

A. 4" DIA. SCHEDULE 40 GALVANIZED STEEL CORNER AND GATE POSTS; PROVIDE END CAP.

B. 3" DIA. SCHEDULE 40 GALVANIZED STEEL INTERMEDIARY LINE POSTS, TO BE EQUALLY SPACED AT MAXIMUM 8'-0" O.C.; PROVIDE END CAP.

C. 2" WELDED STEEL GATE FRAME

D. HEAVY DUTY BUTT HINGES

E. 3/8" DIA. TENSION ROD

F. 1" x 6" DOG-EARED VERTICAL CEDAR PLANKS SECURED TO HORIZONTAL RAILS. FINISH WITH CLEAR WOOD SEALER.

G. 2" x 4" HORIZONTAL CEDAR BACKING RAILS SECURED TO FENCE POSTS WITH MANUFACTURER APPROVED HARDWARE. FINISH WITH CLEAR WOOD SEALER.

H. LATCH WITH PADLOCK ON EXTERIOR GATE (GRAINGER @1XMN8 OR EQUIVALENT).

I. 6" x 6" HANDHOLE FOR CHAIN LOCK

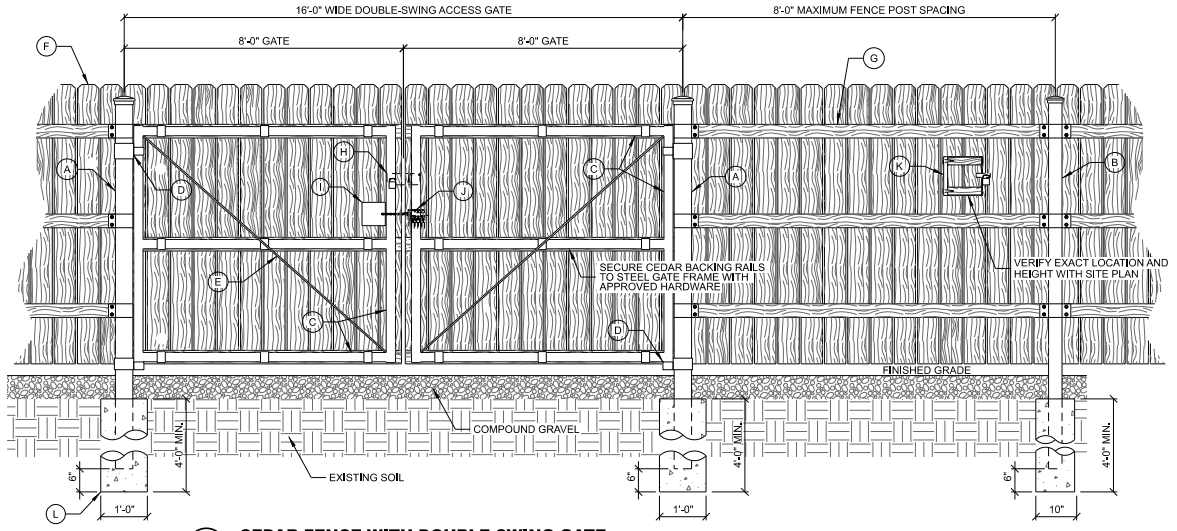
J. TAYHOPE MULTI-TENANT LOCK (OR EQUIVALENT)

K. 10" x 10" HINGED OPENING FOR ELECTRICAL METER READ-OUT. VERIFY EXACT POSITION AND HEIGHT WITH SITE PLAN.

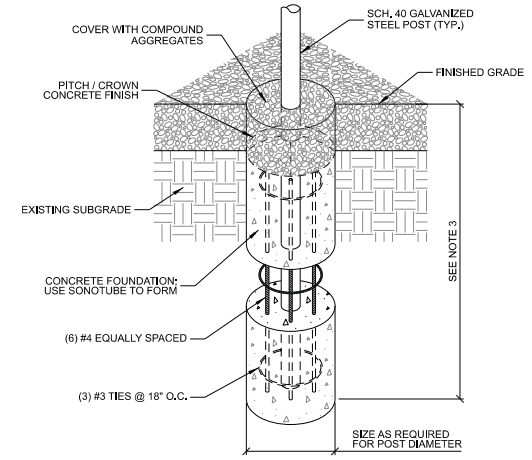
L. 12" DIA. AT GATE & CORNER POSTS, 10" DIA. AT LINE POSTS SEE DETAIL BELOW

GENERAL NOTES: (THIS SHEET)

1. CONTRACTOR TO FOLLOW MANUFACTURER INSTALLATION RECOMMENDATIONS. ALL HARDWARE TO FOLLOW MANUFACTURER SPECIFICATIONS.

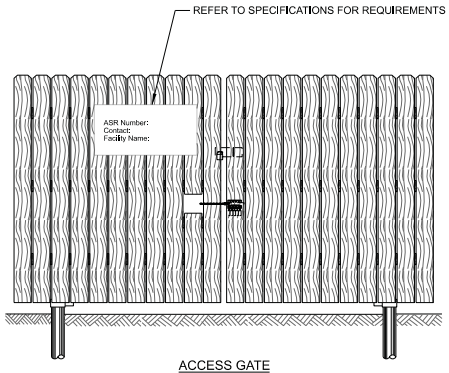


A CEDAR FENCE WITH DOUBLE-SWING GATE



NOTES:
1. MAINTAIN 3" MINIMUM REBAR COVER WITH CONCRETE IN ALL DIRECTIONS.
2. CONCRETE MIX TO BE 4,000 PSI @ 28 DAYS.
3. FOUNDATION DEPTH TO EXCEED LOCAL FROST DEPTH, OR 48" MINIMUM.

B FENCE POST PIER FOUNDATION



ACCESS GATE

GENERAL NOTES:
1. THE ANTENNA STRUCTURE REGISTRATION NUMBER SHALL BE DISPLAYED PER 47 CFR 17.4 (g).
2. THE ASR NUMBER SHALL BE POSTED ON THE PERIMETER FENCE OR ACCESS GATE SO THAT IT IS CONSPICUOUSLY VISIBLE AND LEGIBLE FROM THE PUBLICLY ACCESSIBLE AREA NEAREST THE BASE OF THE ANTENNA STRUCTURE ALONG A PUBLICLY ACCESSIBLE ROADWAY OR PATH.
3. MATERIALS USED TO DISPLAY THE ANTENNA STRUCTURE REGISTRATION NUMBER MUST BE WEATHER-RESISTANT AND OF SUFFICIENT SIZE TO BE EASILY SEEN WHERE POSTED.

C ANTENNA STRUCTURE REGISTRATION (ASR) SIGNAGE

FENCING NOTES: (THIS SHEET)

SCOPE:
1.1 THIS SECTION COVERS THE REQUIREMENTS FOR THE MATERIALS AND THE CONSTRUCTION OF SITE FENCING.

SPECIAL REQUIREMENTS:
2.1 ALL FITTINGS, HARDWARE AND STEEL MEMBERS USED FOR SITE AREA FENCING, SHALL BE HOT DIPPED GALVANIZED (ASTM A153) OR OTHER APPROVED NON CORROSIVE MATERIAL AND CONFORM TO FEDERAL SPEC RR-F-191G (1-25-74).
2.2 ALL NON-CORROSIVE MATERIAL SHALL BE PRE-APPROVED BY THE PROJECT MANAGER.
2.3 ANY DAMAGE TO GALVANIZING OR NON-CORROSIVE COATING DURING CONSTRUCTION SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S RECOMMENDED METHODS.
2.4 ALL WOOD TO BE CEDAR WITH CLEAR WOOD SEALER FINISH.

FENCE POSTS:
3.1 LOCATION OF CORNER POSTS SHALL BE DETERMINED FROM STAKES AND PROPERTY PINS INSTALLED BY THE REGISTERED LAND SURVEYOR UNDER CONTRACT FOR THE PROJECT. IF THE STAKES ARE NOT PRESENT OR DO NOT CONFORM TO THE SITE PLAN. CONSULT WITH THE PROJECT MANAGER.
3.2 CORNERS AND GATE POST FOR SITE SHALL BE 4" DIA. SCHEDULE 40 GALVANIZED PIPE. INTERMEDIARY POSTS SHALL BE 2-1/2" OR 3" DIA. SCHEDULE 40 GALVANIZED PIPE.
3.3 CORNER POSTS SHALL BE SET WITHIN ONE INCH (1") OF DIMENSIONS INDICATED ON THE SITE PLAN.
3.4 FENCE POSTS SHALL BE VERTICALLY PLUMB IN ALL PLANES WITHIN 1/2 INCH (1/2").
3.5 CORNER AND GATE POST FOUNDATIONS SHALL BE A MINIMUM FOUR FEET (4') DEEP OR SIX INCHES (6") BELOW THE FROST LINE, WHICHEVER IS GREATER. WITH MINIMUM THREE INCH (3") CLEARANCE BETWEEN BOTTOM OF POST AND BOTTOM OF THE HOLE.
3.6 POST FOUNDATIONS GATE AND CORNER POSTS SHALL BE 12 INCHES (12") IN DIAMETER. INTERMEDIARY POSTS FOUNDATIONS SHALL BE 10 INCHES (10") IN DIAMETER.
3.7 LINE POSTS BETWEEN CORNER AND GATE POSTS SHALL BE EQUALLY SPACED WITH AN EIGHT FOOT (8') MAXIMUM SPACING. GATE POST LOCATIONS SHALL BE IN ACCORDANCE WITH SITE PLAN AND SHALL BE VERIFIED WITH THE PROJECT MANAGER.
3.8 ALL POSTS SHALL BE CAPPED.
3.9 ALL FOUR CORNERS POSTS AND BOTH GATE POSTS SHALL BE CONNECTED TO THE SITE GROUNDING SYSTEM (REFER TO GROUNDING SYSTEM STANDARD).

FENCE ENCLOSURE:
4.1 ENCLOSURE BACKING RAILS TO CONSIST OF 2 INCH (2") BY 4 INCH (4") NOMINAL CEDAR PLANKS. ALL CEDAR TO HAVE CLEAR WOOD SEALER FINISH.
4.2 ENCLOSURE BOARDS TO BE HEAVY DUTY 1 INCH (1") BY 6 INCH (6") NOMINAL CEDAR PLANKS. ALL CEDAR TO HAVE CLEAR WOOD SEALER FINISH.
4.3. ALL ENCLOSURE BOARDS TO BE SECURED TO FENCE POSTS WITH MANUFACTURER APPROVED HARDWARE. CONTRACTOR TO FOLLOW MANUFACTURER RECOMMENDATIONS AND SPECIFICATIONS

GATE:
5.1 LOCATION OF GATE SHALL CONFORM TO THE SITE PLAN. GATE SIZE SHALL BE 12-0" WIDE (UNLESS OTHERWISE NOTED).
5.2 GATE FRAME TO BE CONSTRUCTED OF 2 INCH (2") WELDED STEEL WITH HEAVY DUTY HINGES. CONTRACTOR TO FOLLOW MANUFACTURER RECOMMENDATIONS AND SPECIFICATIONS.
5.3 GATE HINGES SHALL PROVIDE FOR 180 DEGREE RADIUS GATE SWING. ANY HINGE NUTS SHALL BE ON THE INSIDE AND DOUBLE-NUT TO DETER UNAUTHORIZED ENTRY.
5.4 GATE SHALL BE INSTALLED PLUMB AND SHALL OPEN AND CLOSE FREELY.
5.5 GATE POSTS SHALL NOT BE SHARED AS A CORNER POST.

CONSULTANT:
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CLIENT:
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VERTICAL BRIDGE DEVELOPMENT, LLC
750 PARK OF COMMERCE DRIVE
SUITE 200
BOCA RATON, FL 33487

FENCE DETAILS
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

CHECKED BY	ADP
PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	C-502

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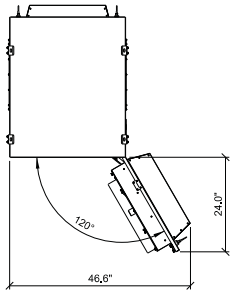
MANUFACTURER: DELTA
MODEL: HP-LARGE 3 POWER CABINET
DIMENSIONS: 72" x 30" x 41" (H x W x D)
WEIGHT: 551 LBS (WITHOUT EQUIPMENT OR BATTERIES)

ORDERING INFORMATION:
CABINET
ESOA600-HCU01 (HP-LARGE 3 600A POWER CABINET)

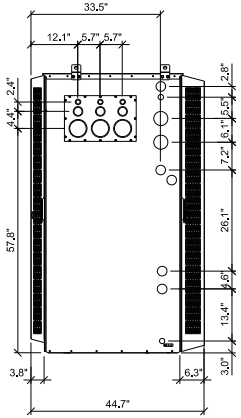
RECTIFIER
ESR-48/60A D-A (48V/56A 3000W, 96.4%, CAN COMM.)

CONTROLLER (SPARE)
TPS1020028AU17 (ORION TOUCH CONTROLLER)

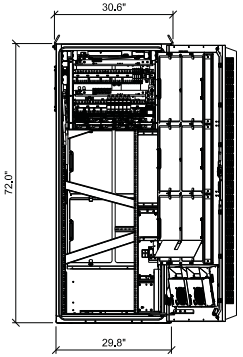
6" PLINTH
37993318816900-S



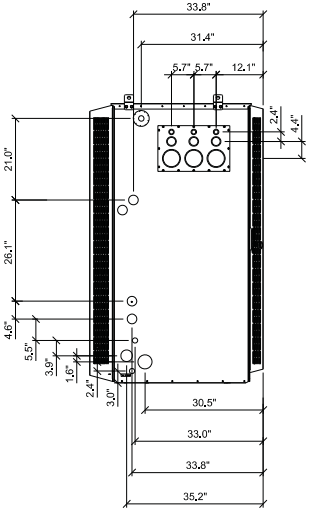
PLAN VIEW



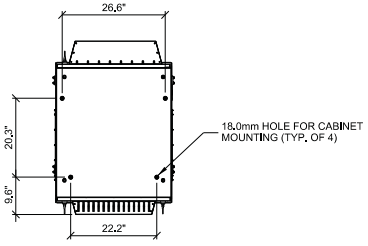
LEFT VIEW



FRONT VIEW



RIGHT VIEW



BOTTOM VIEW

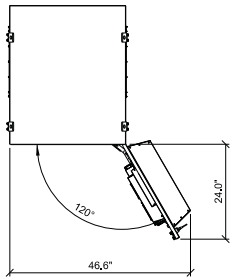
A EQUIPMENT CABINET

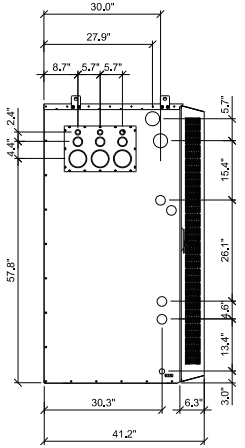
SCALE: 11" x 17" - 3/8" = 1'-0"
22" x 34" - 3/4" = 1'-0"

MANUFACTURER: DELTA
MODEL: LARGE BATTERY 3 CABINET
DIMENSIONS: 72" x 30" x 41" (H x W x D)
WEIGHT: 540 LBS (WITHOUT BATTERIES)

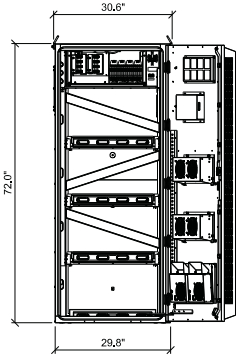
ORDERING INFORMATION:
CABINET
ESOF015-ECV04 (LARGE 3 POWER CABINET)

6" PLINTH
37993318816900-S

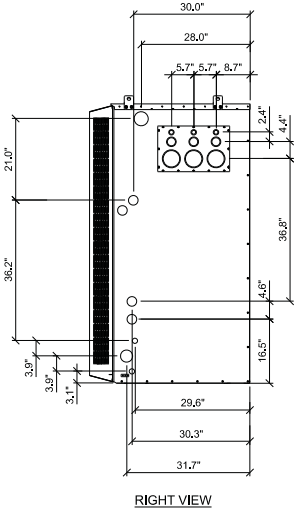




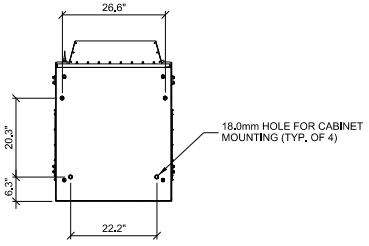
LEFT VIEW



FRONT VIEW



RIGHT VIEW



BOTTOM VIEW

B BATTERY BACKUP SYSTEM

SCALE: 11" x 17" - 3/8" = 1'-0"
22" x 34" - 3/4" = 1'-0"

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BOCA RATON, FL 33487

EQUIPMENT CABINET SPECIFICATIONS
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

SUBMITTAL:

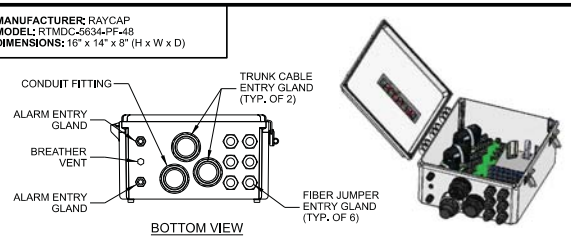
INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

CHECKED BY	ADP
PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	A-001

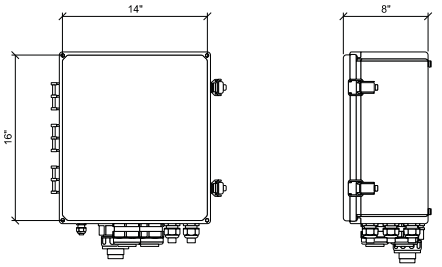
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MANUFACTURER: RAYCAP
MODEL: RTMDC-5634-PF-48
DIMENSIONS: 16" x 14" x 8" (H x W x D)



BOTTOM VIEW



FRONT VIEW SIDE VIEW

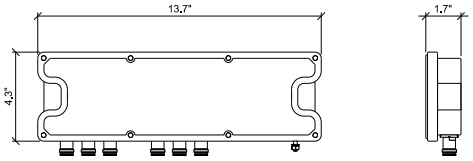
A **RAYCAP OVER VOLTAGE PROTECTION (COVP)**

MANUFACTURER: NOKIA
MODEL: 473551A (FSEE)
DIMENSIONS: 1.7" x 13.7" x 4.3" (H x W x D)
WEIGHT: 1.1 LBS





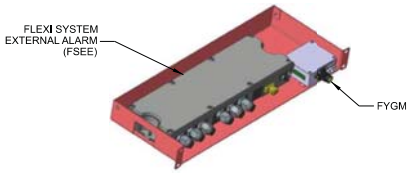
BOTTOM VIEW



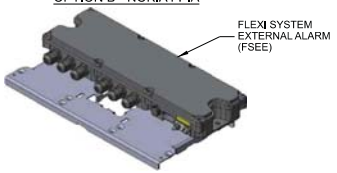
FRONT VIEW SIDE VIEW

B **FLEXI SYSTEM EXTERNAL ALARM (FSEE)**

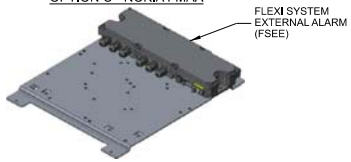
OPTION A - NOKIA FMAB



OPTION B - NOKIA FPIA



OPTION C - NOKIA FMAA



C **FLEXI SYSTEM EXTERNAL ALARM (FSEE) MOUNTING**

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CONSULTANT:
Edge Consulting Engineers, Inc.
624 WATER STREET
PRAIRIE DU SAC, WI 53578
608.644.1449 VOICE
608.644.1549 FAX
www.edgeconsult.com

CLIENT:
verticalbridge
VERTICAL BRIDGE DEVELOPMENT, LLC
750 PARK OF COMMERCE DRIVE
SUITE 200
BOCA RATON, FL 33487

GROUND EQUIPMENT SPECIFICATIONS

US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

CHECKED BY	ADP
PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	**A-002**

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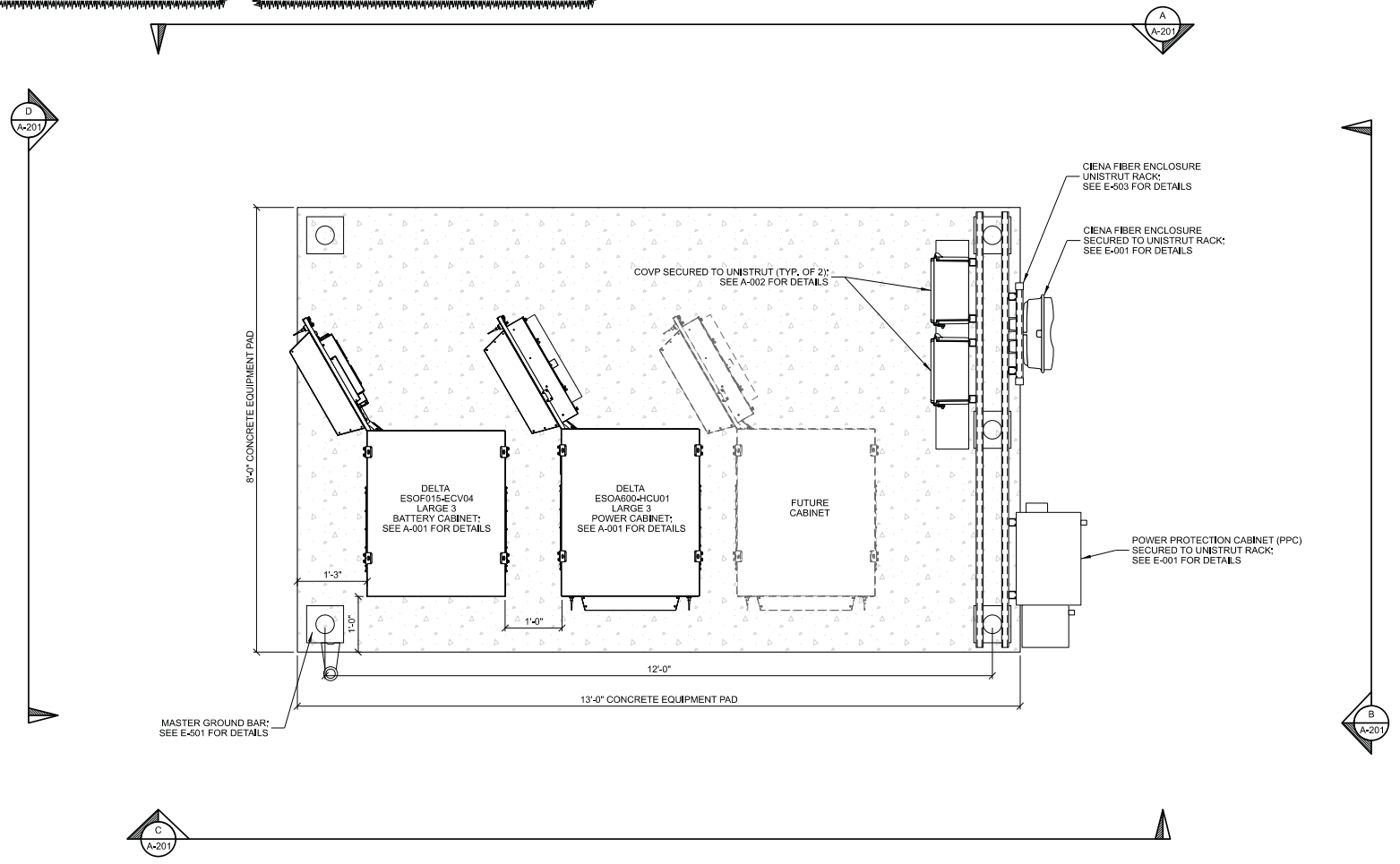
GENERAL NOTES:

-HPL3 WILL CONTAIN FSEE, FSMFs AND AMIAa
-FSMF FANS TO BE REVERSED PRIOR TO INSTALLATION
-EQUIP. PLATFORM TO BE KEPT AS CLOSE TO GRADE AS POSSIBLE
-MIN. 8" CLEARANCE BETWEEN HPL3 AND LB3
-GPS CABLE TO BE ROUTED THROUGH THE COVP INTO CONDUIT FOR HPL3 CABINET

POWER CABINET NOTE:

VOLTAGE BOOSTER TO BE PLACED INSIDE OF HPL3 CABINET, TO BE LOCATED ABOVE THE FIRST AMIA TOWARD THE TOP OF THE RU SHELF.

MANUFACTURER #: POWERPLUS 100-3-1U



NOTE:

1. EQUIPMENT PLATFORM CANOPY NOT SHOWN FOR CLARITY.

A EQUIPMENT PAD LAYOUT

SCALE: 11" x 17" - 1/2" = 1'-0"
22" x 34" - 1" = 1'-0"

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BOCA RATON, FL 33487

EQUIPMENT PAD PLAN
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

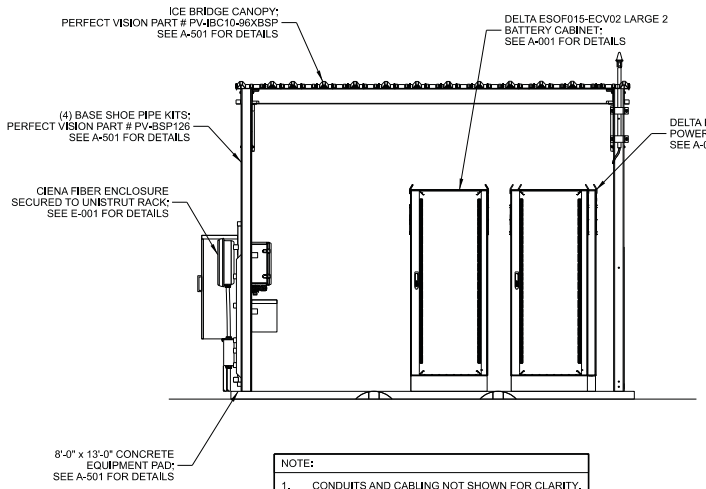
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JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

CHECKED BY	ADP
PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	A-101

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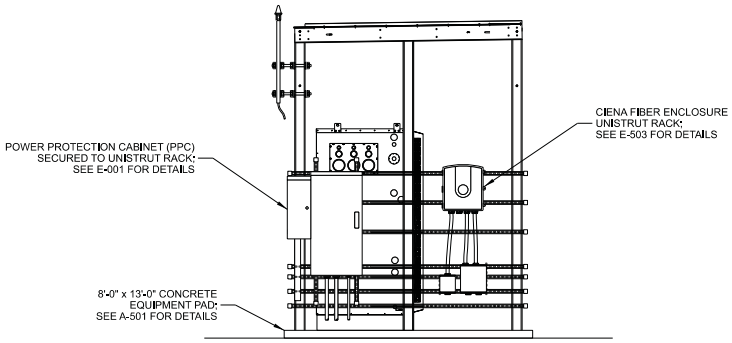
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NOTE:
1. CONDUITS AND CABLING NOT SHOWN FOR CLARITY.

A EQUIPMENT PAD ELEVATION

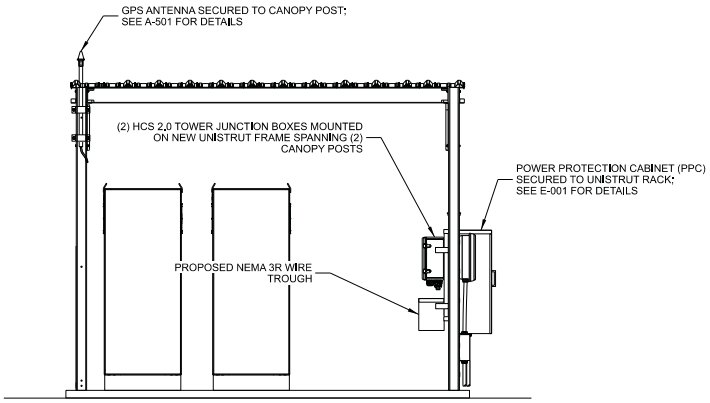
SCALE: 11" x 17" - 1/4" = 1'-0"
22" x 34" - 1/2" = 1'-0"



NOTE:
1. CONDUITS AND CABLING NOT SHOWN FOR CLARITY.

B EQUIPMENT PLATFORM ELEVATION

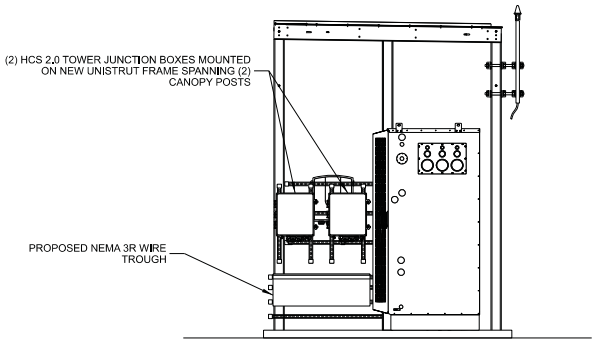
SCALE: 11" x 17" - 1/4" = 1'-0"
22" x 34" - 1/2" = 1'-0"



NOTE:
1. CONDUITS AND CABLING NOT SHOWN FOR CLARITY.

C EQUIPMENT PAD ELEVATION

SCALE: 11" x 17" - 1/4" = 1'-0"
22" x 34" - 1/2" = 1'-0"



NOTE:
1. CONDUITS AND CABLING NOT SHOWN FOR CLARITY.

D EQUIPMENT PAD ELEVATION

SCALE: 11" x 17" - 1/4" = 1'-0"
22" x 34" - 1/2" = 1'-0"

CONSULTANT:
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Consulting Engineers, Inc.
624 WATER STREET
PRAIRIE DU SAC, WI 53578
608.644.1449 VOICE
608.644.1549 FAX
www.edgeconsult.com

CLIENT:
verticalbridge
VERTICAL BRIDGE DEVELOPMENT, LLC
750 PARK OF COMMERCE DRIVE
SUITE 200
BOCA RATON, FL 33487

EQUIPMENT PAD ELEVATIONS
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

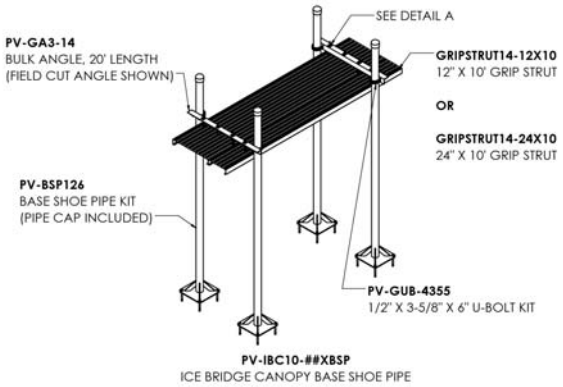
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PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	A-201

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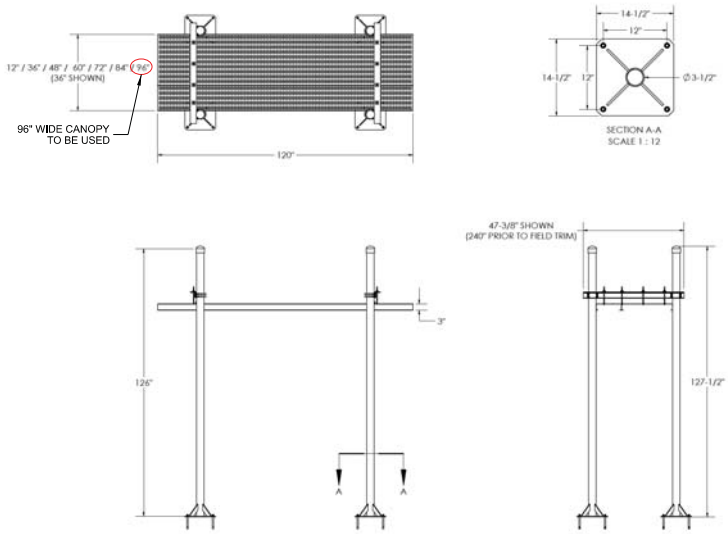
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MANUFACTURER: PERFECT VISION
MODEL: PV-IBC10-96XBSP

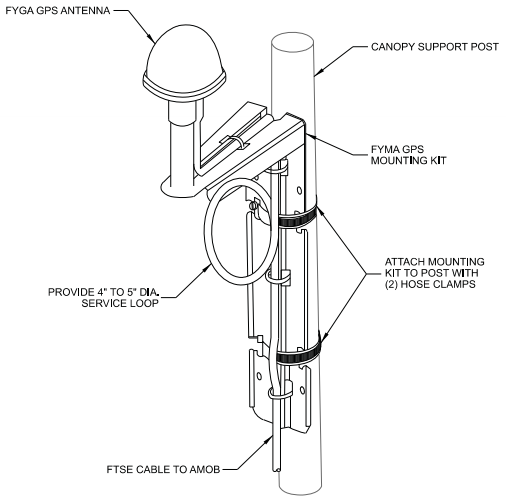
10' x 96" w/ 4 POSTS & BASE SHOE PIPE



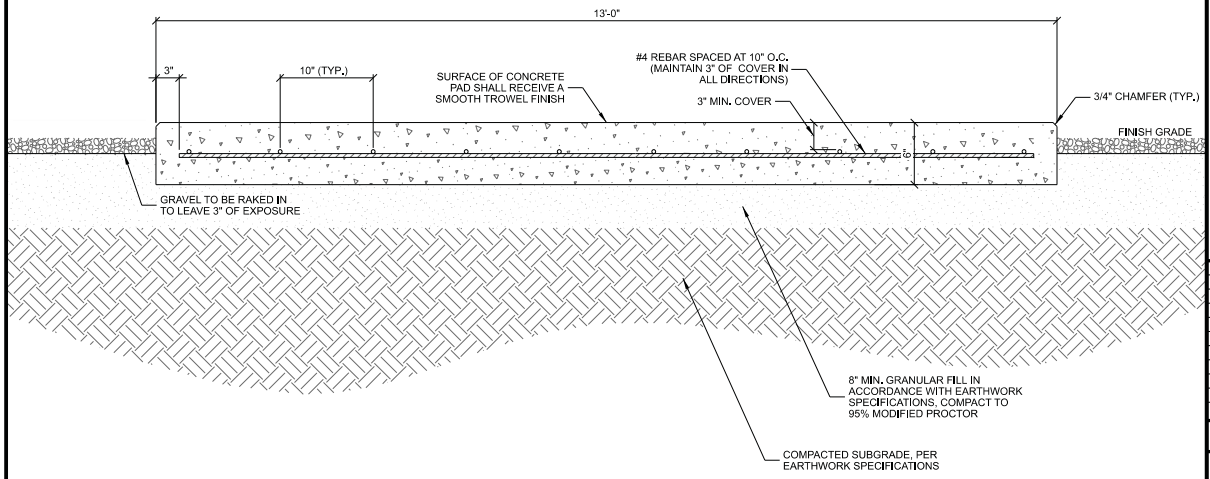
A **ICE CANOPY**



B **ICE CANOPY**



C **GPS ANTENNA MOUNTING**



D **TYPICAL FOUNDATION**

CONSULTANT:
Edge
Consulting Engineers, Inc.
624 WATER STREET
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CLIENT:
verticalbridge
VERTICAL BRIDGE DEVELOPMENT, LLC
750 PARK OF COMMERCE DRIVE
SUITE 200
BOCA RATON, FL 33487

EQUIPMENT PAD DEATILS
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

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PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	A-501

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FFVV-65C-R3-V1



8-port sector antenna, 4x 617-894 and 4x 1695–2690 MHz, 65° HPBW, 3x RET

General Specifications

Antenna Type	Sector
Band	Multiband
Color	Light gray
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage
Radome Material	Fiberglass, UV resistant
Radiator Material	Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, low band	4
RF Connector Quantity, total	8

Remote Electrical Tilt (RET) Information

RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	1 female | 1 male
Input Voltage	10–30 Vdc
Internal RET	High band (2) | Low band (1)
Power Consumption, idle state, maximum	1 W
Power Consumption, normal conditions, maximum	10 W
Protocol	3GPP/AISG 2.0 (Single RET)

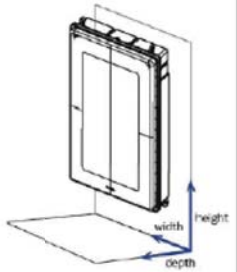
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COMMSCOPE®

A **ANTENNA SPECIFICATION (700/600 & AWS/PCS)**

PRODUCT DESCRIPTION

Band	B41 – 2496-2690 MHz
Supported Modulation schemes	(DL) BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM (UL) BPSK, QPSK, 16 QAM, 64 QAM
No. of TX/RX	64TX64RX
MIMO Streams	16
Instantaneous IBW	194 MHz
Occupied Bandwidth OBW	190 MHz
Total Avg EIRP	74.8 dBm
Supported bandwidths	LTE: 3x20 MHz 5G: 40/60/80/100MHz
Output Power	5 W / TRX (320 W total, 2 W/MHz up to 160 MHz)
Power Consumption	≤1330 W typical (75% DL duty cycle, 30% RF load) ≤1827 W max (75% DL duty cycle, 100% RF load)
Optical Ports	4 x SFP28 (OCTIS), 25 Gbps, eCPRI
Connector Type	APPG DC Pole connector
Dimensions (H x W x D)	38.2 in x 21.5 in x 5.9 in
Weight lbs	108.0 lb
HW/SW Availability	SRAN20C/5G20B
5G NR Support	Yes
Material Description	Nokia AirScale MAA 64T64R 192AE B41 320W AEHC



AEHC 475124A

B **ANTENNA SPECIFICATION (LTE+5G)**

CONSULTANT:
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Consulting Engineers, Inc.
624 WATER STREET
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750 PARK OF COMMERCE DRIVE
SUITE 200
BOCA RATON, FL 33487

ANTENNA SPECIFICATIONS
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

SUBMITTAL:

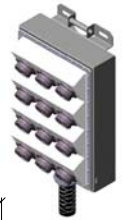
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JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

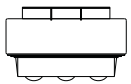
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PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	**T-001**

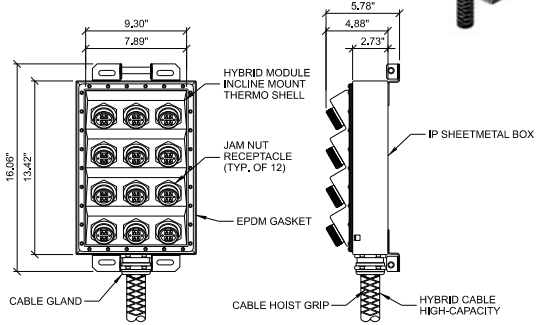
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MANUFACTURER: ALLIANCE CORPORATION
MODEL: HYBRID CABLE HI CAP BREAKOUT BOX
DIMENSIONS: 16.06" x 9.30" x 5.78" (H x W x D)

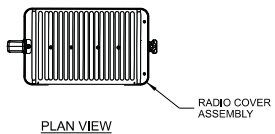




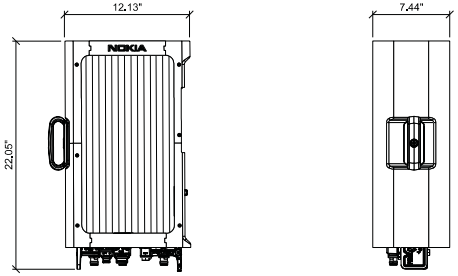


A **HYBRID CABLE BREAKOUT BOX**

MANUFACTURER: NOKIA
MODEL: AHLOA
DIMENSIONS: 22.05" x 12.13" x 7.44" (H x W x D)
WEIGHT: 83.8 LBS (WITHOUT SOLAR SHIELD)







B **REMOTE RADIO HEAD (RRH)**

PRODUCT DESCRIPTION

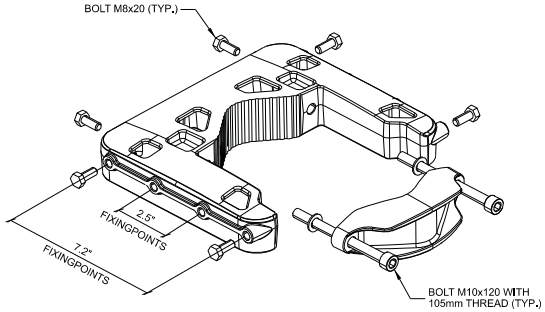
Band	B25 + B66
Instantaneous BW (DL/UL)	65MHz on Band 25, 80MHz on Band 66
Supported Modulation schemes	up to 64QAM (UL) and up to 256QAM (DL)
Supported bandwidths	LTE 1.4,3,5,10,15,20 MHz
No. of ports	4T4R
Output Power	80 W for Band 25 and 40 W for Band 66 (Total Power is 480W)
DC connector	Terminal block
Optical Fiber connector	2 x 9.8Gbps CPRI, R2CT IP seal
RF Connector	4.3-10+
AISG	AISG on all ports, DC on ANT1 and ANT3
Dimensions (H x W x D) in	27.3 x 12.1 x 5.2
Weight lbs	70.5 without cover
HW/SW Availability	Available now – SRAN19A
5G NR Support	YES
NB-IoT Support	YES (in band, guardband, standalone)



C **REMOTE RADIO HEAD (RRH)**

MANUFACTURER: NOKIA
DESCRIPTION: FLEXI POLE KIT (FPKA)
MODEL: 471649A





NOTES:
1. CAN BE USED WITH PIPES FROM 2.4"± DIA. TO 4.7"±.
2. MAX ALLOWABLE WEIGHT IS 352.7 LBS.

D **FLEXI POLE KIT**

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CONSULTANT:
Edge Consulting Engineers, Inc.
624 WATER STREET
PRAIRIE DU SAC, WI 53578
608.644.1449 VOICE
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CLIENT:
vertical bridge
VERTICAL BRIDGE DEVELOPMENT, LLC
750 PARK OF COMMERCE DRIVE
SUITE 200
BOCA RATON, FL 33487

EQUIPMENT SPECIFICATIONS
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

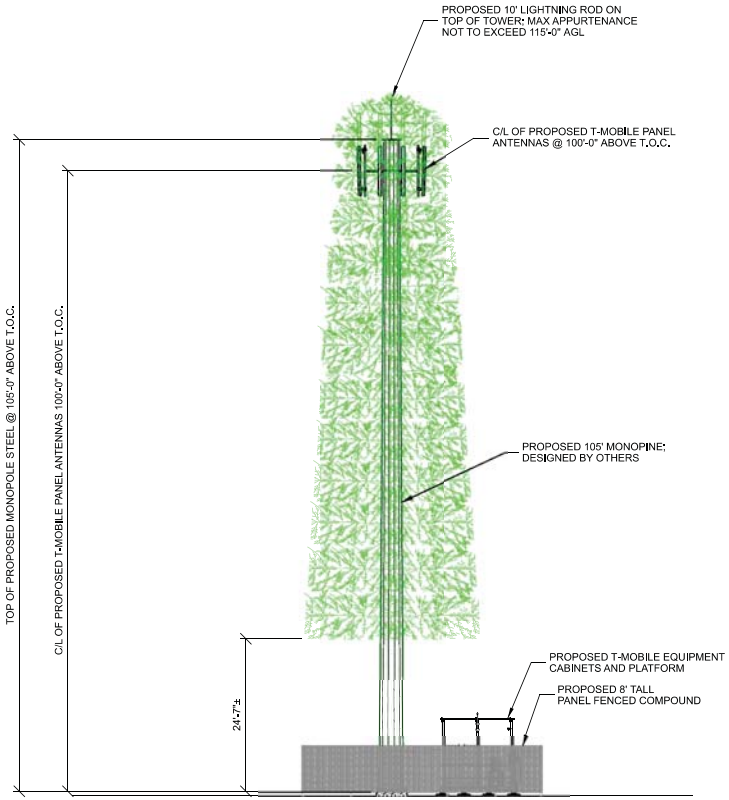
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PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	T-002

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NOTES:

1. CONTRACTOR TO VERIFY HEIGHT AND DIRECTION OF ANTENNAS WITH PROJECT MANAGER.
2. CONTRACTOR TO VERIFY LIGHTNING ROD EXTENDS 2' MIN. ABOVE ALL ANTENNAS & EQUIPMENT
3. CONTRACTOR TO VERIFY MINIMUM 110% SETBACK (115'-6") TO EASTERN PROPERTY LINE



SPECIAL NOTE:

TOWER TO BE EQUIPPED WITH ANTI-CLIMBING DEVICE AS NECESSARY

NOTES:

1. ANCHOR BOLTS AND NUTS TO BE MARKED WITH INDELIBLE INK, 1/8" LINE.

A **SITE ELEVATION**

SCALE: 11" x 17" - 1" = 30'-0"
22" x 34" - 1" = 15'-0"

CONSULTANT:

Edge
Consulting Engineers, Inc.
624 WATER STREET
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CLIENT:

verticalbridge
VERTICAL BRIDGE DEVELOPMENT, LLC
750 PARK OF COMMERCE DRIVE
SUITE 200
BOCA RATON, FL 33487

SITE ELEVATION
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

SUBMITTAL:

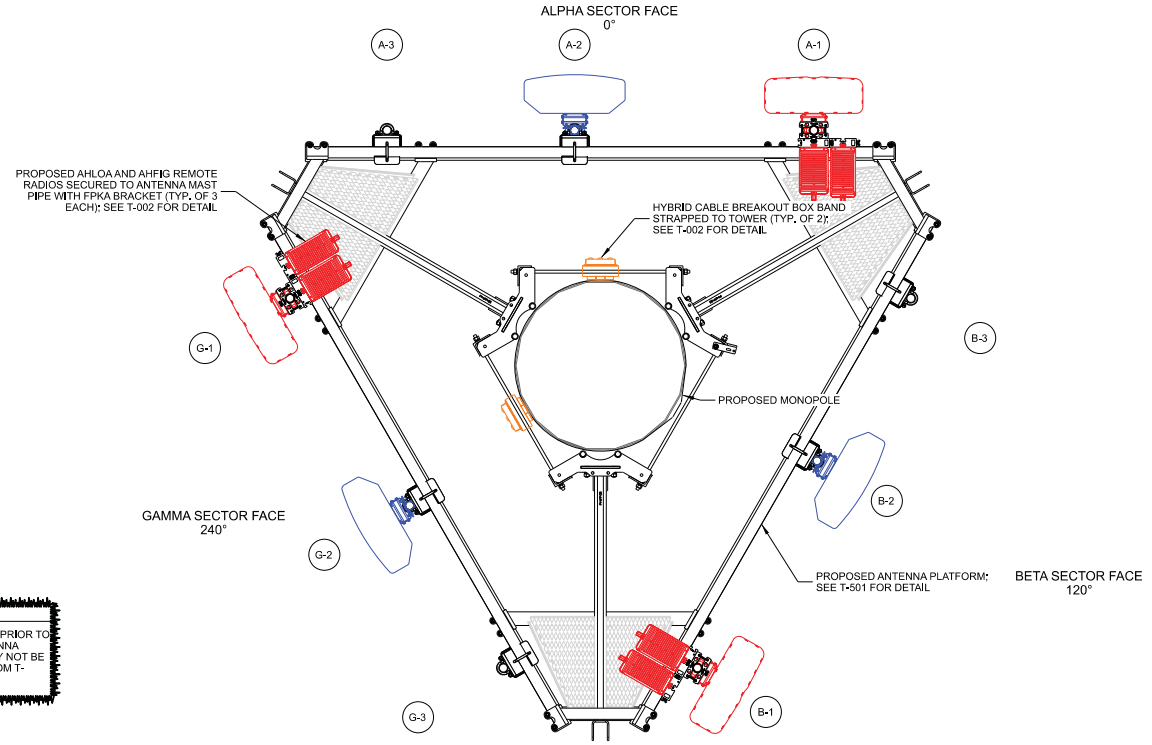
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CHECKED BY	ADP
PLOT DATE	12/9/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	T-201

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NORTH



NOTE:

T-MOBILE RF TO PROVIDE FINAL RFDS PRIOR TO ISSUING FINAL CDS. PROPOSED ANTENNA LOADING SHOWN IS TYPICAL, AND MAY NOT BE INDICATIVE OF FINAL SITE DESIGN FROM T-MOBILE

ANTENNA AND CABLE SCHEDULE (VIEW FROM THE REAR)

SECTOR	ALPHA			BETA			GAMMA		
LOCATION	A-3	A-2	A-1	B-3	B-2	B-1	G-3	G-2	G-1
TECHNOLOGY	N/A	LTE + 5G	AWS + PCS / 700 + 600	N/A	LTE + 5G	AWS + PCS / 700 + 600	N/A	LTE + 5G	AWS + PCS / 700 + 600
AZIMUTH	N/A	0°	0°	N/A	120°	120°	N/A	240°	240°
RAD CENTER	N/A	145'	145'	N/A	145'	145'	N/A	145'	145'
COLOR CODING	N/A	RED (5-8)	RED (1-8) (TYP. ALL SECTORS)	N/A	RED (5-8)	RED (1-8) (TYP. ALL SECTORS)	N/A	RED (5-8)	RED (1-8) (TYP. ALL SECTORS)
MODEL #	N/A	NOKIA AEHC	COMMSCOPE FFHH-65C-R3	N/A	NOKIA AEHC	COMMSCOPE FFHH-65C-R3	N/A	NOKIA AEHC	COMMSCOPE FFHH-65C-R3
MECHANICAL DOWNTILT	N/A	0°	0°	N/A	0°	0°	N/A	0°	0°
ELECTRICAL DOWNTILT	N/A	2°	2°	N/A	2°	2°	N/A	2°	2°
RRU TYPE	N/A	N/A	AHLOA & AHFIG	N/A	N/A	AHLOA & AHFIG	N/A	N/A	AHLOA & AHFIG
HCS TYPE/QUANTITY	(2) NOKIA HIGH CAP HCS 2.0 TRUNK - 12#6AWG 24 SM FIBER PR								
HCS ACTUAL LENGTH	125'								
BUNDLE TYPE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BUNDLE LENGTH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
JUMPER TYPE FROM COVP TO RRU	N/A	HCS 2.0 JUMPER - 10AWG 2PR AIRSCALE	HCS 2.0 JUMPER - 6AWG 2PR AIRSCALE	N/A	HCS 2.0 JUMPER - 10AWG 2PR AIRSCALE	HCS 2.0 JUMPER - 6AWG 2PR AIRSCALE	N/A	HCS 2.0 JUMPER - 10AWG 2PR AIRSCALE	HCS 2.0 JUMPER - 6AWG 2PR AIRSCALE
JUMPER LENGTH	N/A	15'	15'	N/A	15'	15'	N/A	15'	15'
JUMPER QUANTITY	N/A	1	2	N/A	1	2	N/A	1	2
JUMPER TYPE FROM COVP TO ANTENNA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
JUMPER LENGTH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
JUMPER QUANTITY	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NOTE:

1. ALL ANTENNA AZIMUTHS TO BE FROM TRUE NORTH.
2. CONTRACTOR TO INSTALL CABLE KEEPERS AS NEEDED ON ANY MOUNTS THAT MAY OBSTRUCT THE TOWER SAFETY CLIMB. THE SAFETY CLIMB CABLE SHALL BE ROUTED IN THE KEEPERS SUCH THAT IT DOES NOT RUB ON THE MOUNTS OR ANY RF CABLES.

A ANTENNA AND EQUIPMENT LAYOUT

CONSULTANT:
Edge Consulting Engineers, Inc.
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PRAIRIE DU SAC, WI 53578
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CLIENT:
verticalbridge
VERTICAL BRIDGE DEVELOPMENT, LLC
750 PARK OF COMMERCE DRIVE
SUITE 200
BOCA RATON, FL 33487

ANTENNA AND EQUIPMENT CONFIGURATION
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

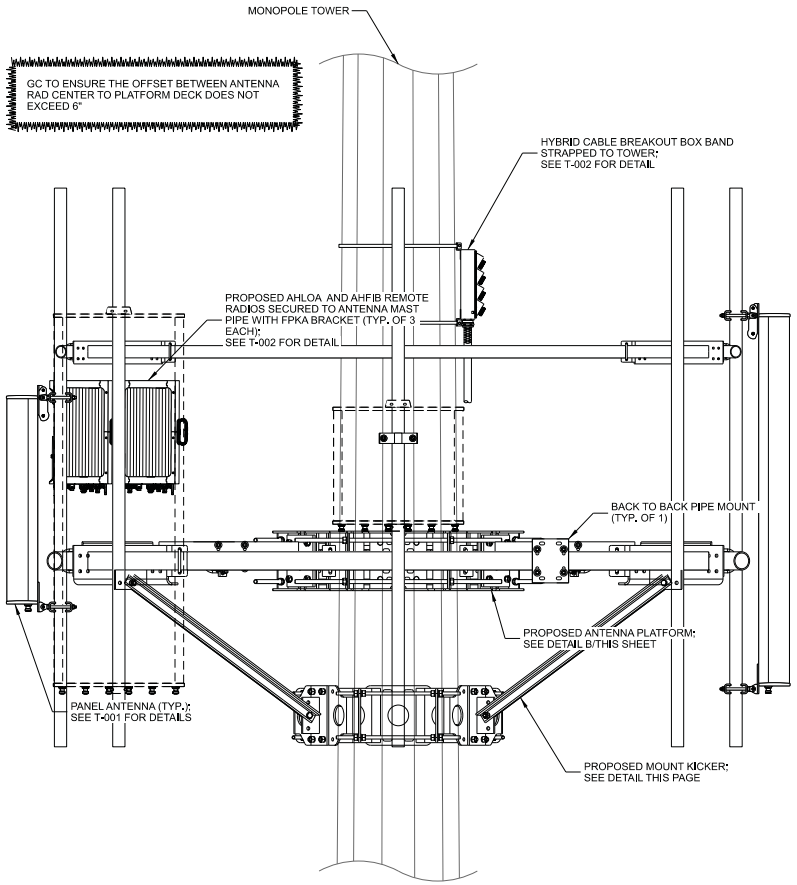
SUBMITTAL:

INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

CHECKED BY	ADP
PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	T-301

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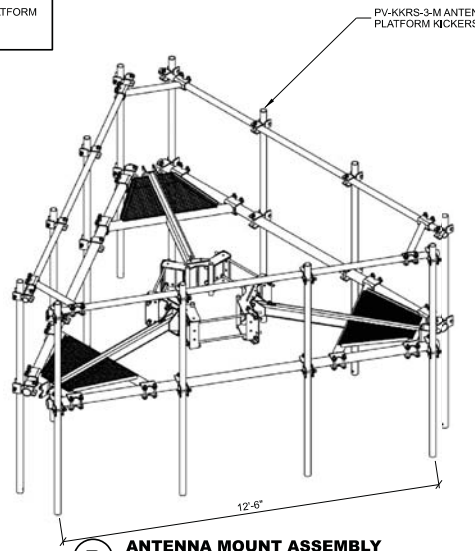


A **ANTENNA AND EQUIPMENT MOUNTING**

MANUFACTURER: PERFECT VISION
MODEL: PV-LPPGS-12M-HR2-AP2

MONOPOLE GUARDIAN MOUNT PLATFORM

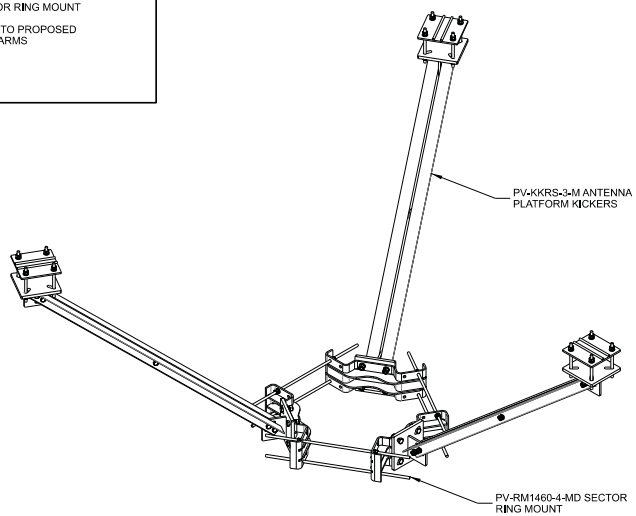
ACCEPTS 10" TO 40" POLE DIA.



B **ANTENNA MOUNT ASSEMBLY**

MANUFACTURER: PERFECT VISION
MODEL: PV-KKRS-3-M w/ PV-RM1460-4-MD SECTOR RING MOUNT

CONNECTS TO PROPOSED PLATFORM ARMS



C **ANTENNA MOUNT KICKER**

CONSULTANT:
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SUITE 200
BOCA RATON, FL 33487

INSTALLATION DETAILS
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

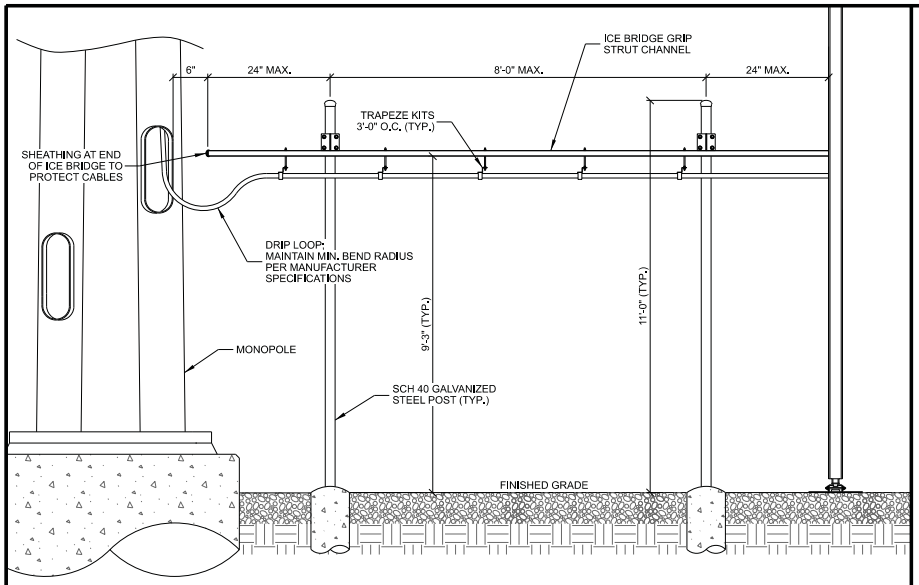
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JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

CHECKED BY	ADP
PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	T-501

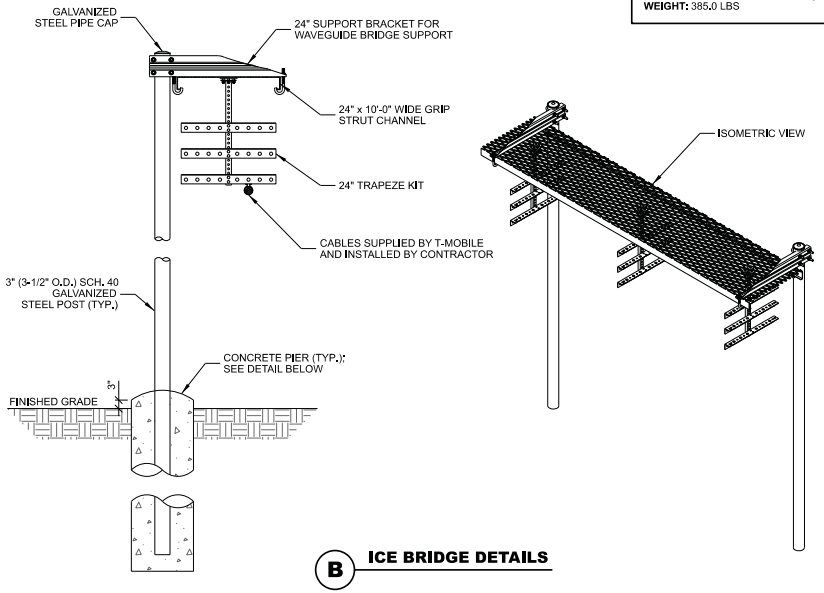
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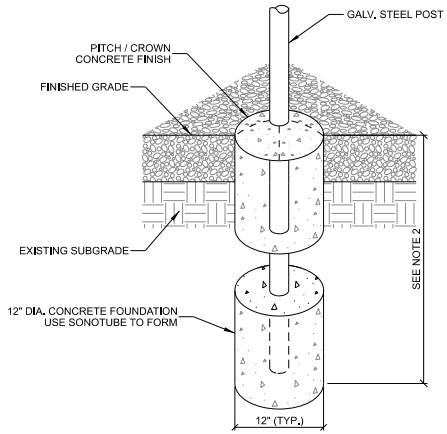


A **ICE BRIDGE INSTALLATION**

MANUFACTURER: ANDREW/COMMSCOPE
MODEL: WB-K210-B
DIMENSIONS: 160.0" x 10'-0" x 24" (H x L x W)
WEIGHT: 385.0 LBS



B **ICE BRIDGE DETAILS**



NOTES:
1. CONCRETE MIX TO BE 4,000 PSI @ 28 DAYS.
2. FOUNDATION DEPTH TO EXCEED LOCAL FROST DEPTH, OR 48" MINIMUM.

C **PIER FOUNDATION**

MANUFACTURER: SITE PRO 1
MODEL: UTL8

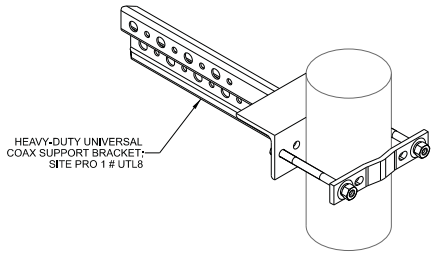
HEAVY-DUTY UNIVERSAL SUPPORT BRACKET

MOUNTS TO ROUND MEMBERS (1-1/2" O.D. TO 5-1/2" O.D.)

PUNCHED WITH 3/4" DIA. HOLES FOR SNAP-IN HANGERS AND 7/16" DIA. HOLES FOR HARDWARE

HOT-DIP GALVANIZED

CAN BE BOLTED DIRECTLY TO PIROD KNOCK-DOWN LEGS WITH INCLUDED HARDWARE



D **HEAVY-DUTY UNIVERSAL COAX SUPPORT BRACKET**

ICE BRIDGE NOTES : (THIS SHEET)

1. FOR COMPONENTS AS SHOWN IN STANDARD DETAILS, MAXIMUM ALLOWABLE SPAN BETWEEN SUPPORTS ON A CONTINUOUS SINGLE SECTION OF BRIDGE CHANNEL SHALL BE 8' FOR A 10' SECTION.
2. SPLICES IN SECTIONS OF BRIDGE CHANNEL SHALL BE INSTALLED AT SUPPORTS. WHERE POSSIBLE, OR AT MOST 2' FROM A SUPPORT.
3. FREE ENDS OF ICE BRIDGE CHANNELS SHALL NOT EXCEED A CANTILEVER DISTANCE OF 2' FROM A SUPPORT.
4. CUT BRIDGE CHANNEL SECTIONS SHALL HAVE RAW EDGES TREATED WITH COLD GALVANIZING SPRAY.
5. DEVIATIONS FROM STANDARDS FOR COMPONENT INSTALLATIONS ARE PERMITTED WITH MANUFACTURER'S AND ENGINEER'S APPROVAL.
6. DEVIATIONS FROM ICE BRIDGE FOUNDATIONS SHOWN ON SITE SPECIFIC DRAWINGS OR STANDARD DETAILS REQUIRE ENGINEERING APPROVAL.

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BOCA RATON, FL 33487

CABLE ROUTING DETAILS
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

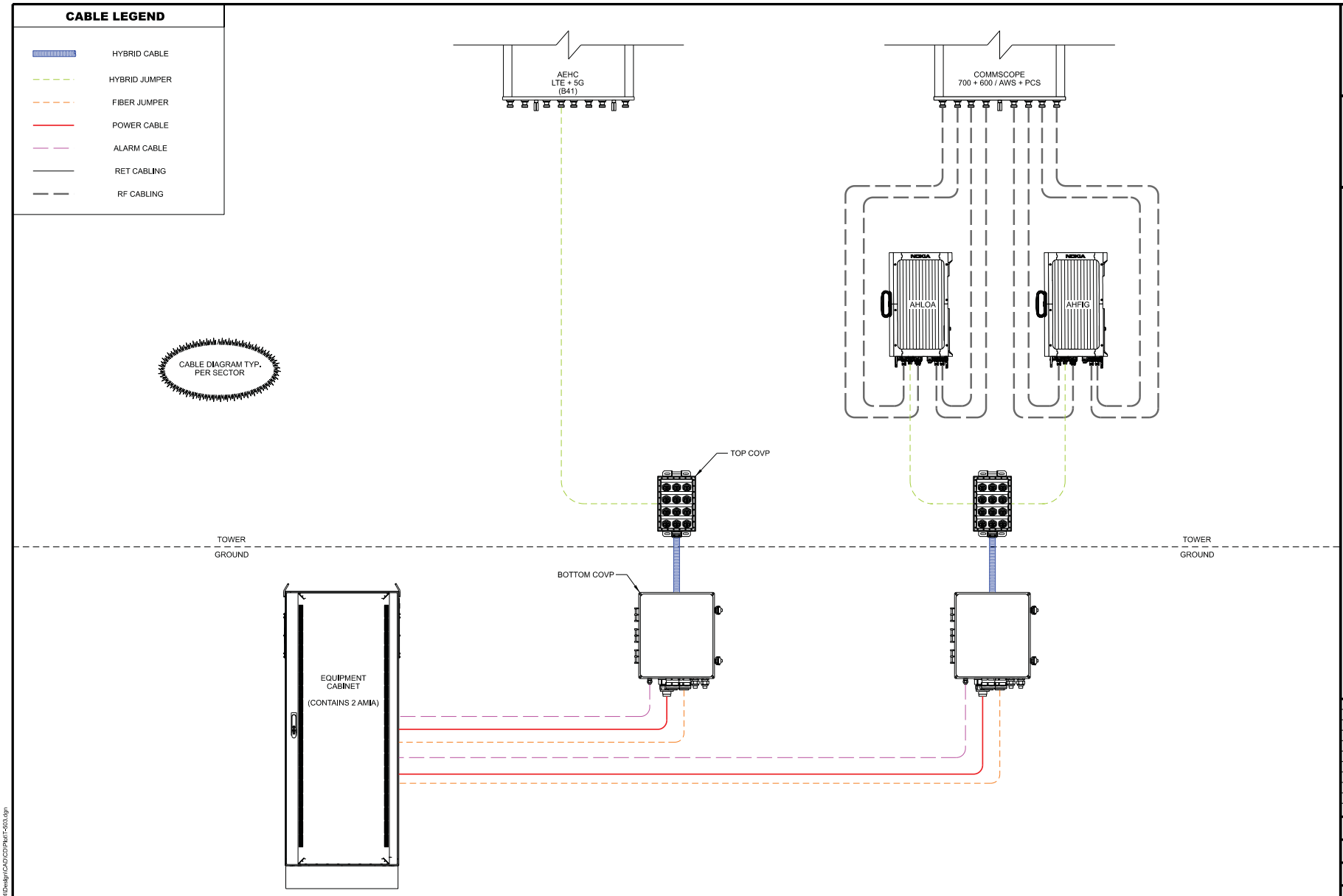
SUBMITTAL:

INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

CHECKED BY	ADP
PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	T-502

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A TYP. PLUMBING DIAGRAM

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BOCA RATON, FL 33487

PLUMBING DIAGRAM
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

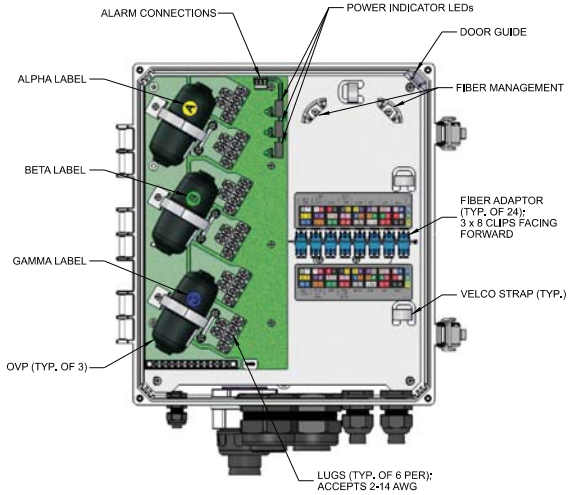
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INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

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PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	T-503

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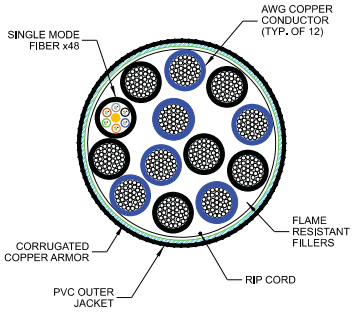
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A **COVP FIBER AND POWER CONFIGURATION**

MANUFACTURER: ALLIANCE CORPORATION
MODEL: ARMORED TRUNK HYBRID CABLE HIGH-CAPACITY WITH #4 AWG CONDUCTORS

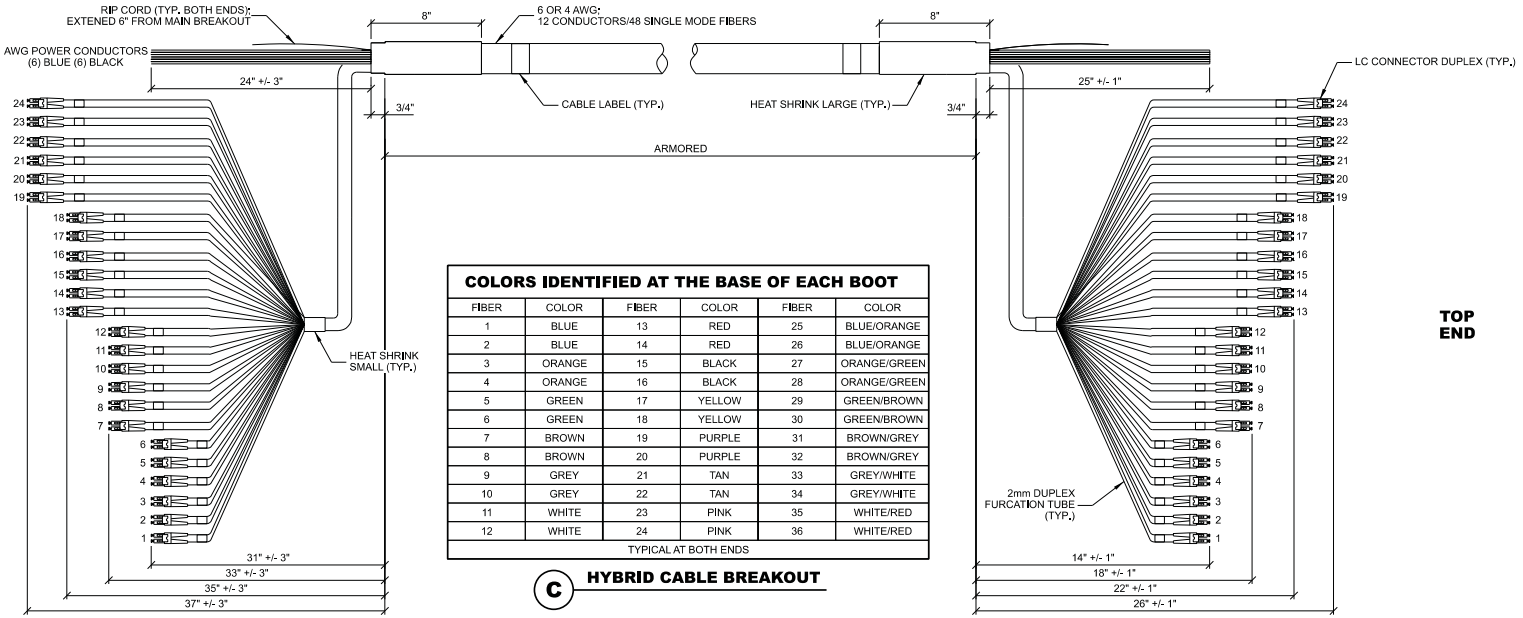
MECHANICAL:	
JACKET COLOR	BLACK
OUTER DIAMETER (IN.)	1.8
MIN. BEND RADIUS (IN.), MULTIPLE BENDS, LOADED	36
MIN. BEND RADIUS (IN.), MULTIPLE BENDS, UNLOADED	18
MIN. BEND RADIUS (IN.), SINGLE BEND, UNLOADED	12.6
MIN. BEND RADIUS (IN.), FURCATION	1.2
ARMOR	CORRUGATED COPPER
WEIGHT (LB./FT.)	2480
COMPRESSION (LB./IN.)	250
TENSILE LOAD, LONG TERM (LBF)	180
TENSILE LOAD, SHORT TERM (LBF)	600
ELECTRICAL:	
CONDUCTOR MATERIAL	COPPER
CONDUCTOR CONSTRUCTION	STRAND
CONDUCTOR COLOR	BLUE/BLACK
RESISTIVITY (nO AT 20° C)	16.78 nohm-M
CONDUCTORS, QUANTITY	12
CONDUCTOR SIZE (AWG)	4
EMI SHIELD	YES
UL RATING	UL TC-OF-ER
OPTICAL:	
FIBER TYPE	SINGLE MODE (G.657.A2)
FIBERS, QUANTITY	48
ATTENUATION (dB/KM), MAX, 1550/1285-1330 NM	0.5
DISPERSION, MAN, 1550/1285-1330 NM	18 ps/3.5 ps
RETURN LOSS (dB)	>50
INSERTION LOSS (dB), POST ENVIRONMENTAL	REDUCTION < 0.65
RETURN LOSS (dB), POST ENVIRONMENTAL	REDUCTION < 5
CUTOFF WAVELENGTH (NM)	1260
PIGTAIL TERMINATION	LC PAIR, STRAIGHT
ENVIRONMENTAL:	
OPERATING TEMPERATURE (°F)	-40 TO +167
STORAGE TEMPERATURE (°F)	-40 TO +167
UV	IEC 60068-2-5
THERMAL CYCLE	IEC 60068-2-14
VIBRATION	IEC 60068-2-64
IMPACT (FT. LB.)	4.4 NM PER ICEA696



B **HYBRID CABLE HIGH-CAPACTIY**

MANUFACTURER: ALLIANCE CORPORATION
MODEL: ARMORED TRUNK HYBRID CABLE HIGH-CAPACITY WITH #6 AWG CONDUCTORS

MECHANICAL:	
JACKET COLOR	BLACK
OUTER DIAMETER (IN.)	1.46
MIN. BEND RADIUS (IN.), MULTIPLE BENDS, LOADED	29.2
MIN. BEND RADIUS (IN.), MULTIPLE BENDS, UNLOADED	14.6
MIN. BEND RADIUS (IN.), SINGLE BEND, UNLOADED	10.22
MIN. BEND RADIUS (IN.), FURCATION	1.2
ARMOR	CORRUGATED COPPER
WEIGHT (LB./FT.)	1610
COMPRESSION (LB./IN.)	250
TENSILE LOAD, LONG TERM (LBF)	180
TENSILE LOAD, SHORT TERM (LBF)	600
ELECTRICAL:	
CONDUCTOR MATERIAL	COPPER
CONDUCTOR CONSTRUCTION	STRAND
CONDUCTOR COLOR	BLUE/BLACK
RESISTIVITY (nO AT 20° C)	16.78 nohm-M
CONDUCTORS, QUANTITY	12
CONDUCTOR SIZE (AWG)	6
EMI SHIELD	YES
UL RATING	UL TC-OF-ER
OPTICAL:	
FIBER TYPE	SINGLE MODE (G.657.A2)
FIBERS, QUANTITY	48
ATTENUATION (dB/KM), MAX, 1550/1285-1330 NM	0.5
DISPERSION, MAN, 1550/1285-1330 NM	18 ps/3.5 ps
RETURN LOSS (dB)	>50
INSERTION LOSS (dB), POST ENVIRONMENTAL	REDUCTION < 0.65
RETURN LOSS (dB), POST ENVIRONMENTAL	REDUCTION < 5
CUTOFF WAVELENGTH (NM)	1260
PIGTAIL TERMINATION	LC PAIR, STRAIGHT
ENVIRONMENTAL:	
OPERATING TEMPERATURE (°F)	-40 TO +167
STORAGE TEMPERATURE (°F)	-40 TO +167
UV	IEC 60068-2-5
THERMAL CYCLE	IEC 60068-2-14
VIBRATION	IEC 60068-2-64
IMPACT (FT. LB.)	4.4 NM PER ICEA696



COLORS IDENTIFIED AT THE BASE OF EACH BOOT

FIBER	COLOR	FIBER	COLOR	FIBER	COLOR
1	BLUE	13	RED	25	BLUE/ORANGE
2	BLUE	14	RED	26	BLUE/ORANGE
3	ORANGE	15	BLACK	27	ORANGE/GREEN
4	ORANGE	16	BLACK	28	ORANGE/GREEN
5	GREEN	17	YELLOW	29	GREEN/BROWN
6	GREEN	18	YELLOW	30	GREEN/BROWN
7	BROWN	19	PURPLE	31	BROWN/GREY
8	BROWN	20	PURPLE	32	BROWN/GREY
9	GREY	21	TAN	33	GREY/WHITE
10	GREY	22	TAN	34	GREY/WHITE
11	WHITE	23	PINK	35	WHITE/RED
12	WHITE	24	PINK	36	WHITE/RED

TYPICAL AT BOTH ENDS

C **HYBRID CABLE BREAKOUT**

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CABLING DETAILS
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

SUBMITTAL:		
INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

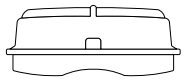
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PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	T-504

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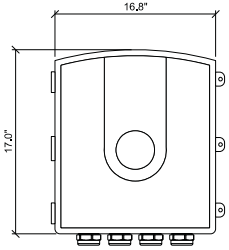
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MANUFACTURER: CIENA
MODEL: 3931
DIMENSIONS: 17.0" x 16.8" x 7.0" (H x W x D)
WEIGHT: 28.6 LBS

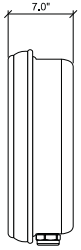




BOTTOM VIEW



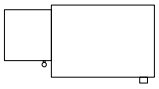
FRONT VIEW



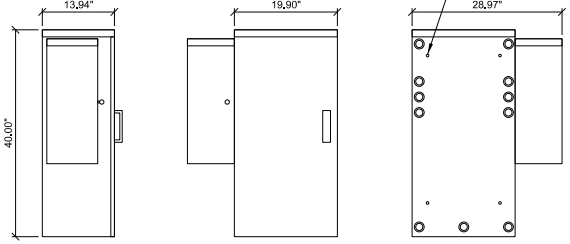
SIDE VIEW

A **CIENA FIBER ENCLOSURE**

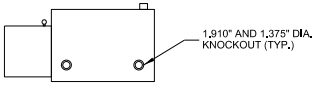
MANUFACTURER: DELTA
MODEL: 2262P1D30D-C00
DIMENSIONS: 40.00" x 19.90" x 13.94" (H x W x D)



PLAN VIEW



SIDE VIEW FRONT VIEW BACK VIEW



BOTTOM VIEW

B **POWER PROTECTION CABINET (PPC)**

NOTE:

1. ALL DISCONNECTS SHALL BE LEGIBLY IDENTIFIED AND ELECTRIC PANELS SHALL HAVE A SCHEDULE CIRCUIT DIRECTORY INSIDE OR ON THE FACE OF EACH PANEL (PER NEC 110.23 & 408.4).

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CONSULTANT:
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SUITE 200
BOCA RATON, FL 33487

UTILITY EQUIPMENT SPECIFICATIONS

US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

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PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	**E-001**

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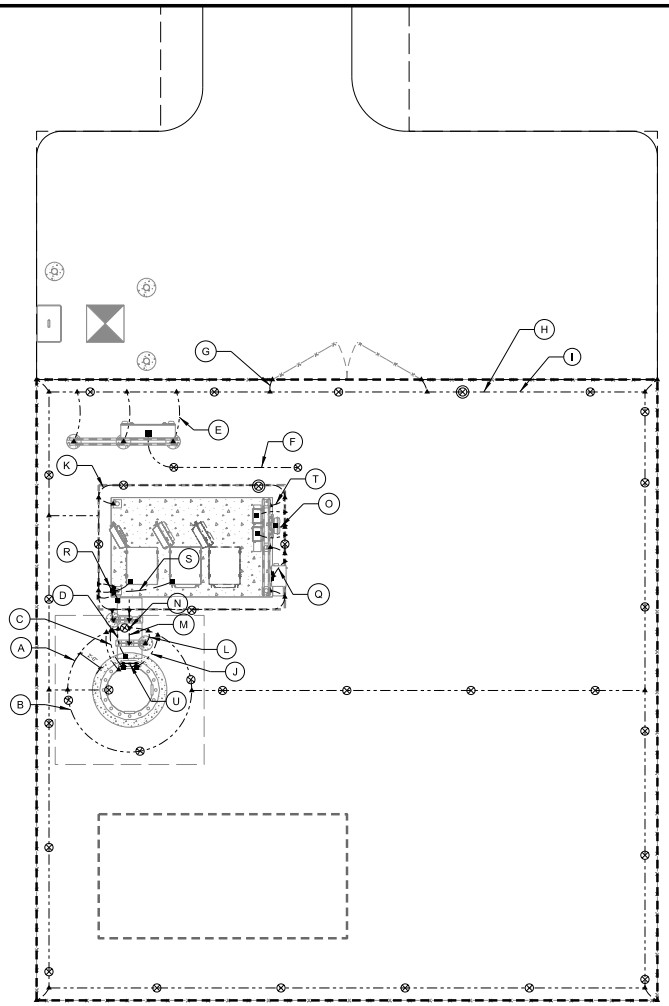
KEYNOTES: (THIS SHEET)

- (A) MAINTAIN 2-FOOT CLEARANCE FROM ALL STRUCTURES
- (B) TOWER GROUND RING, #2 SOLID BARE TINNED COPPER
- (C) GROUND LEADS FROM TOWER STEEL TO GROUND RING (TYP. OF 3) (USE GROUNDING TABS WHEN AVAILABLE), #2 SOLID BARE TINNED COPPER
- (D) TOWER FOUNDATION GROUND, #2 SOLID BARE TINNED COPPER
- (E) MULTI-METER RACK POST (TYP.)
- (F) GROUND ELECTRIC METER HOUSING TO (2) INDEPENDENT GROUND RODS, SPACED 10' O.C. WITH #2 SOLID BARE TINNED COPPER
- (G) GATE GROUND LEAD
- (H) PERIPHERAL GROUND RING SHOULD BE INSTALLED 1' TO 2' INSIDE THE FENCED LINE, #2 SOLID BARE TINNED COPPER
- (I) FENCE CORNER GROUND LEAD, GROUND FENCE WITHIN 25-FEET OF TOWER
- (J) (2) #2 SOLID BARE TINNED COPPER GROUND LEADS TO GROUND RING FOR FUTURE CARRIER GROUND BAR
- (K) EQUIPMENT PLATFORM GROUND RING #2 SOLID BARE TINNED COPPER; SEE E-502 FOR DETAILS
- (L) ICE BRIDGE POST GROUND (TYP.); SEE E-501 FOR DETAILS
- (M) ICE BRIDGE SECTION GROUNDS; SEE E-501 FOR DETAILS
- (N) BOND EQUIPMENT GROUND RING TO THE TOWER GROUND RING WITH EXOTHERMIC CONNECTION (TYP.)
- (O) CEINA GROUND LEAD TO EQUIPMENT PLATFORM GROUND RING; SEE E-501 FOR DETAILS
- (P) AUTOMATIC TRANSFER SWITCH (ATS) GROUND LEAD TO EQUIPMENT PLATFORM GROUND RING; SEE E-501 FOR DETAILS
- (Q) POWER PROTECTION CABINET (PPC) GROUND LEAD TO EQUIPMENT PLATFORM GROUND RING; SEE E-501 FOR DETAILS
- (R) GROUND MOUNTED EQUIPMENT GROUND TO MASTER GROUND BAR; SEE E-501 FOR DETAILS
- (S) EQUIPMENT CABINET GROUND TO MASTER GROUND BAR; SEE E-501 FOR DETAILS
- (T) GROUND LEAD FROM EQUIPMENT GROUND RING TO CANOPY STEEL POST; SEE E-501 FOR DETAILS
- (U) MASTER GROUND BAR SEE E-501 FOR DETAILS
- (V) (2) #2 SOLID BARE TINNED COPPER GROUND LEADS TO GROUND RING FOR FUTURE CARRIER GROUND BAR

NOTES: (THIS SHEET)

1. ALL EXTERIOR GROUNDING SHALL MEET OR EXCEED THE CURRENT NEC AND NFPA 780 CODE.
2. THE GROUNDING SYSTEM & CONDUCTORS SHALL BE INSPECTED PRIOR TO BACK FILLING WITH RESULTS APPROVED BY THE CARRIER. THE SYSTEM SHALL PROVIDE 5 OHM OR LESS RESISTANCE UPON COMPLETION.
3. HIGH COMPRESSION TYPE CONNECTORS SHALL BE USED FOR SECONDARY GROUNDING CONDUCTOR TO MAIN GROUNDING CONDUCTOR CONNECTIONS. AFTER INSPECTION CONNECTIONS SHALL BE WRAPPED WITH ELECTRICAL VINYL TAPE.
4. ALL MECHANICAL CONNECTIONS SHALL INCLUDE ANTI-OXIDANT COMPOUND BETWEEN LUG & CONNECTION POINT. SCRAPE PAINT FROM OBJECT BEING CONNECTED TO. TOUCH UP PAINT ANY EXPOSED METAL AFTER CONNECTION IS INSTALLED.
5. GROUNDING CONDUCTORS SHALL MAINTAIN, TO THE EXTENT PRACTICAL, A HORIZONTAL OR DOWNWARD DIRECTION FREE FROM UP AND DOWN POCKETS. THE RADIUS OF BEND SHALL NOT BE LESS THAN 8" AND THE ANGLE OF ANY BEND SHALL NOT BE SHARPER (LESS) THAN 90°.
6. THE MAXIMUM HORIZONTAL AND VERTICAL SPACING BETWEEN GROUNDING CONDUCTOR (NOT IN CONDUIT) SUPPORTS SHALL NOT EXCEED 4 FT.
7. IF A GROUNDING CONDUCTOR IS INSTALLED IN FERROUS METAL CONDUITS, THE CONDUCTOR SHALL BE BONDED TO THE TOP AND BOTTOM OF THE CONDUIT.
8. ALL NON-INSULATED GROUND LEADS EXTENDING ABOVE GROUND LEVEL SHALL BE ENCASED IN 3/4" PVC & SEALED WITH SILICONE ON BOTH ENDS.
9. ALL ABOVE GRADE EXOTHERMIC CONNECTIONS (TO GALVANIZED ITEMS) SHALL BE SPRAYED WITH COLD GALVANIZING COMPOUND TO PREVENT CORROSION.
10. GROUND RINGS & TOP OF RODS SHALL BE INSTALLED AT 30" BELOW FINISHED GRADE.
11. INSTALL 18" x 18" COPPER PLATES IN LIEU OF GROUND RODS WHEN INSTALLING OVER TOWER FOUNDATION OR WHERE DRIVING GROUND RODS IS NOT FEASIBLE. REFER TO GEOTECH REPORT FOR SOIL CONDITIONS.

NORTH



GROUNDING LEGEND: (THIS SHEET)

- ▲ EXOTHERMIC OR UL RATED IRREVERSIBLE CONNECTION
- ■ MECHANICAL CONNECTION
- — - - GROUND LEAD
- ⊗ GROUND INSPECTION WELL
- ⊗ COPPER CLAD GROUND ROD, (5/8" DIA. x 8' LONG) SPACE @ 10' O.C. MAX.
- ⊗ COPPER PLATE, (18" x 18" x .032" THK) SPACE @ 10' O.C. MAX.

5' 0 5' 10'
SCALE: 11" x 17" - 1" = 10'
22" x 34" - 1" = 5'

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verticalbridge
VERTICAL BRIDGE DEVELOPMENT, LLC
750 PARK OF COMMERCE DRIVE
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BOCA RATON, FL 33487

COMPOUND GROUNDING PLAN
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

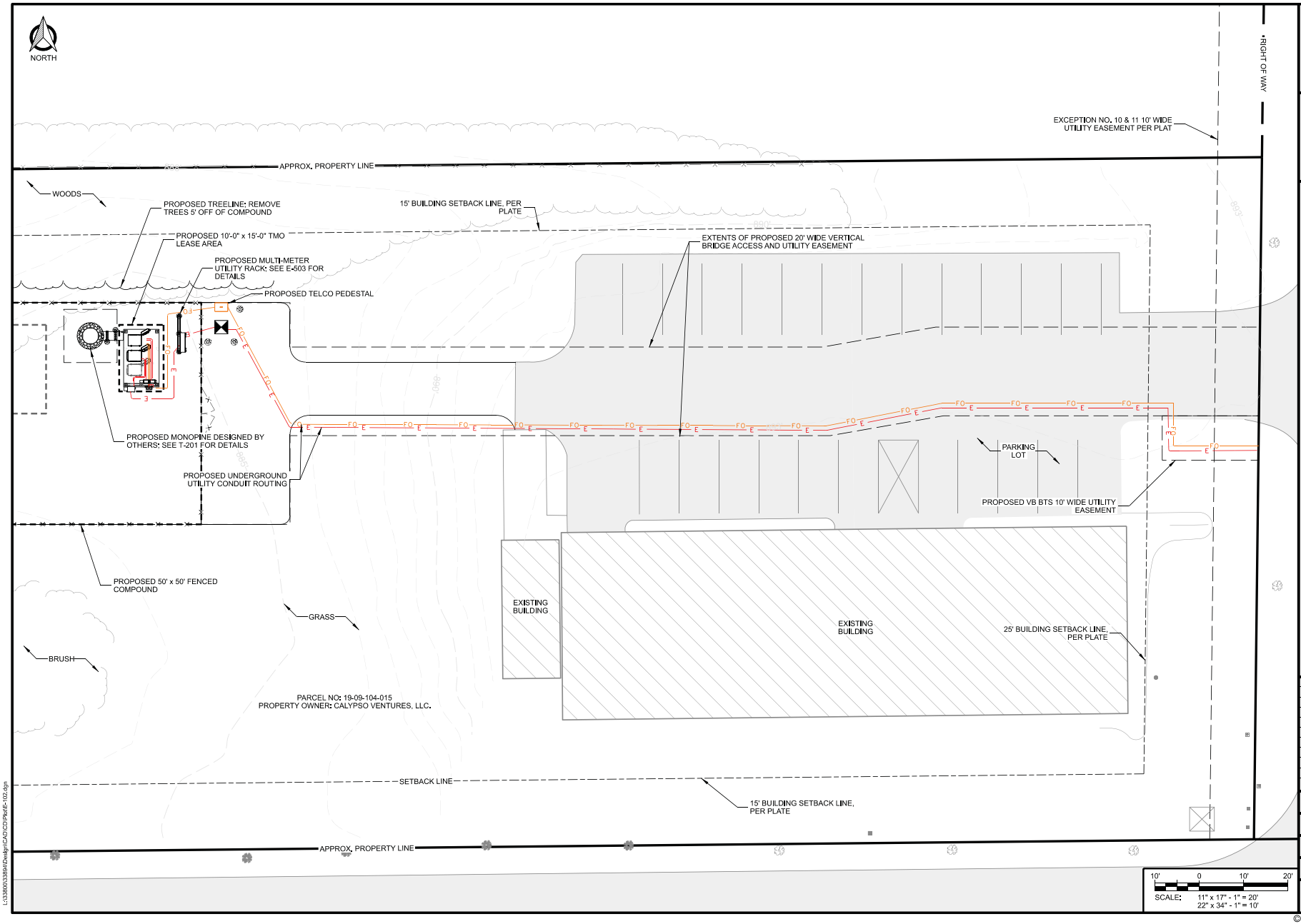
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JCB	12/08/2022	REV. B

CHECKED BY	ADP
PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	E-101

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UTILITY PLAN
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

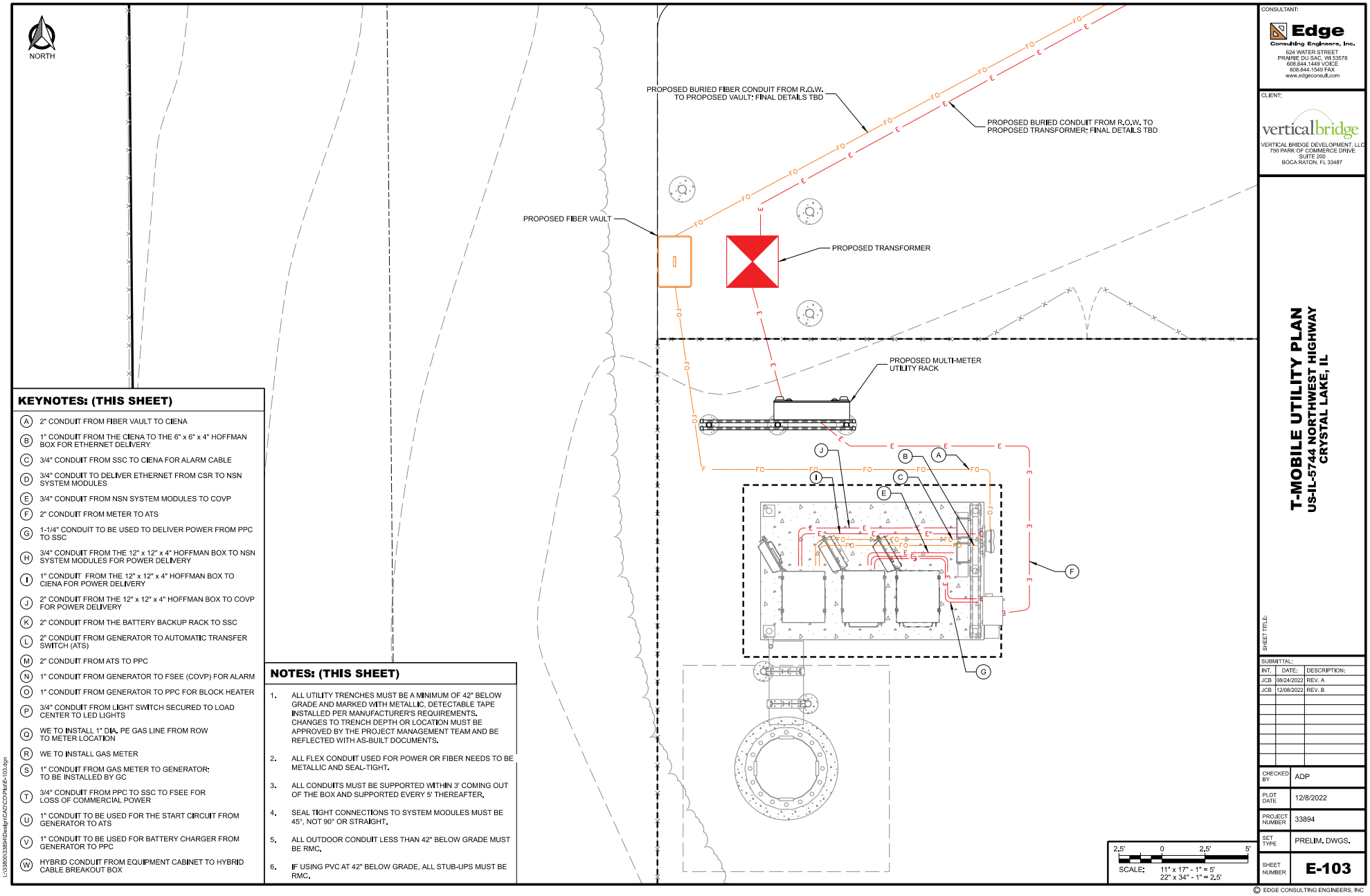
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PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	E-102

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KEYNOTES: (THIS SHEET)

- (A) 2" CONDUIT FROM FIBER VAULT TO CIENA
- (B) 1" CONDUIT FROM THE CIENA TO THE 6" x 6" x 4" HOFFMAN BOX FOR ETHERNET DELIVERY
- (C) 3/4" CONDUIT FROM SSC TO CIENA FOR ALARM CABLE
- (D) 3/4" CONDUIT TO DELIVER ETHERNET FROM CSR TO NSN SYSTEM MODULES
- (E) 3/4" CONDUIT FROM NSN SYSTEM MODULES TO COVP
- (F) 2" CONDUIT FROM METER TO ATS
- (G) 1-1/4" CONDUIT TO BE USED TO DELIVER POWER FROM PPC TO SSC
- (H) 3/4" CONDUIT FROM THE 12" x 12" x 4" HOFFMAN BOX TO NSN SYSTEM MODULES FOR POWER DELIVERY
- (I) 1" CONDUIT FROM THE 12" x 12" x 4" HOFFMAN BOX TO CIENA FOR POWER DELIVERY
- (J) 2" CONDUIT FROM THE 12" x 12" x 4" HOFFMAN BOX TO COVP FOR POWER DELIVERY
- (K) 2" CONDUIT FROM THE BATTERY BACKUP RACK TO SSC
- (L) 2" CONDUIT FROM GENERATOR TO AUTOMATIC TRANSFER SWITCH (ATS)
- (M) 2" CONDUIT FROM ATS TO PPC
- (N) 1" CONDUIT FROM GENERATOR TO FSEE (COVP) FOR ALARM
- (O) 1" CONDUIT FROM GENERATOR TO PPC FOR BLOCK HEATER
- (P) 3/4" CONDUIT FROM LIGHT SWITCH SECURED TO LOAD CENTER TO LED LIGHTS
- (Q) WE TO INSTALL 1" DIA. PE GAS LINE FROM ROW TO METER LOCATION
- (R) WE TO INSTALL GAS METER
- (S) 1" CONDUIT FROM GAS METER TO GENERATOR; TO BE INSTALLED BY GC
- (T) 3/4" CONDUIT FROM PPC TO SSC TO FSEE FOR LOSS OF COMMERCIAL POWER
- (U) 1" CONDUIT TO BE USED FOR THE START CIRCUIT FROM GENERATOR TO ATS
- (V) 1" CONDUIT TO BE USED FOR BATTERY CHARGER FROM GENERATOR TO PPC
- (W) HYBRID CONDUIT FROM EQUIPMENT CABINET TO HYBRID CABLE BREAKOUT BOX

NOTES: (THIS SHEET)

1. ALL UTILITY TRENCHES MUST BE A MINIMUM OF 42" BELOW GRADE AND MARKED WITH METALLIC, DETECTABLE TAPE INSTALLED PER MANUFACTURER'S REQUIREMENTS. CHANGES TO TRENCH DEPTH OR LOCATION MUST BE APPROVED BY THE PROJECT MANAGEMENT TEAM AND BE REFLECTED WITH AS-BUILT DOCUMENTS.
2. ALL FLEX CONDUIT USED FOR POWER OR FIBER NEEDS TO BE METALLIC AND SEAL-TIGHT.
3. ALL CONDUITS MUST BE SUPPORTED WITHIN 3' COMING OUT OF THE BOX AND SUPPORTED EVERY 5' THEREAFTER.
4. SEAL TIGHT CONNECTIONS TO SYSTEM MODULES MUST BE 45°, NOT 90° OR STRAIGHT.
5. ALL OUTDOOR CONDUIT LESS THAN 42" BELOW GRADE MUST BE RMC.
6. IF USING PVC AT 42" BELOW GRADE, ALL STUB-UPS MUST BE RMC.

SCALE: 2.5' 0 2.5' 5'
11" x 17" - 1" = 5'
22" x 34" - 1" = 2.5'

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T-MOBILE UTILITY PLAN
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

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JCB	08/24/2022	REV. A
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PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	E-103

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KEYNOTES: (THIS SHEET)

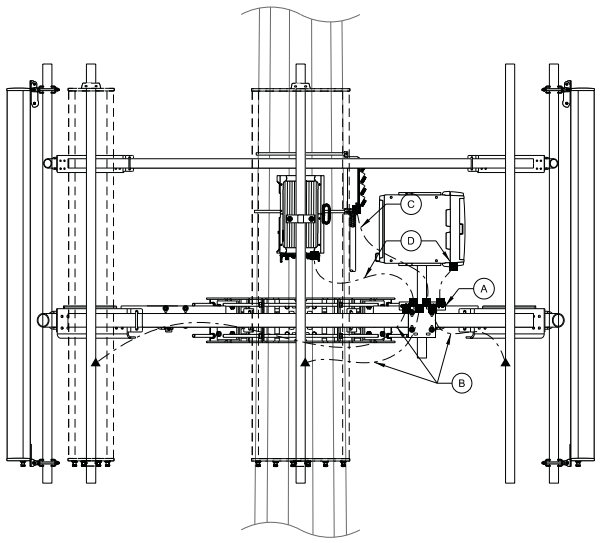
- (A) ANTENNA GROUND BAR FOR CONNECTION OF MULTIPLE GROUND KITS AT ONE LEVEL MOUNT TO TOWER STEEL (TYP. PER SECTOR)
- (B) MAST PIPE GROUND #2 SOLID INSULATED CONNECTION TO GROUND BAR WITH 2 HOLE LONG BARREL LUG (TYP.)
- (C) HYBRID BREAKOUT BOX GROUND #2 STRANDED INSULATED CONNECTION TO GROUND BAR WITH 2 HOLE LONG BARREL LUG
- (D) REMOTE RADIO GROUND #6 STRANDED INSULATED CONNECTION TO GROUND BAR WITH 2 HOLE LONG BARREL LUG (TYP.)
- (E) MASTER GROUND BAR (MGB) MOUNTED VERTICALLY TO EQUIPMENT PLATFORM ON INSULATORS
- (F) #2 SOLID TINNED COPPER GROUNDS ENCASED IN LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT TO 24" BELOW GRADE FROM MGB TO EQUIPMENT GROUND RING (TYP. OF 2)
- (G) EQUIPMENT CABINET GROUND #6 STRANDED INSULATED CONNECTION TO MGB WITH 2 HOLE LONG BARREL LUG (TYP.)
- (H) AMOB GROUND #6 STRANDED INSULATED CONNECTION TO MGB WITH 2 HOLE LONG BARREL LUG (TYP.)
- (I) FLEXI RADIO GROUND #6 STRANDED INSULATED CONNECTION TO MGB WITH 2 HOLE LONG BARREL LUG
- (J) GPS GROUND TO ICE CANOPY POST
- (K) ICE BRIDGE POST GROUND #2 SOLID TINNED COPPER ENCASED IN LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT TO 24" BELOW GRADE (TYP.)
- (L) ICE BRIDGE SECTION GROUND #2 STRANDED INSULATED WITH 2 HOLE LONG BARREL ON EACH END (TYP.)
- (M) ICE BRIDGE SECTION TO POST GROUNDS #2 STRANDED INSULATED WITH 2 HOLE LONG BARREL ON SECTION (TYP.); ORIENT LEAD WITH HIGH SIDE TOWARDS TOWER
- (N) EQUIPMENT PLATFORM GROUND #2 SOLID TINNED COPPER ENCASED IN LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT TO 24" BELOW GRADE (TYP.)
- (O) ICE CANOPY POST GROUND #2 SOLID TINNED COPPER ENCASED IN LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT TO 24" BELOW GRADE (TYP.)
- (P) ICE CANOPY TO ICE CANOPY POST GROUND #2 SOLID TINNED COPPER (TYP.)
- (Q) POWER PROTECTION CABINET (PPC) GROUND #2 SOLID TINNED COPPER ENCASED IN LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT TO 24" BELOW GRADE
- (R) AUTOMATIC TRANSFER SWITCH (ATS) GROUND #2 SOLID TINNED COPPER ENCASED IN LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT TO 24" BELOW GRADE
- (S) CIENA GROUND #2 SOLID TINNED COPPER ENCASED IN LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT TO 24" BELOW GRADE

GROUNDING LEGEND: (THIS SHEET)

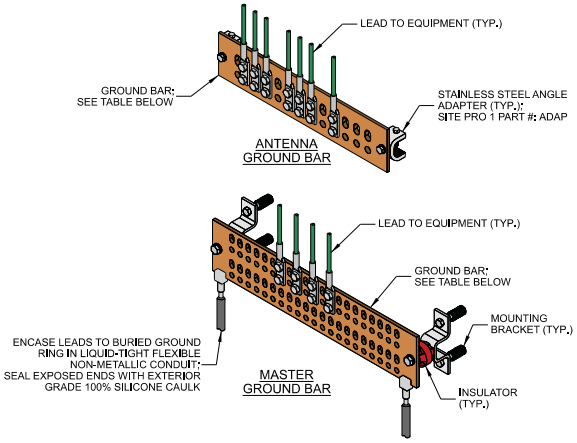
- ▲ EXOTHERMIC OR UL RATED IRREVERSIBLE CONNECTION
- ■ MECHANICAL CONNECTION
- — - - GROUND LEAD

NOTES: (THIS SHEET)

1. ALL BELOW-GRADE CONNECTIONS ARE TO BE EXOTHERMICALLY WELDED A MINIMUM OF 48" BELOW GRADE.
2. ALL LEADS EXTENDING ABOVE GRADE TO BE ENCASED IN 3/4" CONDUIT AND EXTEND A MINIMUM OF 6" ABOVE FINISHED GRADE AND 24" BELOW FINISHED GRADE.
3. APPLY COLD GALVANIZATION TO ALL ABOVE-GROUND EXOTHERMICALLY WELDED CONNECTIONS.
4. APPLY ANTI OXIDANT COMPOUND TO ALL MECHANICAL CONNECTIONS.
5. UPPER AND LOWER TOWER GROUND BARS TO BE BONDED DIRECTLY TO TOWER STEEL WITH #2 CONDUCTORS.
6. AIR TERMINAL TO EXTEND 2' ABOVE HIGHEST ANTENNA MIN. ON MAST PIPE MECHANICALLY FASTEN AIR TERMINAL TO MAST PIPE MAST PIPE TO BE MECHANICALLY CONNECTED TO TOWER STEEL.
7. ALL METAL FRAMING AND GROUNDING ELECTRODES PRESENT SHALL BE BONDED TO THE ELECTRICAL GROUNDING SYSTEM; SUBJECT TO COUNTY INSPECTION.

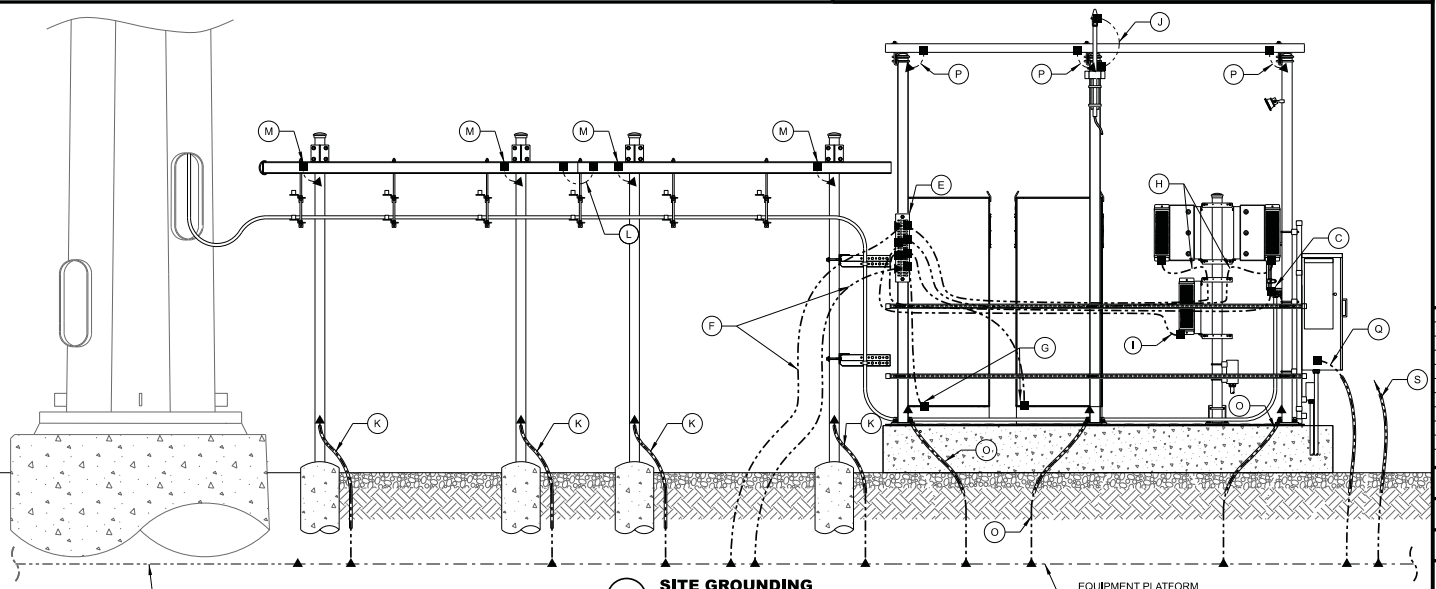


A ANTENNA LEVEL GROUNDING



GROUND BAR SCHEDULE:	
MASTER GROUND BAR	1/4" x 4" x 18" GROUND BAR WITH INSULATORS AND BRACKETS; SIZED FOR 42 SETS OF 2-HOLE LUGS SITE PRO PART #: MG418U-K OR EQUIVALENT
ANTENNA GROUND BAR	1/4" x 2" x 12" GROUND BAR SIZED FOR 13 SETS OF 2-HOLE LUGS SITE PRO PART #: MG212U OR EQUIVALENT

C GROUND BAR



B SITE GROUNDING

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GROUNDING DETAILS
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

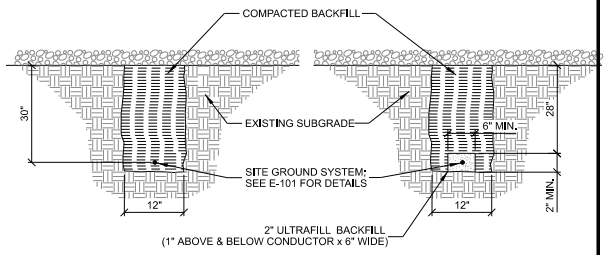
SUBMITTAL:

INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

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PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	E-501

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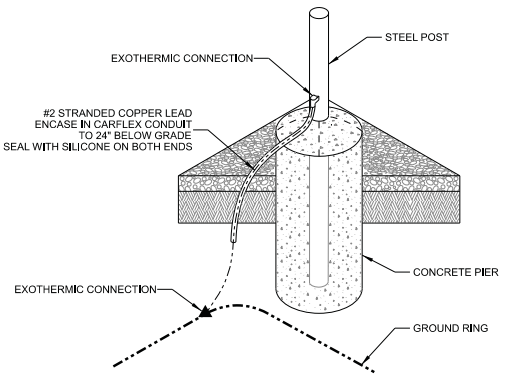
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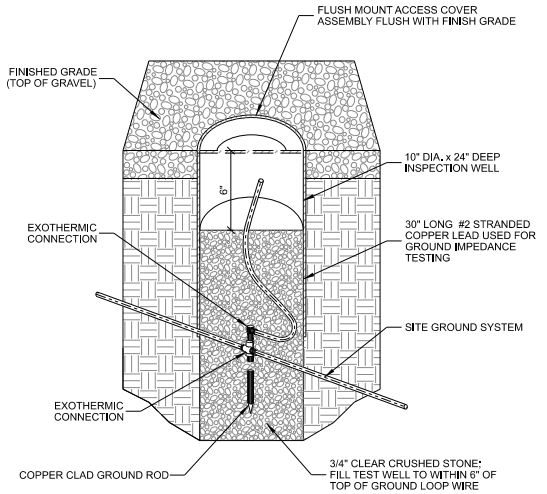
STANDARD GROUND TRENCH ENHANCED GROUND TRENCH

NOTES:
1. GROUNDING TRENCHES TO BE BACK FILLED WITH NATIVE SOIL.
2. COMPACT BACK FILL TO 95% MODIFIED PROCTOR.
3. CONTACT PSC MINIMUM 24HRS NOTICE PRIOR TO BACK FILLING TO ALLOW FOR INSPECTION.

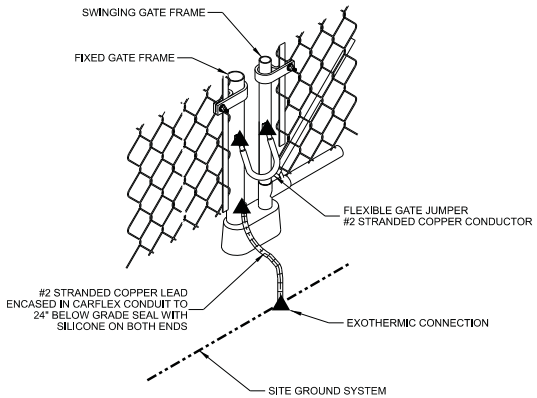
A GROUND TRENCH



B POST GROUNDING

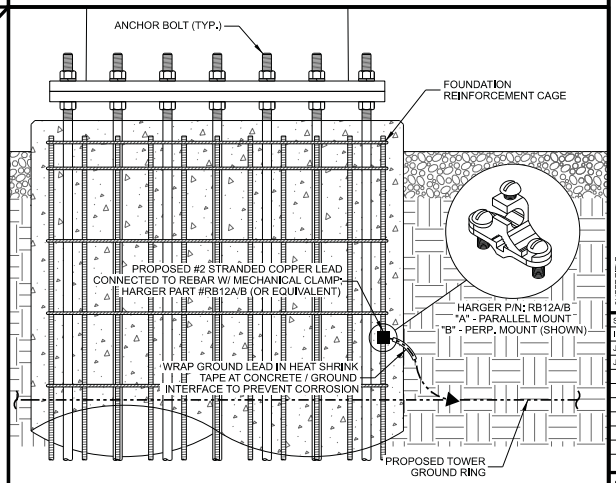


C INSPECTION WELL



D FENCE GATE GROUNDING

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NOTES:
1. FOUNDATION SHOWN IS TYPICAL. SEE TOWER FOUNDATION PLANS FOR PIER REINFORCEMENT DETAILS.
2. FOUNDATION GROUNDING PER NEC 250.52(3)(A). GROUNDING CONNECTIONS TO BE COVERED BY A MINIMUM OF 3" CONCRETE AND BE MADE TO A MIN. 20' CONTINUOUS REBAR, IF POSSIBLE.

E TOWER FOUNDATION GROUNDING

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GROUNDING DETAILS
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

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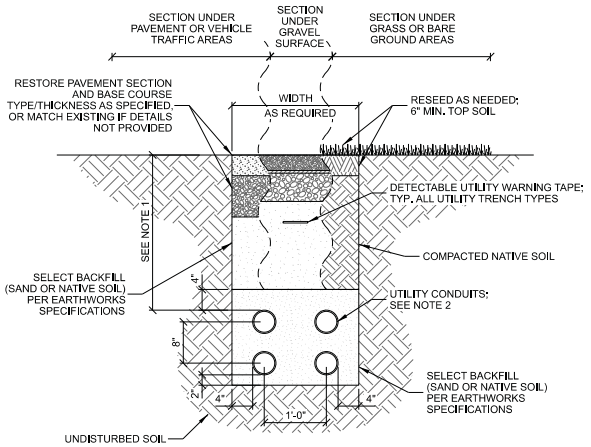
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SET TYPE	PRELIM. DWGS.
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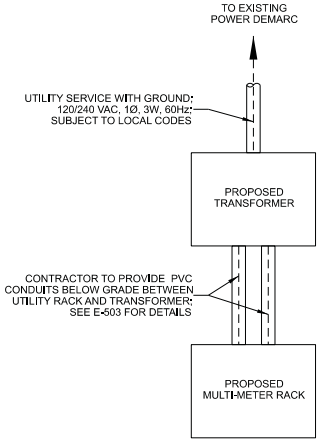
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NOTES:

1. UTILITY CONDUITS TO BE BURIED A MINIMUM DEPTH OF 42" BELOW GROUND LEVEL OR 6" BELOW THE FROST LINE.
2. CONDUIT TYPE, SIZE, AND QUANTITY SHOWN ON E-102.

A **UTILITY TRENCH**



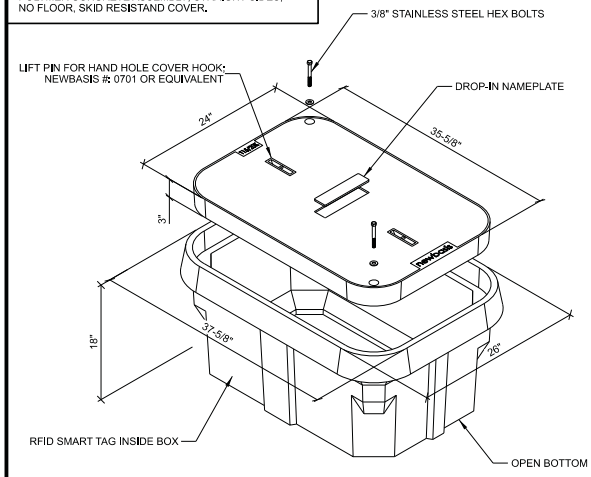
NOTES:

1. STANDARD DIAGRAM PROVIDED BY CLIENT, INCLUDED HERE FOR CONVENIENCE.

B **ELECTRIC LINE DIAGRAM**

MANUFACTURER: NEWBASIS
MODEL: PCA243618
INSIDE DIMENSIONS:
33-9/16" x 21-15/16" x 15" (L x W x D AT LARGEST POINT)
29" x 17-3/8" x 15" (L x W x D AT SMALLEST POINT)
LOAD RATINGS: WUC 3.6, ANSI/SCTE 77 - "T15/20K,"

POLYMER CONCRETE ASSEMBLY, STRAIGHT SIDES, NO FLOOR, SKID RESISTAND COVER.



C **UTILITY VAULT**

WARNING TAPE & TRACE WIRE NOTES: (THIS SHEET)

1. WARNING TAPE TO BE INSTALLED ABOVE THE ELECTRICAL RUN FROM THE GENERATOR TO THE PLATFORM AND ABOVE THE FUEL LINE BETWEEN THE GENERATOR AND FUEL SOURCE.
2. WARNING TAPE SHALL BE RUN CONTINUOUSLY ALONG THE ENTIRE LENGTH AND INSTALLED 12 INCHES ABOVE THE TOP OF THE CONDUITS
3. TRACER WIRE SHALL RUN CONTINUOUSLY ALONG THE ENTIRE LENGTH OF THE BURIED GAS AND ELECTRIC CONDUITS
4. TRACER WIRE SHALL BE SECURED TO THE CONDUIT AND MAINTAINED ABOVE THE CONDUIT CENTERLINE DURING TRENCH BACKFILLING.
5. TRACER WIRE TO EXTEND TO THE TOP OF PVC ABOVE CONCRETE ON BOTH ENDS - LOOP AND WRAP AROUND APPROPRIATE CONDUIT.
6. TRACER WIRE SHALL CONSIST OF 14GA. SOLID COPPER WIRE WITH A CORROSION PROTECTIVE COATING.
7. INSTALL TRACER WIRE WITH SPACER AND SECURE PER MNFG. RECOMMENDATIONS - AT A MIN. EVERY 10' AND AT ALL BENDS. - DO NOT WRAP BURIED CONDUIT WITH TRACER WIRE TO AVOID UNNECESSARY STRESS ON TRACER. - CONTRACTOR TO CHECK CONTINUITY OF TRACER WIRE BEFORE AND AFTER BURIAL AND DOCUMENT RESULTS. 12" ABOVE THE TOP OF THE CONDUITS.

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BOCA RATON, FL 33487

UTILITY DETAILS

US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

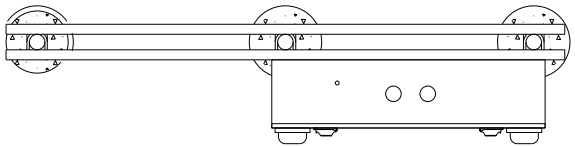
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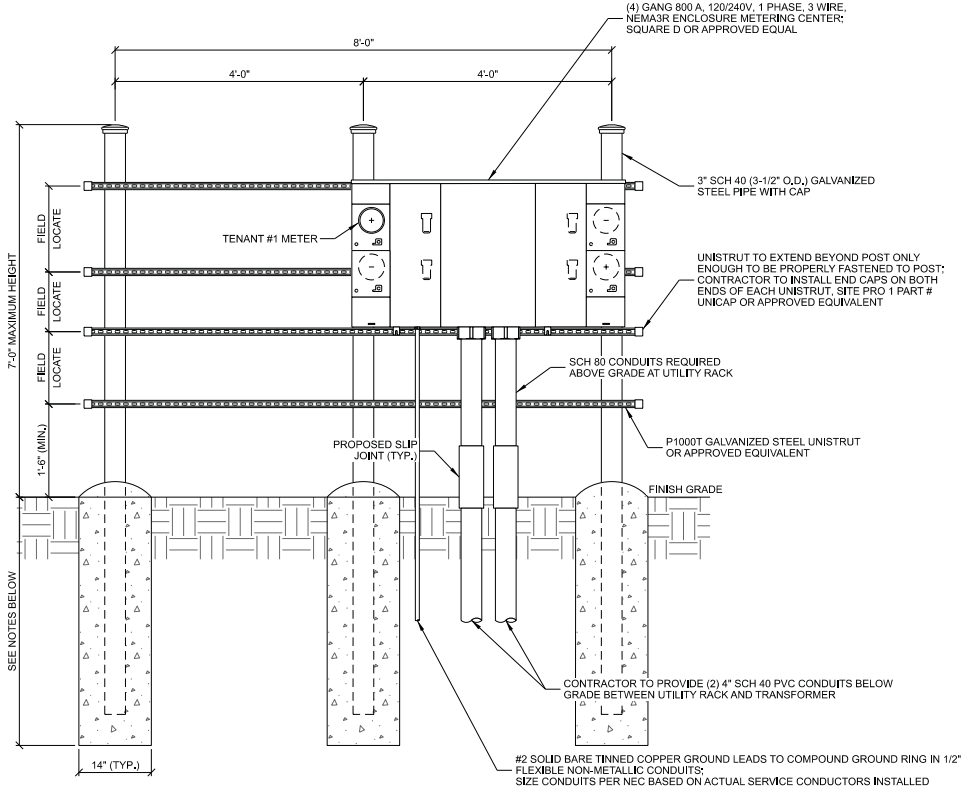
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PLOT DATE	12/8/2022
PROJECT NUMBER	33894
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SHEET NUMBER	**E-503**

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PLAN VIEW



FRONT VIEW

NOTE:

1. INSTALL PVC CONDUITS FOR SERVICE LATERAL CONNECTION TO UTILITY.
2. EXTEND SERVICE LATERAL CONDUITS UNDERGROUND BEYOND FENCELINE. CAP ENDS (NO DUCT TAPE ALLOWED) AND STAKE. EQUIP WITH PULL CORD. VERIFY REQUIREMENTS W/UTILITY PROVIDER.
3. MARK CARRIER METER SLOT @ BREAKER OR SOCKET EXTERIOR.
4. FINAL LAYOUT AND DESIGN DETERMINED BY CONTRACTOR/UTILITY, VERIFY FINAL DESIGN WITH THE CARRIER.
5. CONCRETE FOR PIER TO BE A MINIMUM OF 3,000 PSI AT 28 DAYS.
6. MAINTAIN 3" MINIMUM REBAR COVER IN ALL DIRECTIONS.
7. PIER FOUNDATION DEPTH TO BE A MINIMUM OF 48"; DEPTH TO EXCEED LOCAL FROST DEPTH.

A **MULTI-METER UTILITY RACK**

SCALE: 11" x 17" - 1/2" = 1'-0"
22" x 34" - 1" = 1'-0"

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UTILITY DETAILS
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

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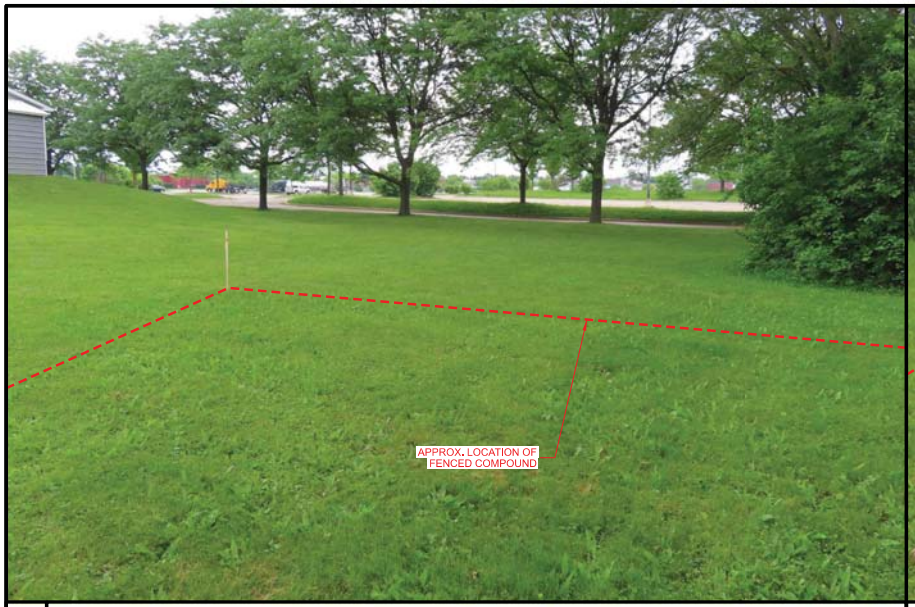
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JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

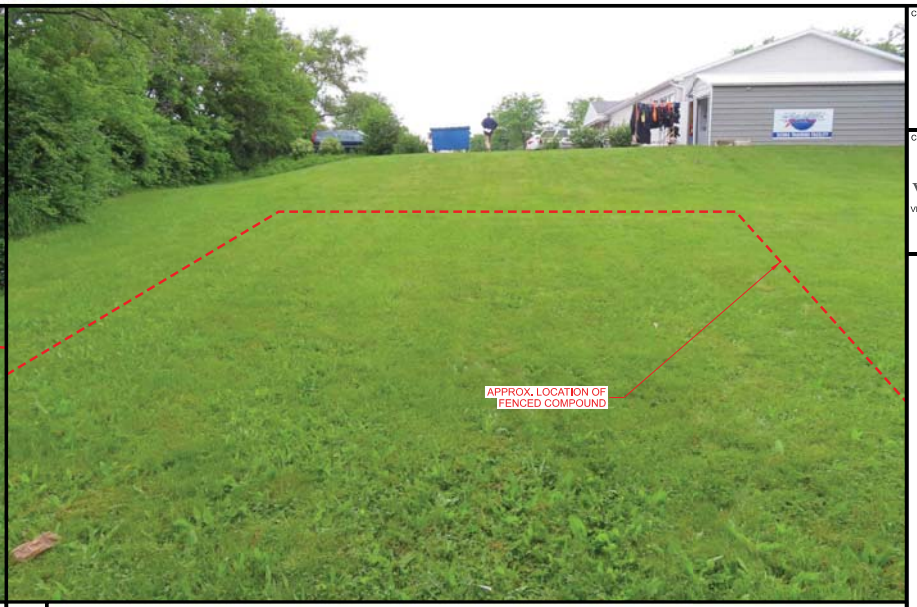
CHECKED BY	ADP
PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	E-504

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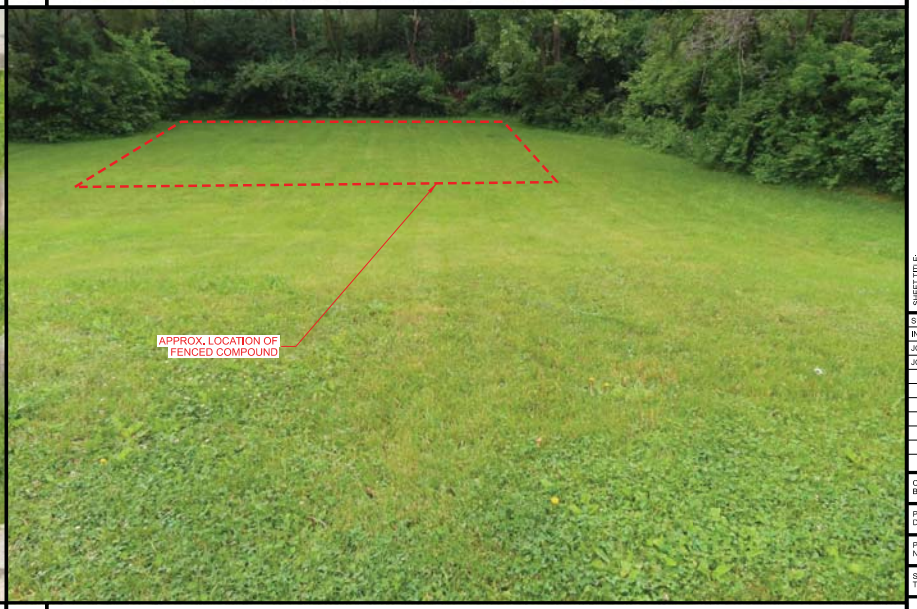
A PROPOSED COMPOUND AREA (LOOKING EAST)



B PROPOSED COMPOUND AREA (LOOKING NORTH)



C DRONE AERIAL VIEW



D PROPOSED COMPOUND AREA (LOOKING SOUTH)

CONSULTANT:
Edge
Consulting Engineers, Inc.
624 WATER STREET
PRAIRIE DU SAC, WI 53578
608.644.1449 VOICE
608.644.1549 FAX
www.edgeconsult.com

CLIENT:
verticalbridge
VERTICAL BRIDGE DEVELOPMENT, LLC
750 PARK OF COMMERCE DRIVE
SUITE 200
BOCA RATON, FL 33487

SITE PHOTOS
US-IL-5744 NORTHWEST HIGHWAY
CRYSTAL LAKE, IL

SHEET TITLE:

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
JCB	08/24/2022	REV. A
JCB	12/08/2022	REV. B

CHECKED BY	ADP
PLOT DATE	12/8/2022
PROJECT NUMBER	33894
SET TYPE	PRELIM. DWGS.
SHEET NUMBER	R-901

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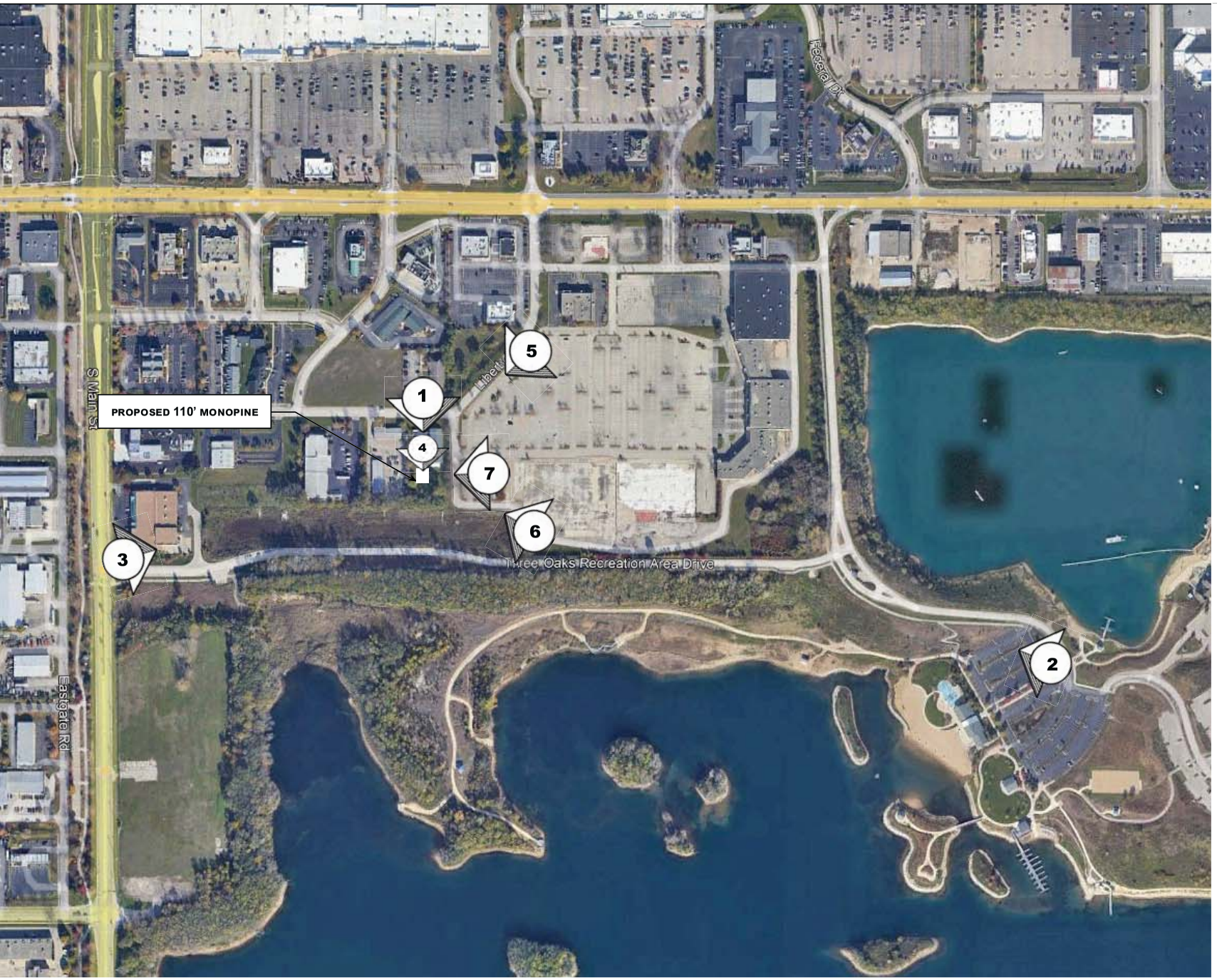


PHOTO SIM NOTES:

1. INTERPRETATION OF THE GENERAL APPEARANCE OF THE PROPOSED INSTALLATION. EACH SIMULATION IS BASED ON THE SCALING CRITERIA OR ASSUMPTIONS IDENTIFIED.
2. THE FINAL DESIGN AND DIMENSIONS WERE NOT AVAILABLE AT THE TIME THIS SIMULATION WAS PREPARED. THEREFORE, A TYPICAL TOWER/ANTENNA OF SIMILAR SIZE WAS USED FOR SIMULATION PURPOSES.
3. AN OBJECT OF KNOWN HEIGHT WAS NOT AVAILABLE FOR REFERENCE IN THE DIRECT VICINITY OF THE TOWER LOCATION, LIMITING RELIABILITY OF THE HEIGHT INTERPRETATION.
4. THE HORIZON LINE AT THE PROPOSED TOWER BASE IS NOT VISIBLE; A HORIZON LINE HAS BEEN ESTIMATED AT THE TOWER BASE FOR THE PHOTO SIMULATIONS.
5. PHOTO SIMULATIONS GENERATED USING A SIMILAR TOWER OF SIMILAR HEIGHT AT A SIMILAR DISTANCE; ARTISTIC INTERPRETATIONS USED TO ESTIMATE THE APPROXIMATE TOWER SIZE AND APPEARANCE.
6. THE DIFFERENCE IN ELEVATION BETWEN THE PHOTOGRAPH LOCATION AND TOWER LOCATION HAS BEEN TAKEN INTO CONSIDERATION.
7. TOPOGRAPHICAL FEATURES BETWEEN THE PHOTOGRAPH LOCATION ARE INTERPRETED AS BEST AS POSSIBLE. VISIBILITY OF THE TOWER WILL BE DRASTICALLY REDUCED WITHIN AREAS OF MATURE VEGETATION AND VALLEYS AND INCREASED WITHIN LARGE OPEN FIELDS AT HIGHER ELEVATIONS.
8. A STRUCTURAL ANALYSIS WAS NOT INCLUDED IN THE SCOPE OF WORK FOR THE INCLUDED PHOTO SIMULATIONS. EQUIPMENT & MOUNTING DEPECTED IS FOR AESTHETIC & LOCATION APPROVAL ONLY.

SITE INFORMATION:

SITE NAME: NORTHWEST HWY

SITE NUMBER: US-IL-5744

LOCATION: CRYSTAL LAKE, IL

EDGE PROJECT #: 33894

INT.	DATE	DESCRIPTION
ALP	12/07/22	REV. 0

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PHOTO SIMULATION 1

PHOTO LOCATION: PHOTO IS TAKEN FROM THE NORTH SIDE OF LIBERTY ROAD FACING SOUTH TOWARDS THE PROJET SITE

SITE INFORMATION:

SITE NAME: NORTHWEST HWY

SITE NUMBER: US-IL-5744

LOCATION: CRYSTAL LAKE, IL

EDGE PROJECT #: 33894

INT.	DATE	DESCRIPTION
ALP	12/07/22	REV. 0

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PHOTO SIMULATION 2

PHOTO LOCATION: PHOTO IS TAKEN FROM THE SOUTHEAST CORNER OF THE NORTH PARKING LOT AT THREE OAK RECREATION AREA FACING NORTHWEST

SITE INFORMATION:

SITE NAME: NORTHWEST HWY

SITE NUMBER: US-IL-5744

LOCATION: CRYSTAL LAKE, IL

EDGE PROJECT #: 33894

INT.	DATE	DESCRIPTION
ALP	12/07/22	REV. 0

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PHOTO SIMULATION 3

PHOTO LOCATION: PHOTO IS TAKEN FROM THE INTERSECTION OF THREE OAKS RECREATION AREA DRIVE AND MAYFAIR CARPET AND FURNITURE DRIVEWAY

SITE INFORMATION:

SITE NAME: NORTHWEST HWY

SITE NUMBER: US-IL-5744

LOCATION: CRYSTAL LAKE, IL

EDGE PROJECT #: 33894

INT.	DATE	DESCRIPTION
ALP	12/07/22	REV. 0

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PHOTO SIMULATION 4

PHOTO LOCATION: PHOTO IS TAKEN FROM THE SOUTH END OF THE PARKING LOT FACING NORTH TOWARD THE PROPOSED TOWER AND COMPOUND

SITE INFORMATION:

SITE NAME: NORTHWEST HWY
SITE NUMBER: US-IL-5744
LOCATION: CRYSTAL LAKE, IL
EDGE PROJECT #: 33894

INT.	DATE	DESCRIPTION
ALP	12/07/22	REV. 0

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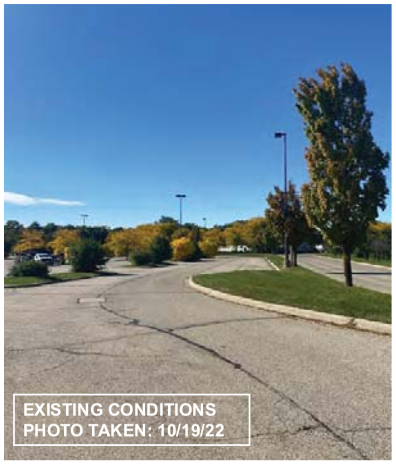


PHOTO SIMULATION 5

PHOTO LOCATION: PHOTO IS TAKEN FROM THE NORTH SIDE OF PARKING LOT FACING SOUTHWEST

SITE INFORMATION:

SITE NAME: NORTHWEST HWY
SITE NUMBER: US-IL-5744
LOCATION: CRYSTAL LAKE, IL
EDGE PROJECT #: 33894

INT.	DATE	DESCRIPTION
ALP	12/07/22	REV. 0

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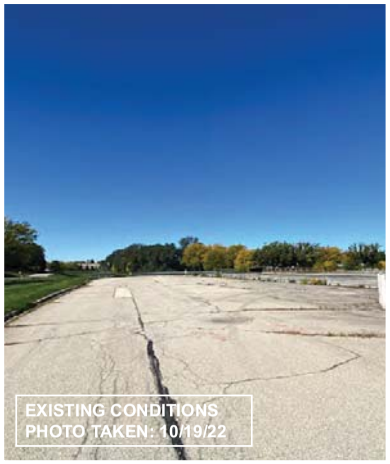


PHOTO SIMULATION 6

PHOTO LOCATION: PHOTO IS TAKEN FROM THE SOUTH SIDE OF PARKING LOT FACING NORTHWEST

SITE INFORMATION:

SITE NAME: NORTHWEST HWY
SITE NUMBER: US-IL-5744
LOCATION: CRYSTAL LAKE, IL
EDGE PROJECT #: 33894

INT.	DATE	DESCRIPTION
ALP	12/07/22	REV. 0

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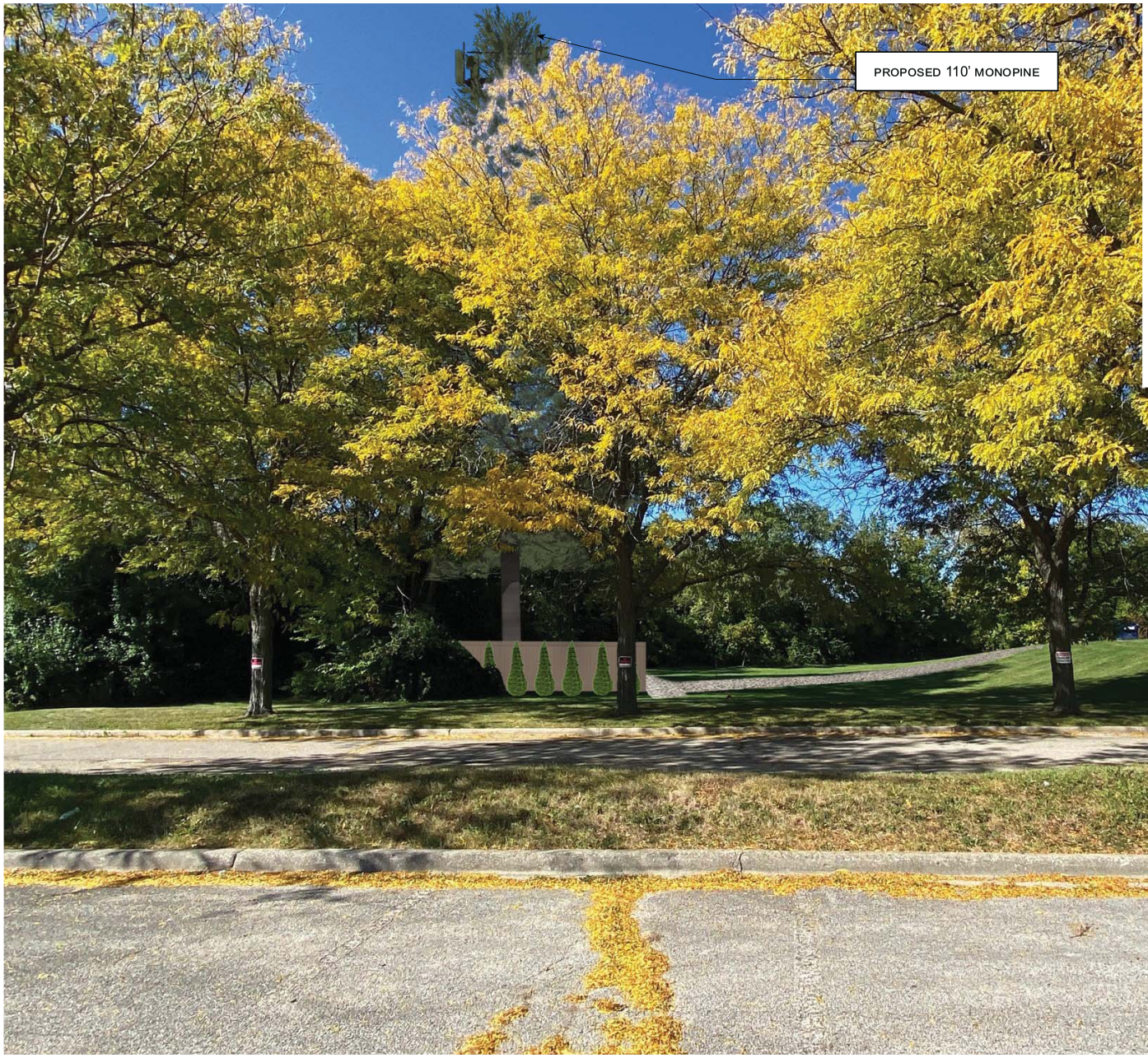




PHOTO SIMULATION 7

PHOTO LOCATION: PHOTO IS TAKEN FROM PARKING LOT FACING WEST

SITE INFORMATION:

SITE NAME: NORTHWEST HWY
SITE NUMBER: US-IL-5744
LOCATION: CRYSTAL LAKE, IL
EDGE PROJECT #: 33894

INT.	DATE	DESCRIPTION
ALP	12/07/22	REV. 0

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T-Mobile Central LLC
PROPOSED WIRELESS TELECOMMUNICATIONS FACILITY
269 LIBERTY ROAD, CRYSTAL LAKE, IL 60014

I, Rosemarie Bernardo, representing T-Mobile Central LLC, d/b/a T-Mobile, a Delaware limited liability company (hereinafter "T-Mobile"), whose address is 1400 Opus Place, 7th Floor, Downers Grove, Illinois, state the following:

1. I am the Senior Radio Frequency Engineer engaged in the development and deployment of T-Mobile's Chicago area network and involved in network design and optimization, including evaluation and selection of candidates for wireless telecommunications base station sites in the network.

2. In an effort to provide seamless in-building coverage in the City of Crystal Lake, T-Mobile has determined that it is necessary to obtain in the vicinity of 269 LIBERTY ROAD, CRYSTAL LAKE, IL 60014. This new site will help in offloading the existing on-air sites CH16749A on the west side of the ring and to support CH76318C on the south west side of the ring. This candidate will also serve the intersection of Northwest Hwy and S Main St., nearby commercial business areas, S Virginia Rd. and residential areas to the west of the ring. T-Mobile MUST be able to add a new site in order to maintain seamless service and high data capacity demand in the area.

3. There are no existing tower structures or feasible building structures with a suitable height of 100' within the desired area of coverage need.

4. My evaluation, conducted in the normal course of T-Mobile's operations, consisted of predicting signal propagation via industry-standard software models. T-Mobile calculated the proposed site's contribution to T-Mobile's needs for coverage and capacity in the area intended to be served by the site within reference to surrounding proposed sites.



Rosemarie Bernardo

T-Mobile Central LLC
PROPOSED WIRELESS TELECOMMUNICATIONS FACILITY
269 LIBERTY ROAD, CRYSTAL LAKE, IL 60014

I, Rosemarie Bernardo, representing T-Mobile Central LLC, d/b/a T-Mobile, a Delaware limited liability company (hereinafter "T-Mobile"), whose address is 1400 Opus Place, 7th Floor, Downers Grove, Illinois, state the following:

1. I am the Senior Radio Frequency Engineer engaged in the development and deployment of T-Mobile's Chicago area network and involved in network design and optimization, including evaluation and selection of candidates for wireless telecommunications base station sites in the network.

2. The intent of T-Mobile's proposed tower at 269 Liberty Road is to deploy the most current 5G technology to serve the voice and high data capacity needs of users in the commercial, recreational and residential areas surrounding the 269 Liberty Road location. To provide this cutting edge technology, T-Mobile must utilize 5G capable antennas and equipment. As presented, the proposed monopine tower located at 269 Liberty Road would fulfill T-Mobile's wireless voice and data improvement objectives.

3. I further evaluated whether the existing stealth tower located at 6521 Commercial Road in Crystal Lake, Illinois might be suitable for collocation. Simply state, collocation within the existing stealth tower is not a viable alternative to resolving T-Mobile's coverage improvement needs because the T-Mobile 5G antennas and equipment are far too large to fit within the designed tower.

4. Next, I conducted a radio frequency analysis of whether the existing stealth tower located at 6521 Commercial Road would address T-Mobile's identified coverage needs if T-Mobile were able to collocate its antennas on the outside of the tower at a height of 110' (the highest available height on the existing tower). Simply stated, given its geographic location, this tower will not allow T-Mobile to provide sufficient coverage to the T-Mobile coverage objectives of the Three Oaks Recreation Center parking areas and the large commercial district located to the Northeast of the intersection of Main Street and Northwest Highway.

5. My evaluation, conducted in the normal course of T-Mobile's operations, consisted of predicting signal propagation via industry-standard software models. T-Mobile calculated the proposed site's contribution to T-Mobile's needs for coverage and capacity in the area intended to be served by the site within reference to surrounding proposed sites.



Rosemarie Bernardo

NEW for CITY COUNCIL

T-Mobile Central LLC
PROPOSED WIRELESS TELECOMMUNICATIONS FACILITY
269 LIBERTY ROAD, CRYSTAL LAKE, IL 60014

I, Rosemarie Bernardo, representing T-Mobile Central LLC, d/b/a T-Mobile, a Delaware limited liability company (hereinafter "T-Mobile"), whose address is 1400 Opus Place, 7th Floor, Downers Grove, Illinois, state the following:

1. I am the Senior Radio Frequency Engineer engaged in the development and deployment of T-Mobile's Chicago area network and involved in network design and optimization, including evaluation and selection of candidates for wireless telecommunications base station sites in the network.

2. The intent of T-Mobile's proposed tower at 269 Liberty Road is to deploy the most current 5G technology to serve the voice and high data capacity needs of users in the commercial, recreational and residential areas surrounding the 269 Liberty Road location. To provide this cutting edge technology, T-Mobile must utilize 5G capable antennas and equipment. As presented, the proposed monopine tower located at 269 Liberty Road would fulfill T-Mobile's wireless voice and data improvement objectives.

3. My most recent affidavit addressed why the existing stealth tower located at 6521 Commercial Road in Crystal Lake, Illinois is not a viable alternative to resolving T-Mobile's coverage improvement needs. Simply stated, given its geographic location, this tower, regardless of tower design, will not allow T-Mobile to provide sufficient coverage to the T-Mobile coverage objectives of the Three Oaks Recreation Area parking lots and the large commercial district which is Crystal Point Mall Shopping Center and nearby commercial areas located north and south of Northwest highway and between the intersection of Main Street and Northwest Highway.

4. Since submittal of my second affidavit, SBA submitted a declaration from Sanjay Dhawan dated November 11, 2022. Dhawan's analysis RF analysis does NOT consider current T-Mobile network coverage and therefore, does not accurately reflect actual T-Mobile network experience and improvement needs.

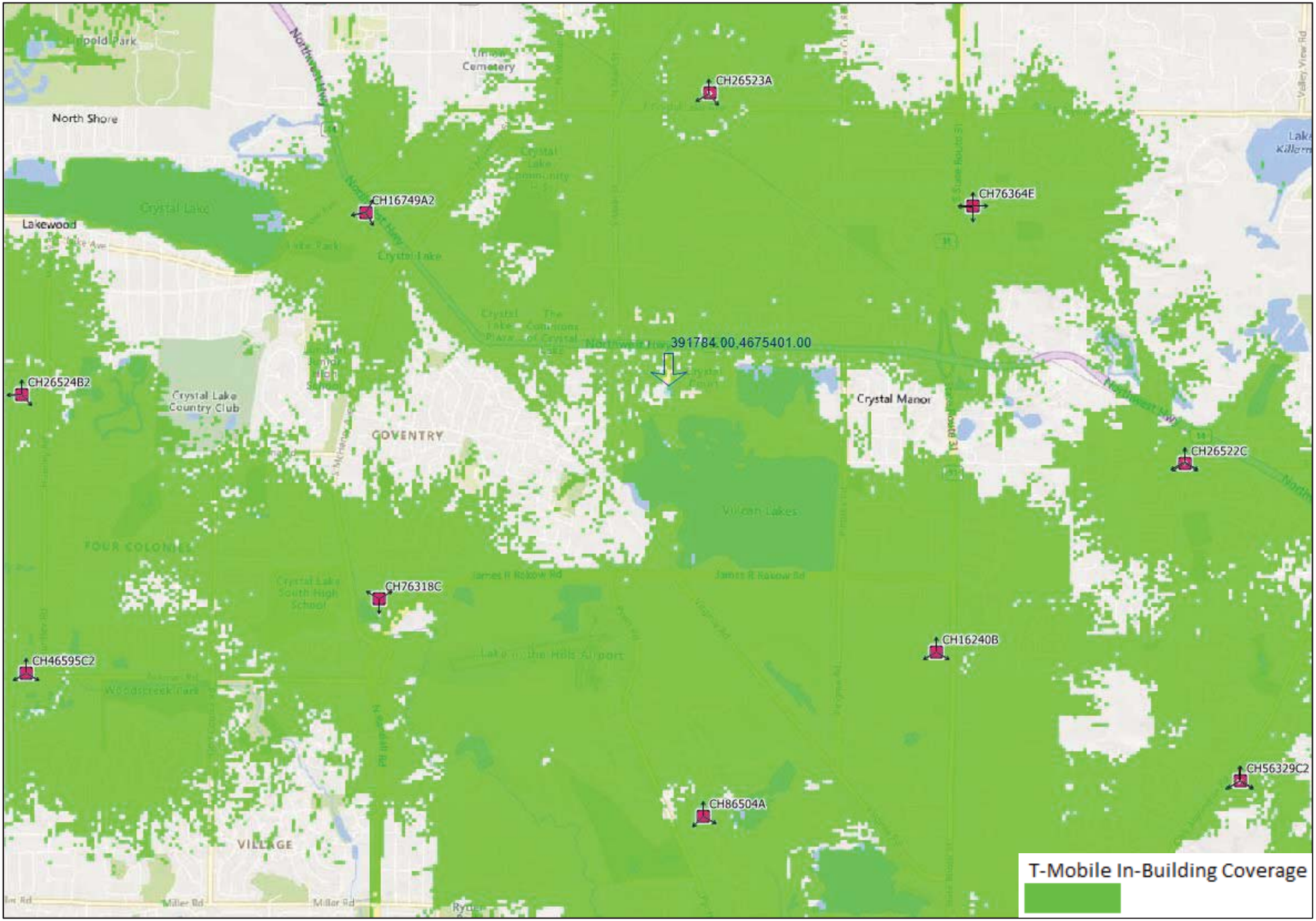
5. Importantly, Dhawan's analysis confirms that T-Mobile locating at the 6521 Commercial Road location would not provide the optimal coverage objectives of improving network deficiencies at the Three Oaks Recreation Area and the large commercial area east of Main Street, on north side of Route 14. Per the Signal to Interference and Noise Ratio (SINR) powerpoint slide of the applicant's presentation, there is a high usage sample of T-Mobile subscribers experiencing poor signal quality within these areas including low speed and congestion which leads to low throughput and therefore results in poor overall service. The existing SBA tower is nearly a half mile further away from these areas and simply will not provide best in class wireless service to these areas. In short, the location proposed at 269 Liberty Road will best provide the current requirement in the area for better support the T-Mobile subscribers of the businesses and residents of Crystal Lake.

6. My evaluation, conducted in the normal course of T-Mobile's operations, consisted of predicting signal propagation via industry-standard software models. T-Mobile calculated the proposed site's contribution to T-Mobile's needs for coverage and capacity in the area intended to be served by the site within reference to surrounding proposed sites.

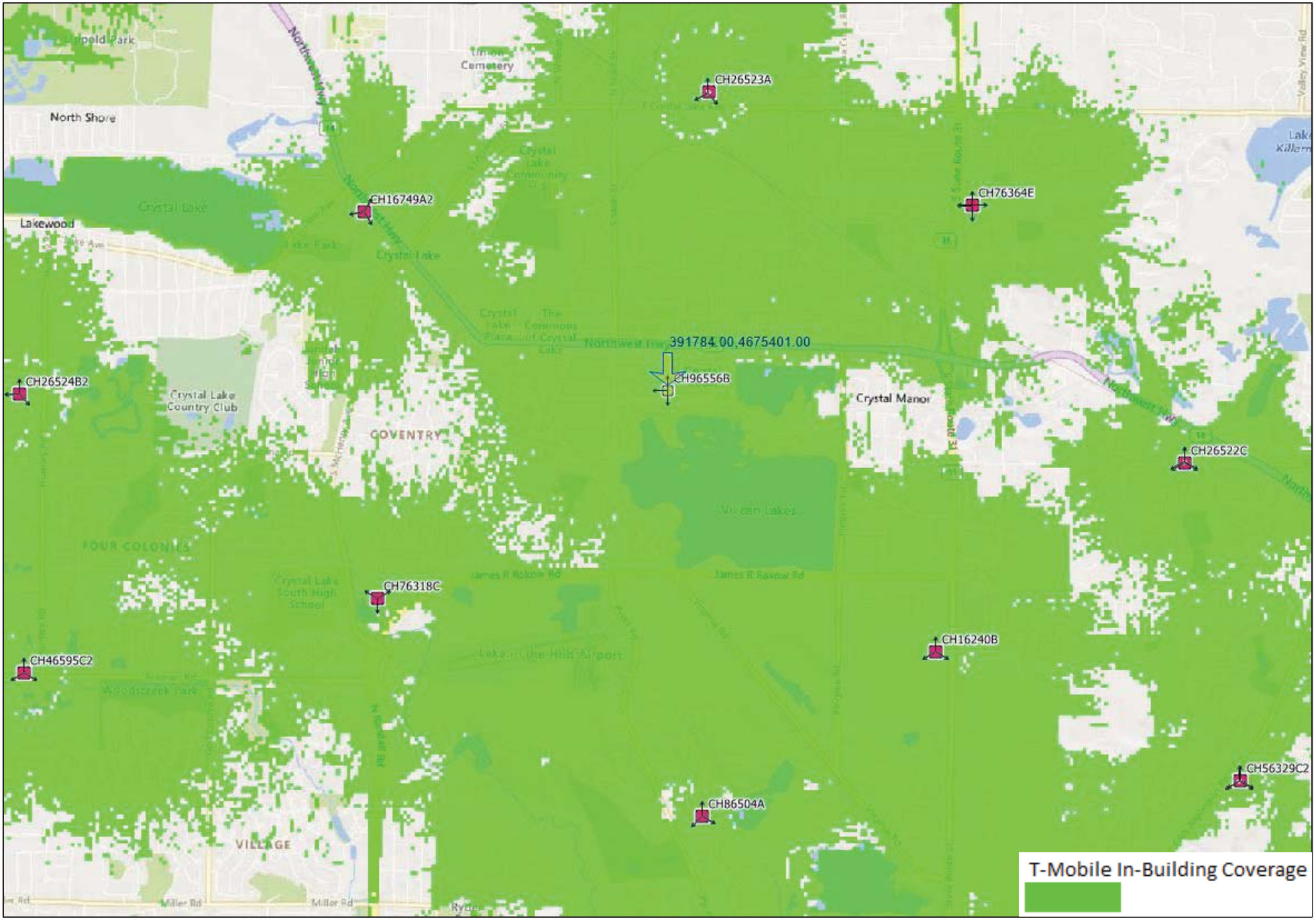


Rosemarie Bernardo

T-Mobile Existing In-Building Coverage



T-Mobile Proposed In-Building Coverage



Crystal Lake City Council
c/o Elizabeth Maxwell AICP / City Planner
100 West Woodstock Street
Crystal Lake, IL 60014

RE: Application No. 2022-199

SUPPLEMENTAL AFFIDAVIT OF CHIYU ZHANG, P.E., S.E.

STATE OF TEXAS
COUNTY OF DALLAS

Chiyu Zhang, P.E., S.E., who, after being duly sworn, deposes and states as follows:

1. I am a Structural Engineer for Allpro Consulting Group, Inc. ("Allpro").
2. I am a licensed Structural Engineer with the State of Illinois, License No. 081-008580.
3. I make this Affidavit with the understanding that it is to be used as a public comment in response to the Application for a Special Use Permit and Variations for new Monopine Wireless Communications Tower, under Application No. 2022-199 (the "Application"), submitted by Arthur Koch, as authorized agent of Calypso Ventures, LLC (the "Applicant"). All statements contained in this Affidavit are based upon my personal knowledge or my personal knowledge of the business records of Allpro. I am over the age of eighteen (18) and I am fully competent to testify to the facts recited herein.[1]

[1] In my capacity working for Allpro, I am one of the primary custodians of the organizational documents, files, applications, letters, correspondence, reports, and other paperwork transmitted or received by Allpro (the "Allpro Records"). Allpro's files contain documents which were made and/or kept as part of the Allpro Records, contemporaneously at or near the time of the events so memorialized herein, by or from information transmitted by Allpro's employees and personnel who had knowledge of the facts set forth in such documents. The Allpro Records are kept in the course of regularly conducted business activity and for each such document contained in the Allpro Records, it is the regular practice of business activity to make or retain such documents. To the extent that I refer to any such document other than those made or received by me personally, such document is one of the Allpro Records.

4. I understand that the Application is seeking to construct a 105-foot (115-feet with lightning rod) Wireless communications tower, which is intended to be situated on property located at 269 Liberty Road, Crystal Lake, IL (the "Proposed Tower").
5. SBA Towers X, LLC, a subsidiary of SBA Communications ("SBA") has owned, operated, and maintained a 126-foot (132-feet with lightning rod) Wireless communications tower situated on property located at 6521 Commercial Road, Crystal Lake, IL since 2018 (the "Existing SBA Tower").
6. The Existing SBA Tower is located approximately 0.46 miles or 2,428 feet from the Proposed Tower.
7. As an alternative solution to the canister expansion proposal as mentioned in my previous Affidavit dated Nov. 14th, SBA also engaged Allpro to provide engineering design that could convert existing tower to a Monopine in order to accommodate T-Mobile's 5G equipment. The proposed modifications would entail replacing the existing spine and canisters from 84' to 124' elevation with (2) new 20' pole sections and new Monopine branches, as well as adding (4) 2.5" new anchor rods reinforcement and a new 15'x15'x2.5' concrete pad at tower base. The Structural Analysis is attached hereto as **Exhibit "A**."
8. Based upon my education, training, and experience, I can confirm that the Structural Analysis is an accurate evaluation of the modifications which would be required in order to accommodate T-Mobile's 5G equipment on the Existing SBA Tower, and that such modifications can be made in approximately three (3) months, which is significantly less time than it would take to construct an entirely new communications tower.
9. Once the proposed modifications to the Existing SBA Tower have been completed, the Existing SBA Tower will have the same structural capacity as the Proposed Tower and

will be able to adequately accommodate T-Mobile's 5G equipment.

FURTHER AFFIANT SAYETH NOT

LICENSED STRUCTURAL ENGINEER
CHIYU ZHANG
081-008580
12/14/2022
STATE OF ILLINOIS
Expires 11/30/2024

Affiant: Chiyu Zhang, P.E., S.E.

STATE OF TEXAS
COUNTY OF DALLAS

Sworn to and subscribed before me by means of ☐ physical presence or ☐ online notarization, this 14 day of December, 2022. Such person did take an oath and:

(Notary must check applicable box).

☒ is/are personally known to me.
☐ produced a current _____ driver's license as identification.
☐ produced _____ as identification.

{Notary Seal must be affixed}

STEPHANI PARGAS
Notary Public, State of Texas
ID # 13202938-4
My Comm. Expires 05/29/2023

Stephani Pargas
SIGNATURE OF NOTARY

Stephani Pargas
Name of Notary *(Typed, Printed or Stamped)*

EXHIBIT "A"

Structural Analysis

ALLPRO
CONSULTING GROUP, INC.
9221 Lyndon B. Johnson Freeway, #204, Dallas, TX 75243 ★ PHONE 972-231-8893 ★ FAX 1-866-364-8375
www.allprocgi.com ★ e-mail: info@allprocgi.com

Tower Structural Analysis Report for SBA Network Services, Inc.

Existing 124' Monopole w/ T-Mobile Monopine Conversion

SBA Site Name: Crystal Lake South
SBA Site ID: IL22533-A

Site Location: 6521 Commercial Road,
Crystal Lake, IL
Mchenry County

Latitude: 42.221600°
Longitude: -88.320200°

ACGI Job # 22-4227_Monopine Conversion option

ANALYSIS RESULTS (Monopine Conversion)		
Tower Components	> 200 %	Fail
Tower Foundation	112.8 %	Fail

Prepared By:
Snehalsinh Vansia, EIT
Staff Engineer



11/14/2022
Approved By:
Chiyu Zhang, P.E.
IL PE # 081-008580

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1. ANALYSIS SUMMARY

The existing 124' Stealth Monopole (with proposed changes), located in Crystal Lake, IL was analyzed by Allpro Consulting Group, Inc. (ACGI) for the existing loads and the proposed T-Mobile antennas, radios and coaxes authorized by SBA Communication Corp. Based on the results of the analysis, the existing tower with below mentioned proposed and existing loading is found to be **not in code compliance** under *TIA-222-H*, *Structural Standards for Steel Antenna Towers and Antenna Supporting Structures and International Building Code 2018 after proposed changes.*

2. SCOPE & SOURCE OF INFORMATION

The purpose of this structural analysis is to determine whether the existing structure is capable of supporting additional loads proposed loads.

SOURCE OF INFORMATION		
Tower Data:	Sabre Industries	Tower Manufacturer Drawing by Sabre Industries Job #132129-MM dated 1/15/2016.
	Stealth Concealment Solution, LLC	Top Stealth Pole drawings by Stealth Concealment Solution, LLC Job #SA15-01581S-00R0 dated 2/8/2016.
	Tower Engineering Solutions	Previous Structural Analysis by Tower Engineering Solutions Project #120213 dated 12/13/2021.
Foundation Data:	Sabre Industries	Tower Manufacturer Drawing by Sabre Industries Job #132129-MM dated 1/15/2016.
Geotechnical Report:	G2 Consulting Group	Geotechnical data as per report by G2 Consulting Group, Project #152185 dated 05/26/2015
Loading Data:	SBA Communication Corp.	Proposed loading is per email from Breann Parreira with SBA dated 11/08/2022.
Authorization:	SBA Communication Corp.	

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3. ANALYSIS METHODS & DATA

The analysis was performed in accordance with Telecommunication Industry Association specification TIA-222-H. The tower was modeled using TNX Tower, a 3-D finite element program. TNX Tower is a general-purpose modeling, analysis, and design program created specifically for communication towers using the EIA-222-C, EIA-222-D, TIA/EIA-222-F, TIA-222-G standards or TIA-222-H code. The 3-D model included the tower, with existing appurtenances and all proposed loads.

SITE DATA	
SBA Site Name:	Crystal Lake South
SBA Site Number:	IL22533-A
Carrier Site Name:	T-Mobile
City, State:	Crystal Lake, IL
County:	McHenry
Code Wind Load Requirement:	TIA-222-H (107 mph Basic wind speed)
Wind Load Used:	TIA-222-H Code: • Basic wind speed of 107 mph • Structure Class II*. • Exposure Category C. • Topographic Category 1. • Crest Height 0.00 ft. • Nominal ice thickness of 1.5 in. • Ground Elevation 896.55ft
Seismic Requirement:	S_s=0.114, Seismic check calculations are included as per TIA-222-H

* This structural analysis is based upon the tower being classified as a class II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

TOWER DATA	
Tower Type:	Monopole (Changes are pending)
Height:	124'
Cross Section:	18 Sided
Steel Strength:	A572-65 ksi (Shaft Steel) A500-42 ksi (Canister pipe)
Type of Foundation:	Pier Foundation

TOWER HISTORY	
Tower Manufacturer / Model:	Sabre / Stealth Concealment Solution, LLC
Date of Original Design:	1/15/2016
Previous Modifications:	Tower Modification Design is pending by others.
Original Design Code Req.:	TIA-222-G with 120 mph design wind speed

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4. APPURTENANCE LISTING

EXISTING LOAD DESCRIPTION					
ELEV (ft.)	***Qty.***	***Antenna Description***	***Mount Type & Qty.***	***TX. LINE (in.)***	***TENANT***
120±	3	CommScope NHHSS-65C-R2BT4 Panel	Inside 34.0" concealment	(18) 7/8"	Verizon
	3	CommScope CBC61923T-DA-43 Triplexers			
119±	1	34" x 10' Canister	-	-	-
109±	1	34" x 10' Canister	-	-	-
99±	1	34" x 10' Canister	-	-	-
89±	1	34" x 10' Canister	-	-	-

FINAL LOADING DESCRIPTION					
ELEV (ft.)	***Qty.***	***Antenna Description***	***Mount Type & Qty.***	***TX. LINE (in)***	***TENANT***
120±	**-**	**Total 125 ft² CaAa and 2250lb**	**-**	(18) 7/8"	**Verizon**
110±	**-**	**Total 125 ft² CaAa and 2250lb**	**-**	**(6) 1-5/8" (6) 7/8"**	**T-Mobile**
124±	**-**	**Top Branches (50 ft² CaAa and 1000lb)**	-	-	-
114±	**-**	**New Branches (50 ft² CaAa and 1000lb)**			
109±	**-**	**New Branches (50 ft² CaAa and 1000lb)**			
104±	**-**	**New Branches (50 ft² CaAa and 1000lb)**			
99±	**-**	**New Branches (50 ft² CaAa and 1000lb)**			
94±	**-**	**New Branches (50 ft² CaAa and 1000lb)**			
89±	**-**	**New Branches (50 ft² CaAa and 1000lb)**			
84±	**-**	**New Branches (50 ft² CaAa and 1000lb)**			

Notes:

1. ACGI should be notified of any discrepancies found in the data listed in this report.
2. Notify Allpro Consulting Group, Inc. of any potential physical and other interference with existing antennas for a redesign.

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5. CONCLUSIONS

RESULT SUMMARY			
MEMBER		*% Capacity*	*Pass/Fail*
Pole		**103.6 %**	**Acceptable**
Anchor Bolt and Base Plate		**> 200.0 %**	**Fail**
Foundation Check	Download	**6.5 %**	**Pass**
	Pier Length	**112.8 %**	**Fail**
	Moment Capacity	**98.4 %**	**Pass**
Tower Overall Rating > 200.0 % (Fail)			

As per the results of the analysis, the existing tower is **not in code compliance** for the new and existing antenna loads.

Maximum tower member stress **is more than 105%**, making it **not in code compliance** under the TIA-222-H code and 2018 International Building Code.

6. RECOMMENDATIONS

The existing tower is not recommended for the final loading listed on page number 5. However, the tower can be modified and can be brought into code compliance with new modifications. Modification design is not in the scope of this report but can be provided upon request.

The estimate cost for tower modification will be in the price range of $245,300 - $308,720. This estimate includes Tower Modification Design, Material and Labor, Project Management, Post Mod EIA/TIA and Post Modification Inspection (PMI including post construction field inspection and engineering construction review) costs.

Modification scope of work:

1. Remove existing 34" diameter canister with associated assembly at elevation 84'-124'.
2. Grind and remove existing flange plate and weld new flange plate 84'.
3. Install (2) 20' new pole sections with branch receptors at 84' - 124'.
4. Install new monopine branches between elevation 84' -124'.
5. Paint Pole to resemble tree bark at elevation 0'-84'.
6. Weld (8) 12"x8"x0.5" stiffener plates to modify existing base plate.
7. Install (4) 2-1/2" Williams anchor rods (150ksi) to modify existing anchor bolts.
8. Add 15'x15'x2.5' concrete pad at top to modify foundation.
9. Temporary relocate existing Verizon Equipment during modification.

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7. ASSUMPTIONS

This analysis was completed based on the following assumptions:

- Tower has been properly maintained
- Tower erection was in accordance to manufacturer drawings
- Leg flanges have been properly designed by manufacturer to not be a limiting reaction
- Welds have been properly designed and installed by manufacturer to not be a limiting reaction
- Foundation was constructed in accordance to manufacturer drawings
- Foundation does not have structural damage
- Bolts have been properly tightened according to manufacturer specifications
- Appurtenance, mount and transmission line sizes and weights are best estimates using the tnxTower database and manufacturer information

8. DISCLAIMER

Installation procedures and related loading are not within the scope of this analysis. A contractor experienced in similar work should perform all installation work. The engineering services provided by Allpro Consulting Group, Inc. (ACGI) are limited to the computer analysis and calculations of the structure with the proposed and existing loads. This analysis is considered void if the loading mentioned in this report is changed or is different as installed. It is assumed that the existing structure is properly maintained and is in good condition free of any defects.

ACGI does not make any warranties, expressed or implied in connection with this engineering analysis report and disclaims any liability arising from deficiencies or any existing conditions of the original structure. ACGI will not be responsible for consequential or incidental damages sustained by any parties as a result of any data or conclusions included in this Report. The maximum liability of ACGI pursuant to this report shall be limited to the consulting fee received for the preparation of the report.

Climbers should not latch or tie their support lanyard or gear on to antennas, radios, mounts etc without proper evaluation. They should only tie to their support lanyards or gear to or attach to Tower structural members that have visible bolting and connection to the larger structure.

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9. SUMMARY OF WORKING PERCENTAGE OF STRUCTURAL COMPONENTS

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	124 - 104	Pole	TP30x30x0.25	1	-9.51	783.04	32.8	Pass
L2	104 - 84.5	Pole	TP30x30x0.25	2	-16.22	783.04	103.6	Acceptable
L3	84.5 - 84	Pole	TP34x30x0.25	3	-16.24	783.04	103.6	Acceptable
L4	84 - 47.75	Pole	TP39.44x34x0.25	4	-22.62	1780.88	95.0	Pass
L5	47.75 - 0	Pole	TP46.1x38.115x0.313	5	-35.48	2661.03	101.8	Acceptable
							Summary	
						Pole (L3)	103.6	Acceptable
						RATING =	**103.6**	**Acceptable**

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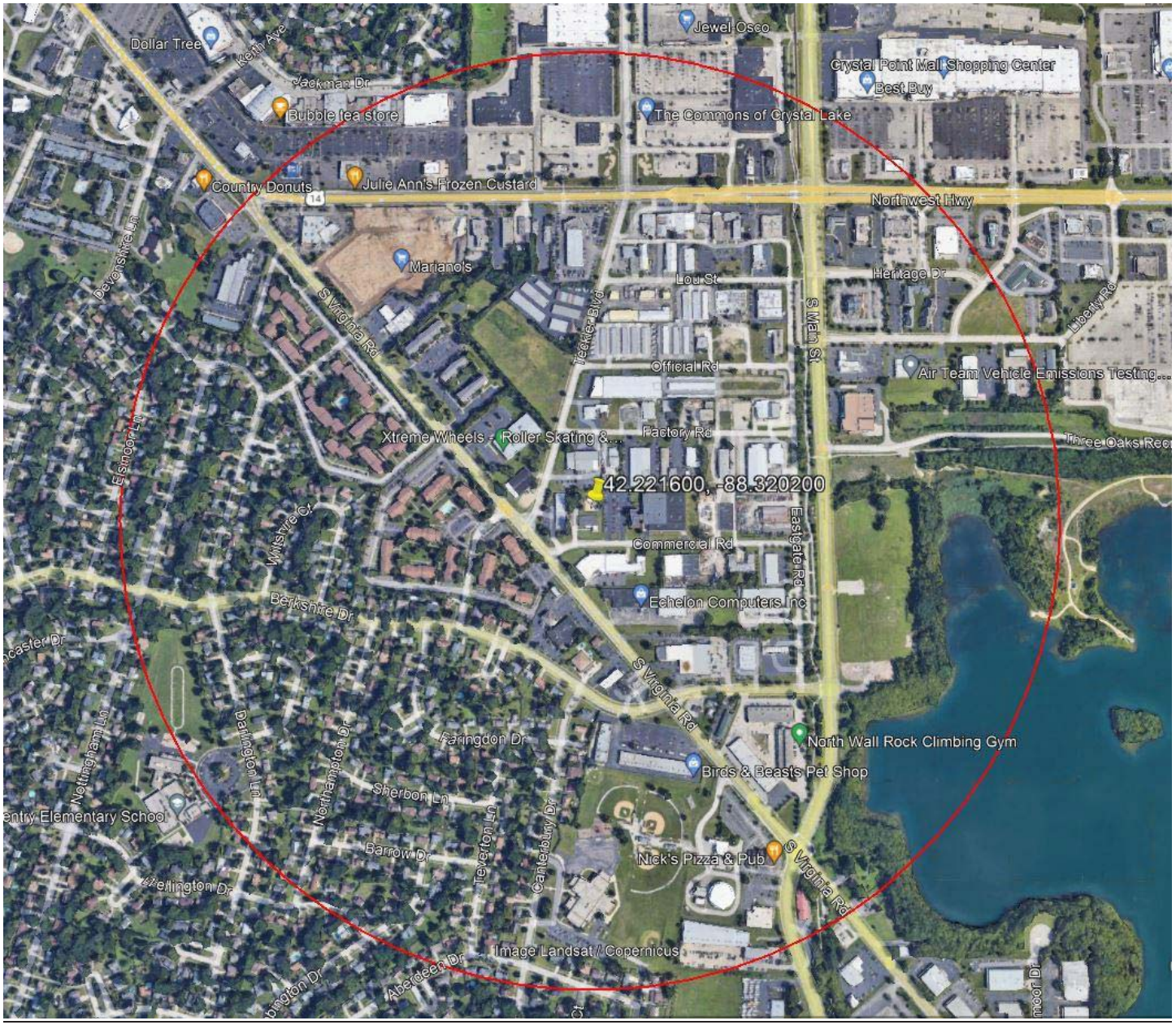
APPENDIX

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TOWER DATA

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IL22533-A / Crystal Lake South



Exposure Category "C"

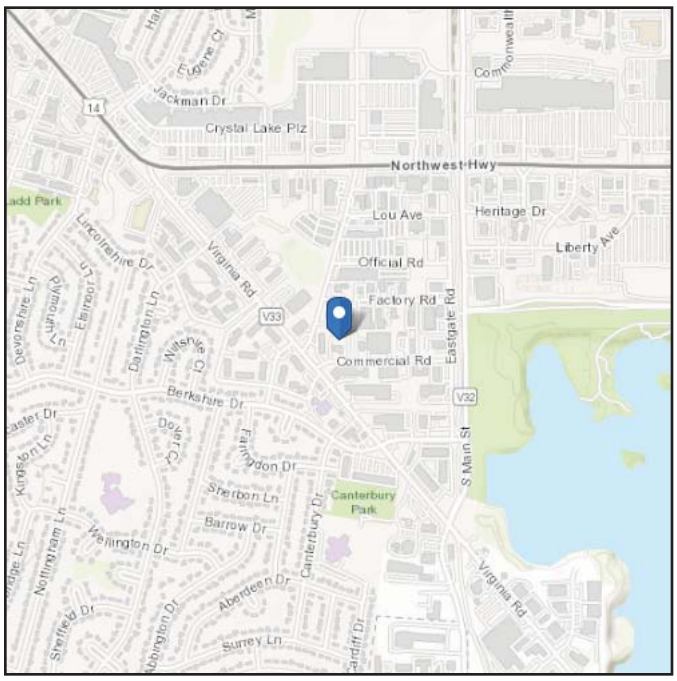
Topographic Category "1"

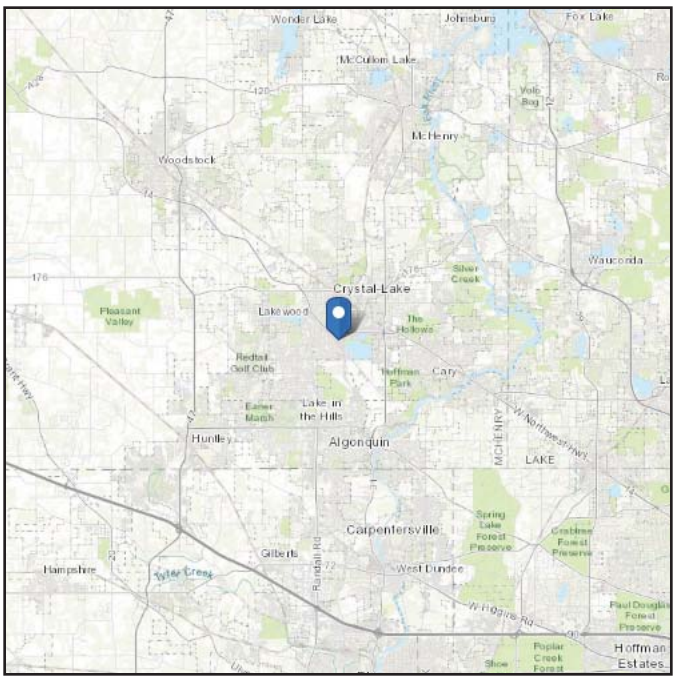
ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 896.55 ft (NAVD 88)
Latitude: 42.2216
Longitude: -88.3202





Wind

Results:

Wind Speed	107 Vmph
10-year MRI	73 Vmph
25-year MRI	82 Vmph
50-year MRI	85 Vmph
100-year MRI	92 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Thu Nov 10 2022

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is not in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2.

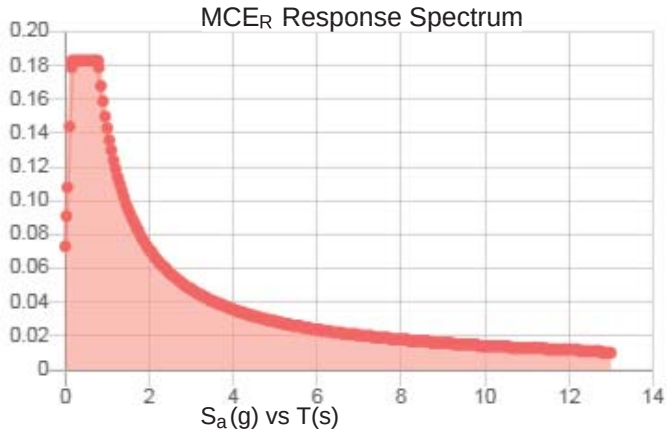
Seismic

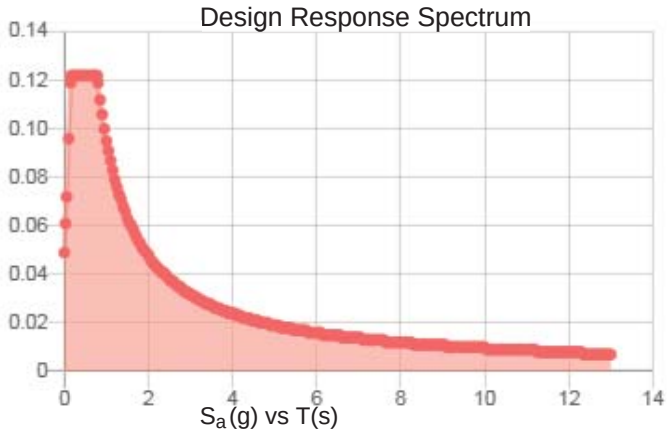
Site Soil Class: D - Stiff Soil

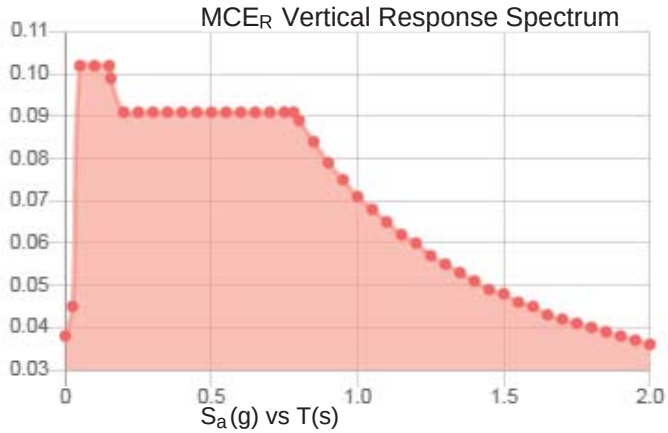
Results:

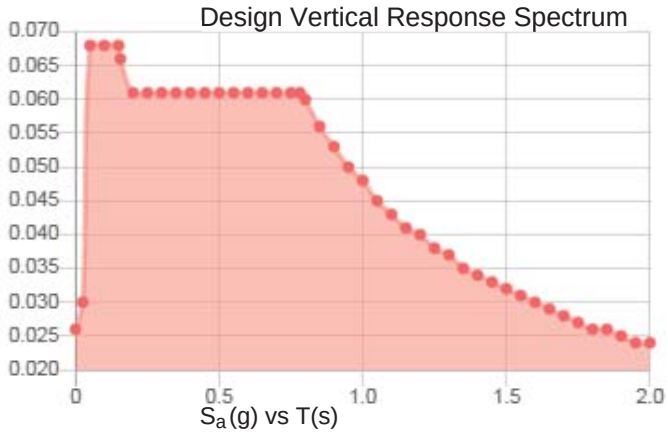
S_S :	0.114	S_{D1} :	0.095
S_1 :	0.06	T_L :	12
F_a :	1.6	PGA :	0.058
F_v :	2.4	PGA_M :	0.093
S_{MS} :	0.183	F_{PGA} :	1.6
S_{M1} :	0.143	I_e :	1
S_{DS} :	0.122	C_v :	0.7

Seismic Design Category B









Data Accessed: **Thu Nov 10 2022**

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	1.50 in.
Concurrent Temperature:	-5 F
Gust Speed	40 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Thu Nov 10 2022

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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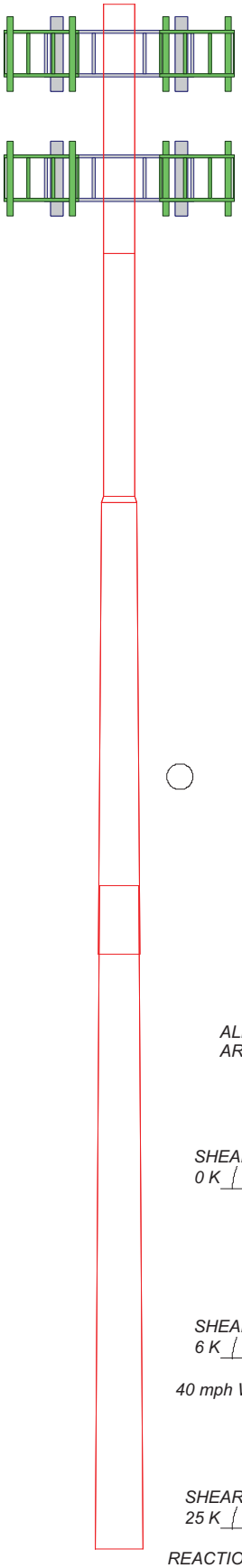
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TOWER ELEVATION DRAWINGS

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Section	1	2	3	4	5
Length (ft)	20.00	19.50	0.50	36.25	53.25
Number of Sides	1	1	1	18	18
Thickness (in)	0.250	0.250	0.250	0.250	0.313
Socket Length (ft)				5.50	
Top Dia (in)	30.000	30.000	30.000	34.000	38.115
Bot Dia (in)	30.000	30.000	34.000	39.440	46.100
Grade	A500-42				A572-65
Weight (K)	1.7	1.6	0.0	3.7	7.9

124.0 ft
104.0 ft
84.5 ft
47.8 ft
0.0 ft



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Top Branches (Other)	124	L3	104
L1	124	New Branches (Other)	99
Verizon Loading (Verizon)	120	New Branches (Other)	94
New Branches (Other)	114	New Branches (Other)	89
T-Mobile Loading (T-Mobile)	110	L4	84.5
New Branches (Other)	109	New Branches (Other)	84
L2	104.5	L5	84
New Branches (Other)	104	L6	47.75

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A500-42	42 ksi	58 ksi	A572-65	65 ksi	80 ksi

TOWER DESIGN NOTES

1. Tower is located in McHenry County, Illinois.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 107 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 40 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 103.6%

ALL REACTIONS ARE FACTORED

AXIAL 36 K
SHEAR 0 K
MOMENT 33 kip-ft

SEISMIC

AXIAL 53 K
SHEAR 6 K
MOMENT 674 kip-ft

40 mph WIND - 1.500 in ICE

AXIAL 36 K
SHEAR 25 K
MOMENT 2787 kip-ft

REACTIONS - 107 mph WIND

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FAX: 866-364-8375

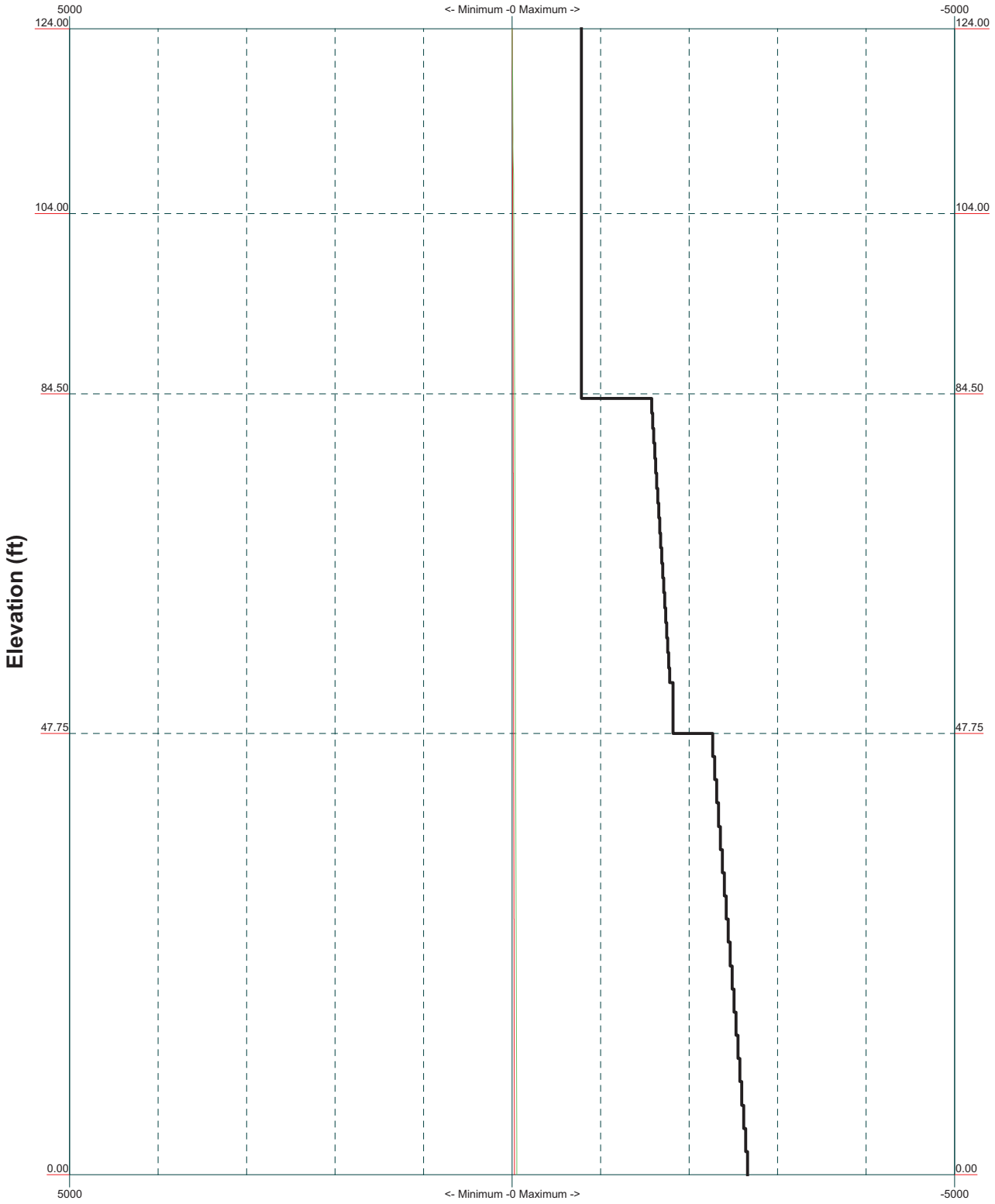
Job: **22-4227**			
Project: ***IL22533-A Crystal Lake South***			
Client: SBA	Drawn by: SVansia	App'd:	
Code: TIA-222-H	Date: 11/14/22	Scale: NTS	
Path: C:\Users\Svansia\Desktop\IL22533\InxTower\Monopine Conversion\IL22533-A_Crystal Lake South_SA ERI_11-14-2022.eri		Dwg No. E-1	

MISCELLANEOUS PLOTS

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TIA-222-H - 107 mph/40 mph 1.500 in Ice Exposure C

Leg Capacity ——— **Leg Compression (K)**



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Job: ***22-4227***		
Project: ***IL22533-A Crystal Lake South***		
Client: SBA	Drawn by: SVansia	App'd:
Code: TIA-222-H	Date: 11/14/22	Scale: NTS
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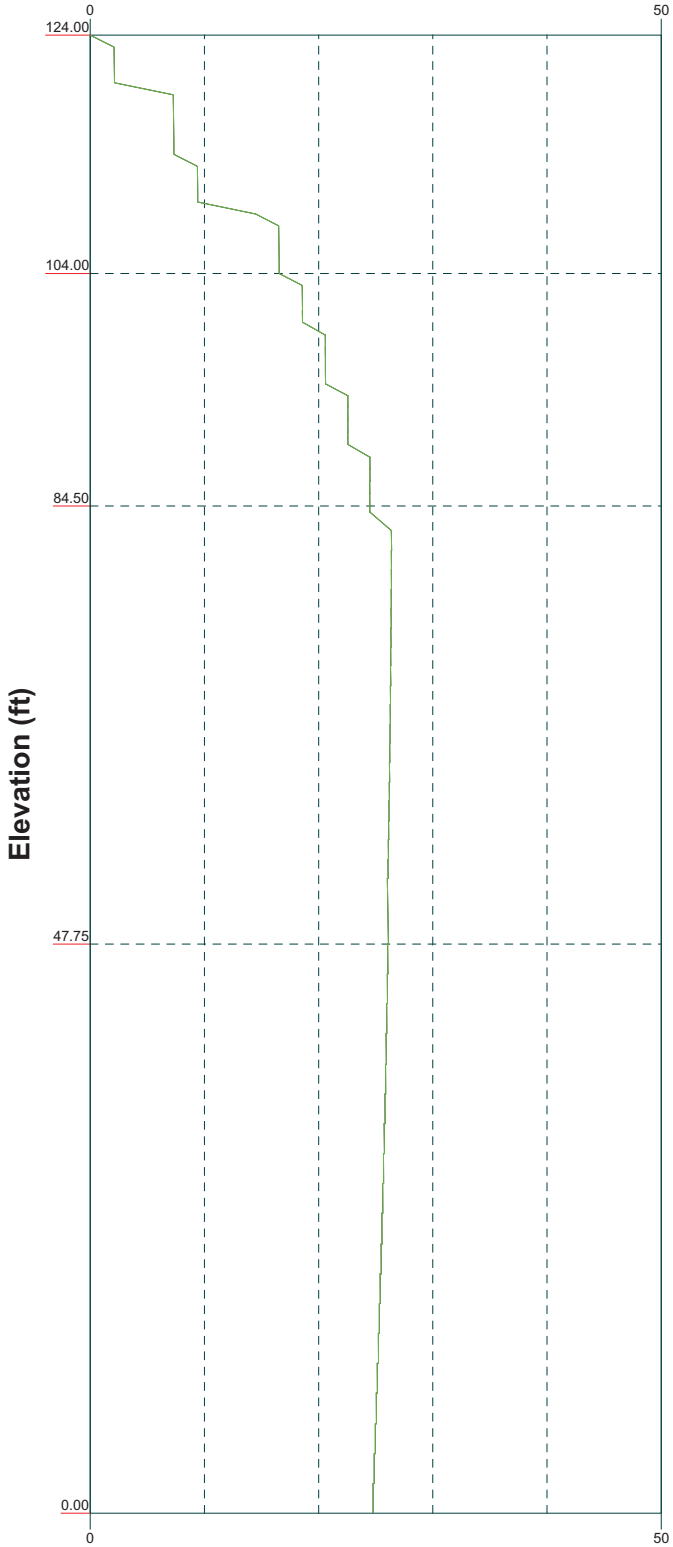
TIA-222-H - 107 mph/40 mph 1.500 in Ice Exposure C

Vx Vz

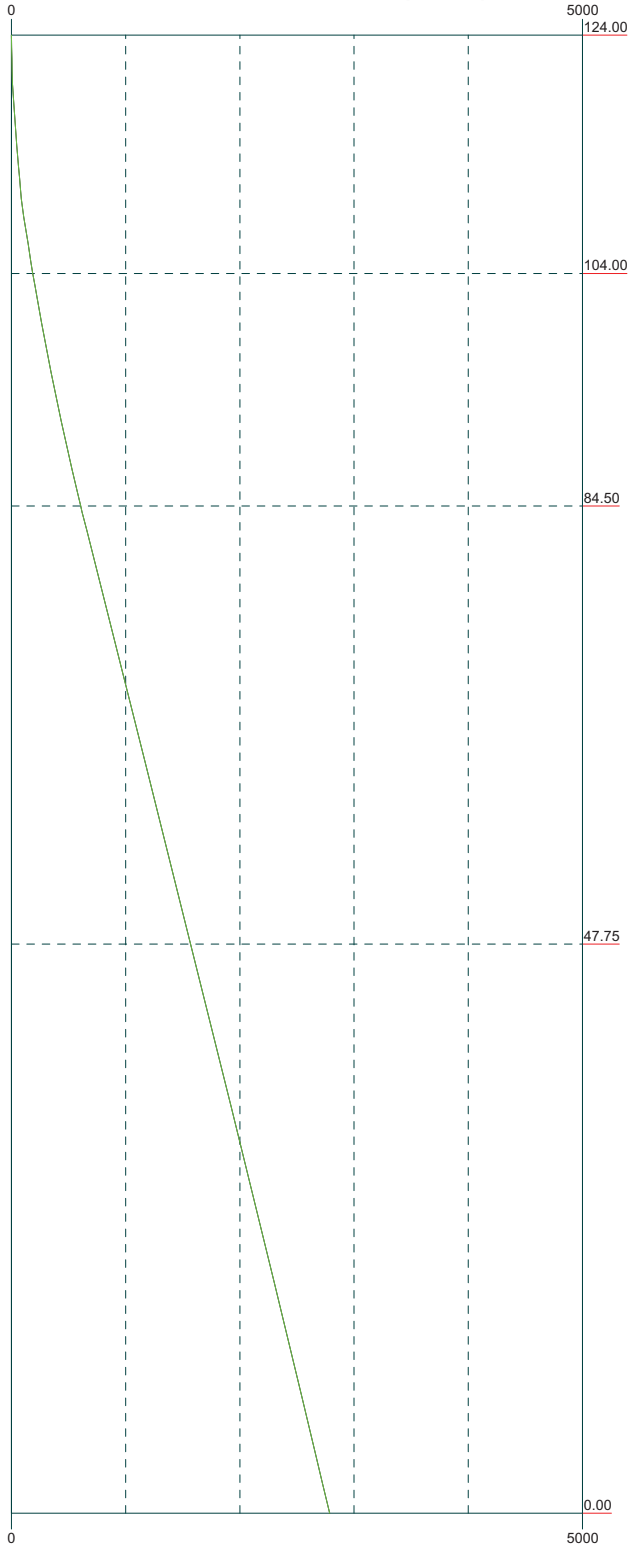
Maximum Values

Mx Mz

Global Mast Shear (K)



Global Mast Moment (kip-ft)

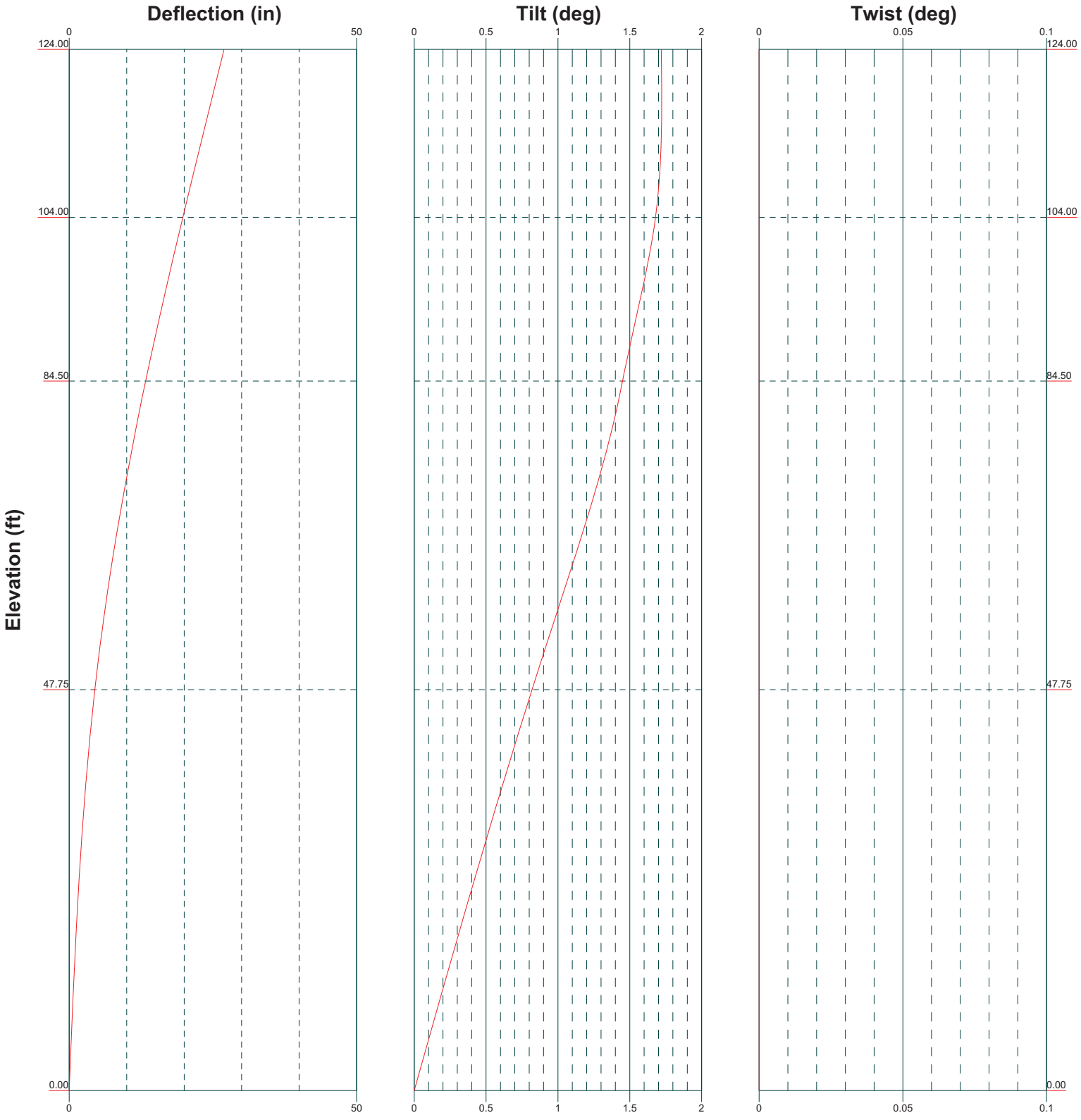


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Job: ***22-4227***		
Project: ***IL22533-A Crystal Lake South***		
Client: SBA	Drawn by: SVansia	App'd:
Code: TIA-222-H	Date: 11/14/22	Scale: NTS
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TIA-222-H - Service - 60 mph

Maximum Values

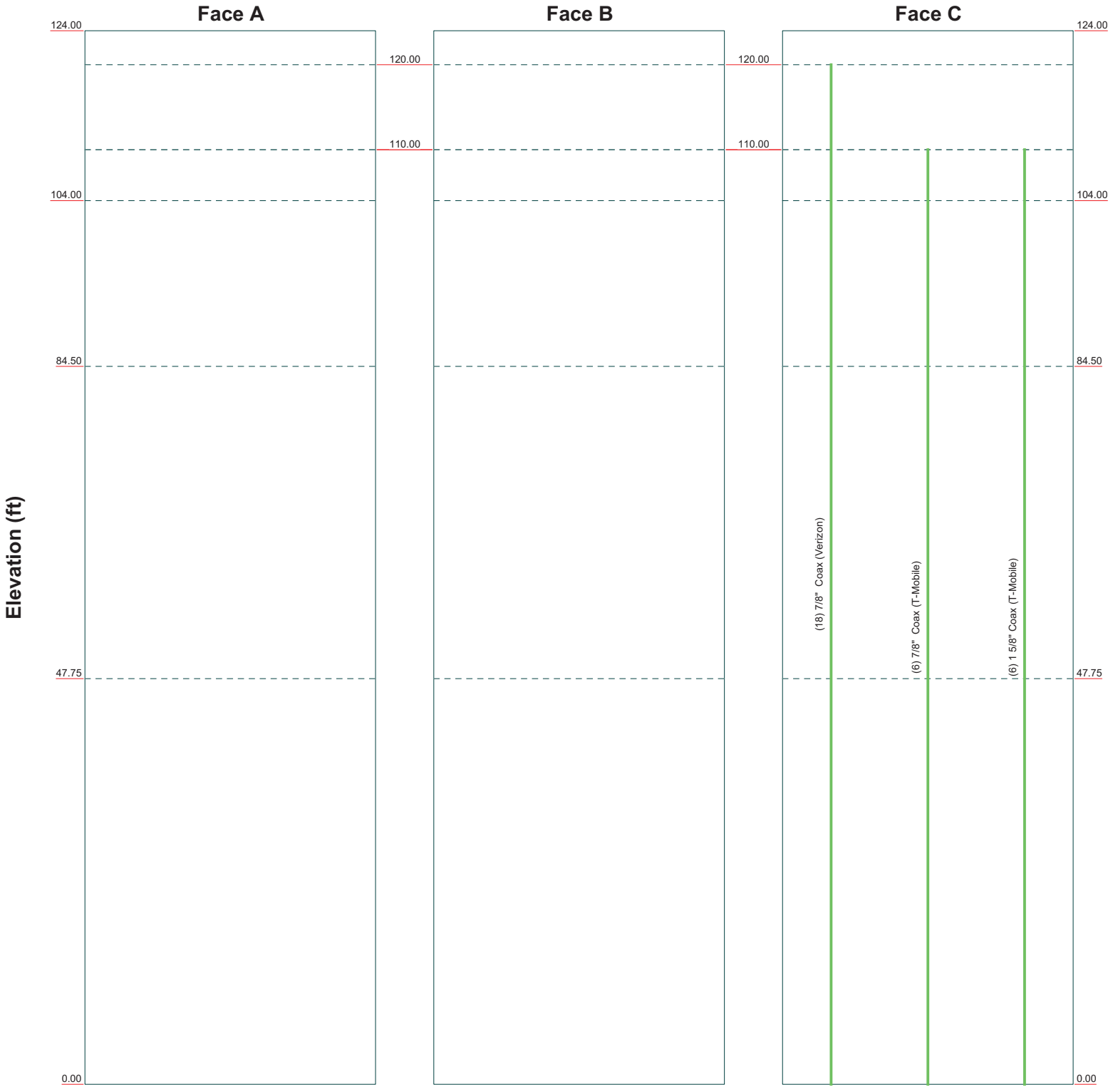


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Job: ***22-4227***		
Project: ***IL22533-A Crystal Lake South***		
Client: SBA	Drawn by: SVansia	App'd:
Code: TIA-222-H	Date: 11/14/22	Scale: NTS
Path: C:\Users\Svansia\Desktop\IL22533\tnxTower\Monopine Conversion\IL22533-A_Crystal Lake South_SA ERI_11-14-2022.eri		Dwg No. E-5

Feed Line Distribution Chart
0' - 124'

Round | Flat | App In Face | App Out Face | Truss Leg

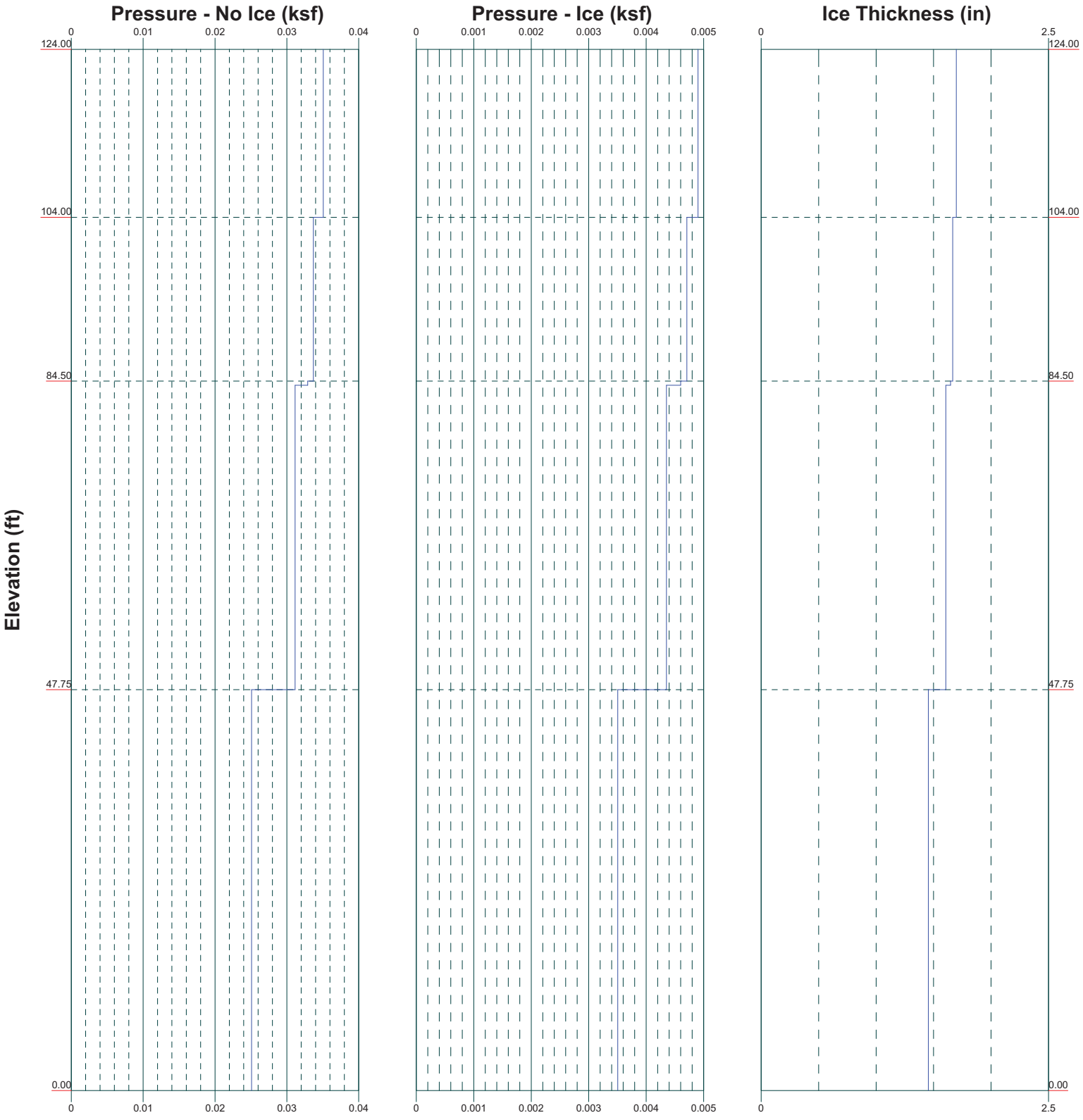


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Job: ***22-4227***		
Project: ***IL22533-A Crystal Lake South***		
Client: SBA	Drawn by: SVansia	App'd:
Code: TIA-222-H	Date: 11/14/22	Scale: NTS
Path: C:\Users\Svansia\Desktop\IL22533\InxTower\Monopine Conversion\IL22533-A_Crystal Lake South_SA ERI_11-14-2022.eri		Dwg No. E-7

Wind Pressures and Ice Thickness

TIA-222-H - 107 mph/40 mph 1.500 in Ice Exposure C



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Job: ***22-4227***		
Project: ***IL22533-A Crystal Lake South***		
Client: SBA	Drawn by: SVansia	App'd:
Code: TIA-222-H	Date: 11/14/22	Scale: NTS
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CALCULATION PRINTOUT

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Tower Input Data

The tower is a monopole.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

Tower is located in McHenry County, Illinois.
Tower base elevation above sea level: 896.55 ft.
Basic wind speed of 107 mph.
Risk Category II.
Exposure Category C.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height: 0.00 ft.
Nominal ice thickness of 1.500 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 40 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Horizontals		Assume Legs Pinned		Calculate Redundant Bracing Forces
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Use Moment Magnification	√	Use Clear Spans For Wind Area		SR Leg Bolts Resist Compression
√	Use Code Stress Ratios		Use Clear Spans For KL/r		All Leg Panels Have Same Allowable
√	Use Code Safety Factors - Guys		Retension Guys To Initial Tension		Offset Girt At Foundation
	Escalate Ice	√	Bypass Mast Stability Checks	√	Consider Feed Line Torque
	Always Use Max Kz	√	Use Azimuth Dish Coefficients		Include Angle Block Shear Check
	Use Special Wind Profile	√	Project Wind Area of Appurt.		Use TIA-222-H Bracing Resist. Exemption
	Include Bolts In Member Capacity		Autocalc Torque Arm Areas		Use TIA-222-H Tension Splice Exemption
	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Poles
	Secondary Horizontal Braces Leg	√	Sort Capacity Reports By Component	√	Include Shear-Torsion Interaction
	Use Diamond Inner Bracing (4 Sided)		Triangulate Diamond Inner Bracing		Always Use Sub-Critical Flow
	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Use Top Mounted Sockets
	SR Members Are Concentric		Ignore KL/ry For 60 Deg. Angle Legs		Pole Without Linear Attachments
					Pole With Shroud Or No Appurtenances
					Outside and Inside Corner Radii Are Known

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	124.00-104.00	20.00	0.00	Round	30.000	30.000	0.250		A500-42 (42 ksi)
L2	104.00-84.50	19.50	0.00	Round	30.000	30.000	0.250		A500-42 (42 ksi)
L3	84.50-84.00	0.50	0.00	Round	30.000	34.000	0.250		A500-42 (42 ksi)
L4	84.00-47.75	36.25	5.50	18	34.000	39.440	0.250	1.000	A572-65 (65 ksi)
L5	47.75-0.00	53.25		18	38.115	46.100	0.313	1.252	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	30.000	23.366	2585.184	10.519	15.000	172.346	5170.368	11.676	0.000	0
	30.000	23.366	2585.184	10.519	15.000	172.346	5170.368	11.676	0.000	0
L2	30.000	23.366	2585.184	10.519	15.000	172.346	5170.368	11.676	0.000	0
	30.000	23.366	2585.184	10.519	15.000	172.346	5170.368	11.676	0.000	0
L3	30.000	23.366	2585.184	10.519	15.000	172.346	5170.368	11.676	0.000	0
	34.000	26.507	3774.375	11.933	17.000	222.022	7548.750	13.246	0.000	0
L4	34.486	26.781	3853.947	11.981	17.272	223.133	7712.965	13.393	5.544	22.176
	40.010	31.097	6034.068	13.912	20.036	301.169	12076.075	15.552	6.501	26.006
L5	39.492	37.554	6779.848	13.420	19.362	350.158	13568.617	18.781	6.157	19.672
	46.763	45.488	12048.009	16.254	23.419	514.459	24111.871	22.748	7.563	24.162

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 124.00-104.00				1	0	1.05			
L2 104.00-84.50				1	0	1.05			
L3 84.50-84.00				1	0	1.05			
L4 84.00-47.75				1	0	1.05			
L5 47.75-0.00				1	0	1.05			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
***											

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
7/8" Coax (Verizon)	C	No	No	Inside Pole	120.00 - 0.00	18	No Ice	0.00	0.52
							1/2" Ice	0.00	0.52
							1" Ice	0.00	0.52
							2" Ice	0.00	0.52
***									
7/8" Coax (T-Mobile)	C	No	No	Inside Pole	110.00 - 0.00	6	No Ice	0.00	0.52
							1/2" Ice	0.00	0.52
							1" Ice	0.00	0.52
							2" Ice	0.00	0.52
1 5/8" Coax (T-Mobile)	C	No	No	Inside Pole	110.00 - 0.00	6	No Ice	0.00	1.04
							1/2" Ice	0.00	1.04
							1" Ice	0.00	1.04
							2" Ice	0.00	1.04
***									

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	124.00-104.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.21
L2	104.00-84.50	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.37
L3	84.50-84.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.01
L4	84.00-47.75	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.68
L5	47.75-0.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.89

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	124.00-104.00	A	1.698	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.21
L2	104.00-84.50	A	1.666	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.37
L3	84.50-84.00	A	1.647	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.01
L4	84.00-47.75	A	1.607	0.000	0.000	0.000	0.000	0.00

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.68
L5	47.75-0.00	A	1.455	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.89

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	124.00-104.00	0.000	0.000	0.000	0.000
L2	104.00-84.50	0.000	0.000	0.000	0.000
L3	84.50-84.00	0.000	0.000	0.000	0.000
L4	84.00-47.75	0.000	0.000	0.000	0.000
L5	47.75-0.00	0.000	0.000	0.000	0.000

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

User Defined Loads - Seismic

Description	Elevation ft	Offset From Centroid ft	Azimuth Angle °	E_v K	E_{hx} K	E_{hz} K	E_h K
L1	124.00	0.00	0.000	0.03	0.00	0.00	0.05
L3	104.00	0.00	0.000	0.04	0.00	0.00	0.07
L4	84.50	0.00	0.000	0.00	0.00	0.00	0.00
L5	84.00	0.00	0.000	0.10	0.00	0.00	0.13
L6	47.75	0.00	0.000	0.20	0.00	0.00	0.15

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft	Azimuth Adjustment °	Placement ft	C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
***								
***								
***								
***								
***								
***								

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
***									
***									
***									
***									
Top Branches (Other)	C	None		0.000	124.00	No Ice	50.00	50.00	1.00
						1/2" Ice	60.00	60.00	1.20
						1" Ice	70.00	70.00	1.40
						2" Ice	90.00	90.00	1.80
New Branches (Other)	C	None		0.000	114.00	No Ice	50.00	50.00	1.00
						1/2" Ice	60.00	60.00	1.20
						1" Ice	70.00	70.00	1.40
						2" Ice	90.00	90.00	1.80
New Branches (Other)	C	None		0.000	109.00	No Ice	50.00	50.00	1.00
						1/2" Ice	60.00	60.00	1.20
						1" Ice	70.00	70.00	1.40
						2" Ice	90.00	90.00	1.80
New Branches (Other)	C	None		0.000	104.00	No Ice	50.00	50.00	1.00
						1/2" Ice	60.00	60.00	1.20
						1" Ice	70.00	70.00	1.40
						2" Ice	90.00	90.00	1.80
New Branches (Other)	C	None		0.000	99.00	No Ice	50.00	50.00	1.00
						1/2" Ice	60.00	60.00	1.20
						1" Ice	70.00	70.00	1.40
						2" Ice	90.00	90.00	1.80
New Branches (Other)	C	None		0.000	94.00	No Ice	50.00	50.00	1.00
						1/2" Ice	60.00	60.00	1.20
						1" Ice	70.00	70.00	1.40
						2" Ice	90.00	90.00	1.80
New Branches (Other)	C	None		0.000	89.00	No Ice	50.00	50.00	1.00
						1/2" Ice	60.00	60.00	1.20
						1" Ice	70.00	70.00	1.40
						2" Ice	90.00	90.00	1.80
New Branches (Other)	C	None		0.000	84.00	No Ice	50.00	50.00	1.00
						1/2" Ice	60.00	60.00	1.20
						1" Ice	70.00	70.00	1.40
						2" Ice	90.00	90.00	1.80
***									
T-Mobile Loading (T-Mobile)	C	None		0.000	110.00	No Ice	125.00	125.00	2.23
						1/2" Ice	150.00	150.00	2.67
						1" Ice	175.00	175.00	3.12
						2" Ice	225.00	225.00	4.00
***									
Verizon Loading (Verizon)	C	None		0.000	120.00	No Ice	125.00	125.00	2.23
						1/2" Ice	150.00	150.00	2.67
						1" Ice	175.00	175.00	3.12
						2" Ice	225.00	225.00	4.00

Load Combinations

Comb. No.	Description

Comb. No.	*Description*
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service
51	1.2 Dead+1.0 Ev+1.0 Eh 0 deg
52	0.9 Dead-1.0 Ev+1.0 Eh 0 deg
53	1.2 Dead+1.0 Ev+1.0 Eh 30 deg
54	0.9 Dead-1.0 Ev+1.0 Eh 30 deg
55	1.2 Dead+1.0 Ev+1.0 Eh 60 deg
56	0.9 Dead-1.0 Ev+1.0 Eh 60 deg
57	1.2 Dead+1.0 Ev+1.0 Eh 90 deg
58	0.9 Dead-1.0 Ev+1.0 Eh 90 deg
59	1.2 Dead+1.0 Ev+1.0 Eh 120 deg
60	0.9 Dead-1.0 Ev+1.0 Eh 120 deg
61	1.2 Dead+1.0 Ev+1.0 Eh 150 deg
62	0.9 Dead-1.0 Ev+1.0 Eh 150 deg

Comb. No.	Description
63	1.2 Dead+1.0 Ev+1.0 Eh 180 deg
64	0.9 Dead-1.0 Ev+1.0 Eh 180 deg
65	1.2 Dead+1.0 Ev+1.0 Eh 210 deg
66	0.9 Dead-1.0 Ev+1.0 Eh 210 deg
67	1.2 Dead+1.0 Ev+1.0 Eh 240 deg
68	0.9 Dead-1.0 Ev+1.0 Eh 240 deg
69	1.2 Dead+1.0 Ev+1.0 Eh 270 deg
70	0.9 Dead-1.0 Ev+1.0 Eh 270 deg
71	1.2 Dead+1.0 Ev+1.0 Eh 300 deg
72	0.9 Dead-1.0 Ev+1.0 Eh 300 deg
73	1.2 Dead+1.0 Ev+1.0 Eh 330 deg
74	0.9 Dead-1.0 Ev+1.0 Eh 330 deg

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	124 - 104	26.93	40	1.720	0.000
L2	104 - 84.5	19.77	40	1.679	0.000
L3	84.5 - 84	13.30	40	1.449	0.000
L4	84 - 47.75	13.15	40	1.443	0.000
L5	53.25 - 0	5.42	40	0.920	0.000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
124.00	Top Branches	40	26.93	1.720	0.000	47123
120.00	Verizon Loading	40	25.48	1.722	0.000	47123
114.00	New Branches	40	23.32	1.720	0.000	23561
110.00	T-Mobile Loading	40	21.89	1.711	0.000	16829
109.00	New Branches	40	21.54	1.707	0.000	15707
104.50	L2	40	19.95	1.683	0.000	11426
104.00	New Branches	40	19.77	1.679	0.000	10940
99.00	New Branches	40	18.03	1.634	0.000	6887
94.00	New Branches	40	16.34	1.574	0.000	4865
89.00	New Branches	40	14.70	1.509	0.000	3764
84.50	L4	40	13.30	1.449	0.000	3789
84.00	New Branches	40	13.15	1.443	0.000	3885
47.75	L6	40	4.46	0.820	0.000	2745

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	124 - 104	96.33	8	6.159	0.000
L2	104 - 84.5	70.74	8	6.015	0.000
L3	84.5 - 84	47.60	8	5.190	0.000

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L4	84 - 47.75	47.05	8	5.167	0.000
L5	53.25 - 0	19.41	8	3.296	0.000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
124.00	Top Branches	8	96.33	6.159	0.000	13447
120.00	Verizon Loading	8	91.17	6.167	0.000	13447
114.00	New Branches	8	83.45	6.159	0.000	6723
110.00	T-Mobile Loading	8	78.33	6.127	0.000	4801
109.00	New Branches	8	77.06	6.114	0.000	4480
104.50	L2	8	71.37	6.028	0.000	3257
104.00	New Branches	8	70.74	6.015	0.000	3119
99.00	New Branches	8	64.52	5.851	0.000	1960
94.00	New Branches	8	58.46	5.640	0.000	1383
89.00	New Branches	8	52.61	5.403	0.000	1068
84.50	L4	8	47.60	5.190	0.000	1074
84.00	New Branches	8	47.05	5.167	0.000	1102
47.75	L6	8	15.95	2.935	0.000	769

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L1	124 - 104 (1)	TP30x30x0.25 4.8.2 (1.04 CR) - 2	20.00	0.00	0.0	23.366	-9.51	783.04	0.012
L2	104 - 84.5 (2)	TP30x30x0.25 4.8.2 (1.04 CR) - 2	19.50	0.00	0.0	23.366	-16.22	783.04	0.021
L3	84.5 - 84 (3)	TP34x30x0.25 4.8.2 (1.04 CR) - 3	0.50	0.00	0.0	23.366	-16.24	783.04	0.021
L4	84 - 47.75 (4)	TP39.44x34x0.25	36.25	0.00	0.0	30.442	-22.62	1780.88	0.013
L5	47.75 - 0 (5)	TP46.1x38.115x0.313 4.8.2 (1.02 CR) - 5	53.25	0.00	0.0	45.488	-35.48	2661.03	0.013

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	124 - 104 (1)	TP30x30x0.25	186.92	607.55	0.308	0.00	607.55	0.000
L2	104 - 84.5 (2)	TP30x30x0.25	605.84	607.55	0.997	0.00	607.55	0.000
L3	84.5 - 84 (3)	TP34x30x0.25	605.84	607.55	0.997	0.00	607.55	0.000
L4	84 - 47.75 (4)	TP39.44x34x0.25	1425.95	1525.03	0.935	0.00	1525.03	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L5	47.75 - 0 (5)	TP46.1x38.115x0.313	2787.03	2776.03	1.004	0.00	2776.03	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	124 - 104 (1)	TP30x30x0.25	16.56	180.93	0.091	0.00	364.03	0.000
L2	104 - 84.5 (2)	TP30x30x0.25	24.49	180.93	0.135	0.00	364.03	0.000
L3	84.5 - 84 (3)	TP34x30x0.25	24.49	180.14	0.136	0.00	364.03	0.000
L4	84 - 47.75 (4)	TP39.44x34x0.25	26.09	534.26	0.049	0.00	1795.01	0.000
L5	47.75 - 0 (5)	TP46.1x38.115x0.313	24.77	798.31	0.031	0.00	3201.05	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	124 - 104 (1)	0.012	0.308	0.000	0.091	0.000	0.328 ✔	1.000	4.8.2 ✔
L2	104 - 84.5 (2)	0.021	0.997	0.000	0.135	0.000	1.036	1.000	4.8.2
L3	84.5 - 84 (3)	0.021	0.997	0.000	0.136	0.000	1.036	1.000	4.8.2
L4	84 - 47.75 (4)	0.013	0.935	0.000	0.049	0.000	0.950 ✔	1.000	4.8.2 ✔
L5	47.75 - 0 (5)	0.013	1.004	0.000	0.031	0.000	1.018	1.000	4.8.2

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	124 - 104	Pole	TP30x30x0.25	1	-9.51	783.04	32.8	Pass
L2	104 - 84.5	Pole	TP30x30x0.25	2	-16.22	783.04	103.6	Acceptable
L3	84.5 - 84	Pole	TP34x30x0.25	3	-16.24	783.04	103.6	Acceptable
L4	84 - 47.75	Pole	TP39.44x34x0.25	4	-22.62	1780.88	95.0	Pass
L5	47.75 - 0	Pole	TP46.1x38.115x0.313	5	-35.48	2661.03	101.8	Acceptable
							Summary	
						Pole (L3)	103.6	Acceptable
						RATING =	**103.6**	**Acceptable**

Seismic Load Analysis Output

Project Data

ACGI#	22-4227
Site Name/ID	IL22533-A Crystal Lake South
TIA Code	TIA-222-H
Type of Tower	MP
Risk Category	II

Output Result

Total Weight W	15.440	k
Fundamental Period (T)	2.421	s
Total Seimic Shear	0.404	k

Seismic Design Data

SDS	0.122
SD1	0.095
S1	0.06
TL(sec)	12

L1	124.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.028	0.053
L2	104.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	0.000
L3	104.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.040	0.065
L4	84.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.001	0.002
L5	84.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.104	0.134
L6	47.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.203	0.150

Monopole Circular Baseplate & Anchor Bolts Calculations

Site Data	
ACGI #	22-4227
Site Name / ID	IL22533-A Crystal Lake South
TIA Code	TIA-222-H

Reactions		
Mu	2787	ft-Kips
Axial, Pu	36	Kips
Shear, Vu	25	Kips
ETA Factor, ŋ	0.5	

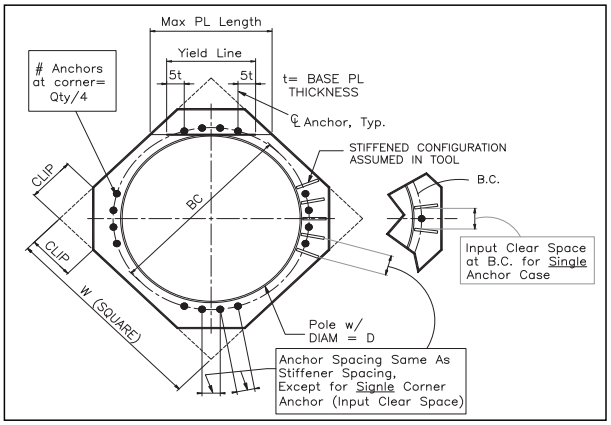
Anchor Rod Data		
Qty.	4	
Diameter	2.25	in
Yield Strength, Fy	75	ksi
Ultimate Strength, Fu	100	ksi
Bolt Circle	52.5	in
Anchor Rod Projection, Iar	2	in

Base Plate Data		
Width	49.75	in
Thickness	1.75	in
Clip Length	8	in
Yield Strength, Fy	50	ksi
Ultimate Strength, Fu	65	ksi

Pole Data at Base		
Diameter	46.1	in
Thickness	0.313	in
Number of sides	18	"0" For round
Yield Strength, Fy	65	Ksi
Ultimate Strength, Fu	80	Ksi

Stiffener Data		
Configuration	Unstiffened	

Modification of Anchor bolts	No



OUTPUT

Base Plate Results		
Base Plate Stress	111.31	Ksi
Allowable Plate Stress	45.00	Ksi
Base Plate Stress Ratio	**247.36%**	FAIL

Anchor Rod Results		
Anchor Rod Stress Ratio	**683.19%**	FAIL

MATHCAD CALCULATION PRINTOUT

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Existing 124 ft Monopole Pier Foundation Check

Customer Name: SBA Communications Corp
Customer Site Number: IL22533-A
Customer Site Name: Crystal Lake South

Site Location: Crystal Lake, Illinois

Latitude: 42.221600
Longitude: -88.320200

ACGI #22-4227

Allpro Consulting Group, Inc.
9221 Lyndon B. Johnson Freeway, Suite 204
Dallas, TX 75243
Tel: 972-231-8893, Fax: 866-364-8375

APPLICABLE CODES

- ***ASCE7-16/ TIA-222-H/ IBC2018 - ACI 318-14 CODE***

INPUT DATA

-Foundation Reactions-(factored)

(Note: As per tnxTower Output)

Down Load: $P_{dwn} := 36 \cdot kips$

Uplift Load: $P_{up} := 0 \cdot kips$

Shear Load: $S := 25 \cdot kips$

Moment: $M := 2787 \cdot ft \cdot kips$

-Reinforcement Data-

Typical concrete cover $cc := 3 \cdot in$

Vertical rebar size $d_{bar} := 8$

No. of vertical rebars in each pier $NRB_{use} := 26$

Tiebar size $d_{tie} := 5$

-Pier Dimensions-

(Note: As per original foundation design by Sabre Job #137006 dated 2/10/2016)

Diameter: $D_{pier} := 6ft$

Extension above grade: $E_{pier} := 0.375 \cdot ft$

Concrete density See below

Concrete strength $F_c := 4000 \cdot psi$

Rebar Fy $F_y := 60 \cdot ksi$

ACI Strength reduction factors

$\phi_{comp} := 0.65$ (ACI 9.3.2.2)

$\phi_{tens} := 0.9$ (ACI 9.3.2.2a)

$\phi_{shear} := 0.75$ (ACI 9.3.2.3)

-Factor of Safety for soil strength-

$\phi_{s_Bear} := 0.75$ as per TIA-222-H code for bearing, 9.7 - for MP/SST

$\phi_{s_friction} := 0.75$ as per TIA-222-H code for skin friction resistance, 9.7

$\phi_{s_lateral} := 0.75$ as per TIA-222-H code for lateral resistance, 9.7

$\phi_{s_uplift} := 0.75$ as per TIA-222-H code for lateral resistance, 9.7

-Soil Properties- (Note: As per Geotechnical report by G2 Consulting Group, Project No #152185 dated 05/26/2015)

Number of soil layers $NSL := 3$ $i_{neg} := 1$ $j := 1 .. NSL$

Neglected soil height $L_{ngl} := 3 \cdot ft$ >= 1.0 x Pier Diam. $k := 1 .. NSL$

$i := 1 .. NSL$

$\alpha := 0.4$ Estimated cohesion

Ground Water @ 28.5ft depth below ground level

Height $H_j :=$	PHI $\phi_j :=$	Cu $Cu_j :=$	Soil Dens $\gamma_{s_j} :=$	Conc Dens $\gamma_{c_j} :=$	Ult Skin friction $SKU_{dn_j} :=$	$SKU_{up_j} :=$
3·ft	0·deg	0·ksf	110·pcf	150·pcf	0·ksf	0·ksf
2.5·ft	0·deg	1.25·ksf	125·pcf	150·pcf	0·ksf	0·ksf
8.5·ft	34·deg	0·ksf	110·pcf	150·pcf	0.57·ksf	0.57·ksf

$L_{pier} := \sum_{j=1}^{NSL} H_j$ $L_{pier} = 14\,ft$

$K_s := 1$

$\sigma 1_{v_2} := \gamma_{s_1} \cdot H_1 + \gamma_{s_2} \cdot \frac{H_2}{2}$ $\sigma 1_{v_2} = 0.49 \cdot ksf$ $SK2 := K_s \sigma 1_{v_2} \cdot \tan(\phi_2 \cdot 0.8)$ $SK2 = 0 \cdot ksf$

$\sigma 1_{v_3} := \gamma_{s_1} \cdot H_1 + \gamma_{s_2} \cdot H_2 + \gamma_{s_3} \cdot \frac{H_3}{2}$ $\sigma 1_{v_3} = 1.11 \cdot ksf$ $SK3 := K_s \sigma 1_{v_3} \cdot \tan(\phi_3 \cdot 0.8)$ $SK3 = 0.57 \cdot ksf$

Soil Bearing Safety fator: $SF := 3$ (As per GEO report)

Allowable bearing capacity: $BC_{all} := 12ksf$ (As per GEO report)

End Ultimate bearing capacity: $BC_{ult} := BC_{all} \cdot SF = 36 \cdot ksf$

CALCULATIONS

-Pier calculation-

Aspect ratio $A_r := \frac{(L_{pier} + E_{pier})}{D_{pier}} = 2.4$

Pier area $A_{pier} := \pi \cdot \frac{D_{pier}^2}{4}$ $A_{pier} = 28.27\,ft^2$

Pier perimeter $PM_{pier} := \pi \cdot D_{pier}$ $PM_{pier} = 18.85\,ft$

Pier volume $V_{pier} := A_{pier} \cdot (L_{pier} + E_{pier})$ $V_{pier} = 15.05 \cdot cy$

Weighted average unit weight of concrete

$$\gamma_{cave} := \frac{\sum_{n=1}^{NSL} (\gamma_{c_n} \cdot H_n)}{\sum_{n=1}^{NSL} H_n} \qquad \gamma_{cave} = 150 \cdot pcf$$

$$\gamma_{net} := \frac{\sum_{n=1}^{NSL} \left[(\gamma_{c_n} - \gamma_{s_n}) \cdot H_n\right]}{\sum_{n=1}^{NSL} H_n} \qquad \gamma_{net} = 37.32 \cdot pcf$$

Pier concrete weight $W_{pier} := V_{pier} \cdot \gamma_{cave}$ $W_{pier} = 60.97 \cdot kips$

Pier net weight $W_{pier_net} := V_{pier} \cdot \gamma_{net}$ $W_{pier_net} = 15.17 \cdot kips$

-Download capacity-

$SKFN_k := SKU_{dn_k} \cdot PM_{pier} \cdot H_k$ $P_k := if\left[k = NSL, \left[A_{pier} \cdot \left(BC_{ult}\right)\right], 0 \cdot kips\right]$ $SKUFN_k := SKU_{up_k} \cdot PM_{pier} \cdot H_k$

$SKFN_k =$

0	·lb
0	
91326.1	

$P_k =$

0	·lb
0	
$1.02 \cdot 10^6$	

$$P_{dcap} := \sum_k P_k \cdot \phi_{s_Bear} + \sum_k SKFN_k \cdot \phi_{s_friction}$$

$P_{dwn_total} := P_{dwn} + 1.2 W_{pier_net}$

$P_{dcap} = 831.9 \cdot kips$ > $P_{dwn_total} = 54.2 \cdot kips$ **OK!**

$$\frac{P_{dwn_total}}{P_{dcap}} = 6.52 \cdot \%$$

$\alpha = 0.4$ - (average value for soils 0.4)

$\sigma_{v_0} := 0.0 \cdot ksf$

$TL_0 := 0 \cdot ft$

$\sigma_{v_i} := \sigma_{v_{i-1}} + 1.0 \cdot \gamma_{s_i} \cdot H_i$

-Required Pier Length Based on Brohm's method-

Weighted average cohesion

$$C_u := \frac{\sum_{j=1}^{NSL} \left(Cu_j \cdot H_j\right)}{\sum_{j=1}^{NSL} H_j - L_{ngl}}$$ $C_u = 0.28 \cdot ksf$

$$PP_i := if\left[i > i_{neg}, \left(2 \cdot Cu_i \cdot \sqrt{\tan\left(45 \cdot deg + \frac{\phi_i}{2}\right)^2} + \sigma_{v_i} \cdot \tan\left(45 \cdot deg + \frac{\phi_i}{2}\right)^2\right) \cdot \phi_{s_lateral}, 0 \cdot kips\right]$$

$PP_j =$

0	·psf
2356.87	
4184.87	

$PP_j =$

0	·psf
2356.87	
4184.87	

$$PP := \frac{\left[\sum_j \left[\left(PP_j + PP_{j-1}\right) \cdot \frac{H_j}{2}\right]\right]2}{\sum_j \left(H_j\right) - L_{ngl}}$$

$PP = 5.59 \cdot ksf$

Passive pressure $PP_{allw} := \frac{PP}{L_{pier} - L_{ngl}}$ $PP_{allw} = 0.51 \cdot kcf$

Depth to the point of zero shear

$$f := if\left[\sum_{j=1}^{NSL} \phi_j > 0deg\,,\ 0.816 \cdot \left(\frac{S}{D_{pier} \cdot PP_{allw}}\right)^{\frac{1}{2}}\,,\ \frac{S}{9 \cdot C_u \cdot D_{pier}}\right] \qquad f = 2.34\,ft$$

g ultimate for moment calculation

$$g_u := if\left[\sum_{j=1}^{NSL} \phi_j > 0deg\,,\ 0\,,\ \sqrt{\frac{S \cdot \left[\left(E_{pier} + L_{ngl}\right) + .5 \cdot f\right] + M}{2.25 \cdot C_u \cdot D_{pier}}}\right] \qquad g_u = 0\,ft$$

g allowable with $\phi_{s_lateral} = 0.75$

$$g_a := if\left[\sum_{j=1}^{NSL} \phi_j > 0deg\,,\ 0\,,\ \sqrt{\frac{S \cdot \left[\left(E_{pier} + L_{ngl}\right) + .5 \cdot f\right] + M}{2.25 \cdot \left(C_u \cdot \phi_{s_lateral}\right) \cdot D_{pier}}}\right] \qquad g_a = 0\,ft$$

-Required pier length- $L_1 := 5 \cdot ft$

$$A := root\left[S \cdot \left(E_{pier} + L_{ngl} + L_1\right) + M - \left[D_{pier} \cdot PP_{allw} \cdot L_1^{\,3} \cdot (.5)\right], L_1\right] \qquad A = 12.79\,ft$$

$$L_{req} := if\left[\sum_{j=1}^{NSL} \phi_j > 0deg\,,\ A + L_{ngl}\,,\ \left(f + L_{ngl}\right) + g_a\right]$$

$L_{req} = 15.79\,ft$ < $L_{pier} = 14\,ft$ **OK!** $\frac{L_{req}}{L_{pier}} = 112.8 \cdot \%$ **OK!**

Max. bending moment,

$$M_{max} := if\left[\sum_{j=1}^{NSL} \phi_j > 0deg\,,\ S \cdot \left(E_{pier} + L_{ngl} + f\right) - S \cdot \frac{f}{3} + M\,,\ 2.25 \cdot C_u \cdot D_{pier} \cdot g_u^{\,2}\right] = 2.91 \times 10^6\,ft \cdot lb$$

Location @ $f + L_{ngl} = 5.34\,ft$ below ground level

REINFORCEMENT CALCULATIONS

Effective pier diameter $D_{eff} := D_{pier} - cc \cdot 2$ $D_{eff} = 5.5\,ft$

-Minimum required area of steel per ACI-

$Area_{stlmin} := 0.005 \cdot \frac{\pi}{4} \cdot D_{pier}^{2}$ -(ACI 10.8.4) & (ACI 10.9.1) (TIA-222-H 9.4.1)

$Area_{stlmin} = 20.36 \cdot in^{2}$

-Rebar details-

Selected rebar size $d_{bar} = 8$

-Rebar details-

$No := (0 \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10 \quad 11 \quad 12 \quad 13 \quad 14 \quad 15 \quad 16 \quad 17 \quad 18)^{T}$

$d_b := (0 \quad 0 \quad 0 \quad 0.375 \quad 0.5 \quad 0.625 \quad 0.75 \quad 0.875 \quad 1.00 \quad 1.125 \quad 1.25 \quad 1.41 \quad 0 \quad 0 \quad 1.693 \quad 0 \quad 0$

$A_b := (0 \quad 0 \quad 0 \quad 0.11 \quad 0.20 \quad 0.31 \quad 0.44 \quad 0.60 \quad 0.79 \quad 1.00 \quad 1.27 \quad 1.56 \quad 0 \quad 0 \quad 2.25 \quad 0 \quad 0 \quad 0 \quad 4$

$B := d_{bar}$ $d_{b_B} = 1 \cdot in$ Bar area= $Area_{abar} := A_{b_B}$ $Area_{abar} = 0.79 \cdot in^{2}$

-Number of vertical rebars required-

$NRB := ceil\left(\frac{Area_{stlmin}}{Area_{abar}}\right)$ $NRB = 26$ $Area_{stluse} := Area_{abar} \cdot NRB$ $Area_{stluse} = 20.54 \cdot in^{2}$

Number rebars provided as per drawings $NRB_{use} = 26$

$\frac{P_{dwn}}{\phi_{tens}} = 40 \cdot kips$

$Mn := 39423.9 \cdot in \cdot kips$

$0.9 \cdot Mn = 2956.79 \cdot kips \cdot ft$ > $M_{max} = 2910.32 \cdot kips \cdot ft$ $\frac{M_{max}}{(0.9 \cdot Mn)} = 98.43\,\%$

Vertical bar spacing $S_{bar} := D_{eff} \cdot \frac{\pi}{NRB} - d_{b_B}$ $S_{bar} = 6.97 \cdot in$

$Area_{use} := Area_{abar} \cdot NRB$ $Area_{use} = 20.54 \cdot in^{2}$

-Check pier in compression-

$P_{comp} := 0.80 \cdot \phi_{comp} \cdot \left[0.85 \cdot F_c \cdot \left(A_{pier} - Area_{use}\right) + F_y \cdot Area_{use}\right]$ (ACI 10.3.6.2 - (10-2)

$P_{comp} = 7802.95 \cdot kips$ > $P_{dwn} = 36 \cdot kips$ **OK!** $\frac{P_{dwn}}{P_{comp}} = 0.46 \cdot \%$

SUMMARY

-Pier Dimensions-

Depth of pier	$L_{pier} = 14\,ft$	Concrete strength	$F_c = 4000 \cdot psi$
Extension above grade	$E_{pier} = 0.38\,ft$	Rebar Fy	$F_y = 60 \cdot ksi$
Total length of pier	$L_{tot} := L_{pier} + E_{pier}$	$L_{tot} = 14.38\,ft$	
Diameter	$D_{pier} = 6\,ft$		
Volume of pier concrete	$V_{pier} = 15.05 \cdot cy$		
Weight of pier concrete	$W_{pier} = 60.97 \cdot kips$		

Calculations summary

-Download capacity-

$P_{dcap} = 831.9 \cdot kips$ > $P_{dwn_total} = 54.2 \cdot kips$ **OK!** $\frac{P_{dwn_total}}{P_{dcap}} = 6.52 \cdot \%$

-Required Pier Length Based on Brohm's method-

$L_{req} = 15.79\,ft$ < $L_{pier} = 14\,ft$ **OK!** $\frac{L_{req}}{L_{pier}} = 112.8 \cdot \%$

```
================================================================================

                     LPile for Windows, Version 2019-11.009

                 Analysis of Individual Piles and Drilled Shafts
                Subjected to Lateral Loading Using the p-y Method
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================================================================================

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--------------------------------------------------------------------------------
                              Files Used for Analysis
--------------------------------------------------------------------------------

Path to file locations:
\Users\Svansia\Desktop\IL22533\L-Pile\Monopine Conversion\

Name of input data file:
IL22533-A Pier.lp11d

Name of output report file:
IL22533-A Pier.lp11o

Name of plot output file:
IL22533-A Pier.lp11p

Name of runtime message file:
IL22533-A Pier.lp11r



--------------------------------------------------------------------------------
                            Date and Time of Analysis
--------------------------------------------------------------------------------

               Date:  November 11, 2022           Time:  15:27:37
```

Problem Title

Project Name: IL22533-A
Job Number: 22-4227
Client: SBA
Engineer: SV
Description: Pier

Program Options and Settings

Computational Options:
 - Compute nonlinear bending properties of pile only
Engineering Units Used for Data Input and Computations:
 - US Customary System Units (pounds, feet, inches)

Output Options:
 - Output files use decimal points to denote decimal symbols.
 - Print using wide report formats

Pile Structural Properties and Geometry

Number of pile sections defined = 1
Total length of pile = 14.500 ft
Depth of ground surface below top of pile = 0.0000 ft

Pile diameters used for p-y curve computations are defined using 2 points.

p-y curves are computed using pile diameter values interpolated with depth over the length of the pile. A summary of values of pile diameter vs. depth follows.

Point No.	Depth Below Pile Head feet	Pile Diameter inches
1	0.000	72.0000
2	14.500	72.0000

Input Structural Properties for Pile Sections:

Pile Section No. 1:

Section 1 is a round drilled shaft, bored pile, or CIDH pile
Length of section = 14.500000 ft

```
   Shaft Diameter                                    =    72.000000 in
   Shear capacity of section                         =       0.0000 lbs




--------------------------------------------------------------------------------
     Computations of Nominal Moment Capacity and Nonlinear Bending Stiffness
--------------------------------------------------------------------------------

Axial thrust force values were determined from input values

Number of Pile Sections Analyzed = 1

Pile Section No. 1:
-------------------

Dimensions and Properties of Drilled Shaft (Bored Pile):
--------------------------------------------------------

Length of Section                                  =    14.500000 ft
Shaft Diameter                                     =    72.000000 in
Concrete Cover Thickness (to edge of long. rebar)  =     3.000000 in
Number of Reinforcing Bars                         =           26 bars
Yield Stress of Reinforcing Bars                   =       60000. psi
Modulus of Elasticity of Reinforcing Bars          =    29000000. psi
Gross Area of Shaft                                =        4072. sq. in.
Total Area of Reinforcing Steel                    =    20.540000 sq. in.
Area Ratio of Steel Reinforcement                  =         0.50 percent
Edge-to-Edge Bar Spacing                           =     6.834884 in
Maximum Concrete Aggregate Size                    =     0.750000 in
Ratio of Bar Spacing to Aggregate Size             =         9.11
Offset of Center of Rebar Cage from Center of Pile =       0.0000 in

Axial Structural Capacities:
----------------------------

Nom. Axial Structural Capacity = 0.85 Fc Ac + Fy As =    15005.678 kips
Tensile Load for Cracking of Concrete              =    -1753.556 kips
Nominal Axial Tensile Capacity                     =    -1232.400 kips


Reinforcing Bar Dimensions and Positions Used in Computations:

     Bar          Bar Diam.      Bar Area          X             Y
    Number         inches         sq. in.        inches        inches
  ----------     ----------     ----------     ----------     ----------
      1            1.000000       0.790000      32.500000        0.00000
      2            1.000000       0.790000      31.555609       7.777759
      3            1.000000       0.790000      28.777321      15.103503
      4            1.000000       0.790000      24.326599      21.551486
      5            1.000000       0.790000      18.462104      26.746976
      6            1.000000       0.790000      11.524659      30.388028
      7            1.000000       0.790000       3.917442      32.263038
      8            1.000000       0.790000      -3.917442      32.263038
      9            1.000000       0.790000     -11.524659      30.388028
```

10	1.000000	0.790000	-18.462104	26.746976
11	1.000000	0.790000	-24.326599	21.551486
12	1.000000	0.790000	-28.777321	15.103503
13	1.000000	0.790000	-31.555609	7.777759
14	1.000000	0.790000	-32.500000	0.00000
15	1.000000	0.790000	-31.555609	-7.777759
16	1.000000	0.790000	-28.777321	-15.103503
17	1.000000	0.790000	-24.326599	-21.551486
18	1.000000	0.790000	-18.462104	-26.746976
19	1.000000	0.790000	-11.524659	-30.388028
20	1.000000	0.790000	-3.917442	-32.263038
21	1.000000	0.790000	3.917442	-32.263038
22	1.000000	0.790000	11.524659	-30.388028
23	1.000000	0.790000	18.462104	-26.746976
24	1.000000	0.790000	24.326599	-21.551486
25	1.000000	0.790000	28.777321	-15.103503
26	1.000000	0.790000	31.555609	-7.777759

NOTE: The positions of the above rebars were computed by LPile

Minimum spacing between any two bars not equal to zero = 6.835 inches
between bars 18 and 19.

Ratio of bar spacing to maximum aggregate size = 9.11

Concrete Properties:

Compressive Strength of Concrete	=	4000. psi
Modulus of Elasticity of Concrete	=	3604997. psi
Modulus of Rupture of Concrete	=	-474.341649 psi
Compression Strain at Peak Stress	=	0.001886
Tensile Strain at Fracture of Concrete	=	-0.0001154
Maximum Coarse Aggregate Size	=	0.750000 in

Input Axial Thrust Forces:

Number of Axial Thrust Force Values Determined from Input Data = 1

Number	Axial Thrust Force kips
1	40.000

Definitions of Run Messages and Notes:

C = concrete in section has cracked in tension.
Y = stress in reinforcing steel has reached yield stress.
T = ACI 318 criteria for tension-controlled section met, tensile strain in reinforcement exceeds 0.005 while simultaneously compressive strain in

```
      concrete more than 0.003. See ACI 318, Section 10.3.4.
  Z = depth of tensile zone in concrete section is less than 10 percent of
      section depth.

Bending Stiffness (EI) = Computed Bending Moment / Curvature.
Position of neutral axis is measured from edge of compression side of pile.
Compressive stresses and strains are positive in sign.
Tensile stresses and strains are negative in sign.


Axial Thrust Force =     40.000 kips

    Bending       Bending       Bending      Depth to      Max Comp      Max Tens
Max Conc      Max Steel  Run
   Curvature      Moment       Stiffness      N Axis        Strain        Strain
Stress        Stress    Msg
    rad/in.       in-kip        kip-in2         in           in/in         in/in
ksi           ksi
------------ ------------ ------------ ------------ ------------ ------------ ----
--------- ------------ ---
  4.16667E-07         2437.   5848294013.    41.4182698    0.00001726   -0.00001274
0.0722273     0.4613208
  8.33333E-07         4861.   5833744503.    38.7179833    0.00003226   -0.00002774
0.1344203     0.8573846
   0.00000125         7274.   5818916185.    37.8179490    0.00004727   -0.00004273
0.1961173     1.2534507
   0.00000167         9673.   5804017543.    37.3679655    0.00006228   -0.00005772
0.2573183     1.6495183
   0.00000208        12061.   5789090710.    37.0980006    0.00007729   -0.00007271
0.3180231     2.0455875
   0.00000250        14435.   5774149773.    36.9180449    0.00009230   -0.00008770
0.3782317     2.4416583
   0.00000292        16798.   5759200767.    36.7895225     0.0001073    -0.0001027
0.4379443     2.8377305
   0.00000333        16798.   5039300671.    17.5559576    0.00005852    -0.0001815
 0.2394097    -4.9497241 C
   0.00000375        16798.   4479378374.    17.2036433    0.00006451    -0.0002055
 0.2634027    -5.6067538 C
   0.00000417        16798.   4031440537.    16.9225082    0.00007051    -0.0002295
 0.2873312    -6.2636969 C
   0.00000458        16798.   3664945942.    16.6811206    0.00007646    -0.0002535
 0.3109705    -6.9221511 C
   0.00000500        16798.   3359533781.    16.4804601    0.00008240    -0.0002776
 0.3345445    -7.5805333 C
   0.00000542        16798.   3101108105.    16.3112318    0.00008835    -0.0003016
 0.3580552    -8.2388273 C
   0.00000583        16798.   2879600383.    16.1648637    0.00009430    -0.0003257
 0.3814593    -8.8973439 C
   0.00000625        16798.   2687627024.    16.0331970     0.0001002    -0.0003498
 0.4046669    -9.5567330 C
   0.00000667        16798.   2519650335.    15.9184588     0.0001061    -0.0003739
  0.4278125   -10.2160313 C
   0.00000708        16798.   2371435610.    15.8176631     0.0001120    -0.0003980
  0.4508958   -10.8752385 C
   0.00000750        16798.   2239689187.    15.7284872     0.0001180    -0.0004220
  0.4739169   -11.5343542 C
```

```
    0.0004229        39591.     93613713.     8.8135080     0.0037274    -0.0267226
3.9785464    60.0000000 CYT
    0.0004429        39591.     89386565.     8.7587355     0.0038794    -0.0280106
3.9928533    60.0000000 CYT


--------------------------------------------------------------------------------
   Summary of Results for Nominal Moment Capacity for Section 1
--------------------------------------------------------------------------------

Moment values interpolated at maximum compressive strain = 0.003
or maximum developed moment if pile fails at smaller strains.

 Load           Axial Thrust        Nominal Mom. Cap.      Max. Comp.
  No.              kips                 in-kip               Strain
 ----         ----------------     ------------------     ------------
   1               40.000             39423.949           0.00300000

Note that the values of moment capacity in the table above are not
factored by a strength reduction factor (phi-factor).

In ACI 318, the value of the strength reduction factor depends on whether
the transverse reinforcing steel bars are tied hoops (0.65) or spirals (0.75).

The above values should be multiplied by the appropriate strength reduction
factor to compute ultimate moment capacity according to ACI 318,
or the value required by the design standard being followed.

The following table presents factored moment capacities and corresponding
bending stiffnesses computed for common resistance factor values used for
reinforced concrete sections.

Axial     Resist.       Nominal        Nominal     Ult. (Fac)    Ult. (Fac)   Bend.
Stiff.
Load      Factor       Ax. Thrust    Moment Cap    Ax. Thrust    Moment Cap    at Ult
Mom
 No.                      kips         in-kips        kips         in-kips      kip-in^2
-----  ------------   ------------  ------------  ------------  ------------  ----------
--
   1       0.65          40.000000        39424.     26.000000        25626.
724671789.

   1       0.75          40.000000        39424.     30.000000        29568.
700446947.

   1       0.90          40.000000        39424.     36.000000        35482.
451136478.



The analysis ended normally.
```

SBA Communications Corporation
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Boca Raton, FL 33487-1307

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sbasite.com

Vertical Bridge REIT LLC's request for a Special Use Permit
Telecommunications Tower at 269 Liberty Road, Crystal Lake, Illinois 60014

AFFIDAVIT OF KENT MEIER

Kent Meier, being duly sworn, deposes and states that he has personal knowledge of the facts set forth in this Affidavit and if called to testify in this matter, he would swear to the following facts as true and correct:

1. I am a Site Marketing Manager for SBA Communications Corporation ("SBA"), have been in this position for over 20 years and have direct knowledge relating to T-Mobile's ("TMO") relationship with SBA.
2. It is my job to interact with carriers, such as TMO, who have located, or are interested in locating, onto SBA cell towers located in several states, including Illinois.
3. I maintain an open line of communication with the carriers to discuss tenant issues, including but not limited to collocation, new equipment, centerline placement of equipment onto SBA cell towers and other related matters, which includes the cell tower SBA has owned, operated, and maintained since April 2018 in Crystal Lake, Illinois on property commonly known as 6251 Commercial Boulevard, Crystal Lake, Illinois 60014 (the "Existing Cell Tower").
4. SBA has a national pricing agreement in place with respect to TMO wishing to collocate on any of SBA's existing towers.
5. VB BTS, LLC, a subsidiary of Vertical Bridge REIT LLC ("Vertical Bridge"), has submitted a Development Application to the City of Crystal Lake, Illinois requesting to construct a new 115-foot monopine on behalf of TMO located 0.46 miles from the Existing Cell Tower.
6. As with all other matters TMO has previously been directed to send any communication related to SBA's cell towers in Illinois to my attention.
7. I communicate with TMO on a weekly basis and they have never mentioned the proposed construction of the subject tower, collocating on the Existing Cell Tower, nor have they inquired whether the Existing Cell Tower could accommodate their equipment.
8. TMO collocating onto the Existing Cell Tower would prevent the unnecessary and needless proliferation of telecommunication towers.
9. Having reviewed my corporate records, SBA can accommodate additional equipment for TMO on the Existing Cell Tower, including 5G equipment, at 110', 100', and 90'.
10. Should TMO's current needs require modifications to the Existing Cell Tower, SBA is willing to discuss this with and attempt to accommodate TMO.
11. There is ample structural capacity for the Existing Cell Tower to handle more equipment as SBA constructed the Existing Cell Tower to house multiple tenants.
12. Having reviewed the radio frequency ("RF") coverage comparison map and study along with the RF Maps submitted by Vertical Bridge, the T-Mobile maps indicate that their coverage target/area of improvement is to the West and as such, the Existing Cell Tower would actually provide better coverage to this area since it is West of their proposed location.
13. If called upon I would testify consistent with the foregoing.

[signature follows on next page]

Dated this 29th day of September, 2022

Kent Meier

Kent Meier

Subscribed and sworn to before me this
29th day of SEPTEMBER, 2022

Notary Public

Official Seal
Patrick C Turner
Notary Public State of Illinois
My Commission Expires 06/01/2023

SBA

RF EMISSIONS COMPLIANCE REPORT

Prepared for:

Vertical Bridge

Site:

US-IL-5744 - CH96556B - Sea Level Diving
269 Liberty Road
Crystal Lake, IL
42.223298, -88.311267

July 18, 2022

This site will be in compliance with

FCC Regulations and MPE Limits:

T-Mobile Is 3.943% of General Population (GP) Limit

(0.789% of Occupational (Occ) Limit)

Certification
I have reviewed this RF Emissions assessment report and believe it to be both true and accurate to the best of my knowledge.



David Charles Cotton, Jr.
Licensed Professional Engineer
State of Illinois, 062.062055

Analysis completed using Waterford's NIERTool© software

Only clients and client representatives are authorized to provide input data through the Waterford web portal. In securing that authorization, clients and client representatives warrant the accuracy of all input data. Waterford Consultants, LLC attests to the accuracy of the engineering calculations. Waterford also attests that the results of those engineering calculations are correctly summarized in this report.

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RF EMISSIONS COMPLIANCE STATEMENT

Site:
US-IL-5744 - CH96556B - Sea Level Diving
269 Liberty Road
Crystal Lake, IL

Compliance Statement

Subject site COMPLIES with Radiofrequency Radiation Exposure Limits of 47 C.F.R. §§ 1.1307(b)(3) and 1.1310.

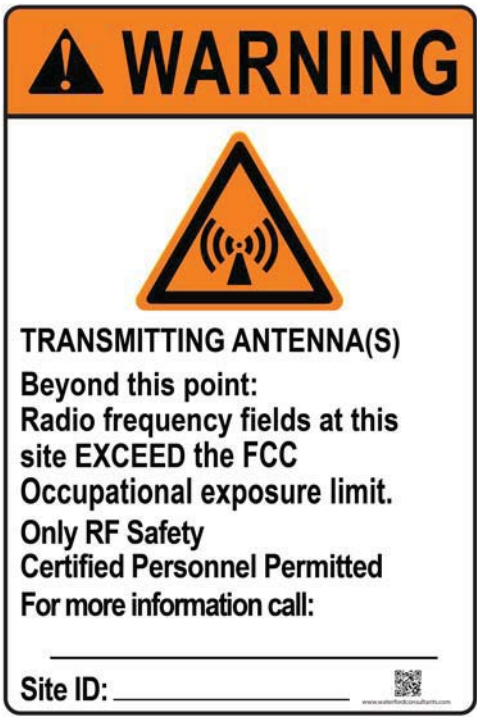
Ground Level Site Summary

Predicted cumulative RF power density at ground level as a percentage of the FCC General Population limits. This result is the sum of the maximum ground level MPE for each RF emitter by band of operation. Sites below 100% are in full compliance.

Source	Predicted Power Density, % of Limit (GP)
T-Mobile 600 MHz	0.257 %
T-Mobile 700 MHz	0.318 %
T-Mobile 1900 MHz	0.254 %
T-Mobile 2100 MHz	0.087 %
T-Mobile 2500 MHz	3.026 %
Sum of Listed Sources	**3.943%**

RF Alerting Signage

The Warning RF sign should be posted at the last accessible area before someone can potentially enter an area that can cause exposure. It should be placed and at the base of the cell tower.



Technical Framerwork: Basis for Compliance Statement

The compliance framework is derived from the Federal Communications Commission (FCC) Rules and Regulations for preventing human exposure in excess of the applicable Maximum Permissible Exposure ("MPE") limits listed in Table 1 of 47 C.F.R. § 1.1310. Calculations using input data provided to Waterford by client or client's representative numerically confirm the subject site can operate at a 100% duty cycle without exceeding the FCC MPE limits in areas of uncontrolled access.

At this site, the radio frequency (RF) power density resulting from each transmitter at any location may be expressed as a percentage of the frequency-specific limits and added to determine if 100% of the exposure limit has been exceeded. The FCC Rules define two tiers of permissible exposure differentiated by the situation in which the exposure takes place and/or the status of the individuals who are subject to exposure. General Population / Uncontrolled exposure limits apply to those situations in which persons may not be aware of the presence of electromagnetic energy, where exposure is not employment related, or where persons cannot exercise control over their exposure. Occupational / Controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment, have been made fully aware of the potential for exposure, and can exercise control over their exposure. Based on the criteria for these classifications, continuous exposure to RF power density levels below the FCC General Population limits is not hazardous. The FCC General Population limits are 5 times more restrictive than the Occupational limits..

	Limits for General Population/ Uncontrolled Exposure		*Limits for Occupational/ Controlled Exposure*	
Frequency (MHz)	Power Density (mW/cm^2)	Averaging Time (minutes)	Power Density (mW/cm^2)	Averaging Time (minutes)
30-300	0.2	30	1	6
300-1500	f/1500	30	f/300	6
1500-100,000	1.0	30	5.0	6

In situations where the predicted MPE exceeds the General Population threshold in an accessible area because of emissions from multiple transmitters, FCC licensees that contribute greater than 5% of the aggregate MPE share responsibility for mitigation.

For any location where radiofrequency (RF) power densities exceed 100% MPE of the General Population limits, access controls with appropriate RF alerting signage must be available to be visible upon approach from any direction to provide notification of potential conditions within these areas. Subject to other site security requirements, occupational personnel should be trained in RF safety and equipped with personal protective equipment (e.g. RF personal monitor) designed for safe work in the vicinity of RF emitters. Waterford Consultants, LLC recommends that any work activity in these designated areas or in front of any transmitting antennas be coordinated with the wireless operators.

Predictive Modeling

Based on the computational guidelines set forth in FCC Office of Engineering and Technology, Bulletin 65 ("OET65"), Waterford Consultants, LLC has developed software to predict the overall MPE possible at any particular location given the spatial orientation and operating parameters of multiple RF sources. These theoretical results represent worst-case predictions as emitters are assumed to be operating at 100% duty cycle.

The tabular analysis in this report calculates the spatial peak power density produced at ground level from each RF emitter. The far field power density in milliWatts per square centimeter is expressed as Sff = 33.4 x ERP / R2 where ERP is the Effective Radiated Power along a specific azimuth in Watts and R is the distance from the antenna radiation center in meters. The antenna manufacturer's horizontal and vertical radiation patterns have been considered in determining the ERP in any direction. This computation is based on the maximum ERP and includes a 1.6-fold increase in field strength due to ground reflection. The result provides a conservative estimate of spatially averaged power density at ground level and may be higher than predicted MPE in the graphical plots described below.

As the limits are frequency dependent, the contribution of any RF source at a specific location may be expressed as a percentage of the FCC General Population MPE limits at the associated operating frequency. The percentage contributions from all RF sources are added to determine the overall exposure level. If this result is less than 100%, the predicted cumulative exposure level is below the General Population limits set forth in the FCC Rules. The cumulative MPE depicted on the summary page is the summation of maximum MPE values for each emitter regardless of antenna orientation.

A graphical plot of calculated spatially averaged RF power density, based on the Cylindrical Model as described in OET65, predicts spatially averaged MPE conditions at areas in near proximity to the antenna. In the vertical display, predicted MPE is depicted at the center of the 6 ft vertical zone that a person could occupy.

Qualifications of Waterford

With more than 100 team-years of experience, Waterford Consultants, LLC [Waterford] provides technical consulting services to clients in the radio communications and antenna locating industry. Waterford retains professional engineers who are placed in responsible charge of the processes for analysis.

Waterford is familiar with 47 C.F.R. § § 1.1307(b)(3) and 1.1310 along with the general rules, regulations, and policies of the FCC. Waterford work processes incorporate all specifications of FCC Office of Engineering and Technology, Bulletin 65 ("OET65"), from the website: www.fcc.gov/oet/rfsafety and follow criteria detailed in 47 CFR § 1.1310 "Radiofrequency radiation exposure Limits".

Within the technical and regulatory framework detailed above, Waterford developed tools according to recognized and generally accepted good engineering practices. Permissible exposure limits are band specific, and the Waterford computerized modeling tools correctly calculate permissible exposure based on the band(s) specified in the input data. Only clients and client representatives are authorized to provide input data through the Waterford web portal. In securing that authorization, clients and client representatives attest to the accuracy of all input data.

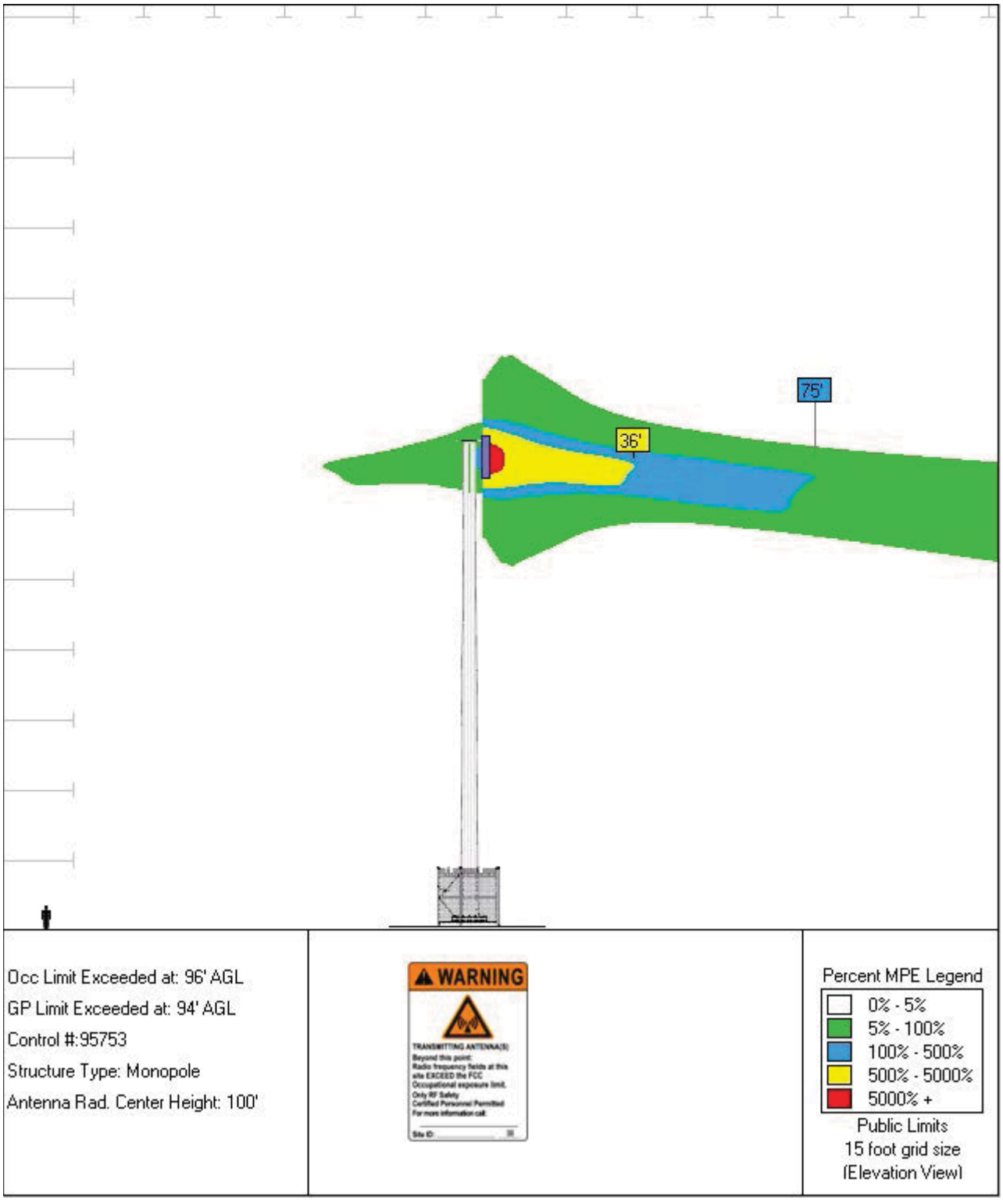
Waterford Consultants, LLC attests to the accuracy of the engineering calculations computed by those modeling tools. Furthermore, Waterford attests that the results of those engineering calculations are correctly summarized in this report.

Antenna Inventory

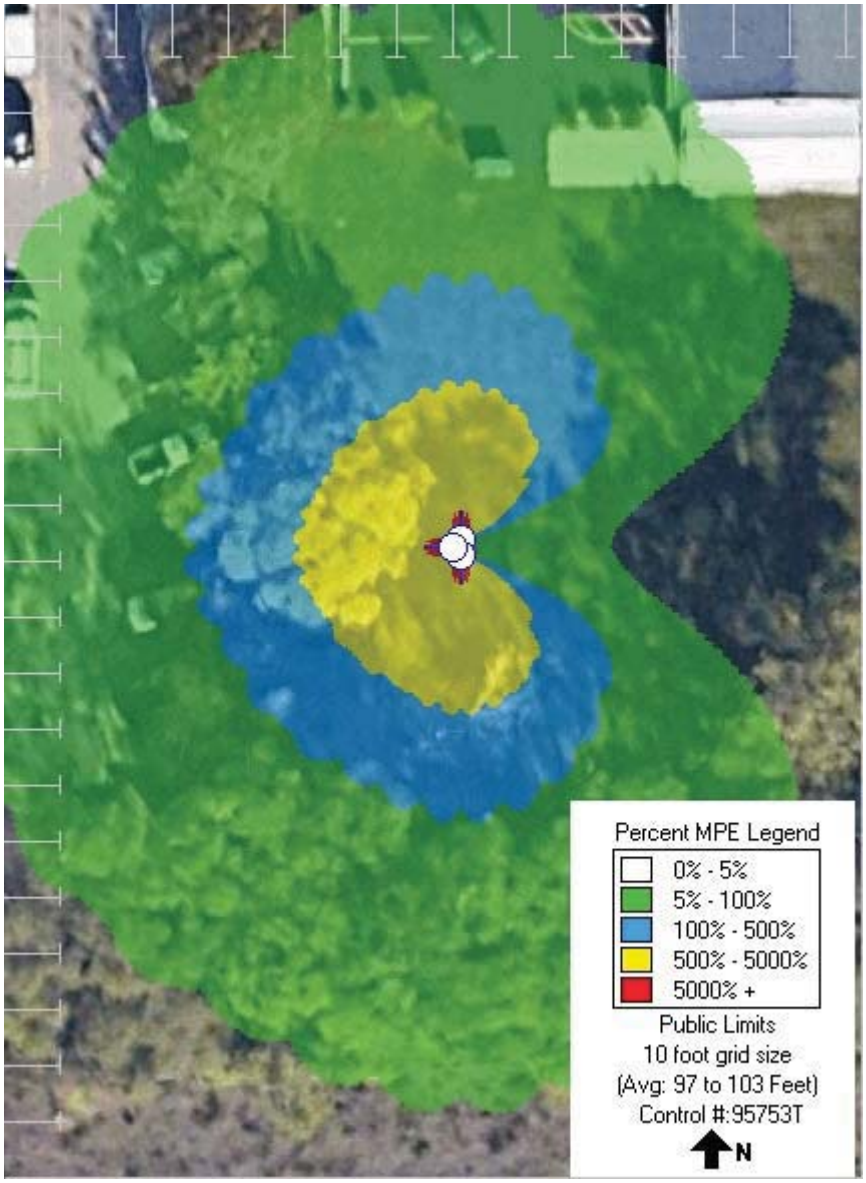
#	Operator	Make	Model	Freq (MHz)	Az (deg)	Tilt (deg)	HorBW (deg)	Ant (ft)	TPO (w)	Paths	Loss (db)	Ant Gain	Radiated Power (W)	RC AGL (ft)
1	T-Mobile	COMMSCOPE	FFVV-65C-R3-V1 02DT 600	600	0	0	66	7.995	30	2	0	13.24dBd	1265.180 ERP	100
2	T-Mobile	COMMSCOPE	FFVV-65C-R3-V1 02DT 600	600	180	0	66	7.995	30	2	0	13.24dBd	1265.180 ERP	100
3	T-Mobile	COMMSCOPE	FFVV-65C-R3-V1 02DT 600	600	270	0	66	7.995	30	2	0	13.24dBd	1265.180 ERP	100
4	T-Mobile	COMMSCOPE	FFVV-65C-R3-V1 02DT 700	700	0	0	61	7.995	30	2	0	13.26dBd	1271.020 ERP	100
5	T-Mobile	COMMSCOPE	FFVV-65C-R3-V1 02DT 700	700	180	0	61	7.995	30	2	0	13.26dBd	1271.020 ERP	100
6	T-Mobile	COMMSCOPE	FFVV-65C-R3-V1 02DT 700	700	270	0	61	7.995	30	2	0	13.26dBd	1271.020 ERP	100
7	T-Mobile	COMMSCOPE	FFVV-65C-R3-V1 02DT 1900	1900	0	0	62	7.995	20	4	0	15.55dBd	4709.060 EIRP	100
8	T-Mobile	COMMSCOPE	FFVV-65C-R3-V1 02DT 1900	1900	0	0	62	7.995	40	1	0	15.55dBd	2354.530 EIRP	100
9	T-Mobile	COMMSCOPE	FFVV-65C-R3-V1 02DT 1900	1900	180	0	62	7.995	20	4	0	15.55dBd	4709.060 EIRP	100
10	T-Mobile	COMMSCOPE	FFVV-65C-R3-V1 02DT 1900	1900	180	0	62	7.995	40	1	0	15.55dBd	2354.530 EIRP	100
11	T-Mobile	COMMSCOPE	FFVV-65C-R3-V1 02DT 1900	1900	270	0	62	7.995	20	4	0	15.55dBd	4709.060 EIRP	100
12	T-Mobile	COMMSCOPE	FFVV-65C-R3-V1 02DT 1900	1900	270	0	62	7.995	40	1	0	15.55dBd	2354.530 EIRP	100
13	T-Mobile	COMMSCOPE	FFVV-65C-R3-V1 02DT 2100	2100	0	0	55	7.995	10	4	0	16.31dBd	2804.810 EIRP	100
14	T-Mobile	COMMSCOPE	FFVV-65C-R3-V1 02DT 2100	2100	180	0	55	7.995	10	4	0	16.31dBd	2804.810 EIRP	100
15	T-Mobile	COMMSCOPE	FFVV-65C-R3-V1 02DT 2100	2100	270	0	55	7.995	10	4	0	16.31dBd	2804.810 EIRP	100
16	T-Mobile	NOKIA	SON_AEHC 120deg #6 00DT-07DT 2500	2500	0	0	14	3.182	150	1	0	22.68dBd	45596.880 EIRP	100
17	T-Mobile	NOKIA	SON_AEHC 120deg #5#1 00DT-07DT 2500	2500	0	0	14	3.182	90	1	0	22.67dBd	27295.200 EIRP	100
18	T-Mobile	NOKIA	SON_AEHC 120deg #5#1 00DT-07DT 2500	2500	180	0	14	3.182	90	1	0	22.67dBd	27295.200 EIRP	100
19	T-Mobile	NOKIA	SON_AEHC 120deg #6 00DT-07DT 2500	2500	180	0	14	3.182	150	1	0	22.68dBd	45596.880 EIRP	100
20	T-Mobile	NOKIA	SON_AEHC 120deg #6 00DT-07DT 2500	2500	270	0	14	3.182	150	1	0	22.68dBd	45596.880 EIRP	100
21	T-Mobile	NOKIA	SON_AEHC 120deg #5#1 00DT-07DT 2500	2500	270	0	14	3.182	90	1	0	22.67dBd	27295.200 EIRP	100

ELEVATION DETAIL

Predicted MPE depicted at the center of the 6 ft vertical zone that a person could occupy



TOP DOWN DETAIL



GROUND LEVEL MPE BY RF EMITTER

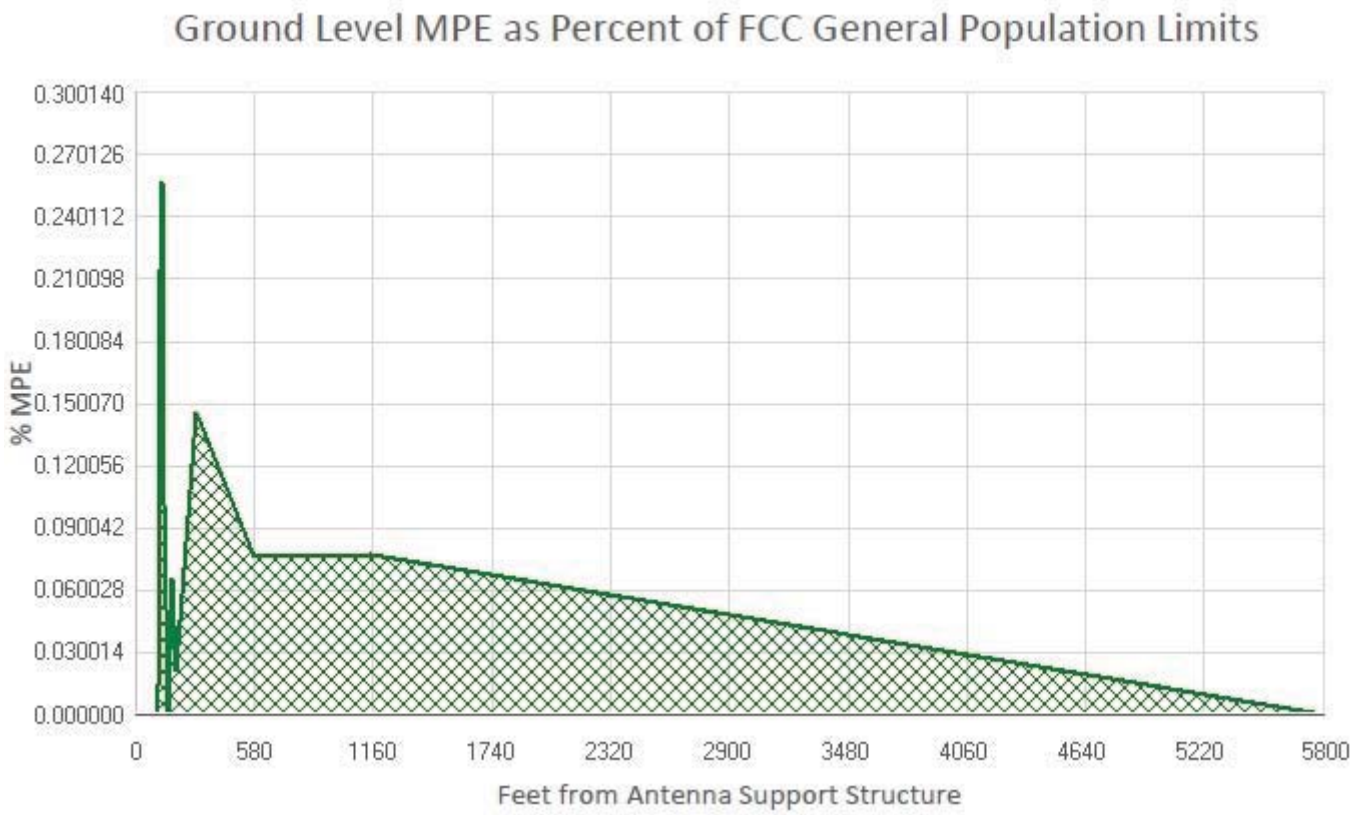
The maximum ground level MPE along the azimuth of orientation for each RF emitter by band of operation is listed below. The computational approach is described in the Predictive Modeling section. The maximum MPE by operator and band is contributive to the cumulative ground level MPE summary table presented above.

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
COMMSCOPE - FFVV-65C-R3-V1 02DT 600 180° Sector

Maximum Exposure Limit - 600 MHz

Limit (GP): 400.000 µW/cm^2

ERP		**Height**		**Downtilt**	
(Watts)	1265.180	(feet)	100.000	(Degrees)	0



Maximum power density at ground level: 1.029 µW/cm^2

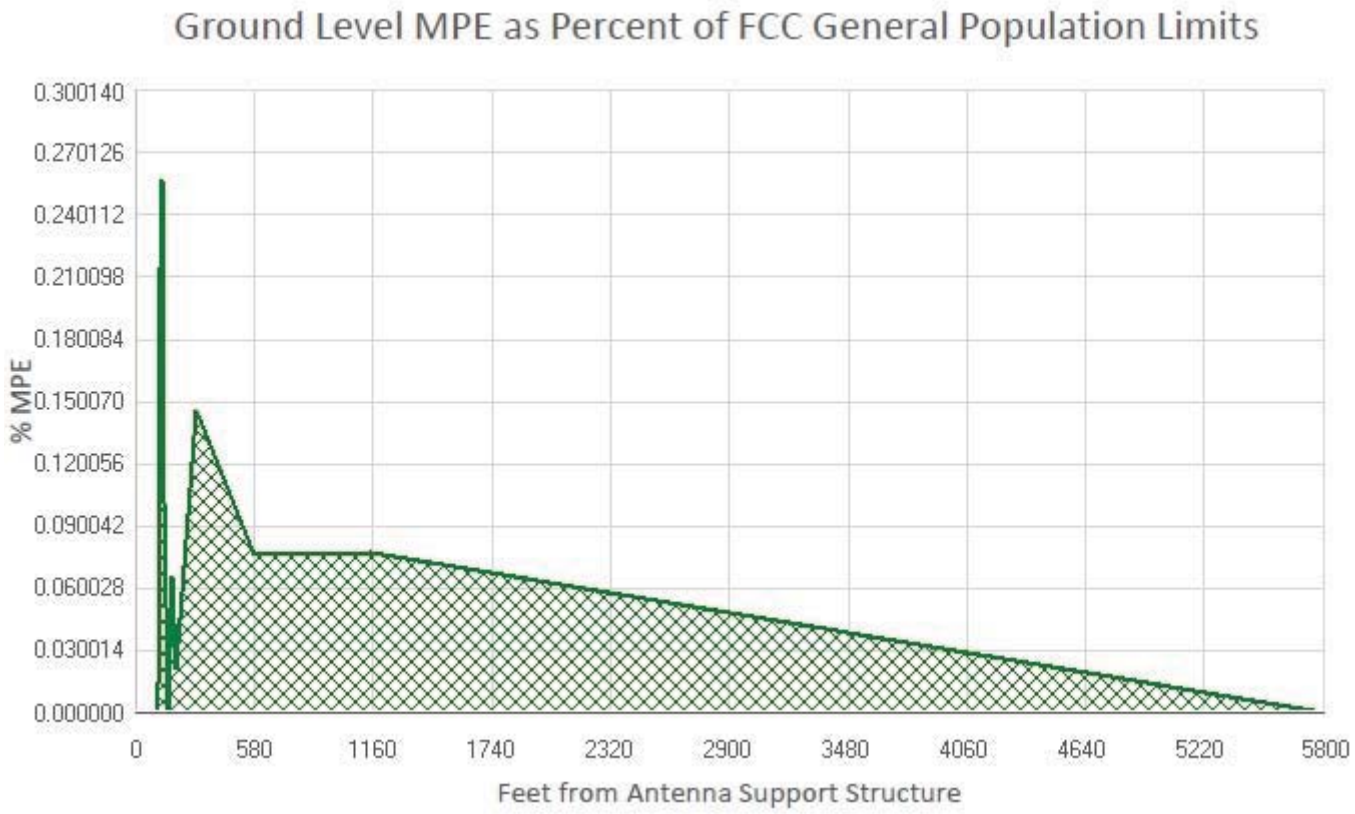
Highest percentage of Maximum Exposure Limit: 0.257 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
COMMSCOPE - FFVV-65C-R3-V1 02DT 600 270° Sector

Maximum Exposure Limit - 600 MHz

Limit (GP): 400.000 µW/cm^2

ERP		**Height**		**Downtilt**	
(Watts)	1265.180	(feet)	100.000	(Degrees)	0



Maximum power density at ground level: 1.029 µW/cm^2

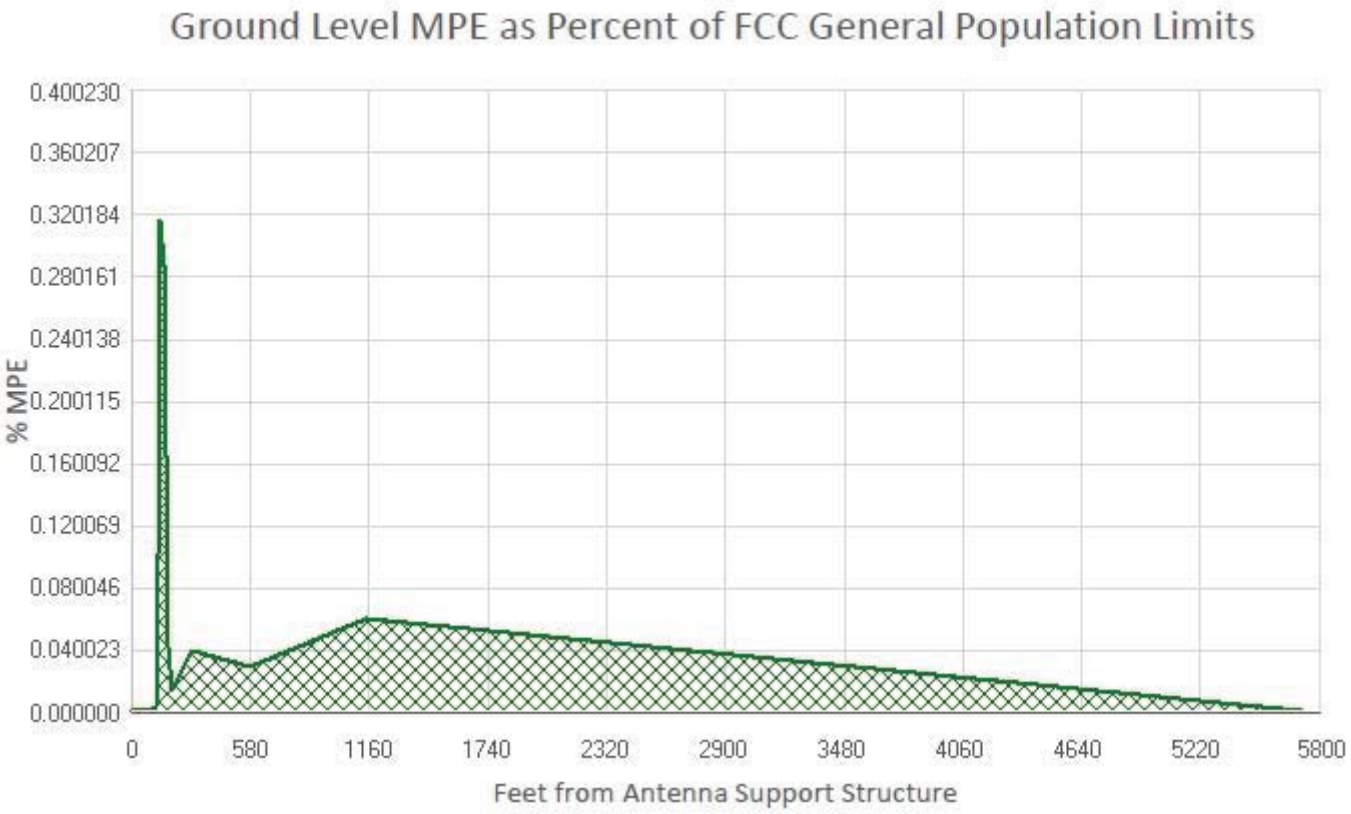
Highest percentage of Maximum Exposure Limit: 0.257 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
COMMSCOPE - FFVV-65C-R3-V1 02DT 700 180° Sector

Maximum Exposure Limit - 700 MHz

Limit (GP): 466.000 µW/cm^2

ERP		**Height**		**Downtilt**	
(Watts)	1271.020	(feet)	100.000	(Degrees)	0



Maximum power density at ground level: 1.485 µW/cm^2

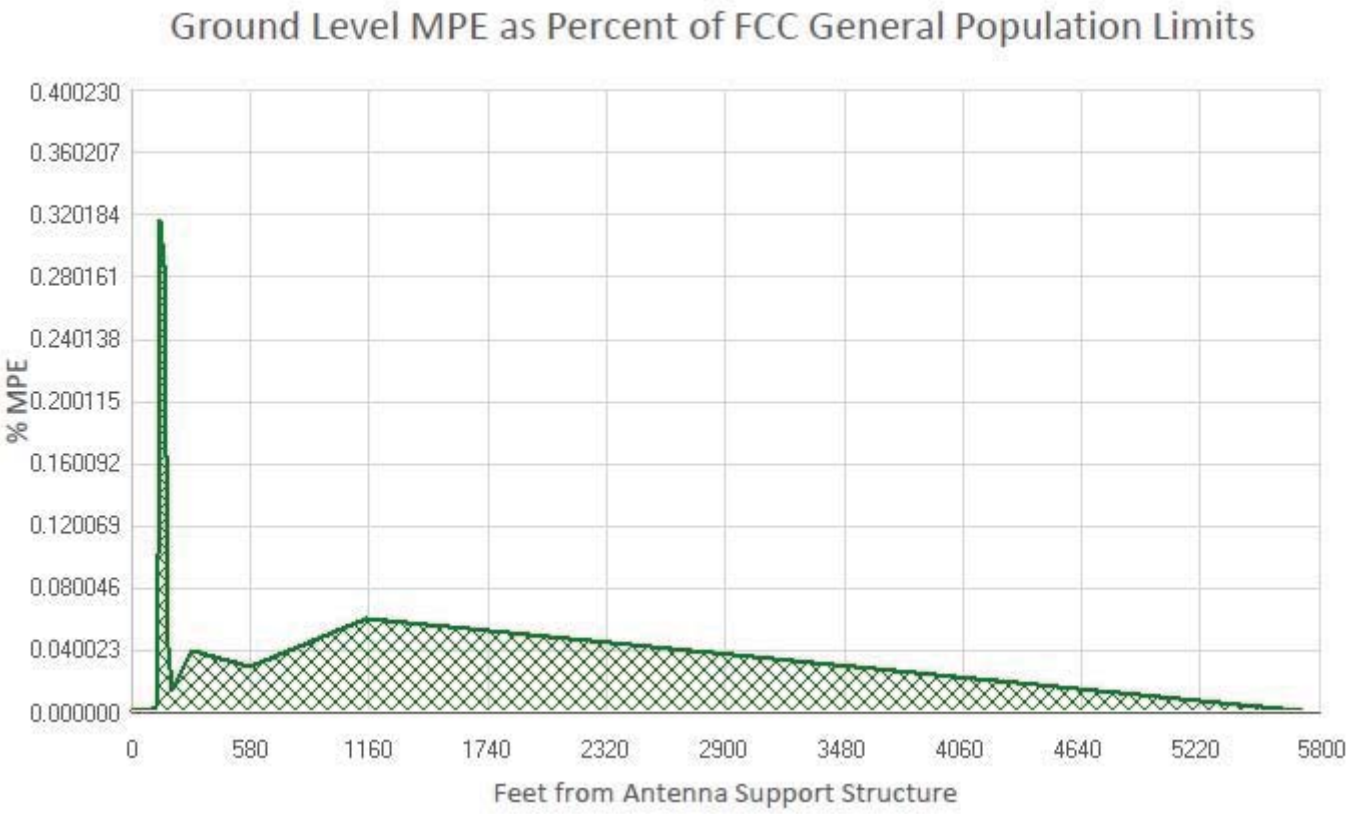
Highest percentage of Maximum Exposure Limit: 0.318 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
COMMSCOPE - FFVV-65C-R3-V1 02DT 700 270° Sector

Maximum Exposure Limit - 700 MHz

Limit (GP): 466.000 µW/cm^2

ERP		**Height**		**Downtilt**	
(Watts)	1271.020	(feet)	100.000	(Degrees)	0



Maximum power density at ground level: 1.485 µW/cm^2

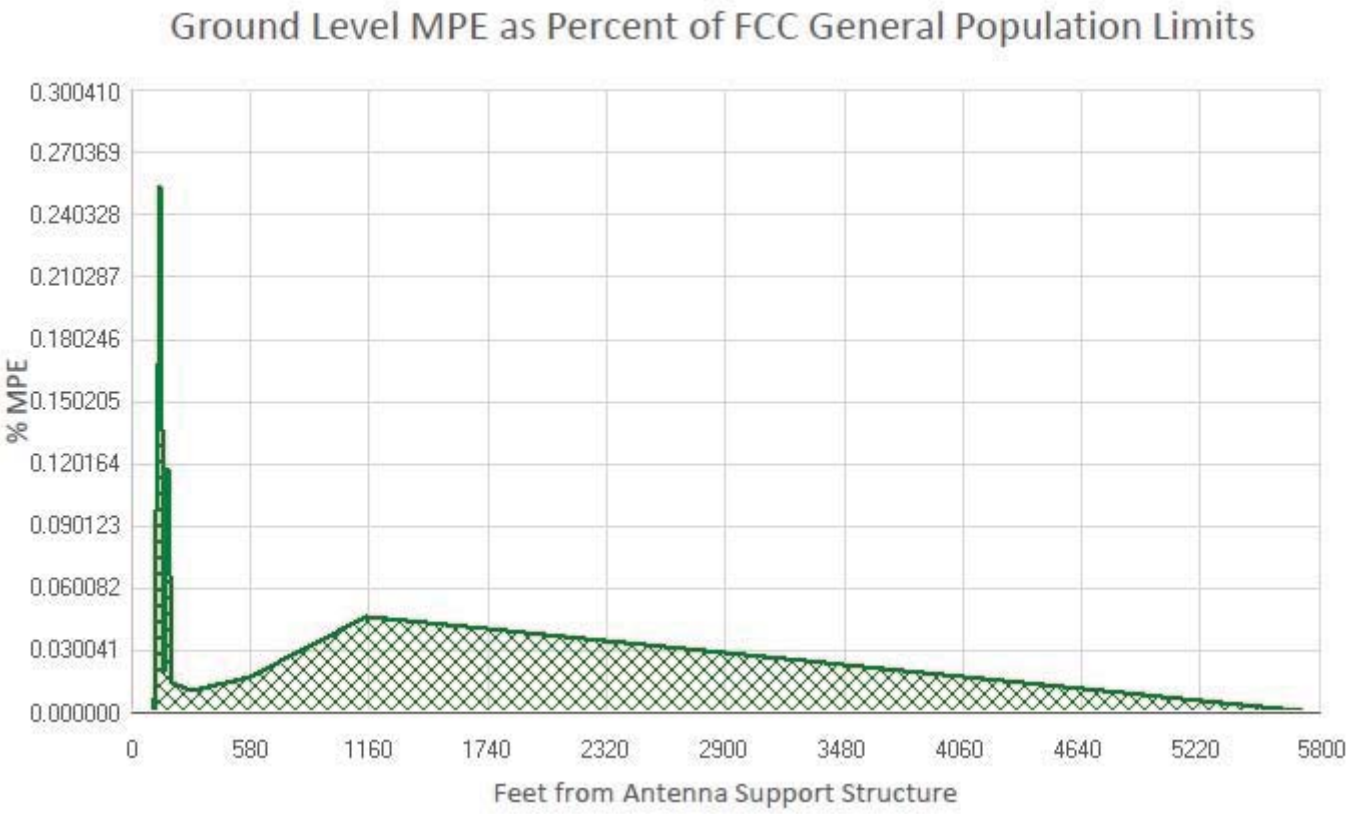
Highest percentage of Maximum Exposure Limit: 0.318 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
COMMSCOPE - FFVV-65C-R3-V1 02DT 1900 0° Sector

Maximum Exposure Limit - 1900 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	4709.060	(feet)	100.000	(Degrees)	0



Maximum power density at ground level: 2.544 µW/cm^2

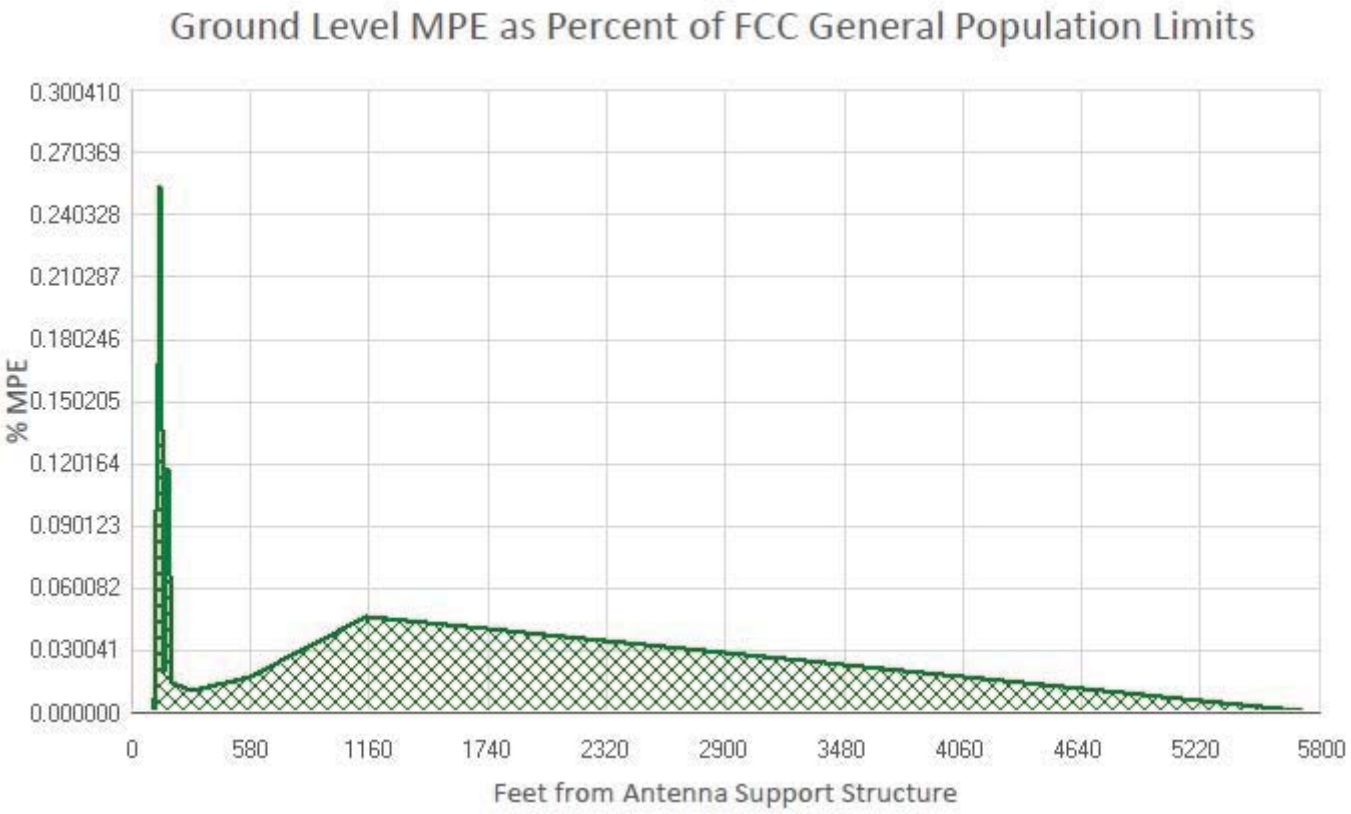
Highest percentage of Maximum Exposure Limit: 0.254 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
COMMSCOPE - FFVV-65C-R3-V1 02DT 1900 180° Sector

Maximum Exposure Limit - 1900 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	4709.060	(feet)	100.000	(Degrees)	0



Maximum power density at ground level: 2.544 µW/cm^2

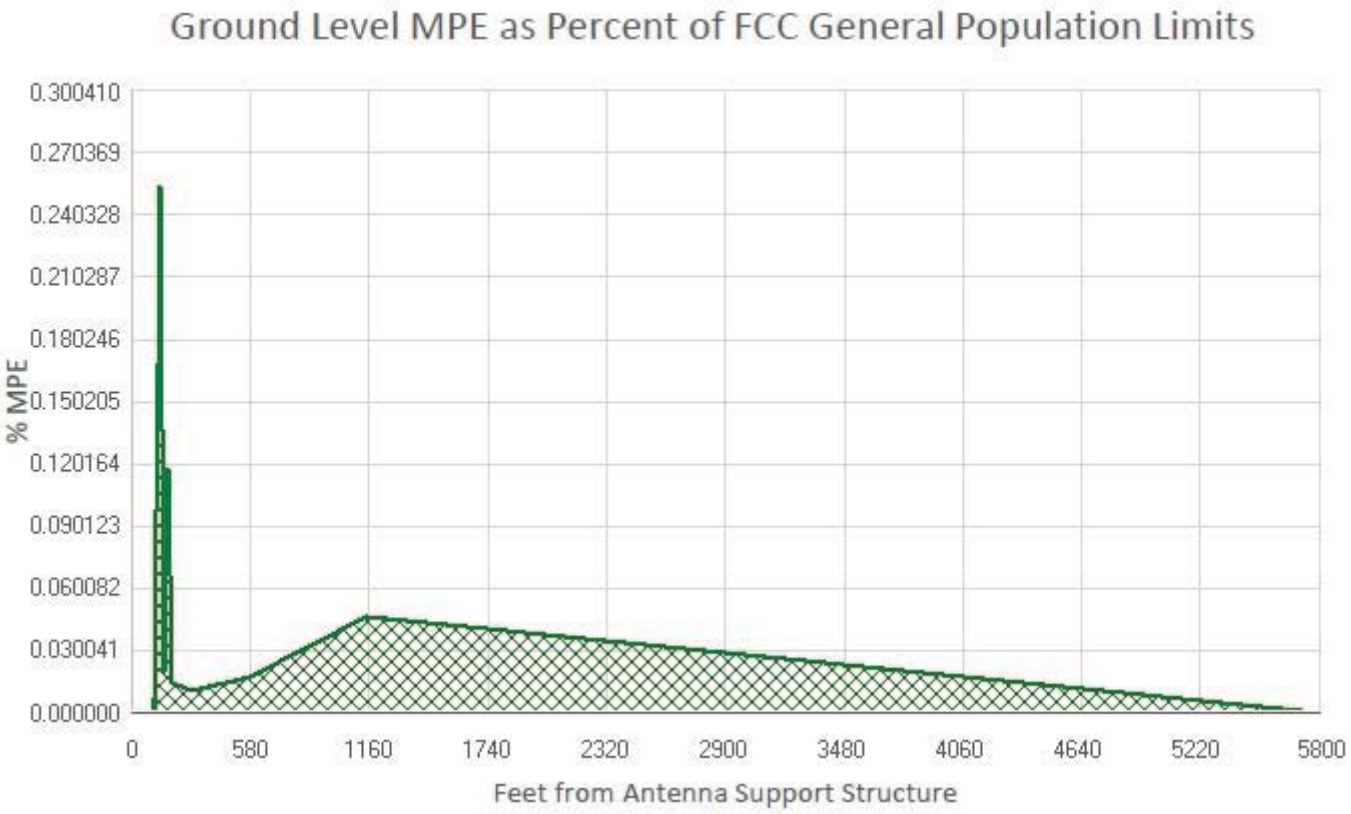
Highest percentage of Maximum Exposure Limit: 0.254 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
COMMSCOPE - FFVV-65C-R3-V1 02DT 1900 270° Sector

Maximum Exposure Limit - 1900 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	4709.060	(feet)	100.000	(Degrees)	0



Maximum power density at ground level: 2.544 µW/cm^2

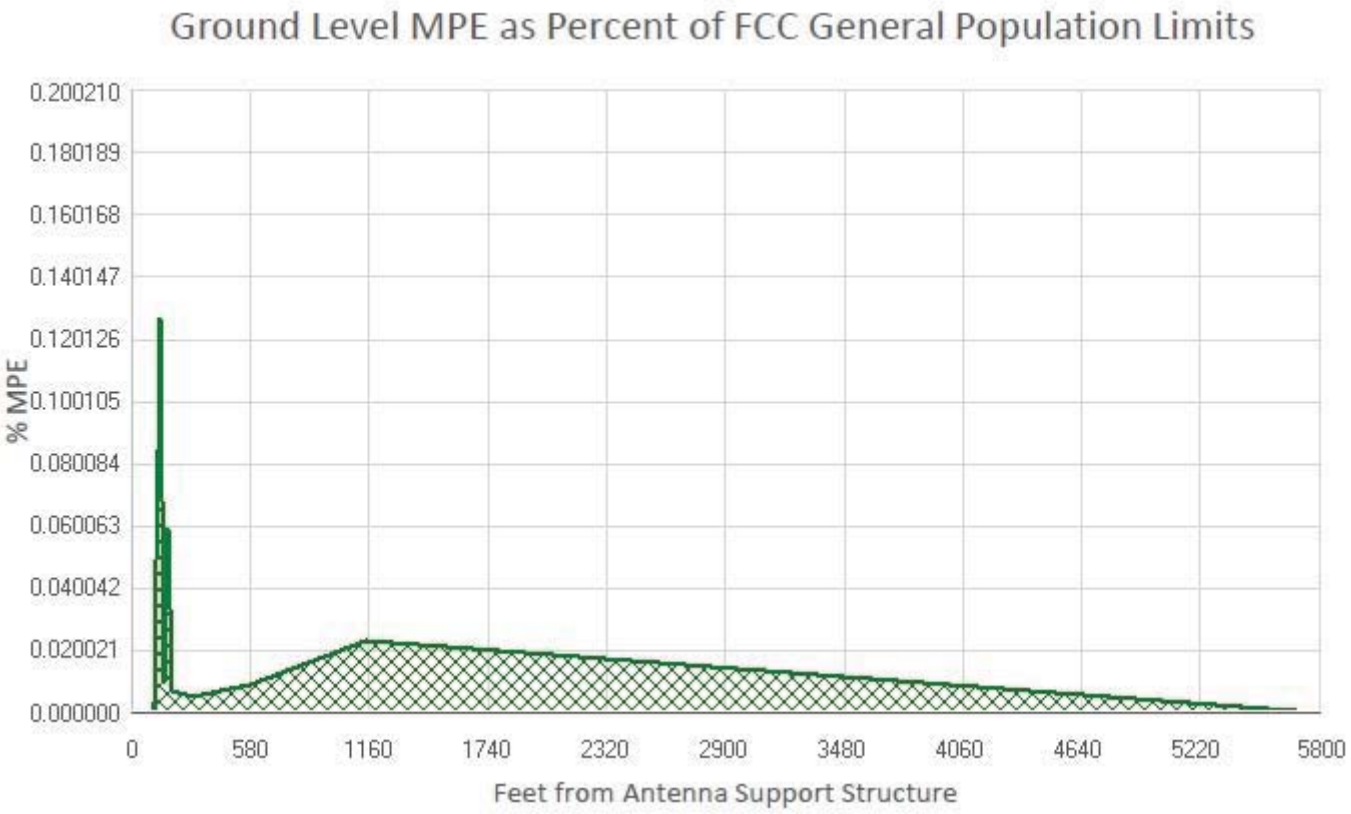
Highest percentage of Maximum Exposure Limit: 0.254 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
COMMSCOPE - FFVV-65C-R3-V1 02DT 1900 180° Sector

Maximum Exposure Limit - 1900 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	2354.530	(feet)	100.000	(Degrees)	0



Maximum power density at ground level: 1.272 µW/cm^2

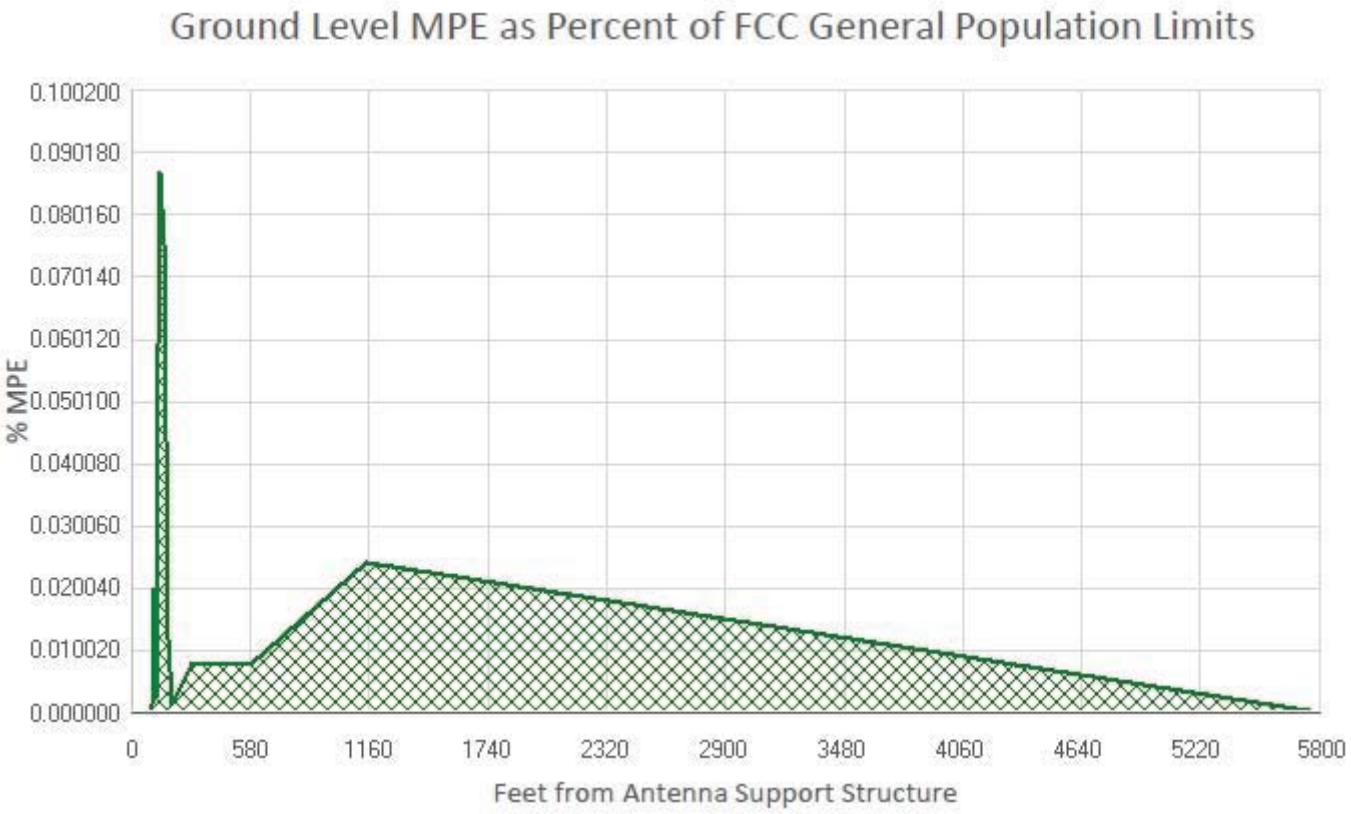
Highest percentage of Maximum Exposure Limit: 0.127 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
COMMSCOPE - FFVV-65C-R3-V1 02DT 2100 0° Sector

Maximum Exposure Limit - 2100 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	2804.810	(feet)	100.000	(Degrees)	0



Maximum power density at ground level: 0.872 µW/cm^2

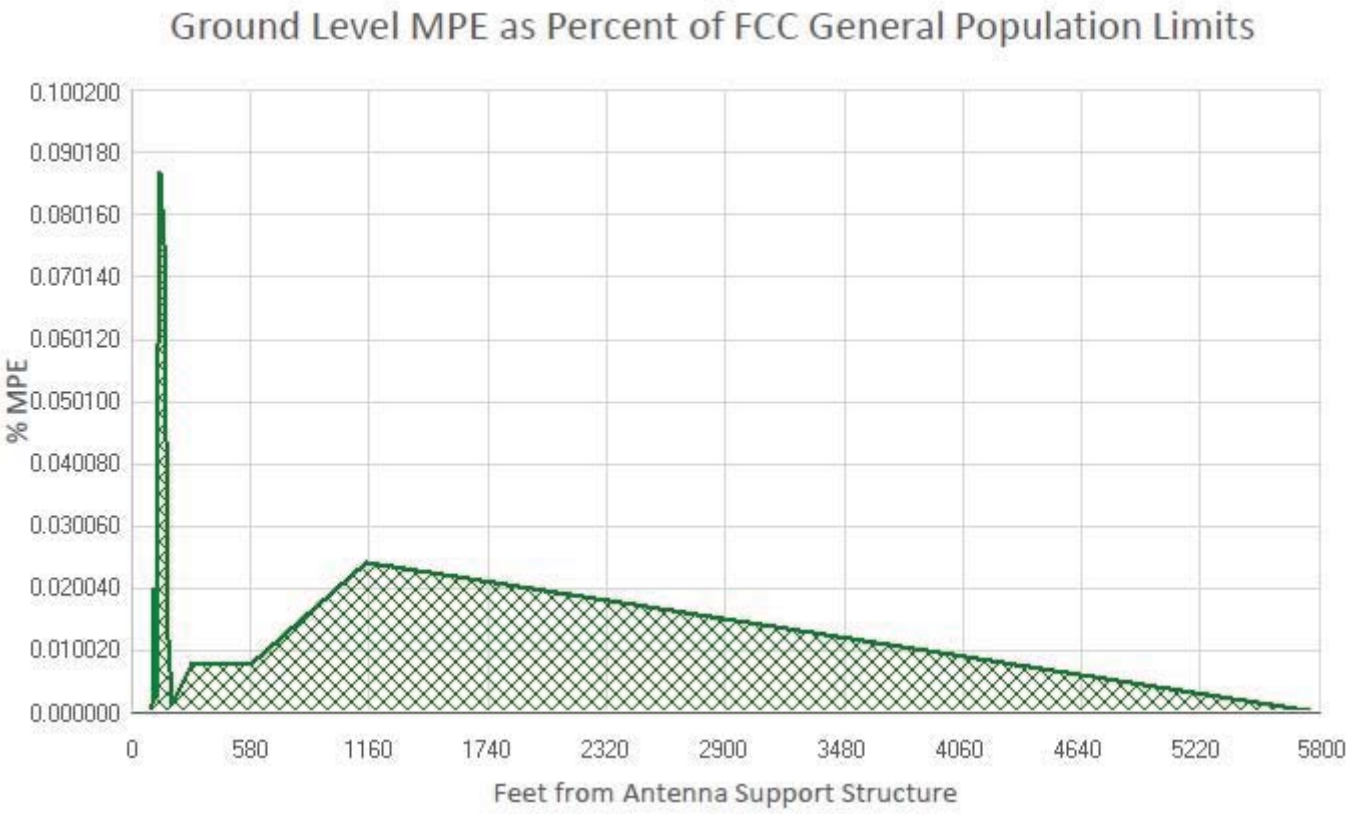
Highest percentage of Maximum Exposure Limit: 0.087 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
COMMSCOPE - FFVV-65C-R3-V1 02DT 2100 180° Sector

Maximum Exposure Limit - 2100 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	2804.810	(feet)	100.000	(Degrees)	0



Maximum power density at ground level: 0.872 µW/cm^2

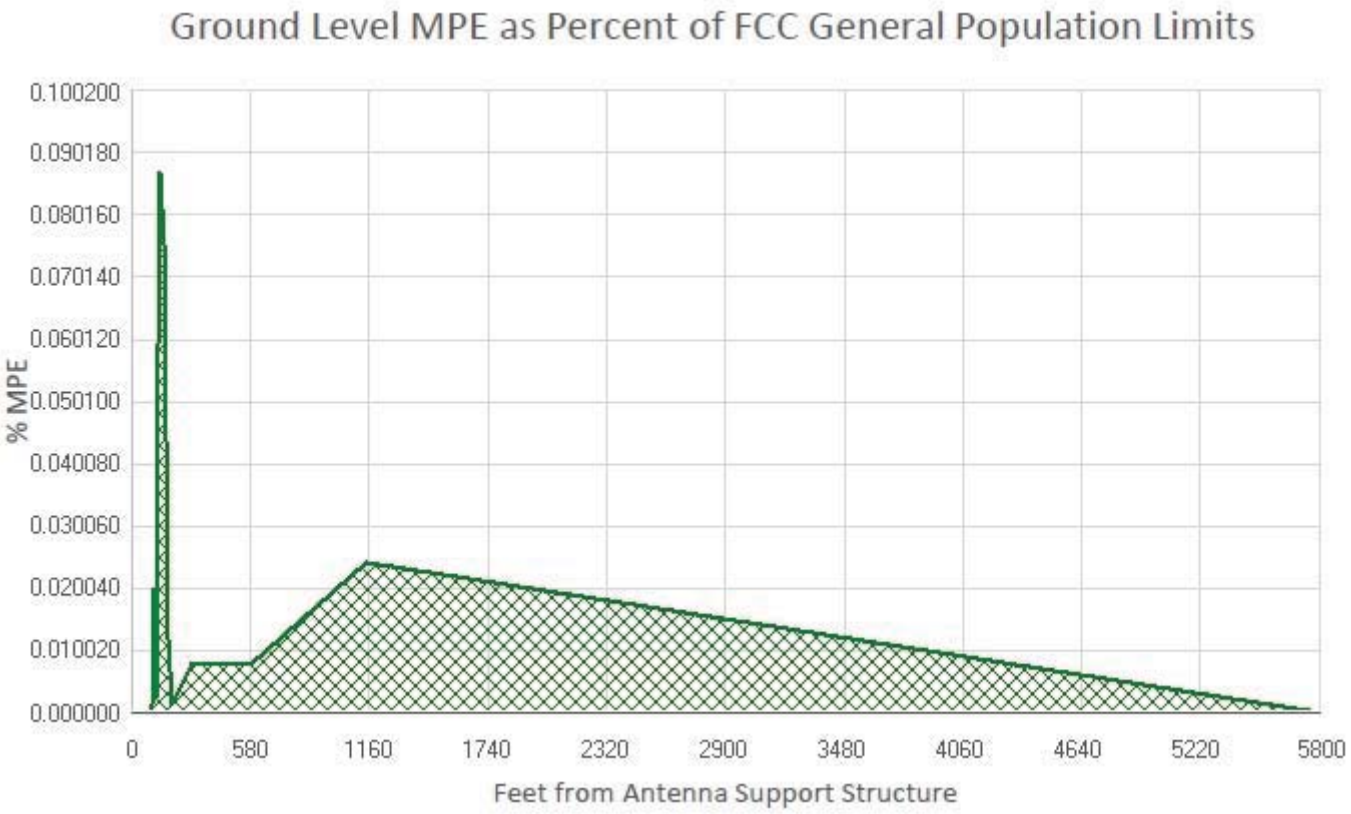
Highest percentage of Maximum Exposure Limit: 0.087 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
COMMSCOPE - FFVV-65C-R3-V1 02DT 2100 270° Sector

Maximum Exposure Limit - 2100 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		**Height**		**Downtilt**	
(Watts)	2804.810	(feet)	100.000	(Degrees)	0



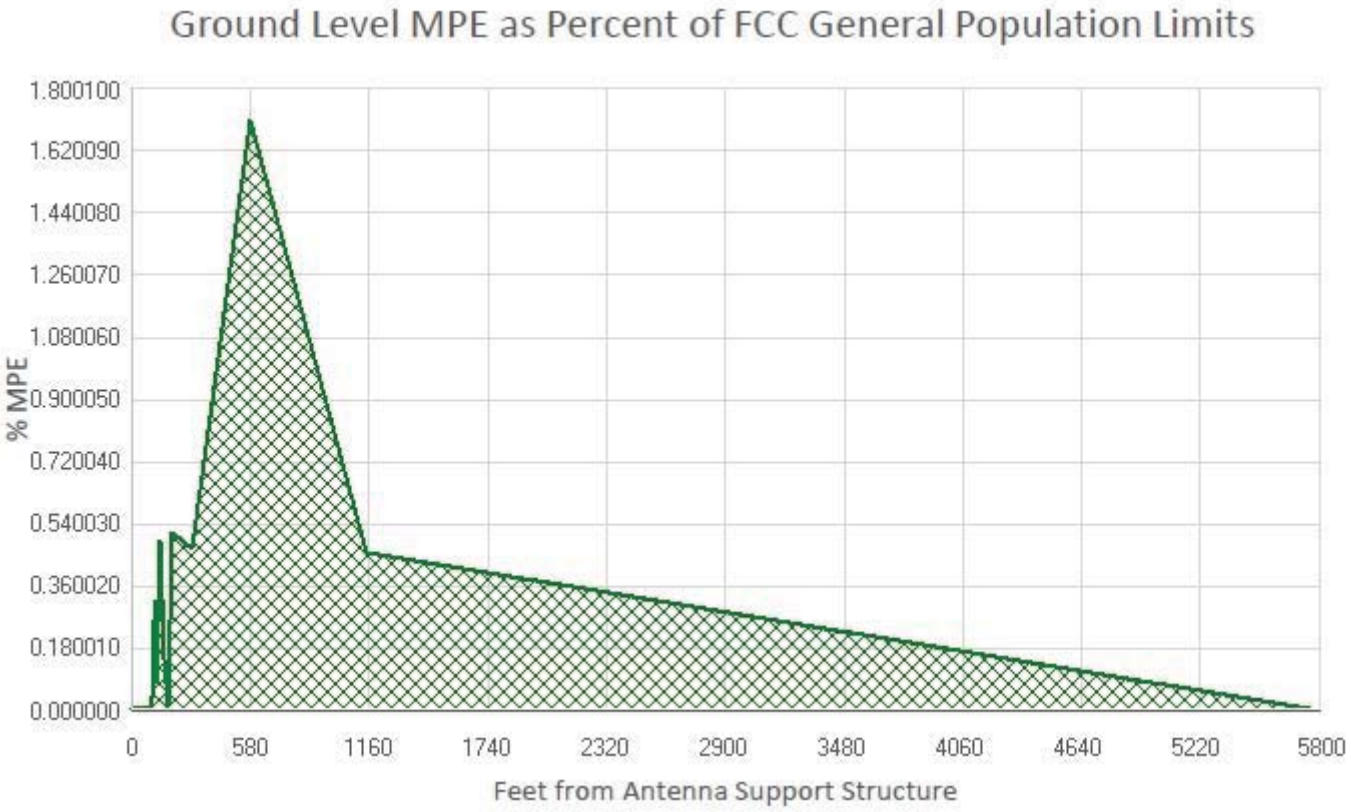
Maximum power density at ground level: 0.872 µW/cm^2

Highest percentage of Maximum Exposure Limit: 0.087 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
NOKIA - SON_AEHC 120deg #5#1 00DT-07DT 2500 0° Sector

Maximum Exposure Limit - 2500 MHz
Limit (GP): 1000.000 µW/cm^2

EiRP		Height		Downtilt	
(Watts)	27295.200	(feet)	100.000	(Degrees)	0

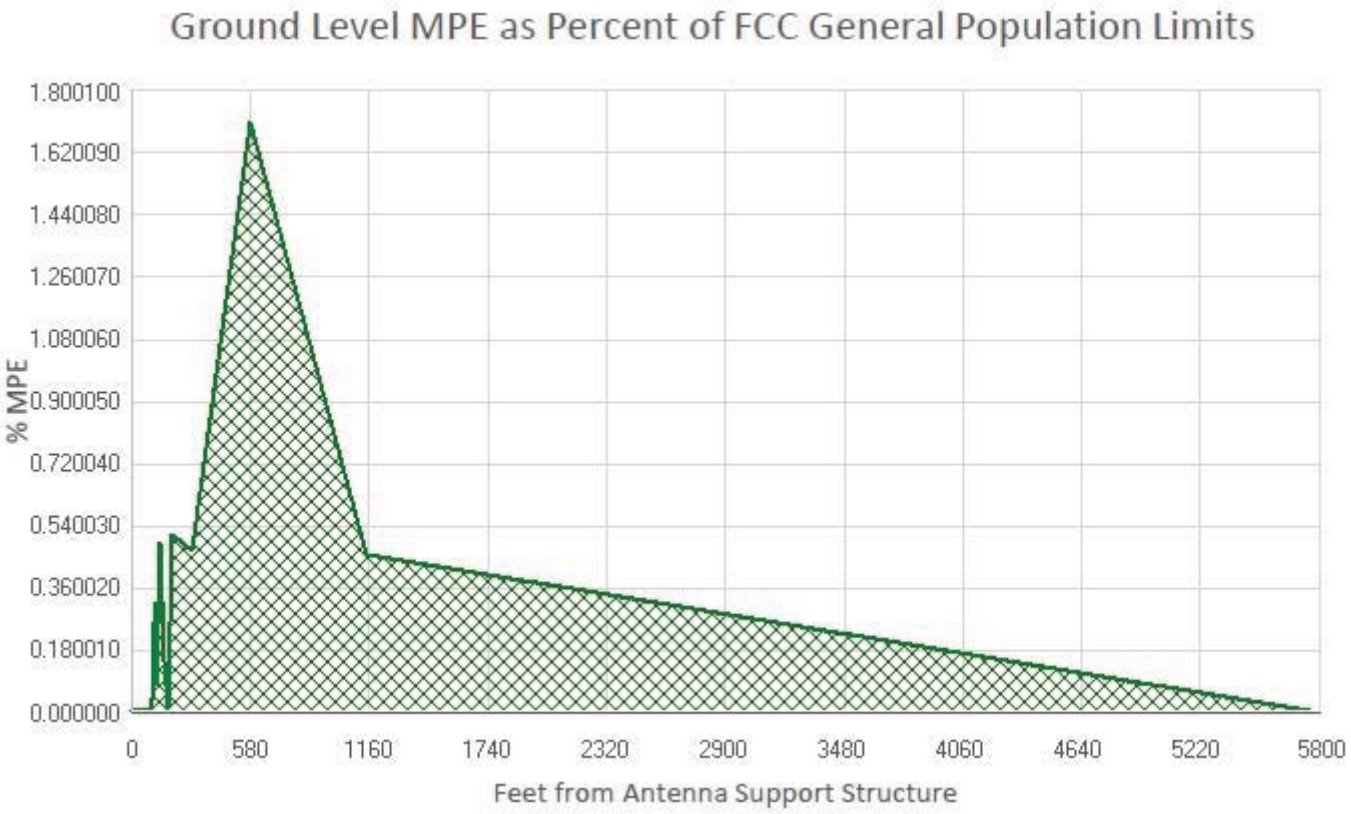


Maximum power density at ground level: 17.101 µW/cm^2
Highest percentage of Maximum Exposure Limit: 1.710 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
NOKIA - SON_AEHC 120deg #5#1 00DT-07DT 2500 180° Sector

Maximum Exposure Limit - 2500 MHz
Limit (GP): 1000.000 µW/cm^2

EiRP		Height		Downtilt	
(Watts)	27295.200	(feet)	100.000	(Degrees)	0



Maximum power density at ground level: 17.101 µW/cm^2
Highest percentage of Maximum Exposure Limit: 1.710 %

T-Mobile

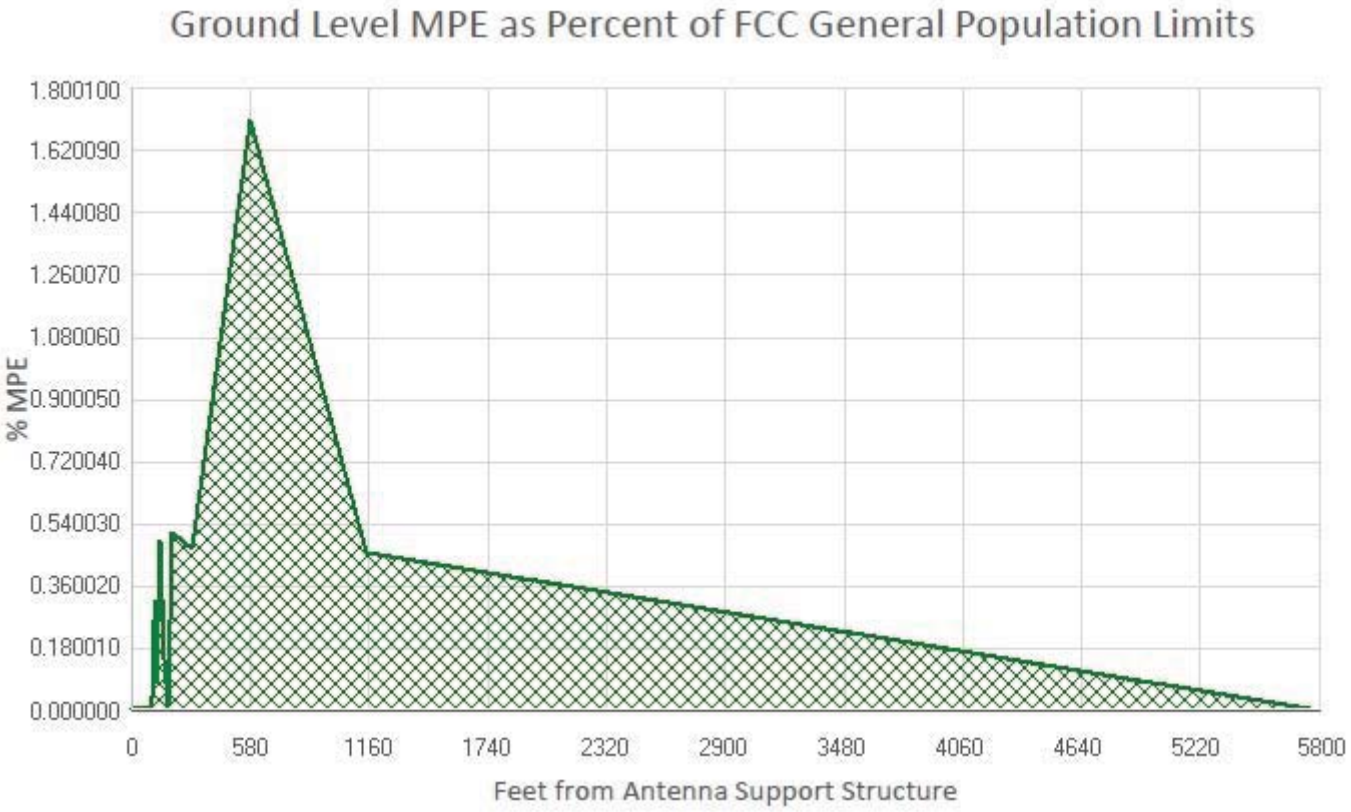
US-IL-5744 - CH96556B - Sea Level Diving

NOKIA - SON_AEHC 120deg #5#1 00DT-07DT 2500 270° Sector

Maximum Exposure Limit - 2500 MHz

Limit (GP): 1000.000 µW/cm^2

EiRP		Height		Downtilt	
(Watts)	27295.200	(feet)	100.000	(Degrees)	0



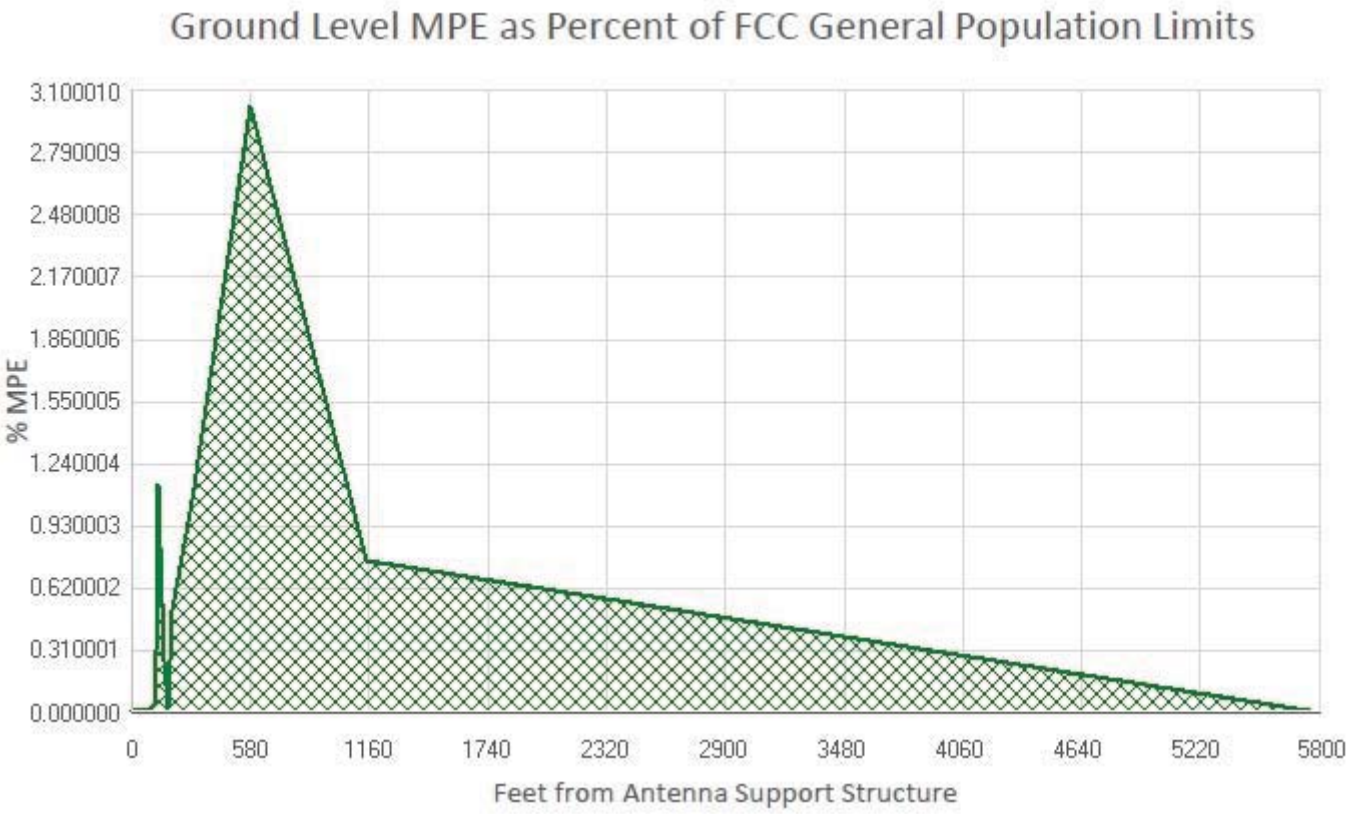
Maximum power density at ground level: 17.101 µW/cm^2

Highest percentage of Maximum Exposure Limit: 1.710 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
NOKIA - SON_AEHC 120deg #6 00DT-07DT 2500 0° Sector

Maximum Exposure Limit - 2500 MHz
Limit (GP): 1000.000 µW/cm^2

EiRP		Height		Downtilt	
(Watts)	45596.880	(feet)	100.000	(Degrees)	0

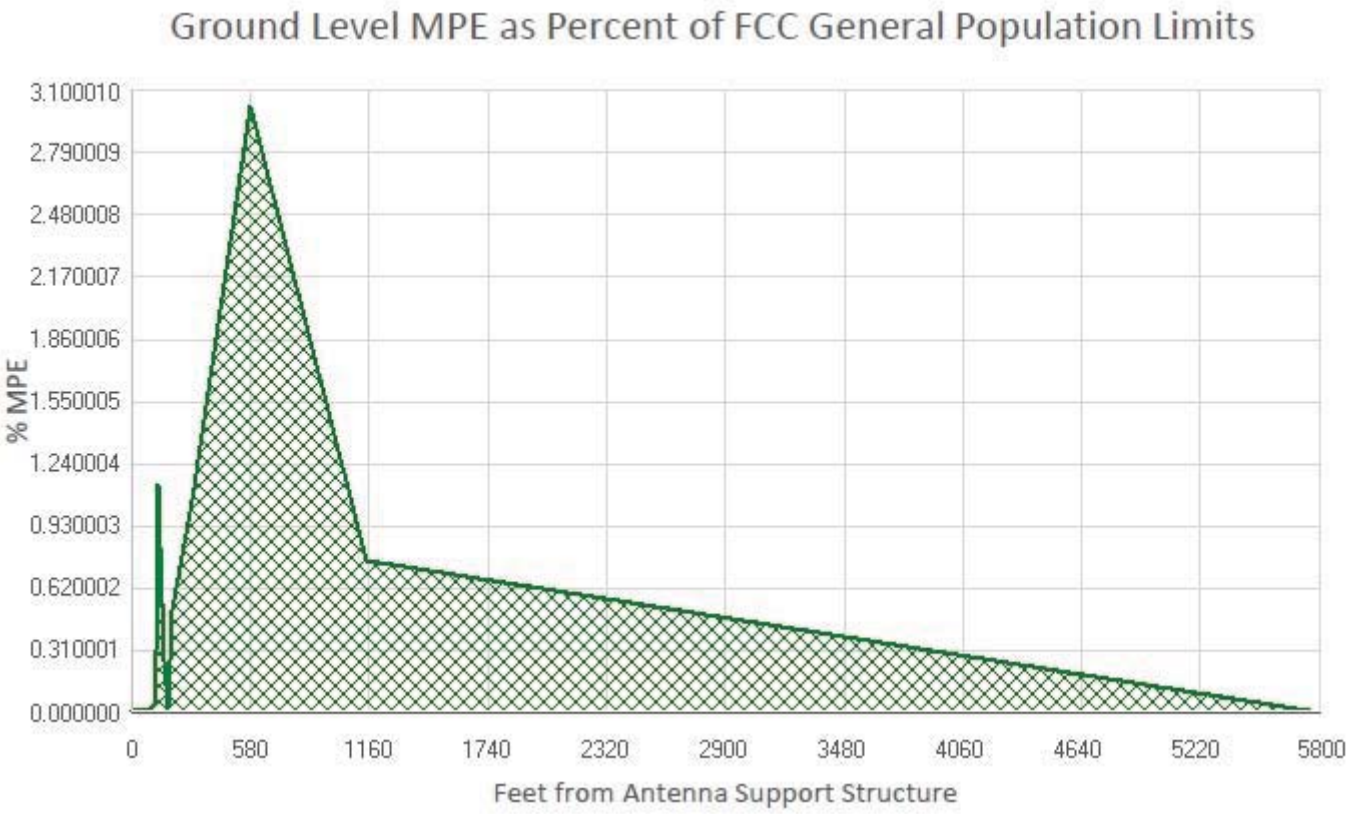


Maximum power density at ground level: 30.260 µW/cm^2
Highest percentage of Maximum Exposure Limit: 3.026 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
NOKIA - SON_AEHC 120deg #6 00DT-07DT 2500 180° Sector

Maximum Exposure Limit - 2500 MHz
Limit (GP): 1000.000 µW/cm^2

EiRP (Watts)	45596.880	Height (feet)	100.000	Downtilt (Degrees)	0

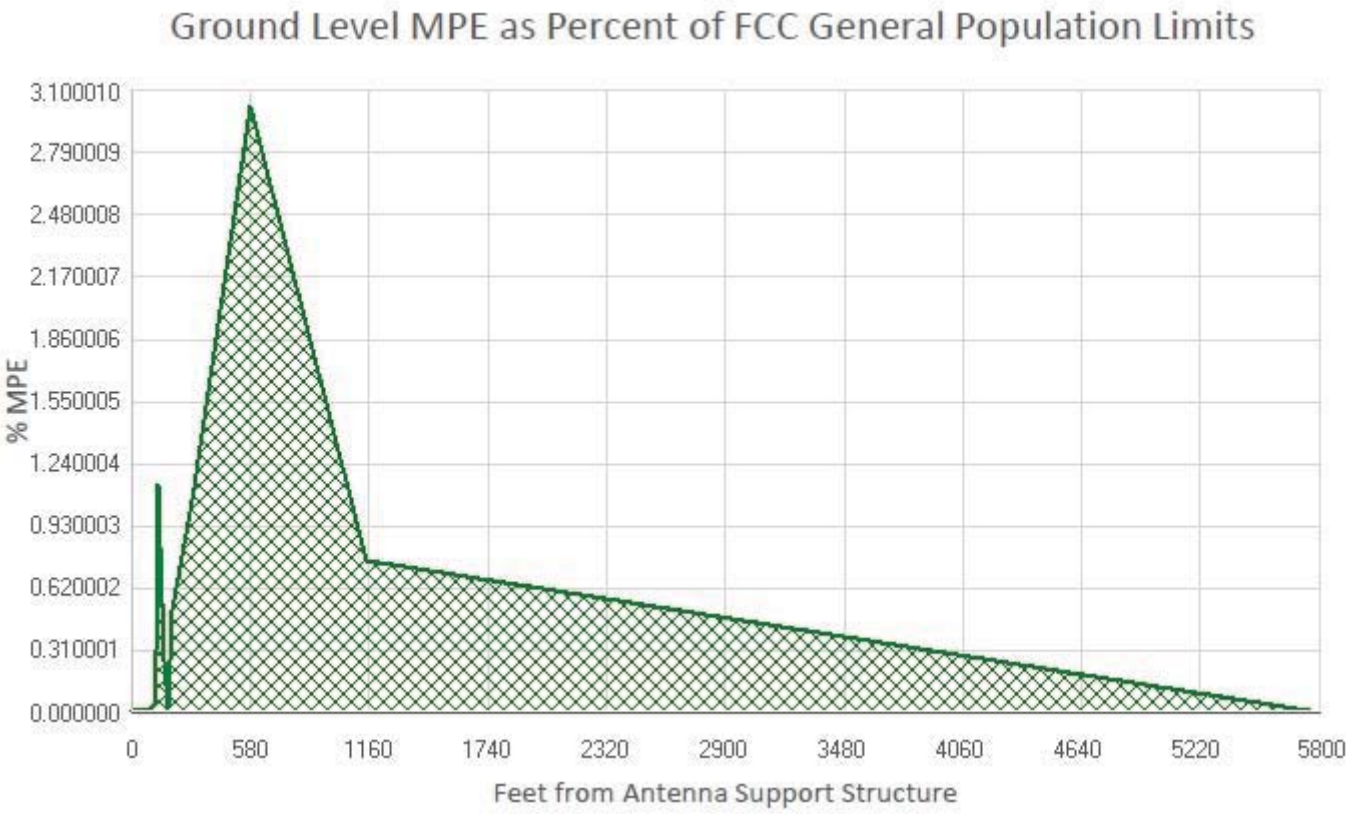


Maximum power density at ground level: 30.260 µW/cm^2
Highest percentage of Maximum Exposure Limit: 3.026 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
NOKIA - SON_AEHC 120deg #6 00DT-07DT 2500 270° Sector

Maximum Exposure Limit - 2500 MHz
Limit (GP): 1000.000 µW/cm^2

EiRP		Height		Downtilt	
(Watts)	45596.880	(feet)	100.000	(Degrees)	0



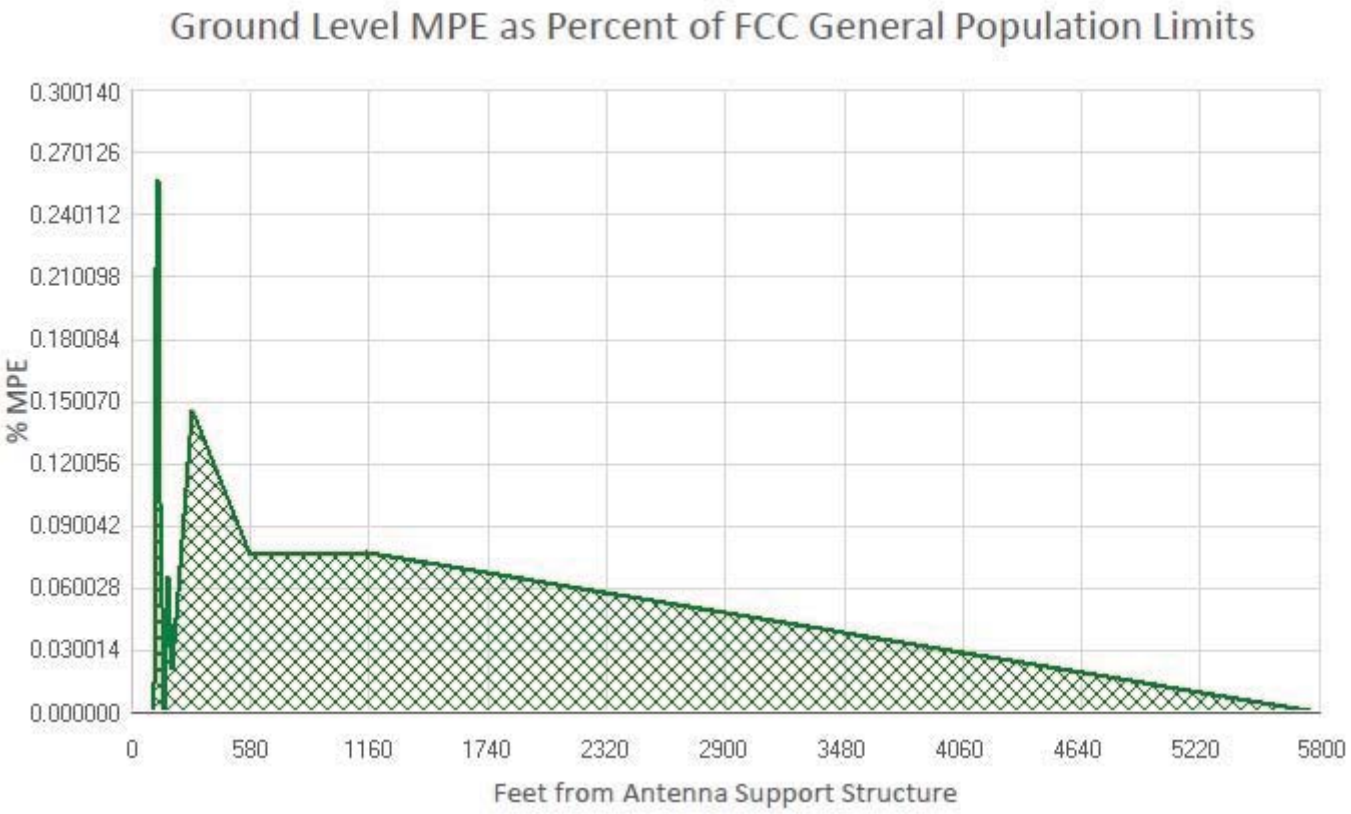
Maximum power density at ground level: 30.260 µW/cm^2
Highest percentage of Maximum Exposure Limit: 3.026 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
COMMSCOPE - FFVV-65C-R3-V1 02DT 600 0° Sector

Maximum Exposure Limit - 600 MHz

Limit (GP): 400.000 µW/cm^2

ERP		Height		Downtilt	
(Watts)	1265.180	(feet)	100.000	(Degrees)	0



Maximum power density at ground level: 1.029 µW/cm^2

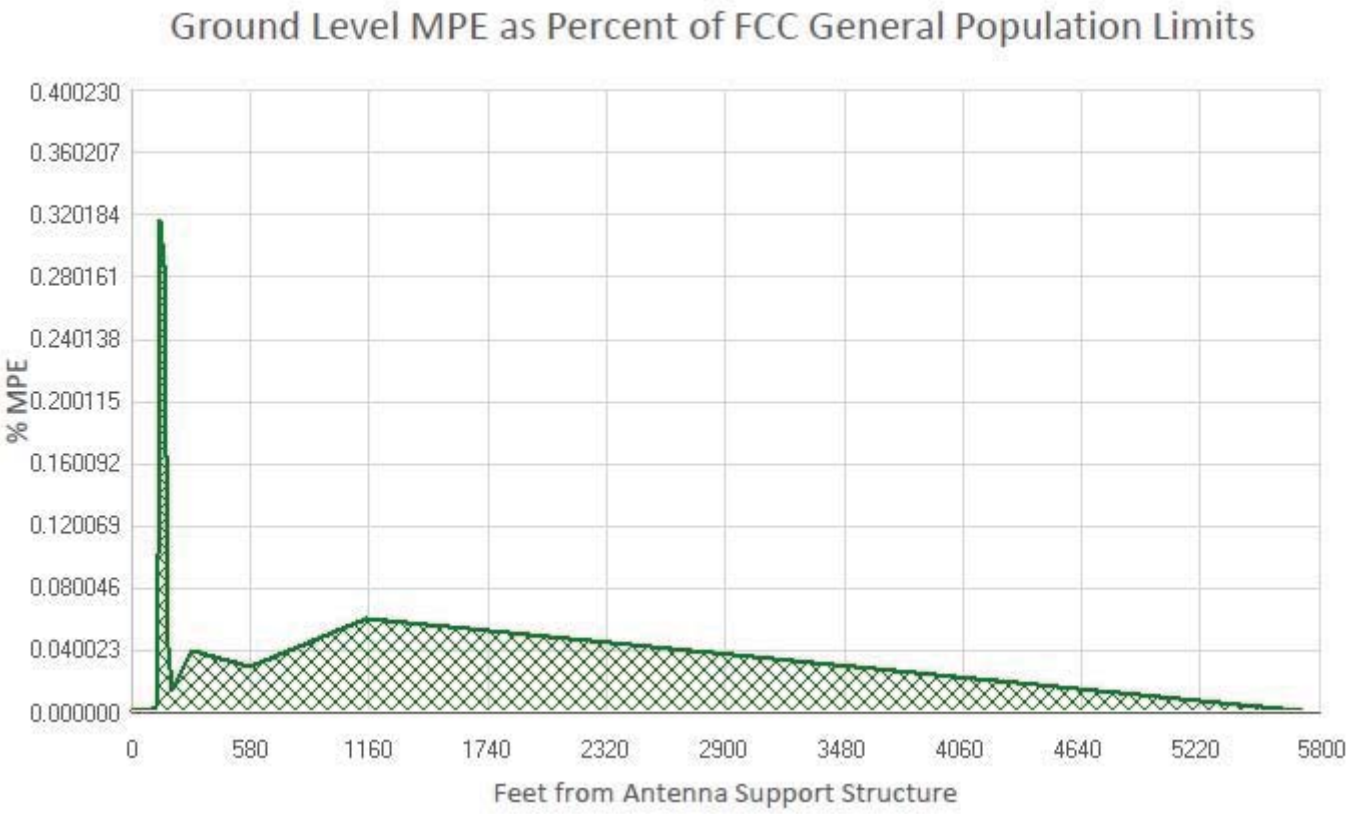
Highest percentage of Maximum Exposure Limit: 0.257 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
COMMSCOPE - FFVV-65C-R3-V1 02DT 700 0° Sector

Maximum Exposure Limit - 700 MHz

Limit (GP): 466.000 µW/cm^2

ERP		Height		Downtilt	
(Watts)	1271.020	(feet)	100.000	(Degrees)	0



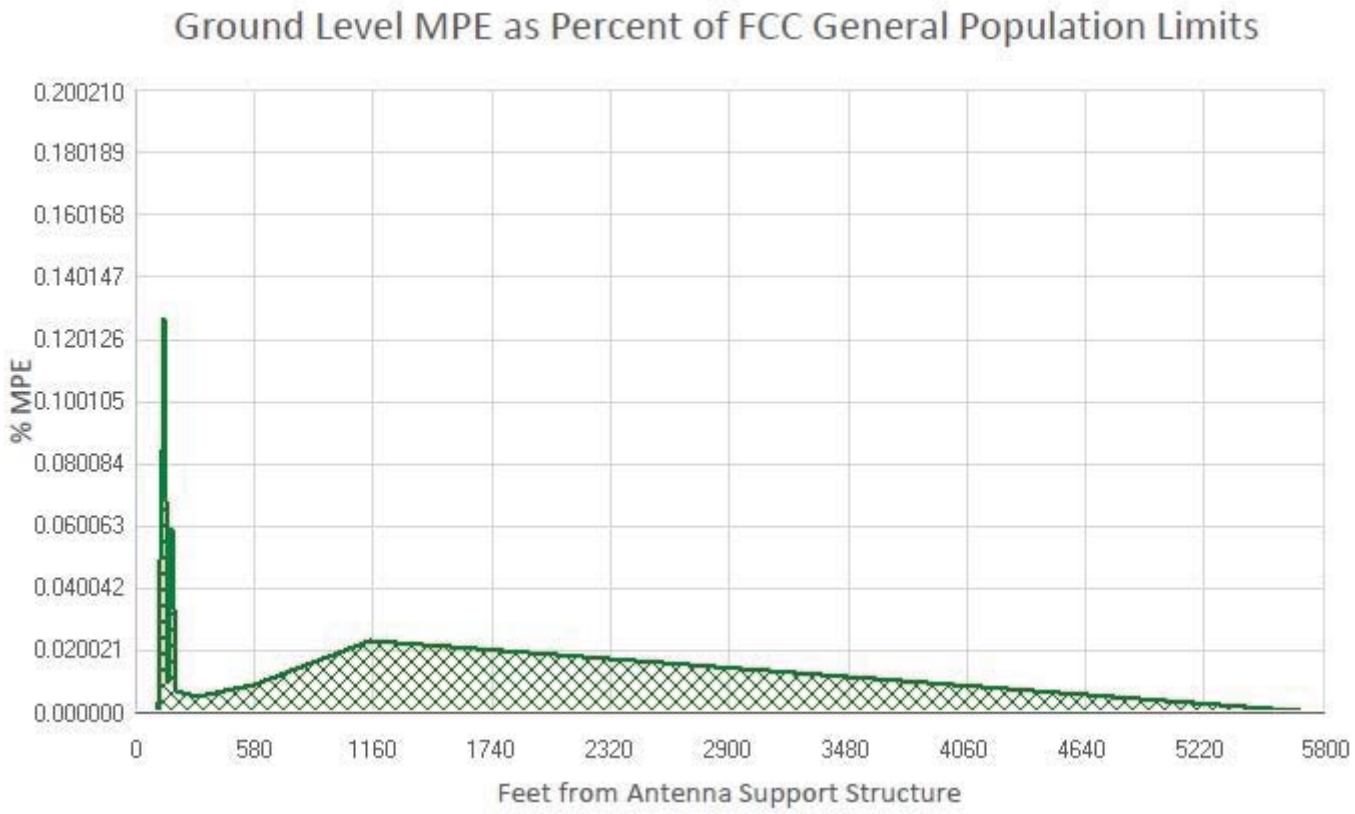
Maximum power density at ground level: 1.485 µW/cm^2

Highest percentage of Maximum Exposure Limit: 0.318 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
COMMSCOPE - FFVV-65C-R3-V1 02DT 1900 0° Sector

Maximum Exposure Limit - 1900 MHz
Limit (GP): 1000.000 µW/cm^2

EiRP		Height		Downtilt	
(Watts)	2354.530	(feet)	100.000	(Degrees)	0

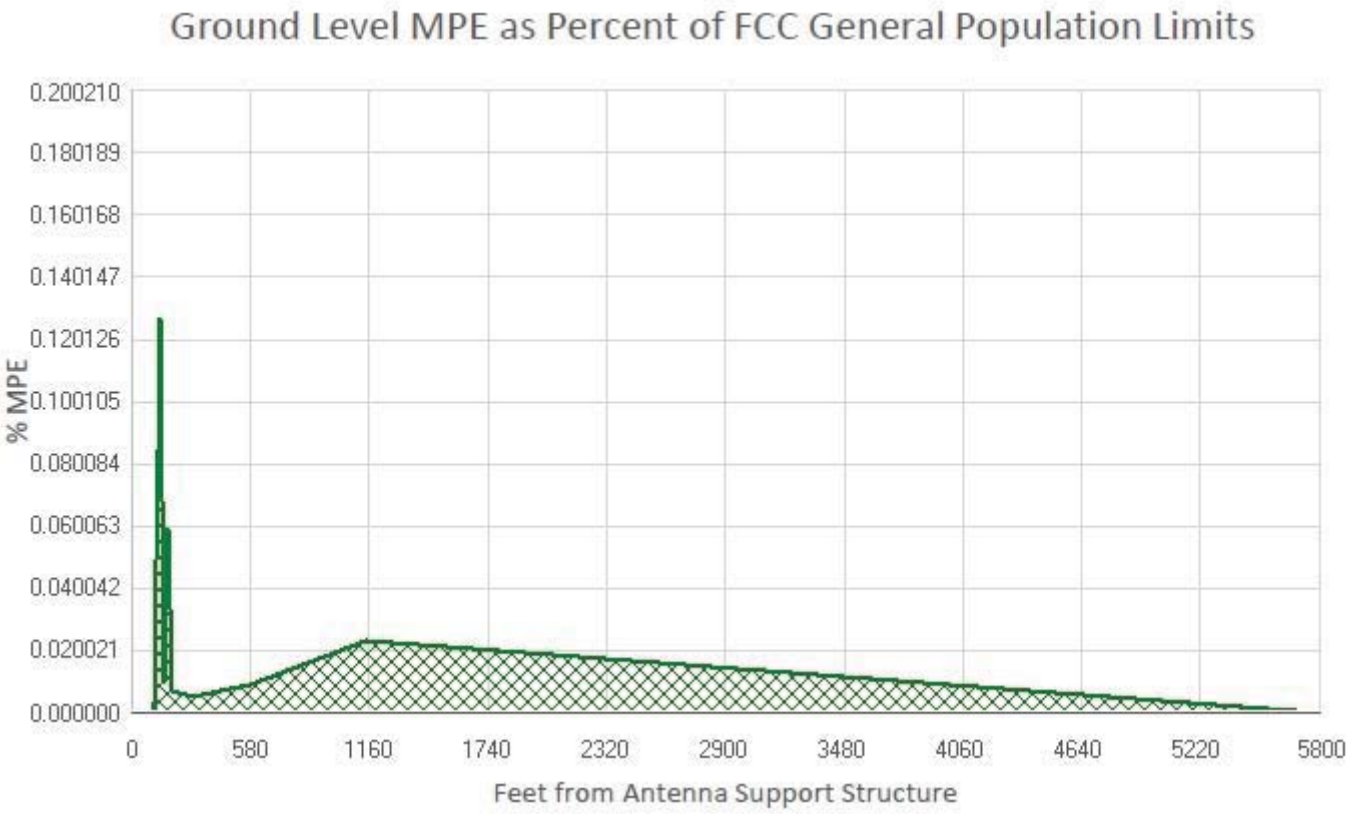


Maximum power density at ground level: 1.272 µW/cm^2
Highest percentage of Maximum Exposure Limit: 0.127 %

T-Mobile
US-IL-5744 - CH96556B - Sea Level Diving
COMMSCOPE - FFVV-65C-R3-V1 02DT 1900 270° Sector

Maximum Exposure Limit - 1900 MHz
Limit (GP): 1000.000 µW/cm^2

EiRP		Height		Downtilt	
(Watts)	2354.530	(feet)	100.000	(Degrees)	0



Maximum power density at ground level: 1.272 µW/cm^2
Highest percentage of Maximum Exposure Limit: 0.127 %

Agenda Item No: 12

City Council
Agenda Supplement

Meeting Date: January 17, 2023

Item: Bid Award – Central Park Drive at Lutter Drive Traffic Signal Installation

Staff Recommendation: Motion to award the bid for construction of a traffic signal at the Central Park Drive/Lutter Drive intersection to the lowest responsive and responsible bidder, Home Towne Electric, Inc. and adopt a Resolution authorizing the City Manager to execute a contract with Home Towne Electric, Inc. in the amount of $430,279.76, execute change orders for up to 10% of the contract amount, and approve warranted completion date change orders relating to the contract.

Staff Contact: Michael Magnuson, P.E., Director of Public Works and Engineering

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Background:
Recent commercial and residential developments near Central Park Drive and Lutter Drive have increased the traffic going through the intersection of these two roadways. Traffic studies for these recent developments concluded that a new traffic signal interconnected to the existing traffic signal at Route 31 and Central Park Drive/Rakow Road is warranted and recommended.

Plans and specifications for this work were completed and bids advertised in accordance with City policies. The City of Crystal Lake publically opened and read the bids on January 10, 2023. The bid results are summarized below:

Bidder	*Cost*	*Engineers Estimate of Cost*
Home Towne Electric, Inc.[1]	$430,279.76	$429,314.85

[1] Indicates Recommended Lowest Responsive and Responsible Bidder

Traffic signal work is specialized and there are a limited number of contractors in the Chicagoland area. City staff reached out to multiple signal contractors to determine why only one contractor bid on this contract. Due to the significant amount of work available in the Chicagoland area, some contractors are not bidding new projects so that they can complete their existing work on

schedule. One contractor who did not bid on the project indicated that they felt they could not compete with a contractors geographically closer to Crystal Lake.

Due to the long lead time of traffic signal equipment, staff anticipates the installation of this traffic signal sometime in summer or fall of 2023.

Recommendation:

This contract is being presented pursuant to a competitive bidding process. Under such process, the contract is to be awarded to the "lowest responsive and responsible bidder." The lowest responsive and responsible bidder is the contractor: (i) whose bid substantially conforms to the material provisions of the bid specifications, (ii) who demonstrates the financial capacity and ability to undertake and complete the project in question in accordance with bid specifications, and (iii) whose bid price is lowest among the responsive and responsible bidders. Selecting a contractor on bases not set forth in the bid specifications can lead to challenges to the City's award.

Home Towne Electric, Inc. meets all of the City's requirements and has previously performed work with the City with satisfactory results. The Engineer Estimate of Cost shows that the contractor bid is appropriate, therefore, staff recommends Home Towne Electric, Inc. for this project. This project is included in the FY2022/2023 budget. The residential and commercial developments in the area which added traffic to this intersection will pay their proportionate share of the intersection costs per each development's approved ordinance.

Votes Required to Pass:

Simple majority vote

RESOLUTION

WHEREAS the CITY OF CRYSTAL LAKE is desirous of improving the intersection of Central Park Drive at Lutter Drive with a traffic signal; and

WHEREAS the CITY received and publicly opened the bids for the Central Park Drive at Lutter Drive Traffic Signal Installation project on January 10, 2023; and

WHEREAS the lowest responsive and responsible bidder is Home Towne Electric, Inc.

NOW THEREFORE BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF CRYSTAL LAKE that the foregoing recitals are repeated and incorporated as though fully set forth herein; and

BE IT FURTHER RESOLVED that the City Manager is authorized to execute a contract between the CITY OF CRYSTAL LAKE and Home Towne Electric, Inc. for the Central Park Drive at Lutter Drive Traffic Signal Installation project in the bid amount $430,279.76; and

BE IT FURTHER RESOLVED that the City Manager is authorized to execute change orders for up to 10% of the contract amount and to approve warranted completion date change orders relating to the contract.

DATED this 17th day of January, 2023.

Draft

CITY OF CRYSTAL LAKE, an
Illinois municipal corporation,

By:_____
Haig Haleblian, MAYOR

SEAL

ATTEST

_____
Nick Kachiroubas, CITY CLERK

PASSED: January 17, 2023
APPROVED: January 17, 2023

Draft

Agenda Item No: 13

City Council
Agenda Supplement

Meeting Date: January 17, 2023

Item: Reject March 7, 2022 bids for Salt Storage Building Repairs and award December 9, 2022 bid to Carmichael Construction

Staff Recommendation: Motion to adopt a Resolution rejecting all bids from the March 7, 2022 bid opening for the Salt Storage Building Repair Project and to award the bid for construction of the Salt Storage Building Repairs to the lowest responsive and responsible bidder, Carmichael Construction, Inc., and adopt a Resolution authorizing the City Manager to execute a contract with Carmichael Construction, Inc. in the amount of $34,960.00, execute change orders for up to 10% of the contract amount, and approve warranted completion date change orders relating to the contract.

Staff Contact: Michael Magnuson, Director of Public Works & Engineering

Background:

The City conducted three bid openings for the Salt Storage Building Repairs on March 7, March 29, and December 9 of 2022. City staff followed standard bidding procedures, published the bids electronically (BidSync), and reached out directly to advise contractors of the projects. The City received only one bid on March 7, 2022, so City staff determined that the project would be re-bid on March 29, 2022 in order to have comparable bids. However, no bids were received from the March 29, 2022 posting.

The project scope was re-evaluated and determined to be appropriate for the work necessary. City staff contacted multiple contractors to notify them of the posting and the project was reposted on December 9, 2022 with three bids received. The bids received are as follows:

Bidder	As-Read Bid
√Carmichael Construction, Inc.	$34,960.00
Wm. Tonyan & Sons	$38,500.00
G. Fisher Commercial Construction, Inc.	$40,000.00

√Lowest responsive and responsible bidder

Recommendation:

This contract is being presented pursuant to a competitive bidding process. Under such process, the contract is to be awarded to the "lowest responsive and responsible bidder." The lowest responsive and responsible bidder is the contractor: (i) whose bid substantially conforms to the material provisions of the bid specifications, (ii) who demonstrates the financial capacity and ability to undertake and complete the project in question in accordance with bid specifications, and (iii) whose bid price is lowest among the responsive and responsible bidders. Selecting a contractor on bases not set forth in the bid specifications can lead to challenges to the City's award.

Carmichael Construction, Inc. meets all of the City's requirements and has previously performed work with the City with satisfactory results. Staff is recommending rejection of the March 7, 2022 bid and award of the December 9, 2022 bid to the lowest responsive and responsible bidder, Carmichael Construction, Inc. in the amount of $34,960.00 with a 10% contingency for unforeseen expenses and to approve warranted completion date extensions.

Votes Required to Pass:

Simple majority

RESOLUTION

WHEREAS the CITY is desirous of Salt Storage Building Repairs located at 100 W. Woodstock St., Crystal Lake; and

WHEREAS the CITY is rejecting all bids from the March 7, 2022 bid opening for Salt Storage Building Repairs; and

WHEREAS the CITY received and publicly opened the bids for Salt Storage Building Repairs on December 9, 2022; and

WHEREAS the lowest responsive and responsible bidder is Carmichael Construction, Inc.

NOW THEREFORE BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF CRYSTAL LAKE that the foregoing recitals are repeated and incorporated as though fully set forth herein; and

BE IT FURTHER RESOLVED that the City Manager is authorized to execute a contract between the CITY OF CRYSTAL LAKE and Carmichael Construction, Inc. for the Salt Storage Building Repairs project in the bid amount $34,960; and

BE IT FURTHER RESOLVED that the City Manager is authorized to execute change orders for up to 10% of the contract amount and to approve warranted completion date change orders relating to the contract.

DATED this 17th day of January, 2023.

Draft

CITY OF CRYSTAL LAKE, an
Illinois municipal corporation,

By:_____
Haig Haleblian, MAYOR

SEAL

ATTEST

_____
Nick Kachiroubas, CITY CLERK

PASSED: January 17, 2023
APPROVED: January 17, 2023

Draft

Agenda Item No: 14

City Council
Agenda Supplement

Meeting Date: January 17, 2023

Item: Appointment to Firefighters' Pension Board of Trustees

Staff Recommendation: Motion to approve the Mayoral appointment of Assistant Finance Director Adam Orton to the Firefighters' Pension Fund Board of Trustees.

Staff Contact: Haig Haleblian, Mayor

Background:

City Manager Eric Helm has served as one of the Mayoral appointees on the Crystal Lake Firefighters' Pension Board since December 2019. With his appointment to City Manager, it is now recommended that Mr. Adam Orton, Assistant Finance Director, be appointed to replace Mr. Helm on the Firefighters' Pension Fund Board of Trustees.

The membership of the Firefighters' Pension Fund Board of Trustees is governed by Public Act 94-0317 (40 ILCS 5/4-121) which states:

> *"…the board for each municipality or fire protection district shall consist of 5 members.* ***Two members of the board shall be appointed by the mayor*** *or president of the board of trustees of the municipality or fire protection involved. Two members of the board shall be active participants of the pension fund who are elected from the active participants of the fund. One member of the board shall be a person who is retired under the Firemen's Pension Fund Act of 1919 or this Article who is elected from person retired under the Firemen's Pension Fund Act of 1919 or this Article." (*Emphasis Added.)

Votes Required to Pass:

Simple majority.

RESOLUTION NO.

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CRYSTAL LAKE, ILLINOIS,
Confirming Appointments to the Board of Trustees of the Firefighters' Pension Fund

WHEREAS, the Board of Trustees of the Firefighters' Pension Fund consists of 5 members, 2 of who are appointed by the Mayor with the advice and consent of the Crystal Lake City Council; and

WHEREAS, the Mayor of the City of Crystal Lake, has recommended that Adam Orton replace Eric Helm on the five-member Board of Trustees of the Firefighters' Pension Fund.

NOW THEREFORE, by adoption of this resolution, the City Council confirms the appointment of Adam Orton to the Board of Trustees of the Firefighters' Pension Fund appointment effective January 17, 2023.

Adopted by the City Council of the City of Crystal Lake at a regular meeting on the 17th day of January, 2023.

Draft

_____
Haig Haleblian, Mayor

SEAL

ATTEST:

_____
Nick Kachiroubas, City Clerk

PASSED: January 17, 2023
APPROVED: January 17, 2023

(40 ILCS 5/4-121) (from Ch. 108 1/2, par. 4-121)

Sec. 4-121. Board created. There is created in each municipality or fire protection district a board of trustees to be known as the "Board of Trustees of the Firefighters' Pension Fund". The membership of the board for each municipality shall be, respectively, as follows: in cities, the treasurer, clerk, marshal or chief officer of the fire department, and the comptroller if there is one, or if not, the mayor; in each township, village or incorporated town, the president of the municipality's board of trustees, the village or town clerk, village or town attorney, village or town treasurer, and the chief officer of the fire department; and in each fire protection district, the president and other 2 members of its board of trustees and the marshal or chief of its fire department or service, as the case may be; and in all the municipalities above designated 3 additional persons chosen from their active firefighters and one other person who has retired under the Firemen's Pension Fund Act of 1919, or this Article. Notwithstanding any provision of this Section to the contrary, the term of office of each member of a board established on or before the 3rd Monday in April, 2006 shall terminate on the 3rd Monday in April, 2006, but all incumbent members shall continue to exercise all of the powers and be subject to all of the duties of a member of the board until all the new members of the board take office.

Beginning on the 3rd Monday in April, 2006, the board for each municipality or fire protection district shall consist of 5 members. Two members of the board shall be appointed by the mayor or president of the board of trustees of the municipality or fire protection district involved. Two members of the board shall be active participants of the pension fund who are elected from the active participants of the fund. One member of the board shall be a person who is retired under the Firemen's Pension Fund Act of 1919 or this Article who is elected from persons retired under the Firemen's Pension Fund Act of 1919 or this Article.

Agenda Item No: 15

City Council
Agenda Supplement

Meeting Date: January 17, 2023

Item: Appointment to Police Pension Board of Trustees

Staff Recommendation: Motion to approve Mayoral appointment of Assistant Finance Director Adam Orton to the Board of Trustees of the Police Pension Fund

Staff Contact: Haig Haleblian, Mayor

Background:

City Manager Eric Helm has served as one of the Mayoral appointees on the Crystal Lake Police Pension Board since December 2019. With his appointment to City Manager, it is now recommended that Mr. Adam Orton, Assistant Finance Director, be appointed to replace Mr. Helm on the Police Pension Fund Board of Trustees.

The membership of the Board of Trustees of the Police Pension Fund is governed by 40 ILCS 5/3-128 which states:

> *A board of 5 members shall constitute a board of trustees to administer the pension fund and to designate the beneficiaries thereof. The board shall be known as the "Board of Trustees of the Police Pension Fund" of the municipality.*
>
> ***Two members of the board shall be appointed by the mayor*** *or president of the board of trustees of the municipality involved. The 3rd and 4th members of the board shall be elected from the active participants of the pension fund by such active participants. The 5th member shall be elected by and from the beneficiaries.* (Emphasis added.)

Votes Required to Pass:

Simple majority.

RESOLUTION NO.

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CRYSTAL LAKE, ILLINOIS,
Confirming Appointments to the Board of Trustees of the Police Pension Fund

WHEREAS, the Board of Trustees of the Police Pension Fund consists of 5 members, 2 of who are appointed by the Mayor with the advice and consent of the Crystal Lake City Council; and

WHEREAS, the Mayor of the City of Crystal Lake, has recommended that Adam Orton replace Eric Helm on the five-member Board of Trustees of the Police Pension Fund.

NOW THEREFORE, by adoption of this resolution, the City Council confirms the appointment of Adam Orton to the Board of Trustees of the Police Pension Fund appointment effective January 17, 2023.

Adopted by the City Council of the City of Crystal Lake at a regular meeting on the 17th day of January, 2023.

Draft

_____
Haig Haleblian, Mayor

SEAL

ATTEST:

_____
Nick Kachiroubas, City Clerk

PASSED: January 17, 2023
APPROVED: January 17, 2023

(40 ILCS 5/3-128) (from Ch. 108 1/2, par. 3-128)

Sec. 3-128. Board created. A board of 5 members shall constitute a board of trustees to administer the pension fund and to designate the beneficiaries thereof. The board shall be known as the "Board of Trustees of the Police Pension Fund" of the municipality.

Two members of the board shall be appointed by the mayor or president of the board of trustees of the municipality involved. The 3rd and 4th members of the board shall be elected from the active participants of the pension fund by such active participants. The 5th member shall be elected by and from the beneficiaries.

One of the members appointed by the mayor or president of the board of trustees shall serve for one year beginning on the 2nd Tuesday in May after the municipality comes under this Article. The other appointed member shall serve for 2 years beginning on the same date. Their successors shall serve for 2 years each or until their successors are appointed and qualified.

The election for board members shall be held biennially on the 3rd Monday in April, at such place or places in the municipality and under the Australian ballot system and such other regulations as shall be prescribed by the appointed members of the board.

The active pension fund participants shall be entitled to vote only for the active participant members of the board. All beneficiaries of legal age may vote only for the member chosen from among the beneficiaries. No person shall be entitled to cast more than one ballot at such election. The term of elected members shall be 2 years, beginning on the 2nd Tuesday of the first May after the election.

Upon the death, resignation or inability to act of any elected board member, his or her successor shall be elected for the unexpired term at a special election, to be called by the board and conducted in the same manner as the regular biennial election.

Members of the board shall neither receive nor have any right to receive any salary from the pension fund for services performed as trustees in that office. (Source: P.A. 83-1440.)

Agenda Item No: 16

City Council
Agenda Supplement

Meeting Date: January 17, 2023

Item: Amendment to City Code Article 11 related to the Police and Fire Pension Board

Staff Recommendation: Motion to approve an ordinance amending Article 11-5 and Article 11-6 of the City Code

Staff Contact: Victor Filippini, City Special Legal Counsel
Eric Helm, City Manager

Background:
City Special Legal Counsel reviewed the City Code and recommends modifications to Sections 11-5 and 11-6 of Article 11, which set forth general provisions related to the Board of Trustees of the Police Pension Fund for the City of Crystal Lake and the Board of Trustees of the Crystal Lake Fire Fighters' Pension Fund. Because both pension funds are independent bodies politic and corporate under the Illinois Pension Code, 40 ILCS 5/22-401, they are governed exclusively by the Pension Code, and the City has no need or authority to regulate to them (40 ILCS 5/3-150, 40 ILCS 5/4-142). As such, staff recommends repealing Sections 11-5 and 11-6 of the City Code.

These changes do not impact any aspects of the City Pension Board's operations or responsibilities.

Votes Required to Pass:

Simple majority.

Ordinance No. _____
File No. _____

CITY OF CRYSTAL LAKE

AN ORDINANCE AMENDING ARTICLE 11 OF THE CRYSTAL LAKE CITY CODE RELATING TO PENSION FUNDS

WHEREAS, the Crystal Lake City Code currently includes Sections 11-5 and 11-6 relating to the boards of trustees of the pension funds for the City's police officers and firefighters, respectively;

WHEREAS, because such pension funds are established under the provisions of the Illinois Pension Code, 40 ILCS 5, and the City lacks authority "to change, alter, or amend in any way" the terms of the Pension Code or the pension boards created thereunder, 40 ILCS 5/3-150, 5/4-142, the City Council has determined that it is appropriate and in the best interests of the City and its residents to amend the City Code by deleting Sections 11-5 and 11-6;

NOW, THEREFORE, BE IT ORDAINED by the Mayor and City Council of the City of Crystal Lake, County of McHenry, State of Illinois, as follows:

SECTION 1: Incorporation of Recitals. The foregoing recitals are hereby incorporated into and made a part of this Ordinance as if fully set forth.

SECTION 2: Amendment to Article 11 of the City Code. Article 11 of the City Code is hereby amended by deleting in their entirety Sections 11-5 and 11-6, so that Article 11 shall hereafter be and read with respect to said Sections as follow:

§11-5. RESERVED.

Draft

§11-6. RESERVED.

SECTION 3: Effective Date. This Ordinance shall be in full force and effect from and after its passage and approval in the manner provided by law.

PASSED THIS 17th DAY OF JANUARY, 2023.

AYES:

NAYS:

ABSTAIN:

ABSENT:

APPROVED at Crystal Lake, Illinois, this 17th day of January, 2023.

City of Crystal Lake, an
Illinois municipal corporation

_____
Haig Haleblian, Mayor

SEAL

ATTEST:

_____
Nick Kachiroubas, City Clerk

PASSED: January 17, 2023
APPROVED: January 17, 2023

Draft