



REVISED

#2015-47 Central States Tower/ Verizon Wireless— Special Use Permit & Zoning Variation Project Review for Planning and Zoning Commission

<u>Meeting Date:</u>	October 21, 2015
<u>Request:</u>	A Special Use Permit for a wireless communication tower and a variation from Article 2-400 to allow the monopole tower to be setback less than 110% of the height of the tower, 143 feet, from all property lines.
<u>Location:</u>	6521 Commercial Road
<u>Acreage:</u>	43,750 square feet
<u>Existing Zoning:</u>	M (Manufacturing)
<u>Surrounding Properties:</u>	North: B-2 (General Commercial) South: M (Manufacturing) East: M (Manufacturing) West: B-2 (General Commercial)
<u>Staff Contact:</u>	Kathryn Cowlin (815.356.3798)

Background:

- **Existing Use:** The property is currently improved with an industrial building that is occupied by Le Walt Glass.
- **Background:** 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.
- After feedback from the City Council, the petitioner is proposing a new design. The "slick stick" pole is more aesthetically pleasing compared to the previously requested pole.
- **UDO Requirements:** A special use permit is required for wireless communication towers. Wireless communication facilities are required to be setback 110% of the height of the tower from all property lines.

Development Analysis:

General

- Request: The petitioner is requesting a special use permit for a wireless communications tower and a zoning variation from Article 2-400 to allow the monopole tower to be setback less than 110% of the height of the tower, 143 feet, from all property lines. The closest that the tower would be to the property lines would be approximately 58 feet.
- 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

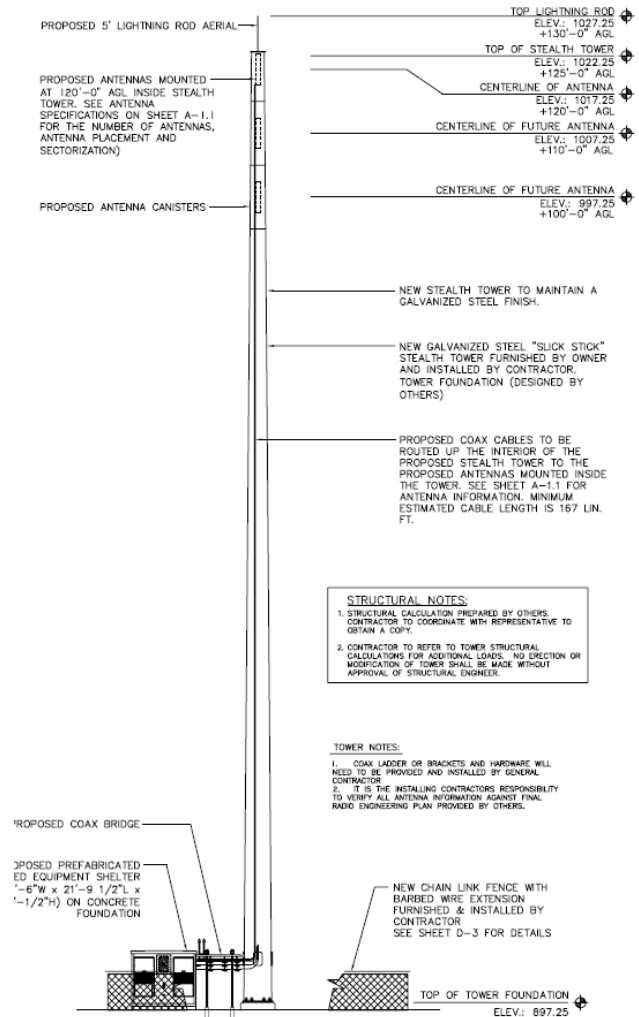
- The height of the tower is 130 feet.
- The proposed tower design is a “slick stick” stealth tower, meaning it has no visible antennas.
- The proposed utility shelter is pictured below. The utility shelter is a prefabricated structure that houses various support equipment for the tower.
- The communication facility will be enclosed by an 8-foot chain link fence with a barbwire crown.



REAR VIEW OF THE SHELTER



FRONT VIEW OF THE SHELTER



2030 Comprehensive Land Use Plan Review:

The Comprehensive Plan designates the subject property as Industry, which allows for existing and future manufacturing uses.

This project meets the following goal:

Land Use - Industry

Goal: Support manufacturing uses within the community which contribute to the regional and local economy and Crystal Lake’s live, work, play philosophy.

This can be accomplished with the following supporting action:

Supporting Action: Expand and attract manufacturing users which provide jobs, services, and products strengthening the City’s economy.

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*

Meets standard per verification letter from Mr. Tindall of Sabre Industries.

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*

Meets standard per verification letter from Mr. Tindall of Sabre Industries.

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*

Meets standard, the tower is 130 feet in height.

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

The petitioner submitted a reference FCC license.

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

Meets standard, the proposed tower is a galvanized steel finish.

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

Meets standard, the proposed utility shelter is neutral in color.

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

Meets Does not meet

No outside storage is proposed.

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

Meets Does not meet

No lighting is proposed.

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

The petitioner's application does not provide signage details, as there is a possibility that they may not plan to include signage.

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

Meets Does not meet

No signage is proposed.

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

The petitioner submitted a site plan demonstrating that all equipment will be located on a single zoning lot.

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

The petitioner is requesting a zoning variation for this criteria.

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

Meets standard, all equipment is greater than the 15-foot minimum interior yard setback and the 20-foot rear yard setback requirements.

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

The petitioner submitted an affidavit that there are no existing structures within the 1200-foot radius.

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

The petitioner submitted plans demonstrating that co-location is possible for four additional users on the proposed tower.

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*

The site plan calls for 6-foot tall Arborvitae screening planted in an alternate pattern at ten feet on center. The requirement states the evergreen shrubs shall be planted five feet on center.

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*

Meets standard, the proposed security fencing is 8 feet in height with a one foot barb wire crown.

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*

Meets standard, the petitioner submitted documentation that the FCC requirements have been met.

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*

Meets standard, the petitioner submitted documentation that the FCC requirements have been met.

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 (received 07/30/15)
 - B. Existing Tower Analysis (received 07/30/15)
 - C. REVISED Plan Set (received 10/20/15, dated 10/20/15)
 - D. REVISED Page A-1 for Plan Set (received 10/23/15, dated 10/20/15)
 - E. Plat of Survey (received 07/30/15, dated 05/12/15)
 - F. Affidavit (received 09/24/15, dated 09/17/15)
 - G. Site-Safe Non-Interference Letter (received 10/30/15, dated 06/05/15)
 - H. Verizon RF Compliance Letter (received 10/30/15, dated 10/30/15)
2. The design of buildings and related structures shall, to the maximum extent practicable, use materials, colors and architectural styles, which blend into the natural setting and surrounding buildings.
3. No outside storage shall be allowed on any facility site.
4. Towers shall not be artificially lighted, unless required by the FAA or other applicable authority.
5. 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.
6. No commercial advertising shall be allowed on the tower or its related facilities.
7. The petitioner shall work with staff to enhance the landscaping buffer along the property lines.
8. The driveway leading to the new cell tower will need to be paved per City standards.
9. The tower shall contain an American flag at all times.
10. The petitioner shall address all of the review comments and requirements of the Community Development, Public Works, Fire and Police Departments.

RECEIVED
JUL 30 2015
BY: _____

2015 47

City of Crystal Lake Development Application

Office Use Only
File # _____

Project Title: IL-00-5777 Crystal Lake South - CST/Verizon Wireless

Action Requested

- | | |
|---|--|
| <input type="checkbox"/> Annexation | <input type="checkbox"/> Preliminary PUD |
| <input type="checkbox"/> Comprehensive Plan Amendment | <input type="checkbox"/> Preliminary Plat of Subdivision |
| <input type="checkbox"/> Conceptual PUD Review | <input type="checkbox"/> Rezoning |
| <input type="checkbox"/> Final PUD | <input checked="" type="checkbox"/> Special Use Permit |
| <input type="checkbox"/> Final PUD Amendment | <input checked="" type="checkbox"/> Variation |
| <input type="checkbox"/> Final Plat of Subdivision | <input type="checkbox"/> Other |

Petitioner Information

Central States Tower
Name: 9/6 TNG Wireless
Address: 1829 Fortner Drive
Indianapolis, IN 46231
Phone: 317-979-1212
Fax: 317-203-0940
E-mail: Darren@TNGEnterprisesllc.com

Owner Information (if different)

Name: Home State BANK NA; LAND TRUST #4439
Address: 6521 Commercial Road
Crystal Lake, IL 60014
Phone: 815-459-5252
Fax: _____
E-mail: feddersenc@aol.com

Property Information

Project Description: Installation of a 180' Tall Monopole Wireless Structure and associate's ground shelter & Equipment within an enclosed, fenced compound

Project Address/Location: 6521 Commercial Rd. Crystal Lake, IL 60014

PIN Number(s): 19-08-276-007

Development Team

Please include address, phone, fax and e-mail

Developer: Central States Tower 323 South Halsted St. #100 Wheaton, IL 60187
630-221-8500 / brianm@centralstatetower.com

Architect: Consolidated Land Surveyors 1300 W. Commerce Dr #700 Peoria, IL 61605
309-692-3434 / JOHN@CLSLANO.COM

Attorney: N/A

Engineer: Consolidated Land Surveyors

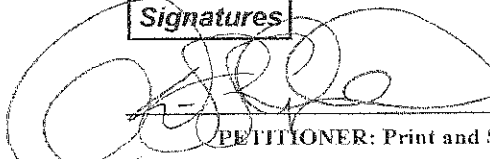
Landscape Architect: N/A

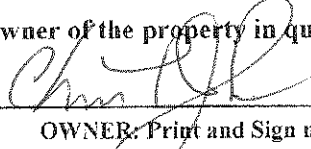
Planner: N/A

Surveyor: Consolidated Land Surveyors

Other: _____

Signatures

 Darren J. Snodgrass 7/29/15
PETITIONER: Print and Sign name (if different from owner) Date

As owner of the property in question, I hereby authorize the seeking of the above requested action.
 CHRIS L. JOHNSON 7/29/15
VICE PRESIDENT & SR. TRUST OFFICER Date
OWNER: Print and Sign name

NOTE: If the property is held in 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.

This instrument is executed by Home State Bank/National Association, Crystal Lake, IL., not personally but solely as Trustee as aforesaid. All the covenants and conditions to be performed hereunder by Home State Bank/National Association are undertaken by it solely as Trustee as aforesaid and not individually, and no personal liability shall be asserted or be enforceable against Home State Bank/National Association by reason of any of the covenants, statements, representations or warranties contained in this instrument.

Development Team

Please include address, phone, fax and e-mail

Developer: Central States Tower 323 South Hale St. #100 Wheaton, IL 60187
630-221-8500 / brianm@centralstatstower.com

Architect: Consolidated Land Surveyors 1301 W. Commerce Dr #700 Peoria, IL 61615
309-692-3434 / JOHN@CLSLAND.COM

Attorney: N/A

Engineer: Consolidated Land Surveyors

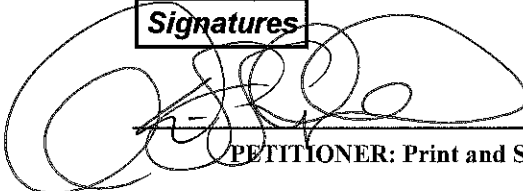
Landscape Architect: N/A

Planner: N/A

Surveyor: Consolidated Land Surveyors

Other: _____

Signatures



Daniel S. Snodgrass

PETITIONER: Print and Sign name (if different from owner)

7/29/2015

Date

As owner of the property in question, I hereby authorize the seeking of the above requested action.

OWNER: Print and Sign name

Date

NOTE: If the property is held in 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.



HOME STATE BANK N.A.
We're on your side
CERTIFICATION OF TRUSTEE

TRUST DEPARTMENT

I, Chris L. Johnson, Vice President & Sr. Trust Officer for Home State Bank/National Association, Crystal Lake, Illinois, do hereby certify that Home State Bank/NA is the trustee of the following trust:

Land Trust # 4439

and, as trustee, do further certify that the beneficial ownership of said trust as indicated by its records is as follows:

Beneficial Owner(s)

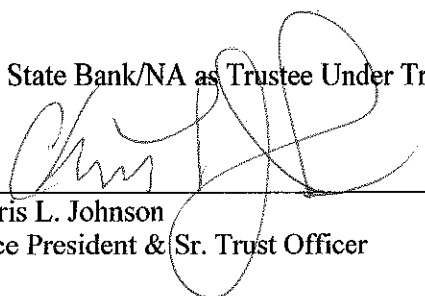
Douglas Fedderson

Collateral Assignee(s)

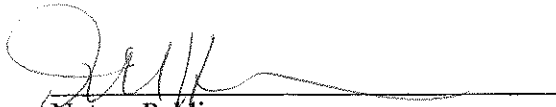
Home State Bank, N.A

Home State Bank does not by this certification make any warranties, representations or certifications as to the holdings of the trust, the state of title of any real property held therein, or any assignment of beneficial interest not acknowledged by it as trustee.

Home State Bank/NA as Trustee Under Trust 4439

By 
Chris L. Johnson
Vice President & Sr. Trust Officer

Subscribed and Sworn to before me
this 29th day of July, 2015.


Notary Public



PUBLIC NOTICE

**BEFORE THE PLANNING AND
ZONING COMMISSION OF THE
CITY OF CRYSTAL LAKE, MCHE-
NRY COUNTY, ILLINOIS**

IN THE MATTER OF THE APPLI-
CATION OF
Central Sales Tower c/o TNG Wire-
less

LEGAL NOTICE

Notice is hereby given in compli-
ance with the Unified Development
Ordinance (UDO) of the City of
Crystal Lake, Illinois, that a public
hearing will be held before the
Planning and Zoning Commission
of the City of Crystal Lake upon the
application of Central Sales Tower
c/o TNG Wireless seeking a Special
Use Permit and variation to allow a
wireless communication tower at
6521 Commercial Road, Crystal
Lake, Illinois. PIN: 19-08-276-007

This application is filed for the
purpose of seeking a Special Use
Permit pursuant to Article 2-400 to
allow a wireless communications
tower and a variation from Article
2-400(C)(48)(ix) to allow the
monopole tower to be setback less
than 110% of the height of the
tower from all property lines, as
well as any other variations as nec-
essary to complete the project as
proposed. Plans for this project
can be viewed at the Crystal Lake
Community Development Depart-
ment at City Hall.

A public hearing before the
Planning and Zoning Commission
for this request will be held at 7:30
p.m. on Wednesday August 19,
2015, at the Crystal Lake City Hall,
100 West Woodstock Street, at
which time and place any person
determining to be heard may be
present.

Tom Hayden, Chairperson
Planning and Zoning Commission
City of Crystal Lake

(Published in the Northwest Herald
August 4th, 2015.) NW 7121

CITY OF
Crystal Lake Illinois





CITY OF
Crystal Lake
ILLINOIS

August 20, 2015

The Honorable Mayor
and City Council

RE: 2015-47 Verizon Tower

Council Members:

The Planning and Zoning Commission considered the above referenced petition at their August 19, 2015 meeting at which a quorum consisting of members Batastini, Esposito, Goss, Jouron, Skluzacek, and Greenman were present. Mr. Hayden was absent.

Mr. Goss moved to approve a Special Use Permit for a wireless communication tower and a variation from Article 2-400 to allow the monopole tower to be setback less than 110% of the height of the tower, 143 feet, from all property lines for Verizon Tower at 6521 Commercial Road with the following conditions:

1. Approved plans, reflecting staff and advisory board recommendations, as approved by the City Council:
 - A. Application (received 07/30/15)
 - B. Existing Tower Analysis (received 07/30/15)
 - C. Plan Set (received 07/30/15, dated 07/28/15)
 - D. Plat of Survey (received 07/30/15, dated 05/12/15)
2. 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.
3. The design of buildings and related structures shall, to the maximum extent practicable, use materials, colors and architectural styles, which blend into the natural setting and surrounding buildings.
4. 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.
5. No outside storage shall be allowed on any facility site.
6. Towers shall not be artificially lighted, unless required by the FAA or other applicable authority.
7. 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.
8. No commercial advertising shall be allowed on the tower or its related facilities.

9. The petitioner shall work with staff to enhance the landscaping buffer along the property lines.
10. The security fencing shall measure 8 feet in height.
11. The driveway leading to the new cell tower will need to be paved per City standards.
12. It shall be demonstrated that the proposed tower, antenna, and supporting equipment complies with FCC nonionizing radiation requirements for individual and combined facilities.
13. The petitioner shall address all of the review comments and requirements of the Community Development, Public Works, Fire and Police Departments.
- 14. The petitioner agrees to meet all of the Special Use Permit criteria listed in the Staff Report, with the exception of the required setback.**
- 15. Any additional carriers are required to go through the Building permit process.**

Mr. Skluzacek seconded the motion. On roll call, members Esposito, Goss, Jouron, Skluzacek, and Greenman voted aye. Mr. Batastini voted no. Motion passed.

CRYSTAL LAKE PLANNING AND ZONING COMMISSION



Jeff Greenman
Vice Chairman

JG/shd



**CRYSTAL LAKE PLANNING AND ZONING COMMISSION
WEDNESDAY, AUGUST 19, 2015
HELD AT THE CRYSTAL LAKE CITY COUNCIL CHAMBERS**

The meeting was called to order by Vice Chairman Greenman at 7:30 p.m. On roll call, members Batastini, Esposito, Goss, Jouron, Skluzacek, and Greenman were present. Mr. Hayden was absent.

James Richter II, Planning and Economic Development Manager, and Kathryn Cowlin, Planner, were present from Staff.

Mr. Greenman asked those in attendance to rise to say the Pledge of Allegiance. He led those in attendance in the Pledge.

Mr. Greenman stated that this meeting was being televised now as well as recorded for future playback on the City's cable station.

2015-47 VERIZON TOWER – 6521 Commercial Rd – PUBLIC HEARING

Special Use Permit for wireless communication tower and a variation from Article 2-400 to allow the monopole tower to be setback less than 110% of the height of the tower, 143 feet, from all property lines.

Mr. Greenman stated that the sign had been posted. He said the surrounding property owners were notified and the Certificate of Publication was in the file. Mr. Greenman waived the reading of the legal notice without objection.

Mr. Greenman read a statement regarding cell towers.

Darren Snodgrass with Central States Tower, was present to represent the petition. Mr. Snodgrass appreciates the time the staff and Commission have put into this request. They have been searching for existing structures that could be utilized to attach a cell tower to and none could be found. Mr. Snodgrass said he provided staff with a collapse letter and the tower is designed to collapse upon itself and within the property. He said he reviewed the conditions in the report and doesn't have any issues with them. He also provided staff with a water tower analysis. Mr. Snodgrass handed out maps showing the existing sites and where coverage is lacking. There is a capacity situation which is causing dropped calls. With all of the I-Pads, cell phones, etc., these devices are taking up data capacity. They looked at what they could do and matched as best as they could to the City's codes.

There was no one in the public who wished to comment on this petition. The public portion was closed at this time.

Mr. Jouron asked if this tower could be a flag pole style like the one at the waste water treatment plant. Mr. Snodgrass said the issue is capacity with the flag pole style. Inside the flag pole units gets too hot. They

worked well for about 5 years and now some carriers are having problems with that style.

Mr. Goss reviewed the criteria listed in the report. Additional information will need to be provided to staff including pole information, building structures, etc. He added that the building that accompanies the towers will need to be landscaped. Mr. Snodgrass agreed. Mr. Goss said he can support the request. Mr. Skluzacek and Mr. Esposito agreed.

Mr. Greenman asked what the height of the pole would be to meet the City's requirements. Mr. Goss said it would be about 50% shorter. Mr. Snodgrass added that this is the reason the poles collapse onto itself to meet City requirements the pole would be approximately 50 feet tall. Mr. Greenman said he can support the request.

Mr. Goss added that any additional users who co-locate equipment must go through the building permit process. Mr. Snodgrass agreed.

Mr. Jouron asked how many other users will be on the tower. Mr. Snodgrass said this pole is designed to accommodate two other carriers.

Mr. Goss moved to approve a Special Use Permit for a wireless communication tower and a variation from Article 2-400 to allow the monopole tower to be setback less than 110% of the height of the tower, 143 feet, from all property lines for Verizon Tower at 6521 Commercial Road with the following conditions:

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9. The petitioner shall work with staff to enhance the landscaping buffer along the property lines.
10. The security fencing shall measure 8 feet in height.
11. The driveway leading to the new cell tower will need to be paved per City standards.
12. It shall be demonstrated that the proposed tower, antenna, and supporting equipment complies with FCC nonionizing radiation requirements for individual and combined facilities.
13. The petitioner shall address all of the review comments and requirements of the Community Development, Public Works, Fire and Police Departments.
- 14. The petitioner agrees to meet all of the Special Use Permit criteria listed in the Staff Report, with the exception of the required setback.**
- 15. Any additional carriers are required to go through the Building permit process.**

Mr. Skluzacek seconded the motion. On roll call, members Esposito, Goss, Jouron, Skluzacek, and Greenman voted aye. Mr. Batastini voted no. Motion passed.

course which has too many turns and is run in a very compressed area. He stated that he was a very big fan and advocate of this type of healthy activity for the community, but the proximity of Route 14 and other busy roads did not make for a great venue, except for the swimming portion at Three Oaks. He stated that he would be willing to give the event one more opportunity with no waivers and strict controls, including that if the event did not have enough volunteers on the day of the race, the race could not occur. He stated that he wanted the event to succeed, but he agreed with Councilman Dawson that the Council's principal responsibility was to the residents of Crystal Lake, and he hoped that the requested date of September 18 would not conflict with anything.

Councilwoman Brady noted that one of the conditions for approval recommended by staff was that the petitioner provides proof of all of the required volunteers by August 18. Councilman Thorsen questioned if those volunteers did not show up on the day of the event. Mayor Shepley stated that the staff could evaluate the minimum number to make the event safe without the assistance of City staff, and if there were not enough volunteers, the race could not go forward. Councilman Hopkins stated that if 4,000 people show up for the event, it would be pretty hard to turn them away, suggesting that there could be a pool of City staff to fill in with their salary paid by the event organizers. Assistant to the City Manager Brad Mitchell advised that at that time of year, there would only be about 6 or so available staff to act as lifeguards. Councilman Hubbard asked what would happen if the cable park could not operate that day. Councilman Dawson noted that the fishing and the marina were also open on weekends in September. Councilman Thorsen suggested that these issues be ironed out before the Council votes on the matter. Councilwoman Brady asked how many people normally attend the annual Willow Creek baptism ceremony at Three Oaks and Mr. Mitchell advised about 500.

Mayor Shepley suggested continuing this to the next meeting to work out all of the details, including advising the cable park business for their input. He noted that the City has a lease with the cable park that should also be reviewed. Councilwoman Brady stated that she would not be able to attend the next City Council meeting and Mayor Shepley stated that if the request began to look like it would not have enough support for approval without Councilwoman Brady, it could be continued again to the next City Council meeting.

Councilwoman Brady moved to continue the matter to the next regular City Council meeting on October 20, 2015. Councilwoman Ferguson seconded the motion. On roll call, all voted yes. Motion passed.

17. 6251 Commercial Road, Central States Towers/Verizon-Special Use Permit for a wireless communications tower and Variation to allow the monopole tower to be setback less than 110% of the height of the tower from all property lines.

Attorney Richard Riley and Darren Snodgrass, Site Acquisition Manager, were present.

Planning and Economic Development Manager James Richter II presented an overview of the request, focusing on required information under the City's Unified Development Ordinance (UDO) that is still outstanding from the petitioner.

Mayor Shepley stated that if the petitioner had not submitted information to the Planning and Zoning Commission sufficient to meet the UDO then the petitioner needed to go back to the Planning and Zoning Commission and present that information, not to the City Council because that was not how the process worked. Councilwoman Brady surmised that the Planning and Zoning Commission had approved it knowing that the tower could not be built without the required information. Mayor Shepley stated that it was not in the Planning and Zoning Commission's purview to go forward with a substandard application. He stated that he greatly respected the Planning and Zoning Commission, but they should not have considered this matter without the required information.

Mr. Riley stated that some information, such as radiation, could only be provided after the site is designed. In response to one piece of missing information, he stated that the color would be gray galvanized metal. He argued that these were not big issues and he did not wish to have to go back to the Planning and Zoning Commission. He stated that they would meet whatever the Unified Development Ordinance requires and the Verizon was in agreement with the staff on all issues, but they were concerned about the time factor as they wished to get the tower built before winter.

Councilman Dawson stated that the Planning and Zoning Commission meeting was the next evening and then the matter could come back before the City Council in two weeks. Mr. Riley stated that he was not certain he could provide the required information by the next day because some of the information is not normally provided until later in the process when the building permit is issued.

Mayor Shepley stated that the City's Unified Development has standards for what is to be submitted with the application and what Verizon normally does is not relevant. Mr. Richter advised in that all other cell tower applications, the information has been provided as required. Councilman Dawson suggested that if Verizon cannot provide the information, they could document why. Councilman Thorsen asked what it was that made this petition different. Director of Community Development Michelle Rentzsch advised that the main issue is that the information submitted to the Planning and Zoning Commission is not accurate so the Planning and Zoning Commission's recommendation is based on faulty information. Staff is requesting correct information for review.

Councilwoman Ferguson asked if since the Planning and Zoning Commission had already recommended approval, the Council could send it back to them and say that it would not be considered further until the information is provided? Councilman Dawson stated that he felt the petitioner should go through the process again and correct their mistakes.

Councilwoman Brady stated that she would be comfortable proceeding with the Planning and Zoning Commission's recommendation, but felt that it was in the petitioner's best interest to make sure that their application was complete and accurate, and she suggest that they go back to the Planning and Zoning Commission the next evening and then come back to the City Council

in two weeks. Councilman Thorsen stated that the matter should be referred back to the Planning and Zoning Commission with information as to exactly what the City Council wants them to do. Councilwoman Brady agreed, and added that they would not need to secure a radon certificate by tomorrow evening.

Mr. Riley attempted to list what they could do before the next evening, which did not include all of the items needed. Mayor Shepley reiterated that those items are all required by the City's application process, and the City Council could not approve an incomplete application. Mr. Riley asked how they could comply with landscaping requirements by the next evening and Councilwoman Ferguson stated that was not the City Council's issue and they would have to solve that problem. Councilman Dawson advised Mr. Riley to please take the opportunity being provided by the City Council, otherwise the Council would be forced to take a vote that evening and the petition would be denied. Mr. Riley agreed and thanked the Council for their time.

Councilman Hopkins added that there had been a recommendation from the Planning and Zoning Commission that Verizon consider a flagpole design rather than what had been presented, but Verizon had said they were not reliable. Director of Finance George Koczwarra advised that Verizon is currently one of the carriers on the flagpole at Wastewater Treatment Plant No. 2. Councilman Hopkins stated that because of the proximity to Three Oaks Recreation and that the tower will be seen directly from the beach, the current design was not acceptable to him and he would prefer a flagpole design. Mr. Riley stated that they had been pleased to find the location in an industrial area which they had thought would be appropriate for this design. He stated that a flagpole limits the number of co-locators, which most municipalities want to encourage, and then stated that when Verizon and other carriers have to use a flagpole, they do not have the same capacity and the type of antennas they can use. Councilman Hopkins stated that he was not in favor of blighting the whole area, particularly the view from the beach at Three Oaks which this proposed tower was in direct sight of, for a cell tower. Other Councilmembers agreed.

Councilwoman Brady moved to send the matter back to the Planning and Zoning Commission for their meeting on October 7, 2015 or a later date if the petitioner so chose. Councilman Thorsen seconded the motion.

Mayor Shepley read the Unified Development Ordinance Standard #48 in full, specifically "Encourage users of towers and antennas to configure them in a way that minimizes the adverse impact of the towers and antennas through careful design, siting, landscape screening and innovative camouflaging techniques", which specified the requirements to be complied with. He added that they may wish to consider reconfiguring their design to address the Council's concerns.

On roll call, all voted yes. Motion passed.

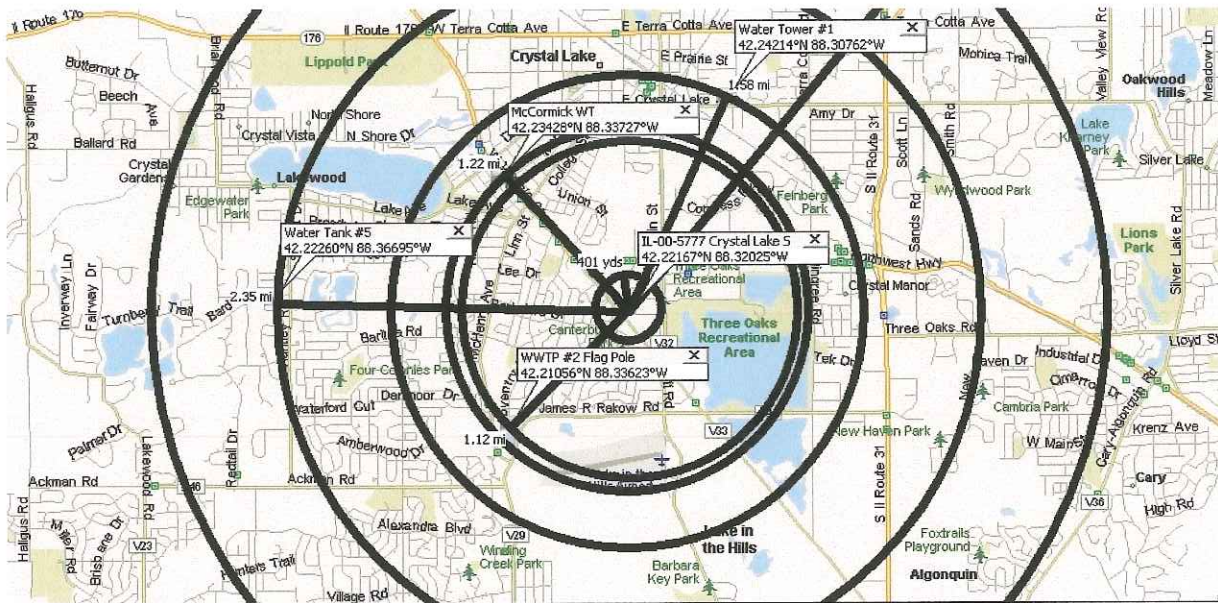
Existing Water Tank and Existing Tower Analysis – City of Crystal Lake

The existing Water Tank and existing tower coordinates were provided by the City of Crystal Lake.

We took those coordinates and entered them into a mapping software. The subject property is indicated at the center of all of these maps. IL-00-577 Crystal Lake S. We then used the software to show radial distances from the subject property.

The first ring is the 1200' separation distance required under the ordinance.

Map #1

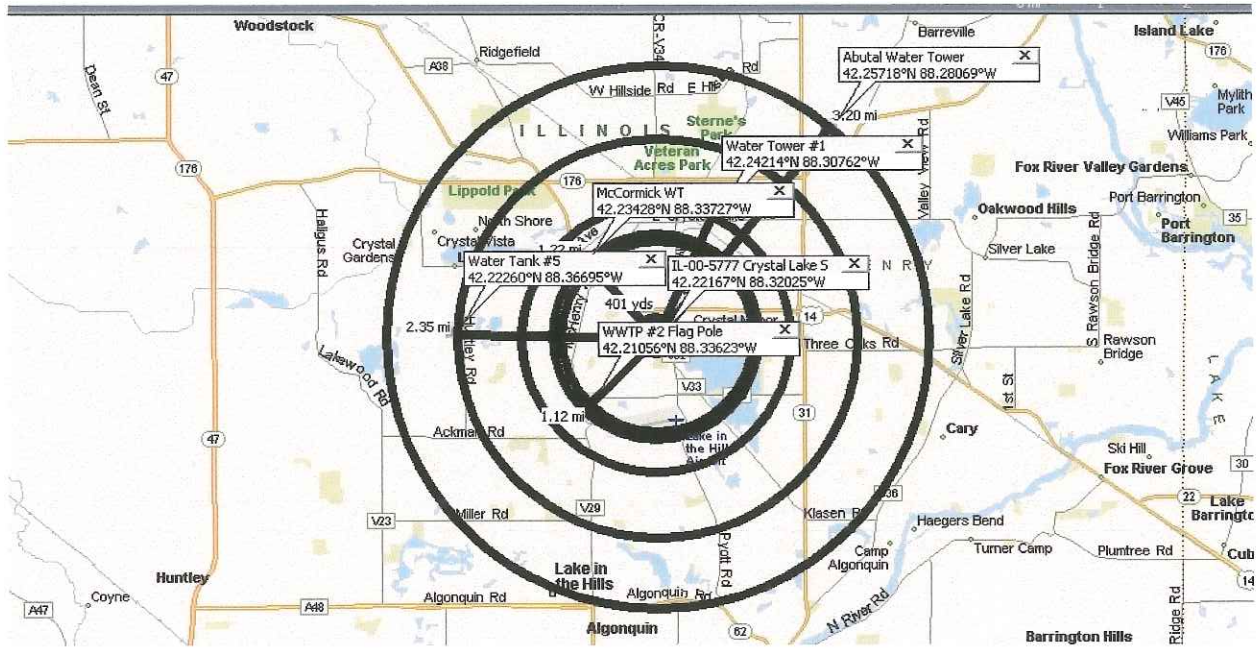


Map #1 shows the closest existing tower, WWTP #2 Flag Pole is located 1.12 miles southwest of the subject property. The next closest structure is the McCormick WT which is 1.22 miles to the Northwest. Third closest is Water Tank #1 which is located 1.58 miles to the northeast. Last site indicated on this map is the Water Tank #5 and that site is 2.35 miles to the West of the subject property.

Map #2 continued on Next Page:



Map #2

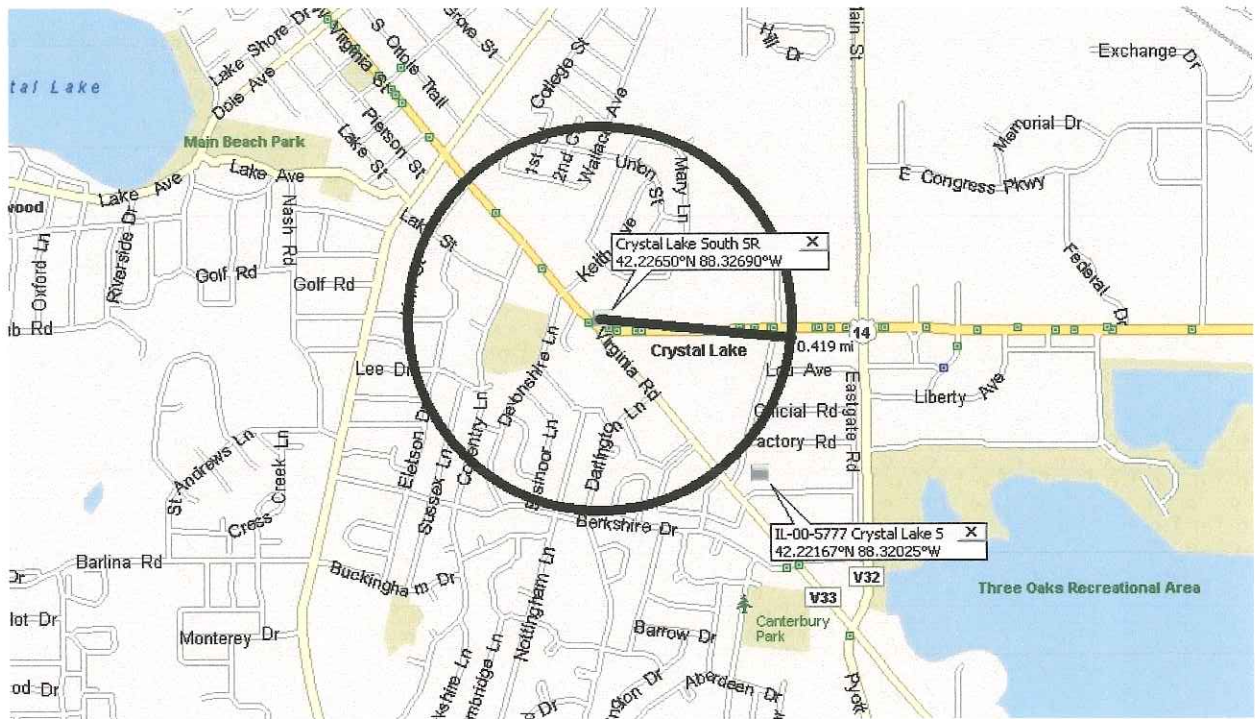


Map # 2 shows the remaining existing structures provided by the City of Crystal Lake, Abutal Water Tower. That Tank is located 3.20 Miles to the northeast of the subject property.

The original target coordinates for our search were 42.2265 / -88.3269 and we were given a search ring of approximately 4/10's of a mile. To find a willing landowner in the area that had a property that was allowable under a special exception we need to go outside our search area a small amount. Even that distance required RF Engineering approval.

Search Area map on next page:

Search Area Map:



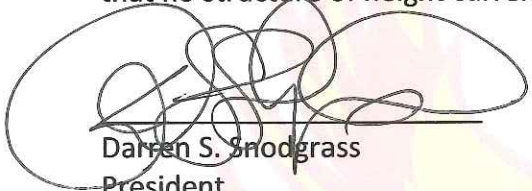
All of the existing structures are too far away from the target area and would create service issues within the target area and also cause interference issues with existing sites. Each of the closest exiting sites are approximately 7/10's of a mile beyond the acceptable search parameters.

STATE OF INDIANA)
)
COUNTY OF HENDRICKS)

AFFIDAVIT

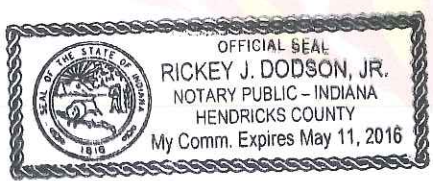
Darren S. Snodgrass, after being first duly sworn, states upon his oath that:


As the President of TNG Wireless and working on behalf of our client, Verizon Wireless and their tower development company, Central States Tower, I made all diligent efforts to locate and identify existing structures of height that would meet the needs of my client having given me a target coordinate of 42.2265 / -088.3269 and a search radius of one half mile. Further I made all diligent efforts to locate any existing structures of height within the 1200 foot radius of the selected candidate with coordinates of 42.22167 / -088.32025 as required under the wireless ordinance for the City of Crystal Lake. Having performed said effort I swear under oath that no structure of height currently exists that meets my client's criteria.

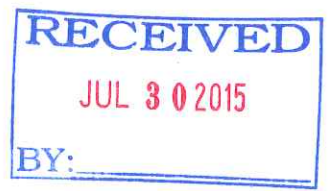


Darren S. Snodgrass
President
TNG Wireless
A Division of TNG Enterprises LLC
Email: Darren@TNGEnterprisesllc.com

Subscribed and sworn to before me this 29th day of July, 2015




Notary Public



WARRANTY DEED

Sole Tenancy Illinois

MAIL TO:

Maksymonko & Slater
109 North Main Street
Algonquin, Illinois 60102

NAME & ADDRESS OF TAXPAYER:

Douglas Feddersen
6521 Commercial Drive
Crystal Lake, Illinois 60014

[Handwritten Signature]
I HEREBY CERTIFY THIS TO BE A TRUE
AND CORRECT COPY OF THE ORIGINAL.
X
PROFESSIONAL NATIONAL TITLE WORK, INC.

RECORDER'S STAMP

THE GRANTOR Raymond E. and Susan L. Ramos, a married couple
of the Village of Cary County of McHenry State of Illinois
for and in consideration of Ten (10) DOLLARS
and other good and valuable considerations in hand paid,

CONVEY and WARRANT to Home State Bank NA; Trust Number 4439, Dated June 13, 1996
(GRANTEE'S ADDRESS) 40 Grant Street
of the City of Crystal Lake County of McHenry State of Illinois
as Sole Tenant, all interest in the following described Real Estate situated in the County of McHenry, State of Illinois,
to wit:

THE EAST 175 FEET OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED MAY 10, 1955 AS DOCUMENT NO. 292393, IN BOOK 12 OF PLATS, PAGE 27 IN MCHENRY COUNTY, ILLINOIS.

hereby releasing and waiving all rights under and by virtue of the Homestead Exemption Laws of the State of Illinois.
TO HAVE AND TO HOLD said premises Sole Tenant.

Permanent Index Number(s) 19-08-276-007

Property Address: 6521 Commercial Drive, Crystal Lake, Illinois 60014

DATED this 1st day of May 2000.

[Handwritten Signature]

Raymond E. Ramos

(Seal)

[Handwritten Signature]

Susan L. Ramos

(Seal)

(Seal)

(Seal)

NOTE: PLEASE TYPE OR PRINT NAME BELOW ALL SIGNATURES

RECEIVED
JUL 30 2015
BY: _____

STATE OF ILLINOIS)
County of McHenry)^{ss}

I, the undersigned, a Notary Public in and for said County, in the State aforesaid, DO HEREBY CERTIFY THAT
Raymond E. Ramos and Susan L. Ramos

personally known to me to be the same person(s) whose name(s) subscribed to the foregoing instrument, appeared before me this day in person, and acknowledged that they signed, sealed and delivered the said instrument as their free and voluntary act, for the uses and purposes therein set forth, including the release and waiver of the right of homestead.

Given under my hand and notarial seal, this 1st day of May, 2000.

My commission expires on May 1, 2000 Kelly Phinney Notary Public

IMPRESS SEAL HERE



McHENRY COUNTY - ILLINOIS TRANSFER STAMP

EXEMPT UNDER PROVISIONS OF PARAGRAPH _____
SECTION 4, REAL ESTATE TRANSFER ACT.

DATE:

Buyer, Seller or Representative

NAME and ADDRESS OF PREPARER:

R. Winston Slater
109 N. Main Street
Algonquin, Illinois 60102
847-658-1400

**This conveyance must contain the name and address of the Grantee for tax billing purposes: (Chap. 55 ILCS 5/3-5020) and name and address of the person preparing the instrument: (Chap. 55 ILCS 5/3-5022).

July 29, 2015

Mr. Yuri Dobrowolsky
Central States Tower
323 South Hale Street, Suite 100
Wheaton, IL 60187

RE: Proposed 125 ft Sabre Monopole for #IL-00-5777, Crystal Lake South, IL

Dear Mr. Dobrowolsky,

Upon receipt of order, we propose to design and supply the above referenced Sabre monopole for a Basic Wind Speed of 90 mph with no ice and 40 mph with 3/4" ice, Structure Class II, Exposure Category C, and Topographic Category 1, in accordance with the Telecommunications Industry Association Standard ANSI/TIA-222-G, "Structural Standard for Antenna Supporting Structures and Antennas".

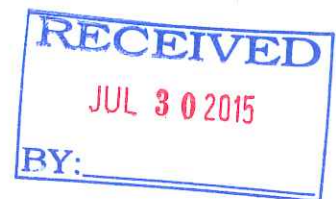
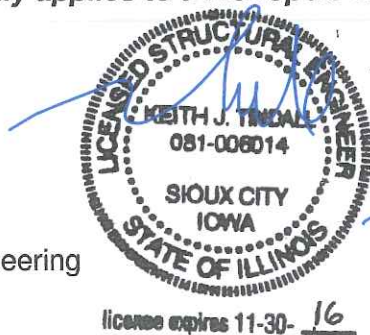
When designed according to this standard, the wind pressures and steel strength capacities include several safety factors, resulting in an overall minimum safety factor of 25%. Therefore, it is highly unlikely that the monopole will fail structurally in a wind event where the design wind speed is exceeded within the range of the built-in safety factors.

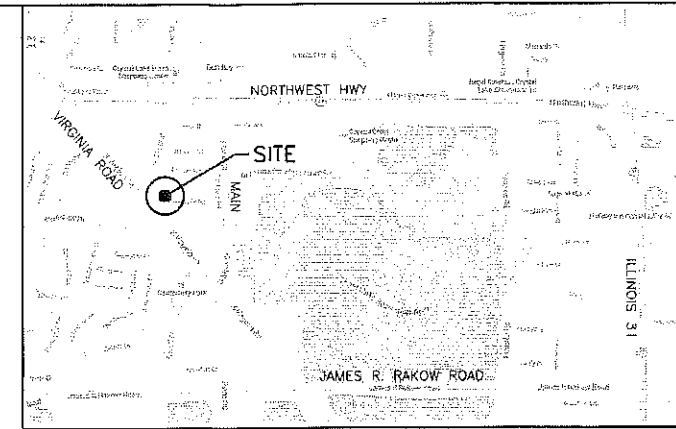
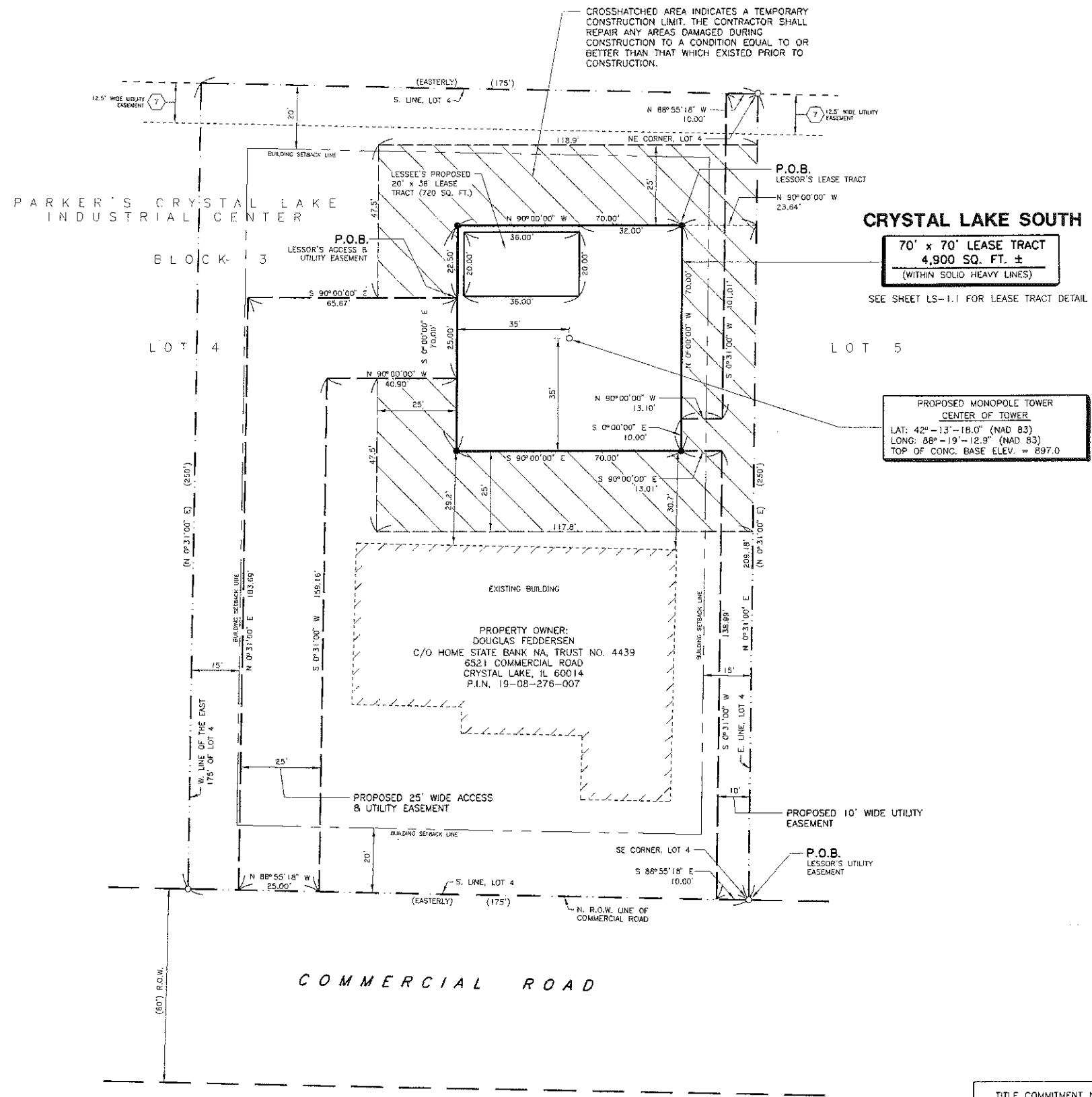
Should the wind speed increase beyond the capacity of the built-in safety factors, to the point of failure of one or more structural elements, the most likely location of the failure would be within one of the monopole shaft sections. This would result in a buckling failure mode, where the steel shaft would bend beyond its elastic limit (beyond the point where the shaft would return to its original shape upon removal of the wind load).

Therefore, the overall effect of an extreme wind event would be localized buckling of the monopole shaft. Assuming that the wind pressure profile is similar to that used to design the monopole, the shaft will buckle at the location of the highest combined stress ratio in the upper portion of the monopole. This would result in the portion of the monopole above "folding over" onto the portion below, essentially collapsing upon itself. **Please note that this letter only applies to a monopole designed and manufactured by Sabre Towers & Poles.**

Sincerely,

Keith J. Tindall, S.E.
Vice President of Engineering





CHICAGO SMSA LIMITED PARTNERSHIP, D.B.A. VERIZON WIRELESS

REAL ESTATE MANAGER:
OCTAVIO HERRERA
1515 EAST WOODFIELD RD.
SCHAUMBURG, IL 60173
OFFICE: (847) 619-4142

CONSTRUCTION MANAGER:
RON PAULY
500 TECHNOLOGY DRIVE
2ND FLOOR
WELDON SPRING, MO 63304
OFFICE: (636) 793-9278

CLS
CONSOLIDATED LAND SURVEYING

1300 W. COMMERCE DR. STE. 700
PEORIA, ILLINOIS 61615

LAND SURVEYORS
AND PROFESSIONAL ENGINEERS

PHONE: 309-692-3434
FAX: 309-692-3433

PROFESSIONAL DESIGN FIRM NO. 184-002756

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2015 47

RECEIVED
JUL 30 2015
BY:

PREPARED BY: HRH 5-12-15

(CST)
IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
LESSEE
PLAT OF SURVEY

SHEET NUMBER
LS-1

JOB NUMBER
9468-43-8-88-03

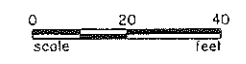
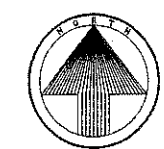
- LEGEND**
- BOUNDARY LINE OF LEASE SITE
 - PARENT PARCEL
 - RIGHT OF WAY LINE
 - BUILDING SETBACK LINE
 - EXISTING PROPERTY LINE
 - PROPOSED EASEMENT LINE
 - EXISTING EASEMENT LINE
 - SURVEY PIPE OR ROD FOUND
 - IRON ROD SET
 - (250') INFORMATION OF RECORD
 - P.O.B. POINT OF BEGINNING

TITLE COMMITMENT NOTES:
(PER TITLE COMMITMENT NUMBER 50791-IL 1503-5030, DATED MARCH 12, 2015)

1. SCHEDULE B, ITEM NUMBER 7: EASEMENTS AS NOTED ON THE PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER PLAT DATED 4/26/1955 RECORDED 5/10/1955 IN BOOK 12 PAGE 27.

SEE SHEET LS-1.1 FOR LEGAL DESCRIPTIONS

SEE SHEET LS-1.1 FOR LEASE TRACT DETAIL



STATE OF ILLINOIS
COUNTY OF PEORIA

WE, CONSOLIDATED LAND SURVEYING, INC. DO HEREBY CERTIFY THAT WE HAVE SURVEYED AND PREPARED A PLAT OF SURVEY OF A PART OF THE EAST 175 FEET OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, MCHEMERY COUNTY, ILLINOIS, AND THAT THE ABOVE PLAT IS A CORRECT REPRESENTATION OF SAID SURVEY AS MADE BY US AND DRAWN TO A SCALE OF 1 INCH = 20 FEET.

GIVEN UNDER MY HAND AND SEAL THIS 12TH DAY OF MAY A.D. 2015.

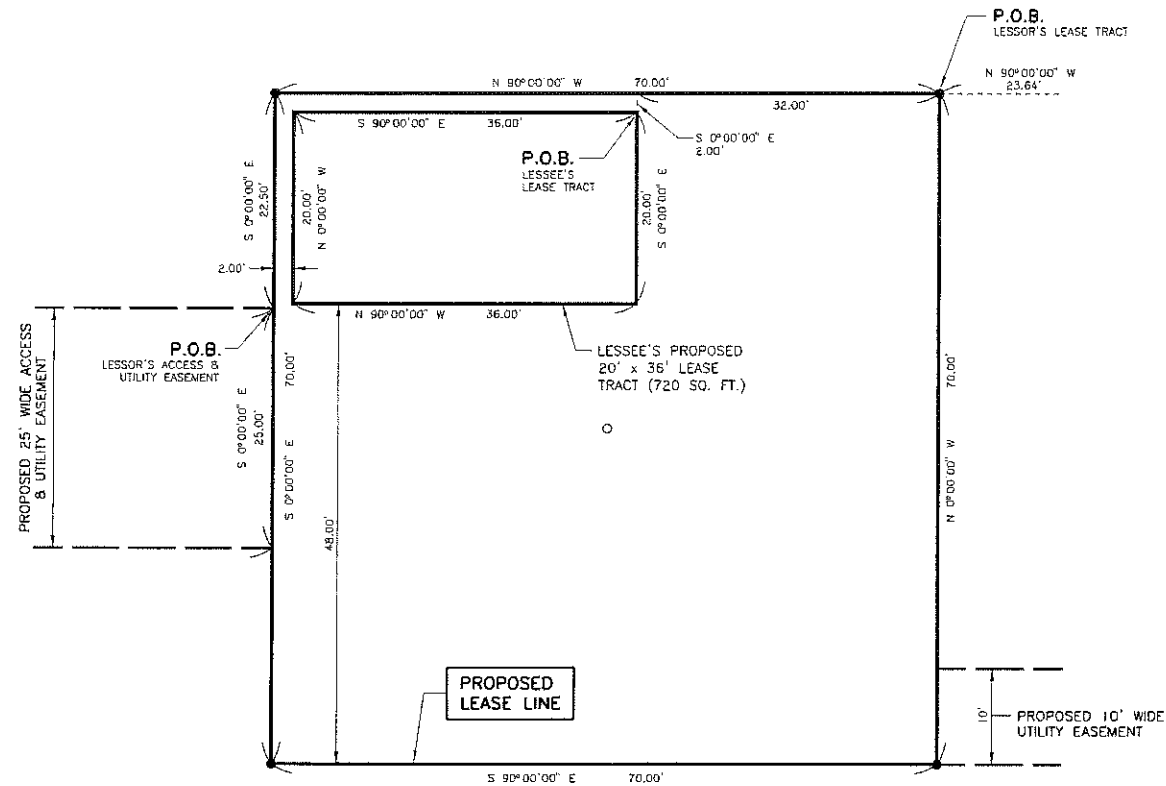
CONSOLIDATED LAND SURVEYING, INC.

H. Ralph Hodges

H. RALPH HODGES, ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 2812

EXPIRES: 11-30-16





PROPOSED LEASE TRACT DETAIL
NOT TO SCALE

SEE SHEET LS-1 FOR PLAT OF SURVEY

**LEGAL DESCRIPTION
PROPOSED 20' x 36' LEASE TRACT
720 SQ. FT. ±**

A 20 FOOT BY 36 FOOT LEASE TRACT AND UTILITY EASEMENT BEING A PART OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID LOT 4; THENCE NORTH 00°-31'-00" EAST (BEARINGS ASSUMED FOR THE PURPOSE OF DESCRIPTION ONLY) ALONG THE EAST LINE OF SAID LOT 4, A DISTANCE OF 209.18 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 23.64 FEET; THENCE CONTINUING NORTH 90°-00'-00" WEST, A DISTANCE OF 32.00 FEET; THENCE SOUTH 00°-00'-00" EAST, A DISTANCE OF 2.00 FEET TO THE POINT OF BEGINNING OF THE TRACT TO BE DESCRIBED; THENCE CONTINUING SOUTH 00°-00'-00" EAST, A DISTANCE OF 20.00 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 36.00 FEET; THENCE NORTH 00°-00'-00" WEST, A DISTANCE OF 20.00 FEET; THENCE SOUTH 90°-00'-00" EAST, A DISTANCE OF 36.00 FEET TO THE POINT OF BEGINNING, CONTAINING 720 SQUARE FEET, MORE OR LESS, SITUATED IN THE COUNTY OF MCHENRY AND STATE OF ILLINOIS.

**LEGAL DESCRIPTION
PROPOSED 70' x 70' LEASE TRACT
4,900 sq. ft. ±**

A 70 FOOT BY 70 FOOT LEASE TRACT AND UTILITY EASEMENT BEING A PART OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID LOT 4; THENCE NORTH 00°-31'-00" EAST (BEARINGS ASSUMED FOR THE PURPOSE OF DESCRIPTION ONLY) ALONG THE EAST LINE OF SAID LOT 4, A DISTANCE OF 209.18 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 23.64 FEET TO THE POINT OF BEGINNING OF THE TRACT TO BE DESCRIBED; THENCE CONTINUING NORTH 90°-00'-00" WEST, A DISTANCE OF 70.00 FEET; THENCE SOUTH 00°-00'-00" EAST, A DISTANCE OF 70.00 FEET; THENCE SOUTH 90°-00'-00" EAST, A DISTANCE OF 70.00 FEET; THENCE NORTH 00°-00'-00" WEST, A DISTANCE OF 70.00 FEET TO THE POINT OF BEGINNING, CONTAINING 4,900 SQUARE FEET, MORE OR LESS, SITUATED IN THE COUNTY OF MCHENRY AND STATE OF ILLINOIS.

**LEGAL DESCRIPTION
PROPOSED 25' WIDE ACCESS & UTILITY EASEMENT**

A 25 FOOT WIDE ACCESS AND UTILITY EASEMENT BEING A PART OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID LOT 4; THENCE NORTH 00°-31'-00" EAST (BEARINGS ASSUMED FOR THE PURPOSE OF DESCRIPTION ONLY) ALONG THE EAST LINE OF SAID LOT 4, A DISTANCE OF 209.18 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 23.64 FEET; THENCE CONTINUING NORTH 90°-00'-00" WEST, A DISTANCE OF 70.00 FEET; THENCE SOUTH 00°-00'-00" EAST, A DISTANCE OF 22.50 FEET TO THE POINT OF BEGINNING OF THE EASEMENT TO BE DESCRIBED; THENCE CONTINUING SOUTH 00°-00'-00" EAST, A DISTANCE OF 25.00 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 40.90 FEET; THENCE SOUTH 00°-31'-00" WEST, PARALLEL WITH THE EAST LINE OF SAID LOT 4, A DISTANCE OF 159.16 FEET TO A POINT ON THE SOUTH LINE OF SAID LOT 4; THENCE NORTH 88°-55'-18" WEST ALONG THE SOUTH LINE OF SAID LOT 4, A DISTANCE OF 25.00 FEET; THENCE NORTH 00°-31'-00" EAST, PARALLEL WITH THE EAST LINE OF SAID LOT 4, A DISTANCE OF 183.69 FEET; THENCE SOUTH 90°-00'-00" EAST, A DISTANCE OF 65.67 FEET TO THE POINT OF BEGINNING, SITUATED IN THE COUNTY OF MCHENRY AND STATE OF ILLINOIS.

**LEGAL DESCRIPTION
PROPOSED 10' WIDE UTILITY EASEMENT**

A 10 FOOT WIDE UTILITY EASEMENT BEING A PART OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID LOT 4 AS THE POINT OF BEGINNING OF THE EASEMENT TO BE DESCRIBED; THENCE NORTH 00°-31'-00" EAST (BEARINGS ASSUMED FOR THE PURPOSE OF DESCRIPTION ONLY) ALONG THE EAST LINE OF SAID LOT 4, A DISTANCE OF 250 FEET TO THE NORTHEAST CORNER OF SAID LOT 4; THENCE NORTH 88°-55'-18" WEST ALONG THE NORTH LINE OF SAID LOT 4, A DISTANCE OF 10.00 FEET; THENCE SOUTH 00°-31'-00" WEST, PARALLEL WITH THE EAST LINE OF SAID LOT 4, A DISTANCE OF 101.01 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 13.10 FEET; THENCE SOUTH 00°-00'-00" EAST, A DISTANCE OF 10.00 FEET; THENCE SOUTH 90°-00'-00" EAST, A DISTANCE OF 13.01 FEET; THENCE SOUTH 00°-31'-00" WEST, PARALLEL WITH THE EAST LINE OF SAID LOT 4, A DISTANCE OF 138.99 FEET TO A POINT ON THE SOUTH LINE OF SAID LOT 4; THENCE SOUTH 88°-55'-18" EAST ALONG THE SOUTH LINE OF SAID LOT 4, A DISTANCE OF 10.00 FEET TO THE POINT OF BEGINNING, SITUATED IN THE COUNTY OF MCHENRY AND STATE OF ILLINOIS.

**LEGAL DESCRIPTION
EXISTING PARENT PARCEL**

THE EAST 175 FEET OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED MAY 10, 1955 AS DOCUMENT NO. 292393, IN BOOK 12 OF PLATS, PAGE 27 IN MCHENRY COUNTY, ILLINOIS.

CHICAGO SMSA LIMITED PARTNERSHIP, O.B.A. VERIZON WIRELESS

REAL ESTATE MANAGER:
OCTAVIO HERRERA
1515 EAST WOODFIELD RD.
SCHAUMBURG, IL 60173
OFFICE: (847) 619-4142

CONSTRUCTION MANAGER:
RON PAULY
500 TECHNOLOGY DRIVE
2ND FLOOR
WELDON SPRING, MO 63304
OFFICE: (636) 793-9278

CLS
CONSOLIDATED LAND SURVEYING
1300 W. COMMERCE DR. STE. 700
PEORIA, ILLINOIS 61615
LAND SURVEYORS
AND PROFESSIONAL ENGINEERS
PHONE: 309-692-3434
FAX: 309-692-3433
PROFESSIONAL DESIGN FIRM NO. 181-002756

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PREPARED BY: HRW 5-12-15



IL 00-5777

SITE NAME:

CRYSTAL LAKE SOUTH

SHEET NAME

LESSEE
PLAT OF SURVEY
LEGAL DESCRIPTIONS

SHEET NUMBER

LS-1.1

JOB NUMBER

9468-43-8-88-03



SITE NAME: CRYSTAL LAKE SOUTH
CST SITE #: IL 00-5777

SITE DATA:

1. PROPOSED RAWLAND SITE
2. PROPOSED OVERALL HEIGHT OF THE "SLICK STICK" STEALTH TOWER STRUCTURE TO BE 130'-0" A.G.L. TO THE TOP OF THE LIGHTNING ROD
3. PROPOSED CENTERLINE OF ANTENNAS TO BE MOUNTED AT 120'-0" A.G.L.
4. PROPOSED RIGHT-HANDED PREFABRICATED UNMANNED EQUIPMENT SHELTER (11'-6" x 21'-9 1/2")
5. PROPOSED DIESEL GENERATOR (48KW MAX)
6. PROPOSED 70' x 70' LEASE TRACT

CHICAGO SMSA LIMITED PARTNERSHIP
D.B.A. VERIZON WIRELESS

SITE NAME: CRYSTAL LAKE
PROJECT NUMBER: 20130992166
LOCATION CODE: 281875



CHICAGO SMSA LIMITED PARTNERSHIP, D.B.A. VERIZON WIRELESS

REAL ESTATE MANAGER:
 OCTAVIO HERRERA
 1515 EAST WOODFIELD RD.
 SCHAUMBURG, IL 60173
 OFFICE: (847) 619-4142

CONSTRUCTION MANAGER:
 RON PAULY
 500 TECHNOLOGY DRIVE
 2ND FLOOR
 WELDON SPRING, MO 63304
 OFFICE: (636) 793-9278



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EXPIRES: 11-30-15

PREPARED BY: HRH 5-12-15

NO.	DATE	DESCRIPTION
1	7-28-15	ADDED LANDSCAPING PER CITY COMMENTS
2	8-25-15	REVISED PER FIBER WALK
3	9-8-15	ADDED FIBER HH PER AT&T COMMENTS
4	10-20-15	REVISED TO "SLICK STICK" STEALTH TOWER



SITE NAME:

CRYSTAL LAKE SOUTH

SHEET NAME

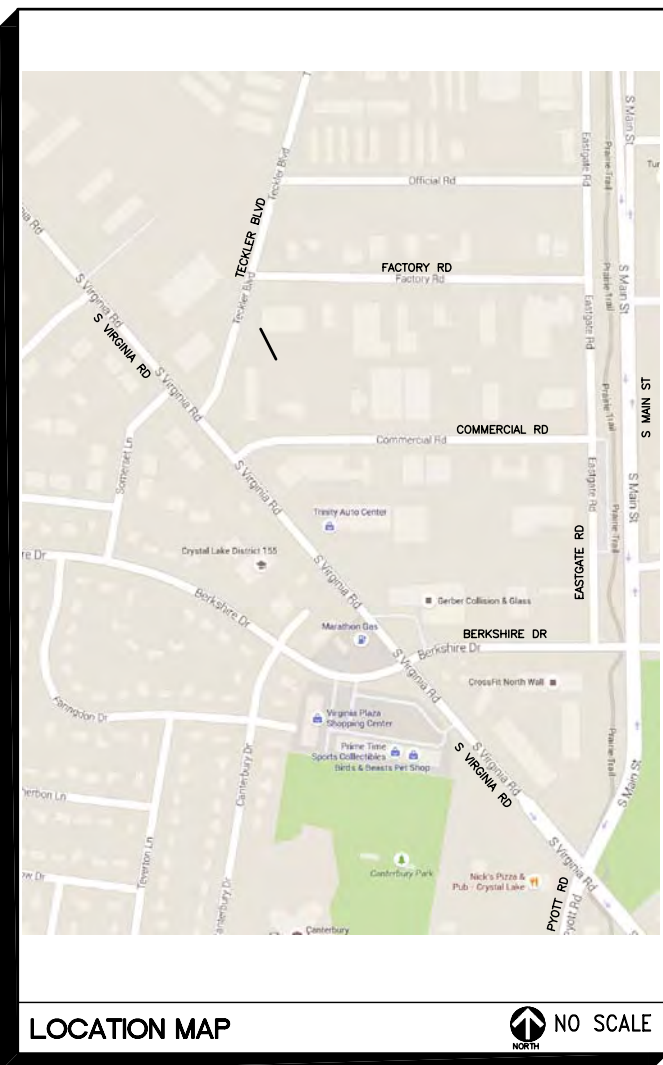
TITLE SHEET

SHEET NUMBER

T-1

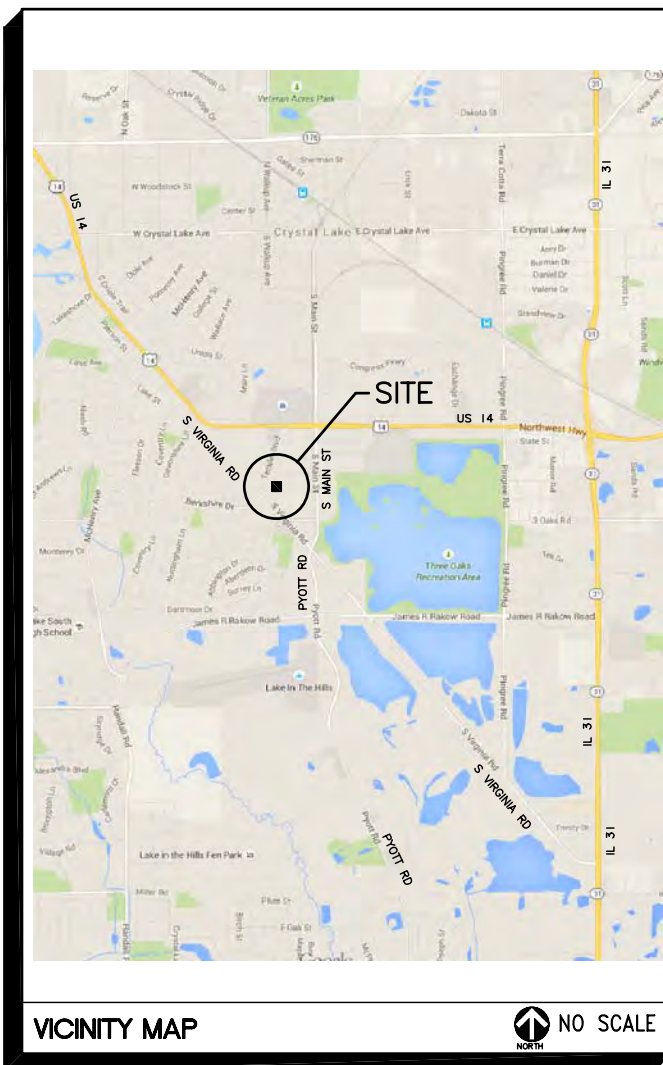
JOB NUMBER

9468-43-8-8B-03



LOCATION MAP

NO SCALE



VICINITY MAP

NO SCALE

PROJECT SUMMARY

SITE NAME:
 CRYSTAL LAKE SOUTH

SITE ADDRESS:
 6521 COMMERCIAL ROAD
 CRYSTAL LAKE, IL 60014
 ALGONQUIN TOWNSHIP
 MCHENRY COUNTY

PROPERTY OWNER:
 DOUGLAS FEDDERSEN
 C/O HOME STATE BANK NA,
 TRUST NO. 4439
 6521 COMMERCIAL ROAD
 CRYSTAL LAKE, IL 60014
 815-459-5252

GEOGRAPHIC COORDINATES:
 LATITUDE: 42°-13'-18.0" (NAD 83)
 LONGITUDE: 088°-19'-12.9" (NAD 83)
 A.M.S.L.: ELEV. 897.0

CURRENT ZONING:
 M-MANUFACTURING

ZONING OFFICE & BUILDING PERMIT DATA:
 CRYSTAL LAKE PLANNING & ECONOMIC DEVELOPMENT
 DEPARTMENT
 100 W. WOODSTOCK STREET
 CRYSTAL LAKE, IL 60014
 815-356-3615

COST OF BUILDING PERMIT: TO BE DETERMINED

DIRECTIONS TO SITE

FROM SCHAUMBURG, TURN RIGHT ONTO N MEACHAM RD. TURN LEFT ONTO IL-62 W/E ALGONQUIN RD. SLIGHT RIGHT ONTO ALGONQUIN RD. TURN RIGHT ONTO PYOTT RD. TURN LEFT ONTO S VIRGINIA RD. TURN RIGHT ONTO COMMERCIAL RD. SITE IS LOCATED ON THE LEFT (NORTH) SIDE OF THE ROAD BEHIND THE ATHENA GLASS COMPANY.

CONSULTING TEAM

DIRECTOR OF CONSTRUCTION:
 YURI DOBROWOLSKY
 CENTRAL STATES TOWER III, LLC, A
 DELAWARE LIMITED LIABILITY COMPANY
 323 SOUTH HALE STREET, SUITE 100
 WHEATON, IL 30187
 PHONE: (630) 221-8500 X104

ELECTRICAL COMPANY:
 COMMONWEALTH
 EDISON
 123 ENERGY WAY
 ROCKFORD, IL 61109
 MIKE PERRON
 (815) 477-5204
 ACCT# 0899111070

FIBER PROVIDER:
 AT&T
 HECTOR SUAREZ
 (847) 888-6864

FIRE DEPARTMENT:
 CRYSTAL LAKE
 FIRE STATION #1
 100 W. WOODSTOCK STREET
 CRYSTAL LAKE, IL 60014
 TEL: (815) 356-3640

SHELTER FOUNDATION STRUCTURAL ENGINEER:
 FIBREBOND CORPORATION
 1300 Davenport Drive
 Minden, Louisiana 71055
 1-800-824-2614

SHELTER MANUFACTURER:
 FIBREBOND CORPORATION
 1300 Davenport Drive
 Minden, Louisiana 71055
 1-800-824-2614

HANDICAP REQUIREMENTS:
 FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS DO NOT APPLY.

SURVEYOR/ENGINEER:

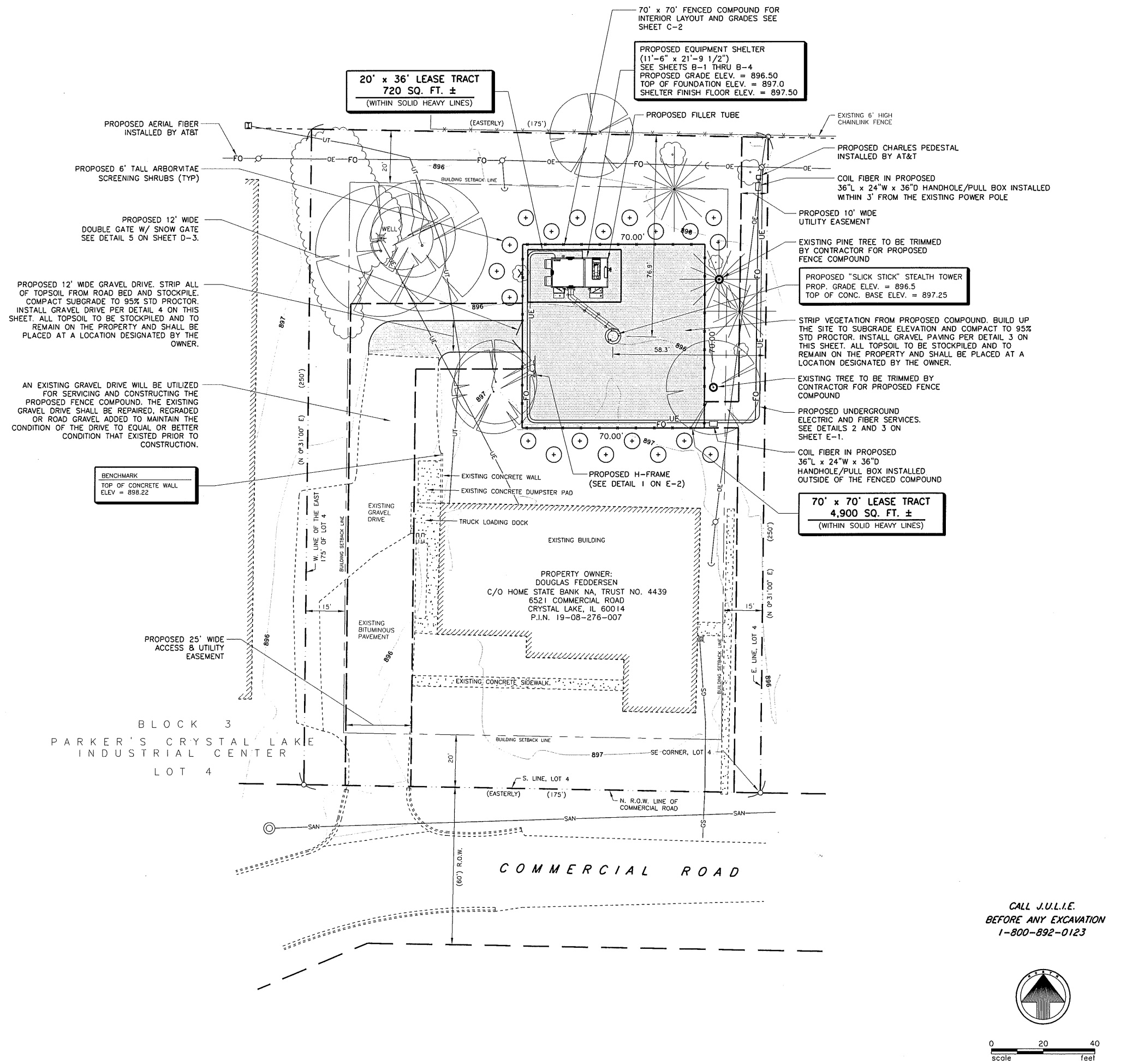


CONSOLIDATED LAND SURVEYING, INC
 1300 W. COMMERCE DR. STE. 700 · PEORIA, ILLINOIS 61615
 LAND SURVEYORS AND PROFESSIONAL ENGINEERS
309-692-3434
 PROFESSIONAL DESIGN FIRM NO. 184-002756
 ralphhedges@clsland.com

SHEET INDEX

SHEET No.	DESCRIPTION
T-1	TITLE SHEET
C-1	SITE PLAN
C-2	ENLARGED SITE PLAN
C-3	GENERAL NOTES, EROSION CONTROL
C-4	FOUNDATION PLAN AND DETAILS
LS-1	LESSEE PLAT OF SURVEY
LS-1.1	LESSEE PLAT OF SURVEY LEGAL DESCRIPTIONS
A-1	TOWER ELEVATION & NOTES
A-1.1	ANTENNA INFORMATION
A-2	ICE BRIDGE/COAX PROFILE WITH GROUNDING
A-3	SHELTER AND GROUNDING SCHEMATIC WITH LEGEND
A-4	GROUNDING DETAILS & NOTES
E-1	UTILITY ROUTING PLAN & NOTES
E-2	TRENCH DETAILS
E-3	UTILITY PLAN, DETAILS & NOTES
D-1	SITE DETAILS
D-2	GROUNDING DETAILS
D-3	FENCING DETAILS
SP-1	SPECIFICATIONS
SP-2	SPECIFICATIONS
P-1	SITE PHOTOS
B-1	SHELTER DETAILS
B-2	SHELTER DETAILS
B-3	SHELTER DETAILS
B-4	SHELTER DETAILS
B-5	SHELTER ITEM LIST
NTC-1	NOTICE TO CONTRACTORS

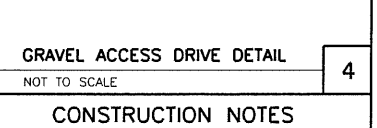
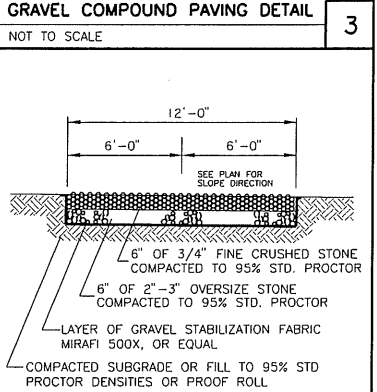
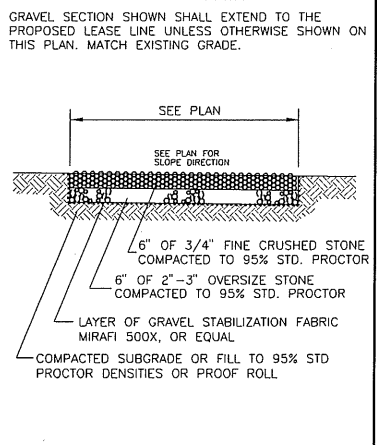
TOWER PLANS AND BUILDING PLANS ARE PROVIDED BY OTHERS AND HAVE BEEN COMBINED AND COMPILED INTO THESE CONSTRUCTION PLANS. SEE GENERAL NOTE 3 ON SHEET C2.



BENCHMARK DATUM
 LOCATION: TOP OF CONCRETE WALL ADJACENT TO DUMPSTER AREA
 ELEVATION: 898.22

LEGEND

- BOUNDARY LINE OF PROPERTY
- EXISTING BUILDING LINE
- o SURVEY PIPE OR ROD FOUND
- 752 EXISTING CONTOUR ELEVATION
- 752 OR 875.25 EXISTING SPOT ELEVATION
- o EXISTING METER
- o EXISTING VALVE
- o EXISTING MANHOLE
- o UTILITY POLE
- o UTILITY POLE WITH TRANSFORMER
- o TELEPHONE PEDESTAL
- SAN SANITARY SEWER
- W WATERMAIN
- GS GAS SERVICE
- UE UNDERGROUND ELECTRIC
- OE OVERHEAD ELECTRIC
- UT UNDERGROUND TELEPHONE
- o PROPOSED SPOT ELEVATION
- o PROPOSED CONTOUR ELEVATION
- CONCRETE SURFACE
- GRAVEL SURFACE
- FENCE LINE
- TREE
- BUSH
- BRUSH LINE
- EXISTING CURB AND GUTTER
- () INFORMATION OF RECORD



ZONING OFFICE & BUILDING PERMIT DATA

CRYSTAL LAKE PLANNING & ECONOMIC DEVELOPMENT DEPARTMENT
 100 W. WOODSTOCK STREET
 CRYSTAL LAKE, IL 60014
 (815) 356-3614

COST OF BUILDING PERMIT: UNKNOWN

THE CONTRACTOR IS RESPONSIBLE FOR PICKING UP THE BUILDING PERMIT AND FOR PAYING PERMIT FEES

- SPECIAL CONSTRUCTION NOTES**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST CELL SITE AND RADIO STATION PROTECTION ENGINEERING CONSIDERATIONS, PRACTICE 08-887-030-085, ISSUE 2, DATED JULY 2001, PAGES 1-69.
 - 24 HOURS NOTICE SHALL BE GIVEN TO THE CONSTRUCTION MANAGER AND THE RESPONSIBLE SITE TECHNICIANS PRIOR TO CLOSING TRENCHES FOR INSPECTION OF GROUNDING.
 - THE CONTRACTOR SHALL NOTIFY THE PROPERTY CONTACT OR OWNER A MINIMUM OF 24 HOURS PRIOR TO ENTERING THE PROPERTY.
 - THE CONTRACTOR SHALL COMPLY WITH ALL OCCUPATIONAL SAFETY AND HEALTH STANDARDS ISSUED UNDER THE OSH ACT THAT APPLY TO ACTIONS AND CONDUCT OF WORKERS AND PERSONNEL ON THE JOB SITE.
 - THE CONTRACTOR MUST FURNISH ALL EMPLOYEES A SAFE AND HEALTHFUL WORKING ENVIRONMENT FREE FROM RECOGNIZED HAZARDS.
 - THE CONTRACTOR SHALL PROVIDE PERSONAL PROTECTIVE EQUIPMENT FOR ALL WORKERS AND PERSONNEL.
 - THE SITE CONTRACTORS SHALL BE MINDFUL OF KEEPING THE ACCESS DRIVE AND THE PUBLIC STREET CLEAN OF DEBRIS, MUD AND DIRT DURING CONSTRUCTION. THEY SHALL PROVIDE CLEAN-UP AT LEAST TWICE DAILY AS NEEDED OR AS DIRECTED BY THE TOWNSHIP INSPECTIONS DEPARTMENT.

- CONSTRUCTION NOTES**
- The locations of existing utilities shown on this sheet are only approximate and may not be complete. The contractor shall verify location of all utilities in the field prior to commencing construction. Protect all existing utilities which are to remain. Upon discovery of unknown or concealed utilities, notify architect/owner immediately. Call J.U.L.I.E. at 1-800-892-0123.
 - All proposed construction work shall be in accordance with the latest edition of the standard specifications for road and bridge construction in Illinois.
 - All utility trenches in structural areas shall be backfilled to subgrade with trench backfill material and compacted to at least 95 percent of maximum dry density as determined by the standard proctor.
 - A minimum of 8 inches of topsoil shall be placed in all unpaved disturbed areas. Topsoil shall be fertile, friable, sandy loam and shall be free of roots, sticks and any other extraneous materials and toxic substances. Finish grade all unpaved disturbed areas to a condition suitable for landscaping.
 - Traffic control during construction shall be in accordance with state and city requirements. At all times traffic control and construction procedures shall be performed in a way as to provide reasonable safety to all involved, including, but not limited to, construction workers, motorists and pedestrians. The safety of all involved shall be the sole responsibility of the contractor.
 - All existing surrounding areas and property shall be properly protected from damage and left undamaged from operations of the contractor. If such damage occurs, it shall be the sole responsibility of the contractor.
 - Contractor shall verify all dimensions shown on the lower plans.
 - Contractor shall acquire all permits that are required by the local authorities, and all construction work shall be performed in compliance with the requirements of all applicable local, state and federal laws, regulations and rules.
 - See lower and building plans for respective site details.
 - Elevations are above mean sea level.
 - Do not scale any dimensions from this drawing.
 - All existing recorded easements are indicated on this drawing to the best of the surveyors knowledge per visual inspection, survey drawings and information received from the developer. Contractor shall contact J.U.L.I.E. at 1-800-892-0123 48 hours prior to start of construction to have underground utilities located and marked.
 - All construction shall conform to the 1996 BOCA code, NEC code, IBC 2003 and per local county requirements.

CHICAGO SMSA LIMITED PARTNERSHIP, D.B.A. VERIZON WIRELESS

REAL ESTATE MANAGER:
 OCTAVIO HERRERA
 1515 EAST WOODFIELD RD.
 SCHAMBOURG, IL 60173
 OFFICE: (847) 619-4142

CONSTRUCTION MANAGER:
 RON PAULY
 500 TECHNOLOGY DRIVE
 2ND FLOOR
 WELDON SPRING, MO 63304
 OFFICE: (636) 793-9278

CLS CONSOLIDATED LAND SURVEYING

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PHONE: 309-692-3434
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 PROFESSIONAL DESIGN FIRM NO. 181-002756

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1	7-28-15	ADDED LANDSCAPING PER CITY COMMENTS
2	8-25-15	REVISED PER FIBER WALK
3	9-8-15	ADDED FIBER HH PER AT&T COMMENTS
4	10-20-15	REVISED PER CITY COMMENTS

(CST)

IL 00-5777

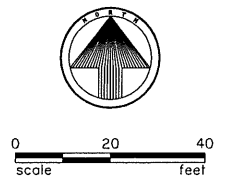
SITE NAME:
 CRYSTAL LAKE SOUTH

SHEET NAME:
 SITE PLAN

SHEET NUMBER:
 C-1

JOB NUMBER:
 9468-43-8-8B-03

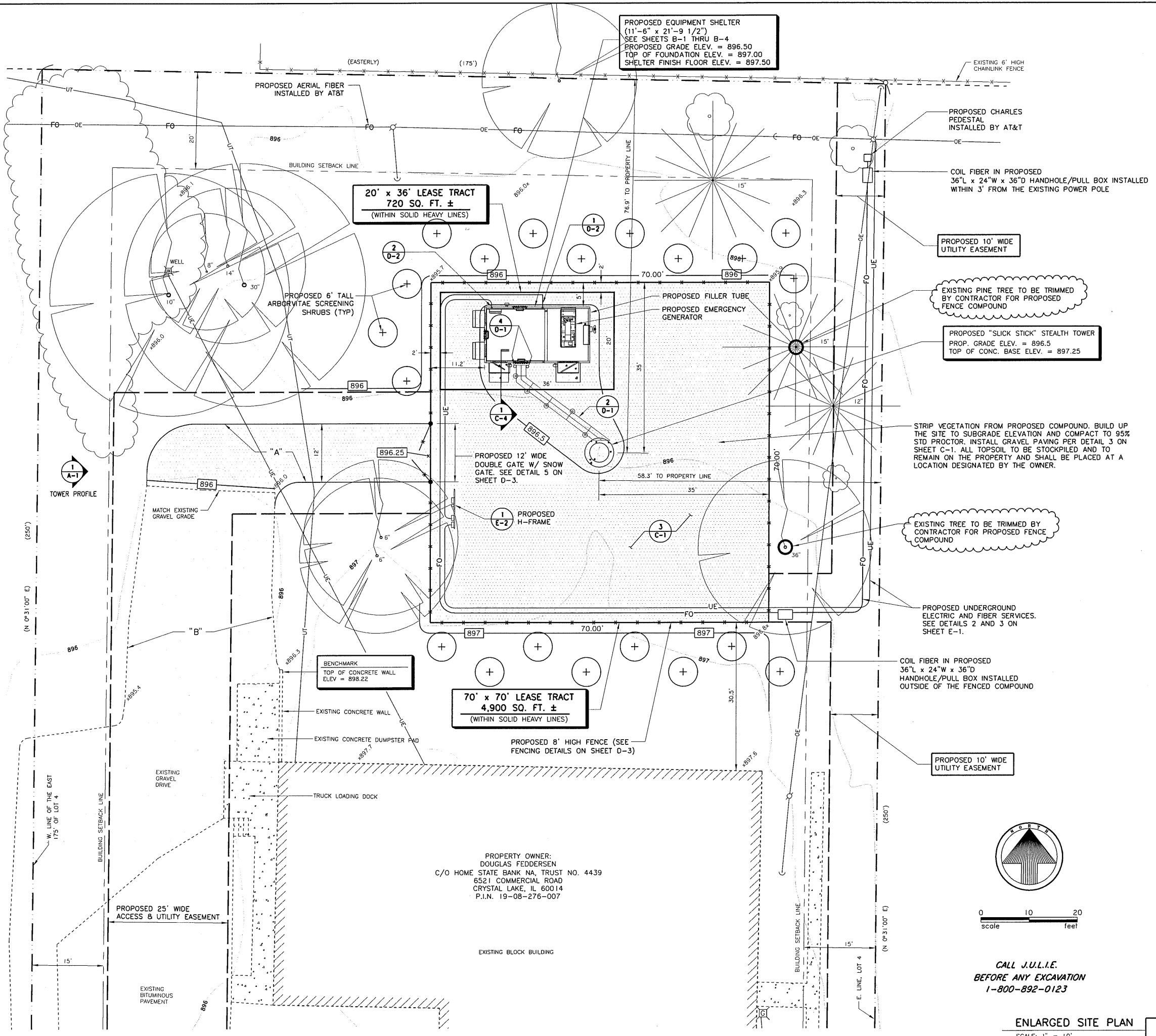
CALL J.U.L.I.E.
 BEFORE ANY EXCAVATION
 1-800-892-0123



SITE PLAN
 SCALE: 1" = 20'

2

5



PROPOSED EQUIPMENT SHELTER
 (11'-6" x 21'-9 1/2")
 SEE SHEETS B-1 THRU B-4
 PROPOSED GRADE ELEV. = 896.50
 TOP OF FOUNDATION ELEV. = 897.00
 SHELTER FINISH FLOOR ELEV. = 897.50

20' x 36' LEASE TRACT
 720 SQ. FT. ±
 (WITHIN SOLID HEAVY LINES)

70' x 70' LEASE TRACT
 4,900 SQ. FT. ±
 (WITHIN SOLID HEAVY LINES)

PROPERTY OWNER:
 DOUGLAS FEDDERSEN
 C/O HOME STATE BANK NA, TRUST NO. 4439
 6521 COMMERCIAL ROAD
 CRYSTAL LAKE, IL 60014
 P.I.N. 19-08-276-007

"A" PROPOSED 12' WIDE GRAVEL DRIVE. STRIP ALL OF TOPSOIL FROM ROAD BED AND STOCKPILE. COMPACT SUBGRADE TO 95% STD PROCTOR. INSTALL GRAVEL DRIVE PER DETAIL 4 ON SHEET C-1. MATCH EXISTING ADJACENT GRADES. ALL TOPSOIL TO BE STOCKPILED AND TO REMAIN ON THE PROPERTY AND SHALL BE PLACED AT A LOCATION DESIGNATED BY THE OWNER.

"B" AN EXISTING GRAVEL DRIVE WILL BE UTILIZED FOR SERVICING AND CONSTRUCTING THE PROPOSED FENCE COMPOUND. THE EXISTING GRAVEL DRIVE SHALL BE REPAIRED, REGRADED OR ROAD GRAVEL ADDED TO MAINTAIN THE CONDITION OF THE DRIVE TO EQUAL OR BETTER CONDITION THAT EXISTED PRIOR TO CONSTRUCTION.

BENCHMARK DATUM

LOCATION: TOP OF CONCRETE WALL ADJACENT TO DUMPSTER PAD
 ELEVATION: 898.22

GENERAL NOTES

- SEE SHEET C-1 FOR LEGEND.
- SEE SHEET C-3, SP-1 & SP-2 FOR CONSTRUCTION NOTES & SPECIFICATIONS.
- TOWER PLANS, BUILDING PLANS, GROUNDING PLANS AND ANTENNA CONFIGURATION DESIGN WERE PROVIDED BY DIFFERENT ENGINEERING FIRMS AND EQUIPMENT MANUFACTURERS. CONSOLIDATED LAND SURVEYING, INC. HAS COMBINED AND COMPILED THIS DATA INTO CONSTRUCTION PLANS FOR THIS PROJECT.
- ALL SITE PREPARATION AND UTILITIES CONSTRUCTION CONCERNING GRAVEL, PAVEMENTS, TRENCHING, BACKFILLING, STORM SEWER, EXCAVATION, ETC., IF NOT SPECIFICALLY DETAILED OR SPECIFIED SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS AND ARE AVAILABLE AT OUR OFFICE FOR EXAMINATION.

CONTRACTOR NOTES

- IF THE CONTRACTOR ENCOUNTERS A CONFLICT OR DISCREPANCY BETWEEN THE PLAN VERSUS SITE CONDITIONS OR LOCAL CODES, HE SHALL CONTACT THE OWNER OR OWNER'S REPRESENTATIVE TO ADDRESS AND RESOLVE THESE CONFLICTS OR DISCREPANCIES, PRIOR TO BIDDING.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ELECTRICAL POWER PROVIDER AND INCLUDING THE COST OF OBTAINING ELECTRICAL SERVICE IN THEIR BID.
- THE CONTRACTOR SHALL INCLUDE IN THEIR BID AND IS RESPONSIBLE FOR THE COST OF THE ANTENNA MOUNTS, COAX SUPPORTS, AS NEEDED, THE COAX BRIDGE AND ALL NECESSARY HARDWARE.
- THE CONTRACTOR SHALL INCLUDE IN THEIR BID AND IS RESPONSIBLE FOR THE PROPOSED ANTENNA INSTALLATION WORK AND ALL NECESSARY HARDWARE SUCH AS (BUT NOT LIMITED TO), THE TOP TOWER MOUNTS, THE INSIDE TOWER MOUNTS THE COAX BRIDGE, CABLE LADDER, ANTENNA MOUNTS AND MOUNTS FOR THE COAX BRIDGE.
- THE CONTRACTOR SHALL INCLUDE IN THEIR BID AND IS RESPONSIBLE FOR THE COST OF EXTENDING THE GENERATOR VENT PIPE 6 INCHES ABOVE THE ROOF LINE AFTER THE BUILDING IS IN PLACE.
- THE CONTRACTOR SHALL INCLUDE IN THEIR BID AND IS RESPONSIBLE FOR THE COST OF INSTALLING THE GPS ANTENNA ON A 1 1/4" DIA. GALVANIZED PIPE, ANTENNA MOUNTS AND ALL NECESSARY HARDWARE AND BRACKETS, THE GPS ANTENNA SHALL BE MOUNTED TO THE COAX BRIDGE AS SHOWN ON THE PLAN.
- THE CONTRACTOR SHALL SWEEP TEST ALL COAX LINES AND VERIFY WITH OPERATIONS PERSONNEL PRIOR TO PULLING OFF THE JOB. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS NOTICE PRIOR TO THE TIME OF THE SWEEP TEST.
- THE CONTRACTOR SHALL BRING THE COAX LINES FROM THE COAX BRIDGE TO INSIDE THE EQUIPMENT SHELTER BEFORE CUTTING THE COAX.
- THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL CONSTRUCTION DOCUMENTS AND CONSTRUCTION PLANS PRIOR TO SUBMITTING THEIR BID. THE SUBMITTAL OF THEIR BID ACKNOWLEDGES THAT THEIR REVIEW OF SUCH DOCUMENTS AND PLANS ARE COMPLETE.
- THE CONTRACTOR SHALL COMPLY WITH ALL OCCUPATIONAL SAFETY AND HEALTH STANDARDS ISSUED UNDER THE OSH ACT THAT APPLY TO ACTIONS AND CONDUCT OF WORKERS AND PERSONNEL ON THE JOB SITE.
- THE CONTRACTOR MUST FURNISH ALL EMPLOYEES A SAFE AND HEALTHFUL WORKING ENVIRONMENT FREE FROM RECOGNIZED HAZARDS.
- THE CONTRACTOR SHALL PROVIDE PERSONAL PROTECTIVE EQUIPMENT FOR ALL WORKERS AND PERSONNEL.
- LOCATION OF ANY FIELD TILE IS UNKNOWN. CONTRACTOR SHALL FIELD VERIFY TILE LOCATIONS PRIOR TO CONSTRUCTION, AS WELL AS USE CAUTION TO PREVENT ANY DAMAGE TO SAID TILE. ANY DAMAGE THAT OCCURS DURING CONSTRUCTION TO FIELD TILE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND/OR REPLACE.

CHICAGO SMSA LIMITED PARTNERSHIP, D.B.A. VERIZON WIRELESS
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CST
 IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
ENLARGED SITE PLAN

SHEET NUMBER
C-2

JOB NUMBER
 9468-43-8-88-03



0 10 20
 scale feet

CALL J.U.L.I.E.
 BEFORE ANY EXCAVATION
 1-800-892-0123

ENLARGED SITE PLAN
 SCALE: 1" = 10'

EROSION AND SEDIMENT CONTROL MEASURES:

UNLESS OTHERWISE INDICATED, ALL VEGETATION AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY FOR SOIL EROSION AND SEDIMENT CONTROL.

SCHEDULE OF EROSION AND SEDIMENT CONTROL MEASURES:

THE FOLLOWING SEQUENCE OF EVENTS AND EROSION CONTROL MEASURES SHALL BE INCORPORATED INTO THE CONSTRUCTION SCHEDULE FOR THIS PROJECT AND SHALL APPLY TO ALL CONSTRUCTION ACTIVITIES WITHIN THE PROJECT LIMITS:

- 1. ALL STORM WATER MANAGEMENT FACILITIES INCLUDING EROSION CONTROL ARE TO BE INSTALLED AND MADE OPERATIONAL AS A FIRST STEP BEFORE THE START OF CLEARING AND GRUBBING OPERATIONS.
- 2. ALL UNPAVED AREAS AND/OR AREAS DISTURBED BY CONSTRUCTION SHALL HAVE TOPSOIL PLACED AND BE SEEDED.
- 3. ALL DISTURBED AREAS, WHICH ARE NOT DESIGNATED FOR PAVING, UTILITY OR STRUCTURAL USES OR AREAS THAT HAVE BEEN STRIPPED AND HAVE FINAL GRADE ESTABLISHED, SHALL HAVE PERMANENT SOIL STABILIZATION APPLIED WITHIN SEVEN DAYS THEREAFTER. ALL STRIPPED AREAS THAT DO NOT HAVE FINAL GRADE ESTABLISHED, SHALL HAVE TEMPORARY SOIL STABILIZATION APPLIED WITHIN SEVEN DAYS THEREAFTER.
- 4. INLET PROTECTION SHALL BE INSTALLED AT ALL STORM WATER STRUCTURES (WHEN PRESENT) TO PREVENT SEDIMENT FROM ENTERING THE STORM SEWER SYSTEM.
- 5. A WEEKLY RECORD OF EROSION/SEDIMENT CONTROL MEASURES AND MAINTENANCE SHALL BE MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MEASURES AND MAINTENANCE THROUGHOUT THE LIFE OF CONSTRUCTION.

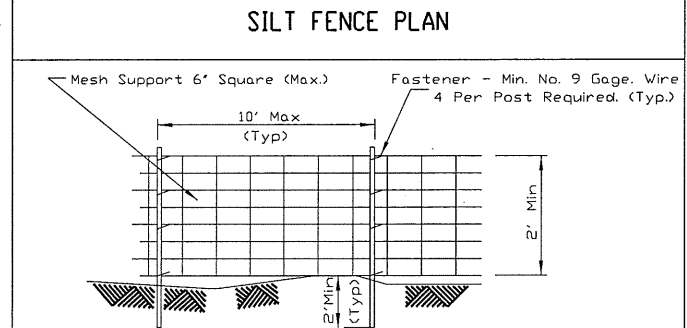
EROSION AND SEDIMENT CONTROL MAINTENANCE:

IN GENERAL, ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED AFTER EACH RAINFALL OR WEEKLY, WHICHEVER IS MOST FREQUENT, AND SHOULD BE CLEANED AND REPAIRED ACCORDING TO THE FOLLOWING SCHEDULE:

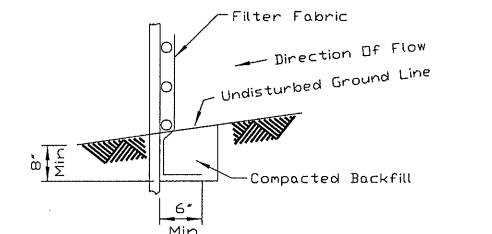
- 1. SILT FENCES SHALL BE CHECKED AFTER EVERY RAINFALL AND AT LEAST DAILY DURING PROLONGED PERIODS OF RAIN. SEDIMENTS MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY 1/2 THE HEIGHT OF THE SILT FENCE.
- 2. STRAW BALE BARRIERS WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE BALES.
- 3. ALL SEEDED AREAS WILL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RE-SEEDED AS NEEDED.
- 4. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS FOLLOWING FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE CONSTRUCTION MANAGER/ ENGINEER.

GENERAL NOTES

- 1. SCHEDULE: THE CONSTRUCTION OF THE SITE REQUIRES A CERTAIN SEQUENCE OF EVENTS TO MINIMIZE CONSTRUCTION TIME REQUIRED UNTIL AVAILABILITY OF CELLULAR TELEPHONE SERVICE.
- 2. BENCHMARK: SEE SURVEY FOR ADDITIONAL INFORMATION.
- 3. CONSTRUCTION STAKING: THE GENERAL CONTRACTOR SHALL CONTACT THE SURVEYOR TO SCHEDULE CONSTRUCTION STAKING AT LEAST 48 HOURS PRIOR TO SITE LAYOUT. SURVEYOR TO STAKE LEASE AREA CORNERS, SHELTER CORNERS, FENCE CORNERS, CENTER OF TOWER AND CENTERLINE OF ALL ACCESS AND UTILITY EASEMENTS. ANY SITE CONSTRUCTION LAYOUT WORK DONE BY ANY OTHER(S) THAN CONSOLIDATED LAND SURVEYING INC. SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR CONSTRUCTING THE PROPOSED IMPROVEMENTS SHALL HAVE A RESPONSIBILITY IN CHECKING AND VERIFYING GRADE ELEVATIONS PRIOR TO INSTALLATION OF SAID IMPROVEMENTS. THE CONTRACTOR SHALL ALSO USE QUALIFIED AND COMPETENT PERSONNEL THAT CAN RECOGNIZE AND UNDERSTAND PROPER CONSTRUCTION TECHNIQUES AND PROCEDURES AND CAN RECOGNIZE IRREGULARITIES OF CONFLICTS ON THE PLANS OR ON THE CONSTRUCTION SITE WHICH WOULD NEED TO BE CORRECTED. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER AND/OR ENGINEER OF ANY DISCREPANCIES, CONFLICTS OR ERRORS FOUND ON THE PLANS OR ON THE CONSTRUCTION SITE IMMEDIATELY.
- 4. SITE CLEARING - EXCAVATION AND FILL: ALL NEW SHELTER AND TOWER LOCATIONS SHALL BE CLEARED OF ALL TOPSOIL AND VEGETATION. CONTRACTOR SHALL USE EXCAVATED MATERIAL FROM FOUNDATION EXCAVATION AND SHALL PROVIDE SPREAD AND COMPACT GRAVEL AS REQUIRED TO BRING SHELTER UP TO ELEVATIONS AS INDICATED BY THE FINAL GRADE ELEVATIONS AS SHOWN ON THE PLANS.
- 5. SHELTER LOCATION: THE GENERAL CONTRACTOR SHALL VERIFY THAT THE SHELTER FOUNDATION IS LOCATED CORRECTLY WITH RESPECT TO EXISTING OR PROPOSED SHELTER(S), TOWER AND FENCE CORNERS. THE CONTRACTOR MUST NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO POURING CONCRETE.
- 6. PREFABRICATED SHELTER: THE GENERAL CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT AND MATERIALS FOR THE PROPER LIFTING OF THE SHELTER FROM THE TRANSPORT TRUCK BED TO THE FINAL POSITION ON THE CONCRETE FOUNDATION. THE SHELTER SHALL BE LIFTED INTO PLACE BY USING EIGHT (8) LIFTING EYELETS PROVIDED BY THE SHELTER MANUFACTURER. THE SHELTER MANUFACTURER REQUIRES EIGHT (8) 3/4" DIAMETER, 15' LONG STEEL CABLES CONNECTED TO THE SPREADER BAR. IF THE SPREADER BAR IS AT LEAST TWO FEET WIDER THAN THE SHELTER, CORNER PROTECTORS WILL NOT NEED TO BE USED. THE APPROXIMATE WEIGHT OF THE SHELTER WITH THE TELEPHONE EQUIPMENT IS 72,000 LBS. THE CONTRACTOR SHALL ANCHOR THE SHELTER TO THE CONCRETE SLAB WITH STEEL PLATES AND ANCHOR BOLTS PROVIDED BY THE SHELTER MANUFACTURER. THE EQUIPMENT SHELTER SHALL NOT BE USED FOR THE STORAGE OF ANY MATERIALS, TOOLS, ETC. USED BY THE CONTRACTOR OR SUBCONTRACTORS.
- 7. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF THE ELECTRICAL DISCONNECT, DOOR CANOPIES (WITH CAULKING), EXTERIOR LIGHT FIXTURE, GENERATOR LOOSE SHIP MATERIALS, INCLUDING FUELING, START UP AND TESTING (COORDINATE WITH OPERATIONS TO SET GENERATOR ROUTINE RUN DATE).
- 8. UTILITIES: THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE EXCAVATION AND PROPER BACK FILLING OF TRENCHES REQUIRED FOR UNDERGROUND TELEPHONE AND ELECTRICAL UTILITIES. SEE SHEET D-1 AND D-2 FOR THE UTILITY TRENCH PLAN AND DETAILS. COORDINATE SERVICE DATE WITH THE RESPECTIVE UTILITY COMPANIES.
- 9. THE GENERAL CONTRACTOR SHALL INSTALL THE TOWER FOUNDATION, INCLUDING THE ANCHOR BOLTS AS FURNISHED BY THE TOWER MANUFACTURER. TOWER FABRICATION, ERECTION, AND ANTENNA INSTALLATION SHALL BE BY OTHERS.
- 10. ACCESS DRIVEWAY: THE GENERAL CONTRACTOR SHALL CONSTRUCT THE ACCESS DRIVEWAY PER THE ALIGNMENT AND CROSS SECTION ON THE DRAWINGS. IF ANY AREA OF CONSTRUCTION REQUIRES MORE FILL OF AGGREGATE STONE THAN SHOWN ON THE DRAWINGS, THE GENERAL CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER AND/OR ENGINEER FOR APPROVAL OF THE SIZE, TYPE AND QUANTITY OF STONE/FILL NECESSARY, AND SHALL NOT BE USED UNTIL APPROVAL BY THE CONSTRUCTION MANAGER/ENGINEER.
- 11. ANTENNAS INSTALLATION: ALL ANTENNAS AND LINES AND ICE BRIDGE SHALL BE INSTALLED BY THE ANTENNA CONTRACTOR. DURING THIS WORK THE GENERAL CONTRACTOR SHALL BE LIMITED TO THE WORK WHICH CAN BE PERFORMED IN THE VICINITY OF THE TOWER.
- 12. HERBICIDE: AFTER PLACEMENT AND COMPACTING OF FILL AROUND THE PREFABRICATED SHELTER AND BEFORE PLACEMENT OF LIMESTONE SURFACE, A WEED BARRIER SHALL BE PLACED AND HERBICIDE SHALL BE SPRAYED OVER ALL DISTURBED AREAS.
- 13. TRASH REMOVAL: THE GENERAL CONTRACTOR SHALL REMOVE ALL TRASH AS CREATED BY HIMSELF AND HIS SUBCONTRACTORS AND ALSO BY OTHER CONTRACTORS, INCLUDING CABLE REELS, CARDBOARD BOXES AND PACKAGING. THE GENERAL CONTRACTOR SHALL PROVIDE A TRASH DUMPSTER (40 YARD ROLL-OFF) ON THE SITE UNTIL ALL CONSTRUCTION WORK AND EQUIPMENT INSTALLATION WORK HAS BEEN COMPLETED. ALL TRASH SHALL BE REMOVED FROM THE SITE IN A TIMELY FASHION TO A LEGAL DISPOSAL AREA. FAILURE TO PROVIDE A DUMPSTER ON SITE WILL RESULT IN A \$1,000.00 REDUCTION IN THE CONTRACT AMOUNT.
- 14. FINAL CLEAN UP: UPON COMPLETION OF ALL WORK BY THE GENERAL CONTRACTOR AND ALL OTHER CONTRACTORS ON THIS PROJECT, THE GENERAL CONTRACTOR SHALL STRIP AND CLEAN THE FLOOR OF THE SHELTER USING AN INDUSTRIAL STRIPPING MACHINE. THE FINISHED FLOOR SHALL BE CLEAN AND DUST FREE. NO SURFACE FINISHES SHALL BE APPLIED. THE GENERAL CONTRACTOR IS ALSO RESPONSIBLE FOR THE REMOVAL OF ALL EXCESS MATERIALS FROM INSIDE THE SHELTER ALONG WITH SHIPMENT OF NOTED MATERIALS BACK TO THE OWNER.
- 15. GENERAL CONTRACTOR SHALL REQUEST DELIVERY OF ANTENNAS AND MISCELLANEOUS MATERIALS WHEN READY TO RECEIVE AND INVENTORY. ANY SHORTAGES MUST BE REPORTED TO THE CONSTRUCTION MANAGER WITHIN 48 HOURS OF DELIVERY.
- 16. THE GENERAL CONTRACTOR SHALL PROVIDE AND MAINTAIN A PORTABLE TOILET ON SITE DURING THE DURATION OF THE CONSTRUCTION PROJECT.
- 17. UNDERGROUND UTILITY LOCATION: CONTACT J.U.L.I.E. (800) 892-0123 AT LEAST 48 HOURS PRIOR TO DIGGING.
- 18. THE CONTRACTOR WILL, UPON BECOMING AWARE OF SUBSURFACE OR LATENT PHYSICAL CONDITIONS DIFFERING FROM THOSE DISCLOSED BY THE ORIGINAL SOIL INVESTIGATION WORK, PROMPTLY NOTIFY THE OWNER VERBALLY TO PERMIT VERIFICATION OF THE CONDITIONS, AND IN WRITING, AS TO THE NATURE OF THE DIFFERING CONDITIONS. NO CLAIM BY THE CONTRACTOR FOR ANY CONDITIONS DIFFERING FROM THOSE ANTICIPATED IN THE PLANS AND SPECIFICATIONS AND DISCLOSED BY THE STUDIES WILL BE ALLOWED UNLESS THE CONTRACTOR HAS SO NOTIFIED THE OWNER, VERBALLY AND IN WRITING, AS REQUIRED ABOVE, OF SUCH DIFFERING SUBSURFACE CONDITIONS.
- 19. THE GENERAL CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO POURING CONCRETE FOR SHELTER FOUNDATION.
- 20. CONCRETE CORES (3 CYLINDERS PER TRUCK) ARE TO BE TAKEN AND TESTED BY A QUALIFIED CONCRETE TESTING COMPANY. THE GENERAL CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF TESTING RESULTS TO THE CONSTRUCTION MANAGER. FAILURE TO PROVIDE WRITTEN TESTS WILL RESULT IN A \$1,000.00 DEDUCTION FROM CONTRACT. THE GENERAL CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY ADDITIONAL COSTS IN TESTING DUE TO DELAYS BY THE GENERAL CONTRACTOR OR HIS SUBCONTRACTORS.
- 21. BEFORE AND DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ADEQUATE EROSION CONTROL AS NECESSARY IN THE FORM OF SILT FENCES FOR THE SITE AND BALES AROUND ANY EXISTING MANHOLES, INLETS, OR CATCHBASINS (WHEN PRESENT) SUSCEPTIBLE TO EROSION. EROSION CONTROL MEASURES SHALL BE PERIODICALLY INSPECTED TO ENSURE PROPER FUNCTION. EROSION CONTROL SHALL BE REMOVED UPON COMPLETION OF WORK BY THE CONTRACTOR.
- 22. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING PAVED, CONCRETE, OR GRAVEL PARKING AREAS AND DRIVES. CONTRACTORS SHALL PHOTOGRAPH AND VIDEOTAPE EXISTING PARKING AREAS AND DRIVES PRIOR TO CONSTRUCTION. ANY DAMAGE CAUSED DURING CONSTRUCTION SHALL BE REPLACED TO EXISTING OR BETTER CONDITIONS AT NO ADDITIONAL COST.
- 23. GRADE AND RE-SEED ALL AREAS DISTURBED DURING CONSTRUCTION PER EROSION AND SEDIMENT CONTROL NOTES AND DETAILS ON THIS SHEET TO MATCH EXISTING SURROUNDINGS AFTER WORK IS COMPLETE OR AS WEATHER PERMITS WITH APPROVAL FROM THE PROPERTY OWNER.



ELEVATION

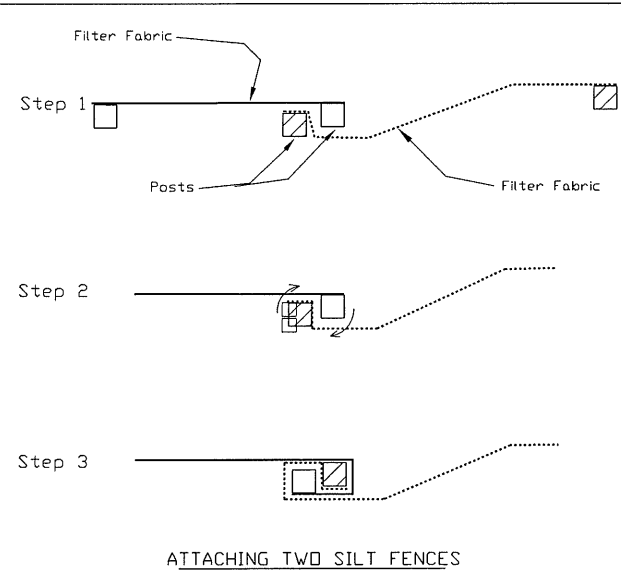


NOTES:

- 1. Top and bottom wires of mesh support shall be min. gage no.9.
- 2. Intermediate wires of mesh supports shall be min. gage no. 11.
- 3. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading.
- 4. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class I with equivalent opening size of at least 30 for nonwoven and 50 for woven.
- 5. Fence post shall be either standard steel post or wood post with a minimum sectional area 3.0 sq.in.
- 6. The mesh support may be omitted if a maximum of 5' is used for post post spacing.

REFERENCE Project	Date	U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE ILLINOIS	STANDARD DWG. NO. IL-620 SHEET 1 OF 1 DATE 3-3-95
Designed	Date		
Checked	Date		
Approved	Date		

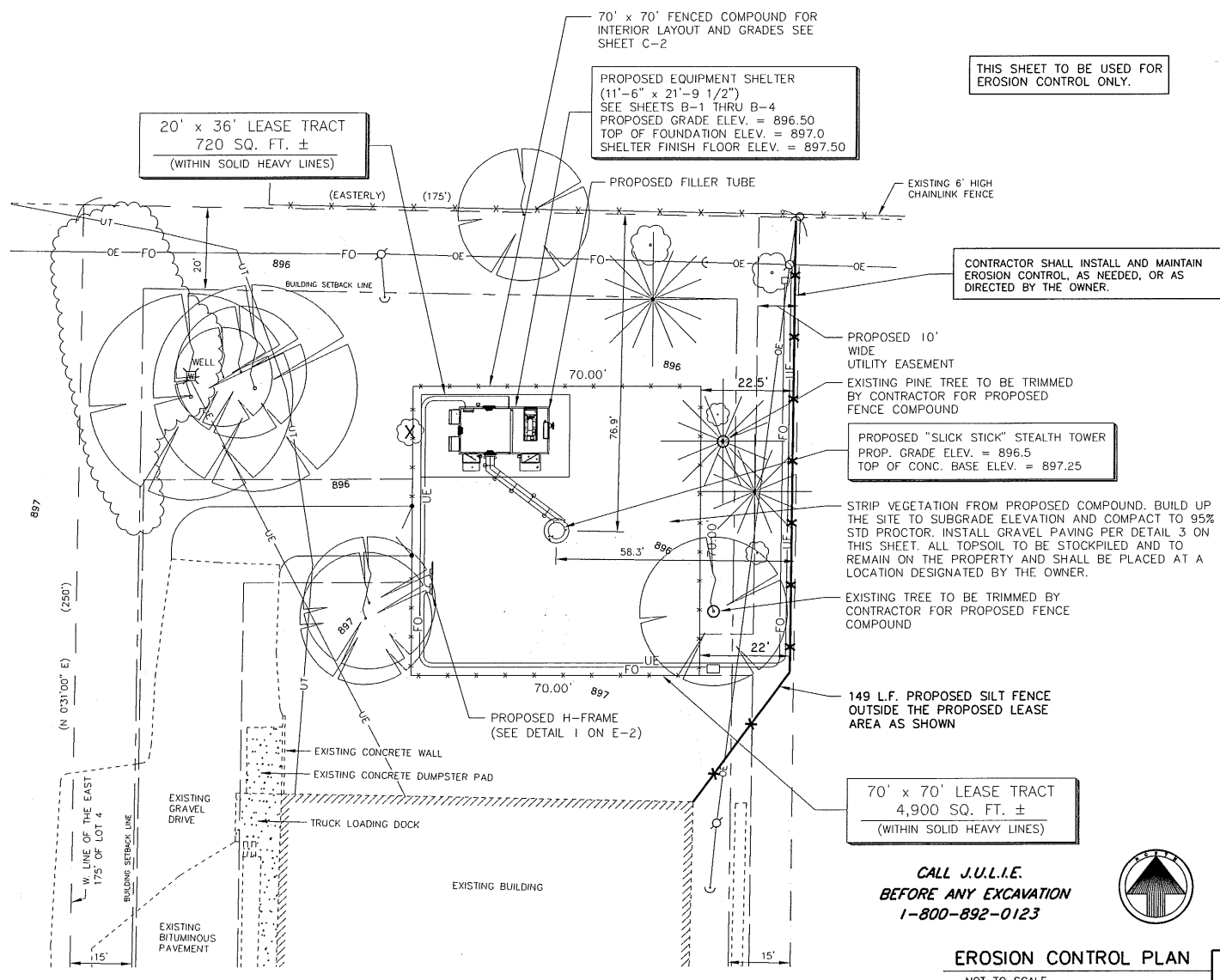
SILT FENCE



NOTES:

- 1. Place the end post of the second fence inside the end post of the first fence.
- 2. Rotate both posts at least 180 degrees in a clockwise direction to create a tight seal with the fabric material.
- 3. Drive both posts a minimum of 2 feet into the ground and bury the flap.

REFERENCE Project	Date	USDA NRCS NATURAL RESOURCES CONSERVATION SERVICE ILLINOIS	STANDARD DWG. NO. IL-620 SHEET 2 OF 2 DATE 1-29-99
Designed	Date		
Checked	Date		
Approved	Date		



CHICAGO SMSA LIMITED PARTNERSHIP, D.B.A. VERTIZON WIRELESS
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1515 EAST WOODFIELD RD. SCHAUMBURG, IL 60173
OFFICE: (847) 619-4142
CONSTRUCTION MANAGER: RON PAULY
500 TECHNOLOGY DRIVE 2ND FLOOR WELDON SPRING, MO 63304
OFFICE: (636) 793-9278

CLS CONSOLIDATED LAND SURVEYING
1300 W. COMMERCE DR. STE. 700 PEORIA, ILLINOIS 61615
LAND SURVEYORS AND PROFESSIONAL ENGINEERS
PHONE: 309-692-3434 FAX: 309-692-3433
PROFESSIONAL DESIGN FIRM NO. 184-002756

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PREPARED BY: HRH 5-12-15

1	8-25-15	REVISED PER FIBER WALK
2	10-20-15	REVISED PER CITY COMMENTS

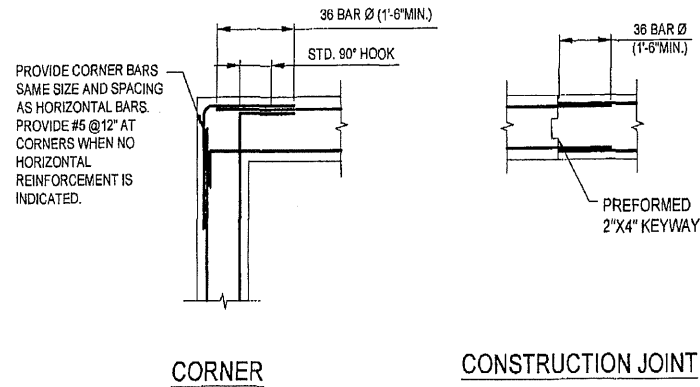
(CST)
IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME:
GENERAL NOTES EROSION CONTROL

SHEET NUMBER:
C-3

JOB NUMBER:
9468-43-8-8B-03



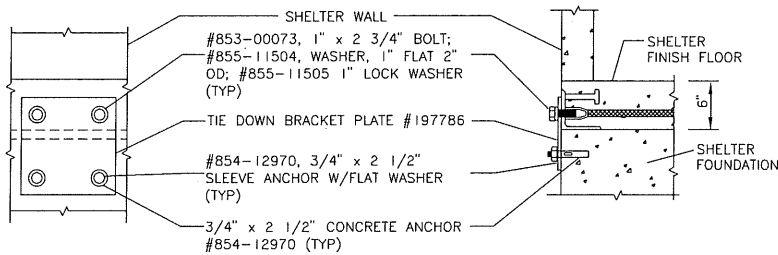
CORNER

CONSTRUCTION JOINT

CORNER REINFORCING

NOT TO SCALE

2

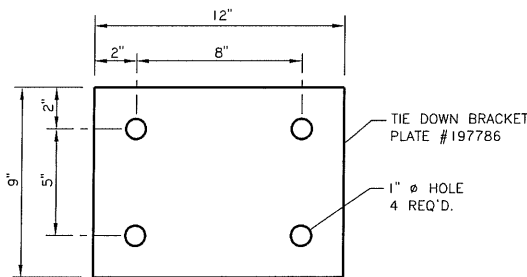


SECTION B-B

NOT TO SCALE

SECTION C-C

NOT TO SCALE



TIE DOWN PLATE DETAILS

NOT TO SCALE

3

A. EQUIPMENT ENCLOSURE FOUNDATION

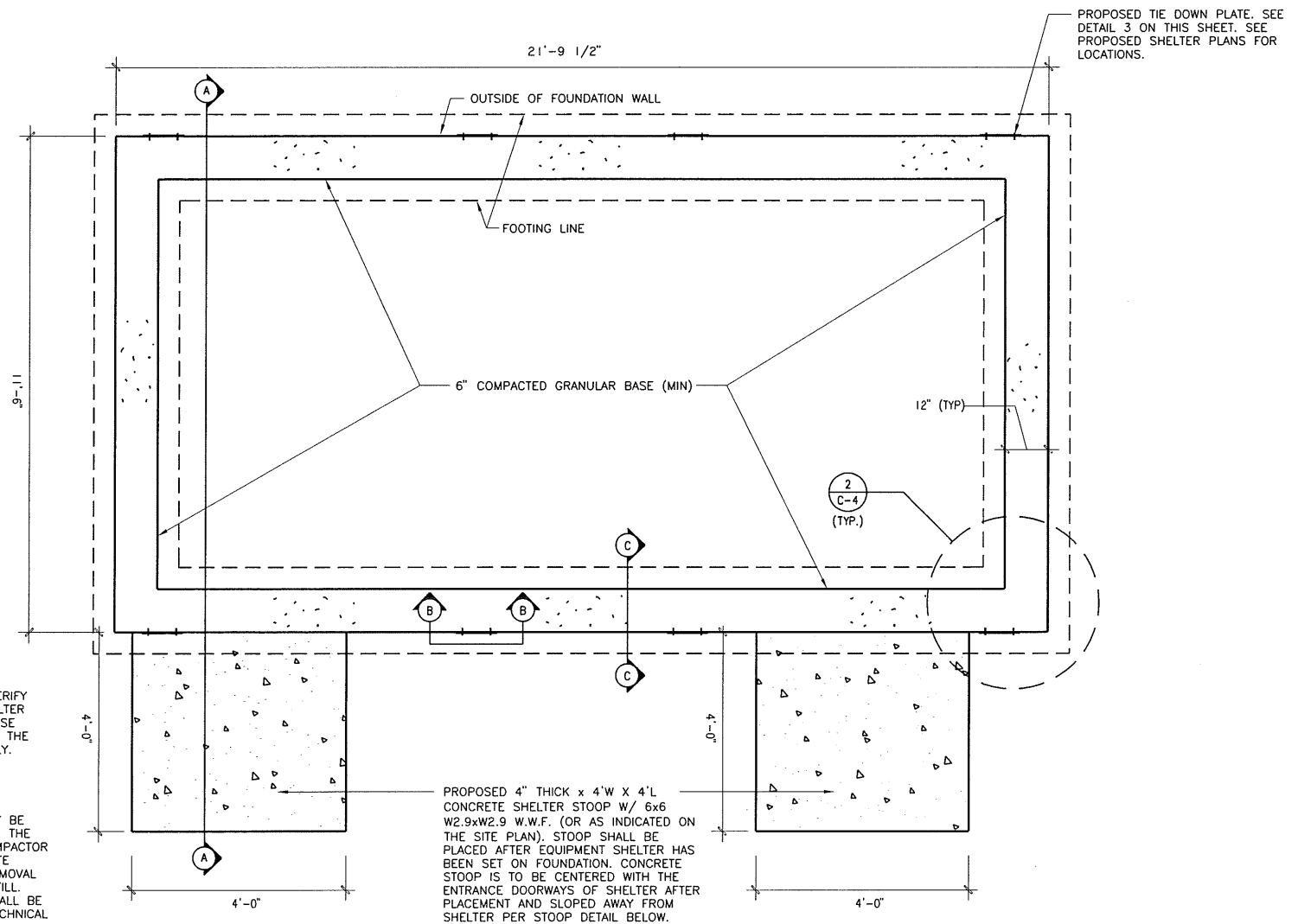
- REFER TO CIVIL DRAWINGS FOR ORIENTATION OF THE FOUNDATIONS.
- EQUIPMENT ENCLOSURE FOUNDATION IS DESIGNED FOR THE FOLLOWING LOADS:
ENCLOSURE DEAD LOAD: 70,000 LBS.
ROOF LIVE LOAD: 50 PSF
FLOOR LIVE LOAD: 125 PSF
- THE CONTRACTOR SHALL NOTIFY THE CLIENT'S GEOTECHNICAL ENGINEER TO COORDINATE HAVING A FIELD REPRESENTATIVE ON SITE FOR TESTING AND INSPECTION.
- FOOTINGS SHALL BEAR ON VIRGIN SOIL OR COMPACTED FILL MATERIAL CAPABLE OF SUPPORTING A MINIMUM SOIL BEARING PRESSURE OF 2000 PSF.
- SUBGRADE PREPARATION:
 - REMOVE ALL SOILS CONTAINING TOPSOIL, ORGANIC MATERIALS, AND/OR FILL MATERIALS FROM WITHIN AREA OF ENCLOSURE FOUNDATION.
 - PROOF ROLL RESULTING SUBGRADE WITH A HEAVILY LOADED SINGLE AXLE ROLLER OR SIMILAR VEHICLE. (20 TON LOAD). CONTRACTOR SHALL UNDERCUT AND REPLACE WITH ENGINEERED FILL. ALL LOOSE SOFT OR UNSTABLE AREAS REVEALED DURING PROOFROLLING AS DIRECTED BY THE TESTING AGENCY. CONTRACTOR SHALL INCLUDE ANTICIPATED UNDERCUT AND REPLACEMENT AS INDICATED IN THE GEOTECHNICAL REPORT AS PART OF THE BID.
 - BACKFILL AND COMPACT THE AREA WITHIN THE BUILDING FOUNDATION. BETWEEN RESULTANT SUBGRADE AND FOUNDATION WALL WITH APPROVED GRANULAR MATERIAL.
- FOUNDATION WALLS SHALL BE BACKFILLED EVENLY ON EACH SIDE OF THE WALL.
- CONTRACTOR TO ENSURE FOUNDATION IS POURED TO MEET FLATNESS LEVEL TOLERANCES AS INDICATED IN ACI 4.5.6 AND 4.5.7.

B. EQUIPMENT ENCLOSURE

- THE EQUIPMENT ENCLOSURE IS A PRE-FABRICATED BUILDING MANUFACTURED BY FIBREBOND, MINDEN, LOUISIANA.
- THE EQUIPMENT ENCLOSURE BUILDING SHALL BE FURNISHED AND INSTALLED BY THE OWNER AND INSTALLED BY THE CONTRACTOR PERMANUFACTURER'S SPECIFICATIONS.

C. CONCRETE NOTES

- ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 AND ACI 301, LATEST EDITION. THESE DOCUMENTS SHALL BE AVAILABLE IN THE FIELD OFFICE.
- EXCEPT WHERE OTHERWISE INDICATED, CONCRETE SHALL BE NORMAL WEIGHT AND WITH MINIMUM 28-DAY COMPRESSIVE STRENGTHS OF $f'c=4000$ PSI. ALL EXTERIOR EXPOSED CONCRETE SHALL BE AIR ENTRAINED.
- REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

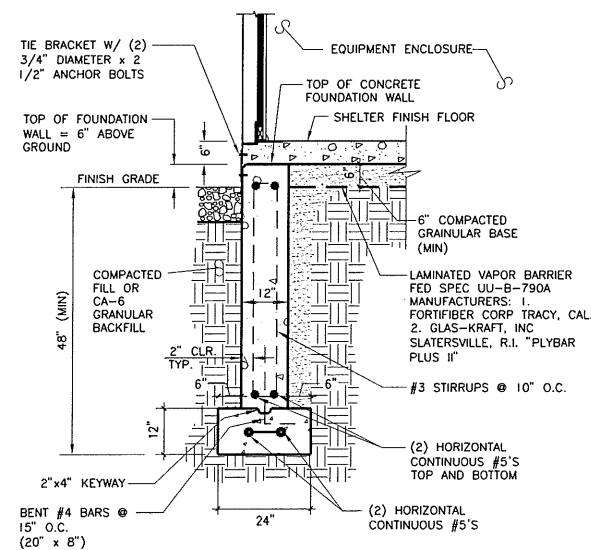


SHELTER FOUNDATION PLAN

NOT TO SCALE

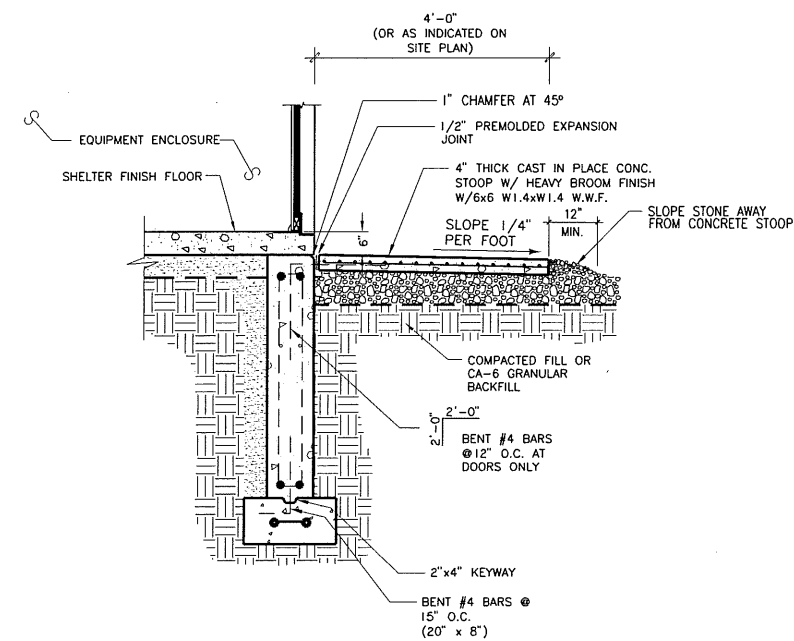
SHELTER NOTE:
PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT THE FOUNDATION MATCHES THE PROPOSED SHELTER SIZE SHOWN ON SHEETS B-1 THROUGH B-4 OF THESE PLANS. IF CONFLICTS OR DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.

NOTE:
LOCALIZED AREAS OF SOFT OR LOOSE MATERIALS MAY BE ENCOUNTERED AT THE PROPOSED BEARING ELEVATION. THE SOILS MAY REQUIRE COMPACTION USING A PLATE COMPACTOR IN THE FOOTING TRENCH IF FIELD CONDITIONS INDICATE LOOSE GRANULAR SOILS. THE SOILS MAY REQUIRE REMOVAL AND REPLACEMENT WITH AN APPROVED ENGINEERED FILL. FOUNDATION DEPTH AND OVER DIG REQUIREMENTS SHALL BE VERIFIED WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. THE EVALUATION OF THE SUB-GRADE AND SELECTION OF FILL MATERIALS SHALL BE MONITORED AND TESTED BY A QUALIFIED REPRESENTATIVE OF THE SOILS ENGINEER.



FOUNDATION WALL SECTION A-A

NOT TO SCALE



STOOP DETAIL SECTION A-A

NOT TO SCALE

SHELTER FOUNDATION DETAILS

NOT TO SCALE

1

CHICAGO SMSA LIMITED
PARTNERSHIP, D.B.A.
VERIZON WIRELESS

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OCTAVIO HERRERA
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CONSTRUCTION MANAGER:
RON PAULY
500 TECHNOLOGY DRIVE
2ND FLOOR
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CLS

CONSOLIDATED LAND SURVEYING

1300 W. COMMERCE DR. STE. 700
PEORIA, ILLINOIS 61615

LAND SURVEYORS
AND PROFESSIONAL ENGINEERS

PHONE: 309-692-3434
FAX: 309-692-3433

PROFESSIONAL DESIGN FIRM NO. 184-002756

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PREPARED BY: HRH 5-12-15

I	8-25-15	UPDATED FOUNDATION DETAILS

(CST)

IL 00-5777

SITE NAME:

**CRYSTAL
LAKE
SOUTH**

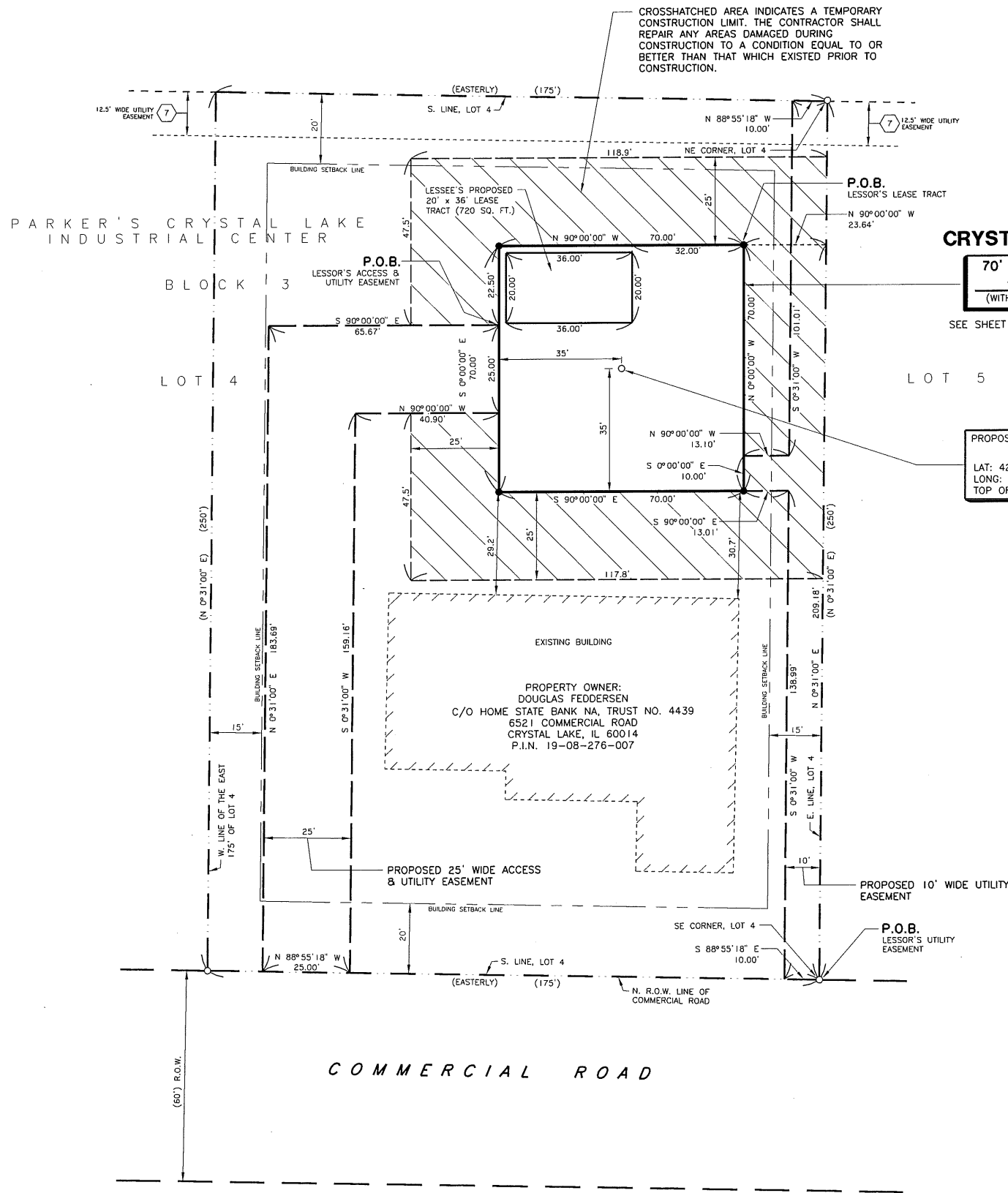
SHEET NAME
**FOUNDATION
PLAN AND
DETAILS**

SHEET NUMBER

C-4

JOB NUMBER

9468-43-8-88-03



CROSSHATCHED AREA INDICATES A TEMPORARY CONSTRUCTION LIMIT. THE CONTRACTOR SHALL REPAIR ANY AREAS DAMAGED DURING CONSTRUCTION TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION.

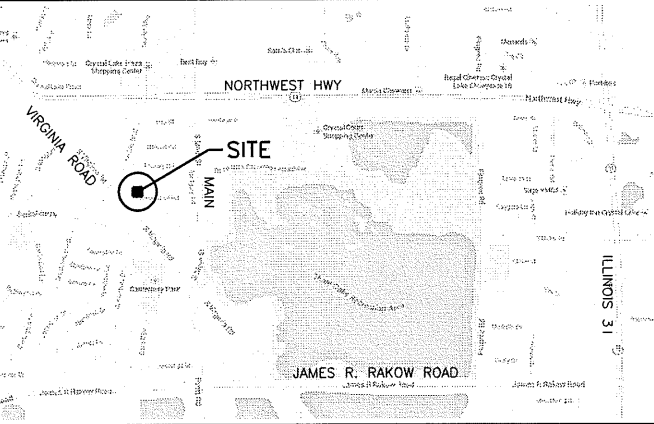
CRYSTAL LAKE SOUTH

70' x 70' LEASE TRACT
4,900 SQ. FT. ±
 (WITHIN SOLID HEAVY LINES)

SEE SHEET LS-1.1 FOR LEASE TRACT DETAIL

PROPOSED "SLICK STICK" STEALTH TOWER
 CENTER OF TOWER
 LAT: 42°-13'-18.0" (NAD 83)
 LONG: 88°-19'-12.9" (NAD 83)
 TOP OF CONC. BASE ELEV. = 897.0

PROPERTY OWNER:
 DOUGLAS FEDDERSEN
 C/O HOME STATE BANK NA, TRUST NO. 4439
 6521 COMMERCIAL ROAD
 CRYSTAL LAKE, IL 60014
 P.I.N. 19-08-276-007



LOCATION MAP
 NOT TO SCALE

CHICAGO SMSA LIMITED PARTNERSHIP, D.B.A. VERIZON WIRELESS
 REAL ESTATE MANAGER:
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 RON PAULY
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PREPARED BY: HRH 5-12-15

1	10-20-15	REVISED MONOPOLE TO "SLICK STICK" STEALTH TOWER PER CITY COMMENTS

(CST)
 IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
LESSEE
 PLAT OF SURVEY

SHEET NUMBER
LS-1

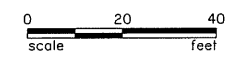
JOB NUMBER
 9468-43-8-8B-03

- LEGEND**
- BOUNDARY LINE OF LEASE SITE
 - PARENT PARCEL
 - RIGHT OF WAY LINE
 - - - BUILDING SETBACK LINE
 - - - EXISTING PROPERTY LINE
 - - - PROPOSED EASEMENT LINE
 - - - EXISTING EASEMENT LINE
 - SURVEY PIPE OR ROD FOUND
 - IRON ROD SET
 - (250') INFORMATION OF RECORD
 - P.O.B. POINT OF BEGINNING

TITLE COMMITMENT NOTES:
 (PER TITLE COMMITMENT NUMBER 50791-IL 1503-5030, DATED MARCH 12, 2015)
 1. SCHEDULE B, ITEM NUMBER 7; EASEMENTS AS NOTED ON THE PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER PLAT DATED 4/26/1955 RECORDED 5/10/1955 IN BOOK 12 PAGE 27.

SEE SHEET LS-1.1 FOR LEGAL DESCRIPTIONS

SEE SHEET LS-1.1 FOR LEASE TRACT DETAIL



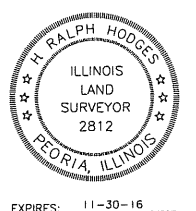
STATE OF ILLINOIS
 COUNTY OF PEORIA

WE, CONSOLIDATED LAND SURVEYING, INC. DO HEREBY CERTIFY THAT WE HAVE SURVEYED AND PREPARED A PLAT OF SURVEY OF A PART OF THE EAST 175 FEET OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, MCHENRY COUNTY, ILLINOIS, AND THAT THE ABOVE PLAT IS A CORRECT REPRESENTATION OF SAID SURVEY AS MADE BY US AND DRAWN TO A SCALE OF 1 INCH = 20 FEET.

GIVEN UNDER MY HAND AND SEAL THIS 20TH DAY OF OCTOBER A.D. 2015.

CONSOLIDATED LAND SURVEYING, INC.

H. Ralph Hodges
 H. RALPH HODGES, ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 2812



EXPIRES: 11-30-16

**LEGAL DESCRIPTION
PROPOSED 20' x 36' LEASE TRACT
720 SQ. FT. ±**

A 20 FOOT BY 36 FOOT LEASE TRACT AND UTILITY EASEMENT BEING A PART OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID LOT 4; THENCE NORTH 00°-31'-00" EAST (BEARINGS ASSUMED FOR THE PURPOSE OF DESCRIPTION ONLY) ALONG THE EAST LINE OF SAID LOT 4, A DISTANCE OF 209.18 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 23.64 FEET; THENCE CONTINUING NORTH 90°-00'-00" WEST, A DISTANCE OF 32.00 FEET; THENCE SOUTH 00°-00'-00" EAST, A DISTANCE OF 2.00 FEET TO THE POINT OF BEGINNING OF THE TRACT TO BE DESCRIBED; THENCE CONTINUING SOUTH 00°-00'-00" EAST, A DISTANCE OF 20.00 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 36.00 FEET; THENCE NORTH 00°-00'-00" WEST, A DISTANCE OF 20.00 FEET; THENCE SOUTH 90°-00'-00" EAST, A DISTANCE OF 36.00 FEET TO THE POINT OF BEGINNING, CONTAINING 720 SQUARE FEET, MORE OR LESS, SITUATED IN THE COUNTY OF MCHENRY AND STATE OF ILLINOIS.

**LEGAL DESCRIPTION
PROPOSED 70' x 70' LEASE TRACT
4,900 sq. ft. ±**

A 70 FOOT BY 70 FOOT LEASE TRACT AND UTILITY EASEMENT BEING A PART OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID LOT 4; THENCE NORTH 00°-31'-00" EAST (BEARINGS ASSUMED FOR THE PURPOSE OF DESCRIPTION ONLY) ALONG THE EAST LINE OF SAID LOT 4, A DISTANCE OF 209.18 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 23.64 FEET TO THE POINT OF BEGINNING OF THE TRACT TO BE DESCRIBED; THENCE CONTINUING NORTH 90°-00'-00" WEST, A DISTANCE OF 70.00 FEET; THENCE SOUTH 00°-00'-00" EAST, A DISTANCE OF 70.00 FEET; THENCE SOUTH 90°-00'-00" EAST, A DISTANCE OF 70.00 FEET; THENCE NORTH 00°-00'-00" WEST, A DISTANCE OF 70.00 FEET TO THE POINT OF BEGINNING, CONTAINING 4,900 SQUARE FEET, MORE OR LESS, SITUATED IN THE COUNTY OF MCHENRY AND STATE OF ILLINOIS.

**LEGAL DESCRIPTION
PROPOSED 25' WIDE ACCESS & UTILITY EASEMENT**

A 25 FOOT WIDE ACCESS AND UTILITY EASEMENT BEING A PART OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID LOT 4; THENCE NORTH 00°-31'-00" EAST (BEARINGS ASSUMED FOR THE PURPOSE OF DESCRIPTION ONLY) ALONG THE EAST LINE OF SAID LOT 4, A DISTANCE OF 209.18 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 23.64 FEET; THENCE CONTINUING NORTH 90°-00'-00" WEST, A DISTANCE OF 70.00 FEET; THENCE SOUTH 00°-00'-00" EAST, A DISTANCE OF 22.50 FEET TO THE POINT OF BEGINNING OF THE EASEMENT TO BE DESCRIBED; THENCE CONTINUING SOUTH 00°-00'-00" EAST, A DISTANCE OF 25.00 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 40.90 FEET; THENCE SOUTH 00°-31'-00" WEST, PARALLEL WITH THE EAST LINE OF SAID LOT 4, A DISTANCE OF 159.16 FEET TO A POINT ON THE SOUTH LINE OF SAID LOT 4; THENCE NORTH 88°-55'-18" WEST ALONG THE SOUTH LINE OF SAID LOT 4, A DISTANCE OF 25.00 FEET; THENCE NORTH 00°-31'-00" EAST, PARALLEL WITH THE EAST LINE OF SAID LOT 4, A DISTANCE OF 183.69 FEET; THENCE SOUTH 90°-00'-00" EAST, A DISTANCE OF 65.67 FEET TO THE POINT OF BEGINNING, SITUATED IN THE COUNTY OF MCHENRY AND STATE OF ILLINOIS.

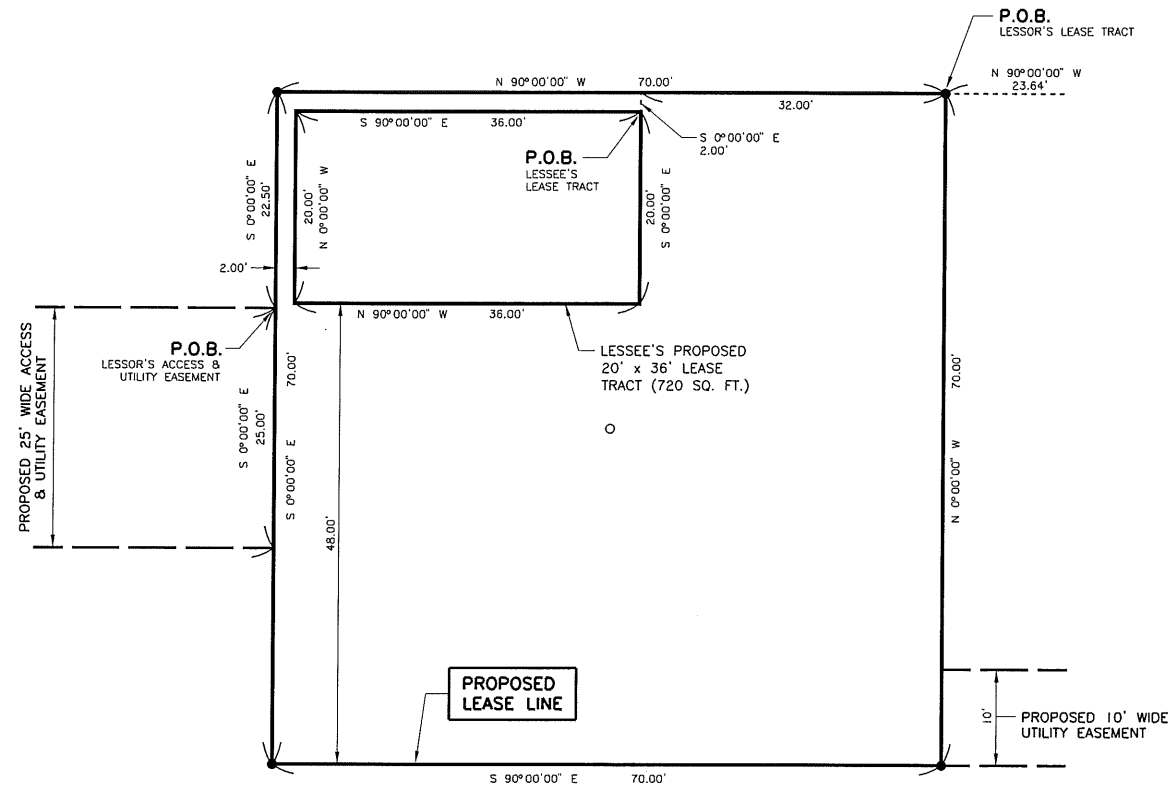
**LEGAL DESCRIPTION
PROPOSED 10' WIDE UTILITY EASEMENT**

A 10 FOOT WIDE UTILITY EASEMENT BEING A PART OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID LOT 4 AS THE POINT OF BEGINNING OF THE EASEMENT TO BE DESCRIBED; THENCE NORTH 00°-31'-00" EAST (BEARINGS ASSUMED FOR THE PURPOSE OF DESCRIPTION ONLY) ALONG THE EAST LINE OF SAID LOT 4, A DISTANCE OF 250 FEET TO THE NORTHEAST CORNER OF SAID LOT 4; THENCE NORTH 88°-55'-18" WEST ALONG THE NORTH LINE OF SAID LOT 4, A DISTANCE OF 10.00 FEET; THENCE SOUTH 00°-31'-00" WEST, PARALLEL WITH THE EAST LINE OF SAID LOT 4, A DISTANCE OF 101.01 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 13.10 FEET; THENCE SOUTH 00°-00'-00" EAST, A DISTANCE OF 10.00 FEET; THENCE SOUTH 90°-00'-00" EAST, A DISTANCE OF 13.01 FEET; THENCE SOUTH 00°-31'-00" WEST, PARALLEL WITH THE EAST LINE OF SAID LOT 4, A DISTANCE OF 138.99 FEET TO A POINT ON THE SOUTH LINE OF SAID LOT 4; THENCE SOUTH 88°-55'-18" EAST ALONG THE SOUTH LINE OF SAID LOT 4, A DISTANCE OF 10.00 FEET TO THE POINT OF BEGINNING, SITUATED IN THE COUNTY OF MCHENRY AND STATE OF ILLINOIS.

**LEGAL DESCRIPTION
EXISTING PARENT PARCEL**

THE EAST 175 FEET OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED MAY 10, 1955 AS DOCUMENT NO. 292393, IN BOOK 12 OF PLATS, PAGE 27 IN MCHENRY COUNTY, ILLINOIS.



**PROPOSED LEASE TRACT DETAIL
NOT TO SCALE**

SEE SHEET LS-1 FOR PLAT OF SURVEY

**CHICAGO SMSA LIMITED
PARTNERSHIP, D.B.A.
VERIZON WIRELESS**

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PREPARED BY: HRH 5-12-15

(CST)

IL 00-5777

SITE NAME:

**CRYSTAL
LAKE
SOUTH**

SHEET NAME

LESSEE

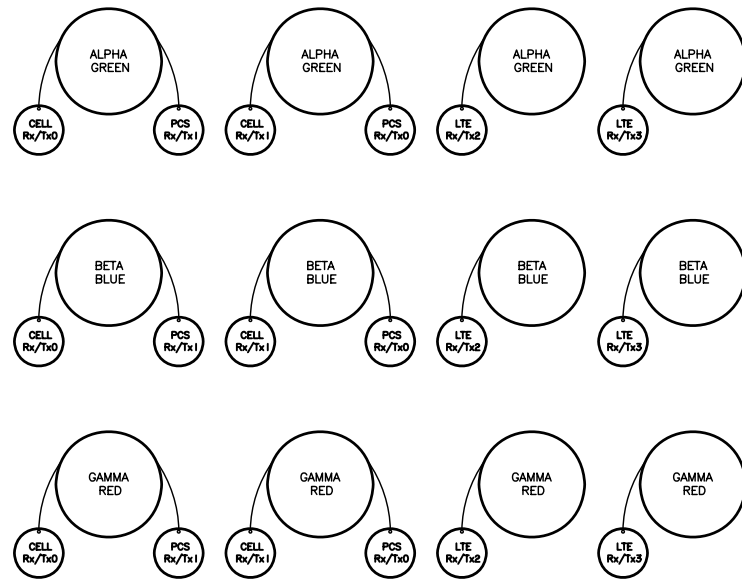
PLAT OF SURVEY
LEGAL DESCRIPTIONS

SHEET NUMBER

LS-1.1

JOB NUMBER

9468-43-8-88-03



VIEW LOOKING AT ENTRY PORT FROM INSIDE SHELTER

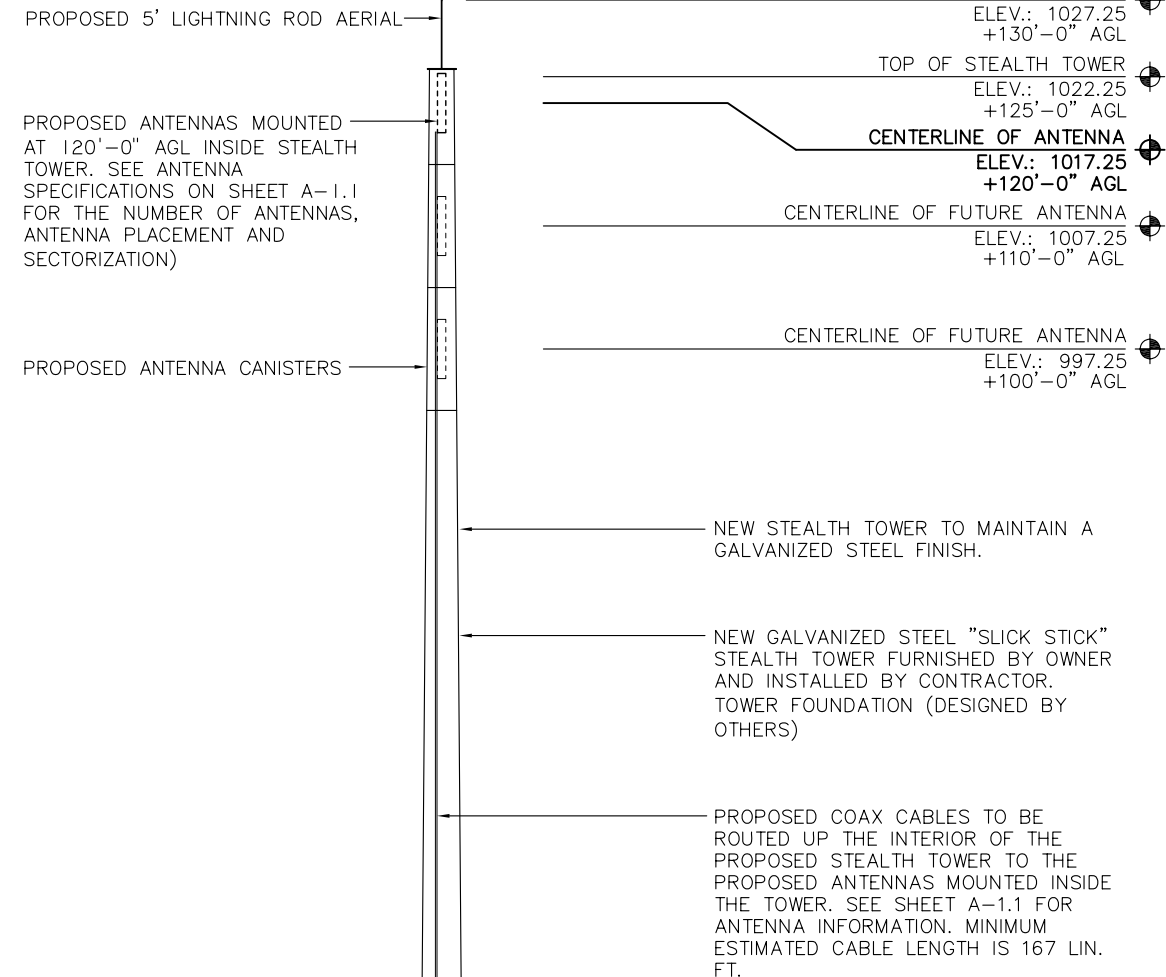
PREFERRED COAX & COAX TAG ORIENTATION

NOT TO SCALE

2

NOTES:

1. VERIFY EACH COAXIAL CABLE LENGTH, ROUTING AND ALL MOUNTING APPURTENANCES WITH OWNER PRIOR TO ORDERING.
2. THE MINIMUM COAXIAL CABLE LENGTH HAS BEEN ESTIMATED AT 167 FEET EACH WITH A CORRESPONDING CABLE DIAMETER OF 1/8". THIS CABLE LENGTH IS APPROXIMATE AND IS NOT TO BE USED FOR CONSTRUCTION. ACTUAL CABLE LENGTHS MAY VARY FROM ESTIMATED MINIMUM LENGTH AND MUST BE VERIFIED.
3. TAG ALL MAIN CABLES (LABELED ACCORDING TO SPECS) AT FOUR (4) LOCATIONS:
 - A. 1 ID TAG ON THE BOTTOM 1/2" JUMPER COMING FROM THE LUCENT EQUIPMENT
 - B. 1 ID TAG ON THE BOTTOM MAIN LINE INSIDE THE SHELTER NEAR THE MAIN CONNECTOR
 - C. 1 ID TAG ON THE TOP MAIN LINE NEAR THE MAIN CONNECTOR
 - D. 1 ID TAG ON THE TOP 1/2" JUMPER NEAR THE ANTENNA
4. CONTRACTOR TO AFFIX TAGS ON THE MAIN CABLES USING A MORE PERMANENT METHOD THAT TIE WRAPS. CONTACT CONSTRUCTION MANAGER FOR SUFFICIENT METHODS.
5. IN THE EVENT DIPLEXERS AND/OR OTHER EQUIPMENT IS ADDED INTO THE SYSTEM, TAGGING WILL BE CHANGED FROM NOTE 3. CONTACT CONSTRUCTION MANAGER FOR SUFFICIENT METHODS.
6. EACH COAX SHALL BE SUPPORTED COLUMN GRIP (CHINESE FINGER GRIP) HUNG FROM A J-HOOK AT TOP OF TOWER, (10' ABOVE FOR LATTICE TOWER).
7. EACH COAX SHALL BE GROUNDED AT THREE (3) LOCATIONS:
 - A. TOWER PLATFORM OR V-FRAME
 - B. TOWER BASE
 - C. OUTSIDE EQUIPMENT SHELTER AT THE WAVEGUIDE ENTRY PORT
8. COAXIAL CABLES TO BE SUPPORTED EVERY 3'-0" ON PLATFORM OR V-FRAME WITH STAINLESS STEEL HANGERS.
9. COAXIAL CABLES TO BE SUPPORTED EVERY 18" WITH STAINLESS STEEL HANGERS.
10. ANTENNA CONTRACTOR RESPONSIBLE FOR FABRICATION ENCLOSURE JUMPERS.
11. COAX TYPE WILL BE AVA7-50 AIR FOAM DIELECTRIC CABLE FROM ANDREW TO REPLACE THE OLDER LDF7-50 CABLE.
12. THE CONTRACTOR SHALL USE PPC CONNECTORS ONLY. NO ANDREW CONNECTORS SHALL BE USED.

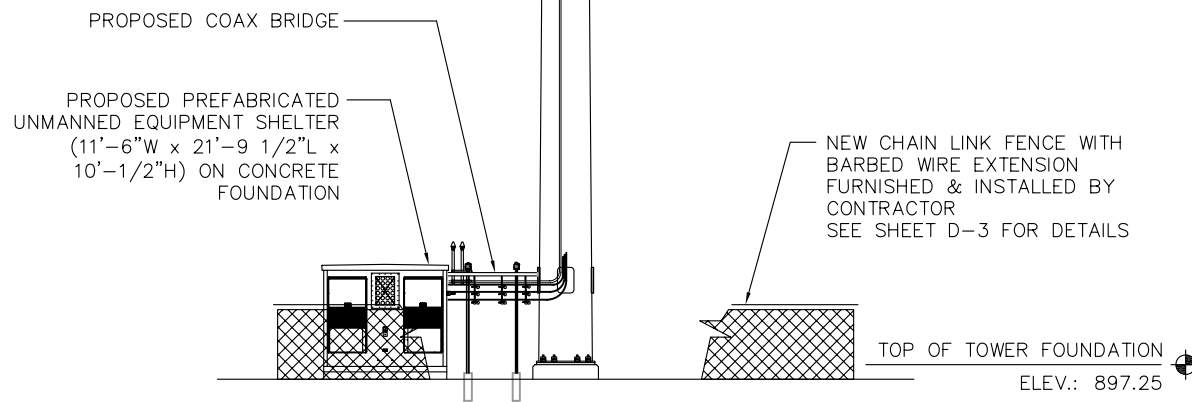


STRUCTURAL NOTES:

1. STRUCTURAL CALCULATION PREPARED BY OTHERS. CONTRACTOR TO COORDINATE WITH REPRESENTATIVE TO OBTAIN A COPY.
2. CONTRACTOR TO REFER TO TOWER STRUCTURAL CALCULATIONS FOR ADDITIONAL LOADS. NO ERECTION OR MODIFICATION OF TOWER SHALL BE MADE WITHOUT APPROVAL OF STRUCTURAL ENGINEER.

TOWER NOTES:

1. COAX LADDER OR BRACKETS AND HARDWARE WILL NEED TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR
2. IT IS THE INSTALLING CONTRACTORS RESPONSIBILITY TO VERIFY ALL ANTENNA INFORMATION AGAINST FINAL RADIO ENGINEERING PLAN PROVIDED BY OTHERS.



ELEVATION - LOOKING EAST
NOT TO SCALE

1

CHICAGO SMSA LIMITED PARTNERSHIP, D.B.A. VERIZON WIRELESS

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PREPARED BY: HRH 5-12-15

1	10-20-15	REVISED TO "SLICK STICK" STEALTH TOWER

(CST)

IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
TOWER ELEVATION AND NOTES

SHEET NUMBER
A-1

JOB NUMBER
9468-43-8-8B-03



REAR VIEW OF THE SHELTER



FRONT VIEW OF THE SHELTER

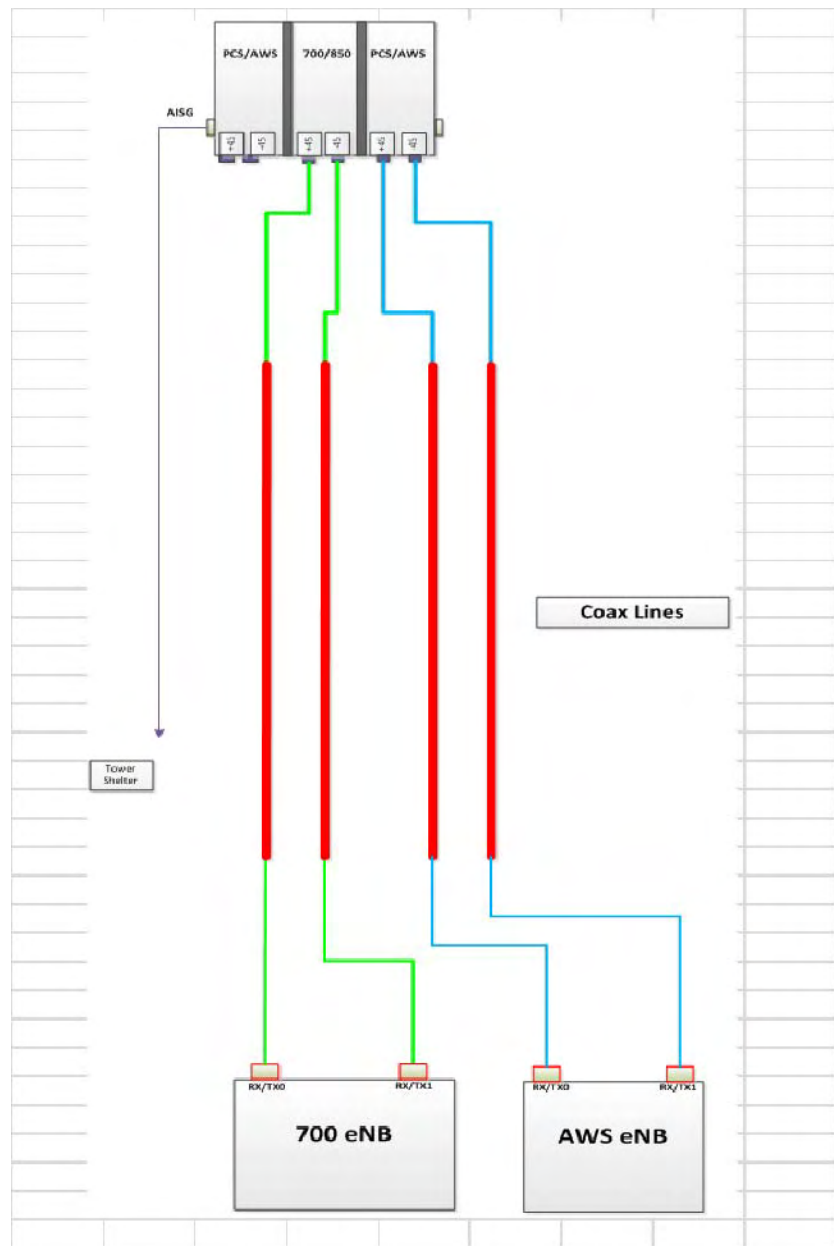
ESTIMATED COAX CABLE LENGTH IS 167 LIN. FT.

Proposed					
Passive Components	Location	Manufacturer	Component Model	Count	Action
	Top (Platform)				
	Bottom (Shelter)				
	Top (Platform)				
	Bottom (Shelter)				
	Top (Platform)				
	Top (Platform)				
	Bottom (Shelter)				
	Top (Platform)				
	Bottom (Shelter)				

Coax	Sector	Coax Manufacturer	Type	Size	Count	Action
	Alpha	ANDREW	LDF7-50A	7/8"	4	Install
	Beta	ANDREW	LDF7-50A	7/8"	4	Install
	Gamma	ANDREW	LDF7-50A	7/8"	4	Install
	AWS					

Comments

Use high power amplifier (80w) at the base station (inside the shelter) for AWS. NO RRHs. Stealth pole site.



ANTENNA LINE/PLATFORM SCHEMATIC
NOT TO SCALE

EQUIPMENT CHANGE REQUEST FORM- ECR

Cell Name	CRYSTAL LAKE SOUTH			Cell ID	3319
Location Number	281875	RF Engineer	Shoaib Nagi	Address	6521 Commercial Road
Date of Request	5/5/2015	Market	Elgin-1	City/State/Zip	Crystal Lake, IL, 60014

PROPOSED CONFIGURATION				Configuration				Option-A2			
Sector	Pos	Port	RF Path	Antenna Manufacturer	Antenna Model	Antenna Serial Number	Centerline	Azimuth	Variable Tilt	Mechanical Tilt	Action
Alpha	A1	L1 (-45)	LTE C - RrTx0/RrTx1	Amphenol	CWWX063X19G00		120	90	2	0	Add- Install
		L2 (+45)	LTE C - RrTx2/RrTx3								
		H1 (-45)	AWS - RrTx0								
		H2 (+45)	AWS - RrTx1								
	A2	L1 (-45)	Unused at this time								Unchanged
		L2 (+45)	Unused at this time								
		H1 (-45)	Unused at this time								
		H2 (+45)	Unused at this time								
	A3	L1 (-45)	Unused at this time								Unchanged
		L2 (+45)	Unused at this time								
		H1 (-45)	Unused at this time								
		H2 (+45)	Unused at this time								
A4	L1 (-45)	Unused at this time								Unchanged	
	L2 (+45)	Unused at this time									
	H1 (-45)	Unused at this time									
	H2 (+45)	Unused at this time									
Beta	B1	L1 (-45)	LTE C - RrTx0/RrTx1	Amphenol	CWWX063X19G00		120	210	2	0	Add- Install
		L2 (+45)	LTE C - RrTx2/RrTx3								
		H1 (-45)	AWS - RrTx0								
		H2 (+45)	AWS - RrTx1								
	B2	L1 (-45)	Unused at this time								Unchanged
		L2 (+45)	Unused at this time								
		H1 (-45)	Unused at this time								
		H2 (+45)	Unused at this time								
	B3	L1 (-45)	Unused at this time								Unchanged
		L2 (+45)	Unused at this time								
		H1 (-45)	Unused at this time								
		H2 (+45)	Unused at this time								
B4	L1 (-45)	Unused at this time								Unchanged	
	L2 (+45)	Unused at this time									
	H1 (-45)	Unused at this time									
	H2 (+45)	Unused at this time									
GAMMA	G1	L1 (-45)	LTE C - RrTx0/RrTx1	Amphenol	CWWX063X19G00		120	330	2	0	Add- Install
		L2 (+45)	LTE C - RrTx2/RrTx3								
		H1 (-45)	AWS - RrTx0								
		H2 (+45)	AWS - RrTx1								
	G2	L1 (-45)	Unused at this time								Unchanged
		L2 (+45)	Unused at this time								
		H1 (-45)	Unused at this time								
		H2 (+45)	Unused at this time								
	G3	L1 (-45)	Unused at this time								Unchanged
		L2 (+45)	Unused at this time								
		H1 (-45)	Unused at this time								
		H2 (+45)	Unused at this time								
G4	L1 (-45)	Unused at this time								Unchanged	
	L2 (+45)	Unused at this time									
	H1 (-45)	Unused at this time									
	H2 (+45)	Unused at this time									

TOWER NOTES:

- COAX LADDER OR BRACKETS AND HARDWARE WILL NEED TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR
- IT IS THE INSTALLING CONTRACTORS RESPONSIBILITY TO VERIFY ALL ANTENNA INFORMATION AGAINST FINAL RADIO ENGINEERING PLAN PROVIDED BY OTHERS.

ANTENNA SCHEDULE
NOT TO SCALE

CHICAGO SMSA LIMITED PARTNERSHIP, D.B.A. VERIZON WIRELESS

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PREPARED BY: HRH 5-12-15

1	10-20-15	REVISED TO "SLICK STICK" STEALTH TOWER
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(CST)

IL 00-5777

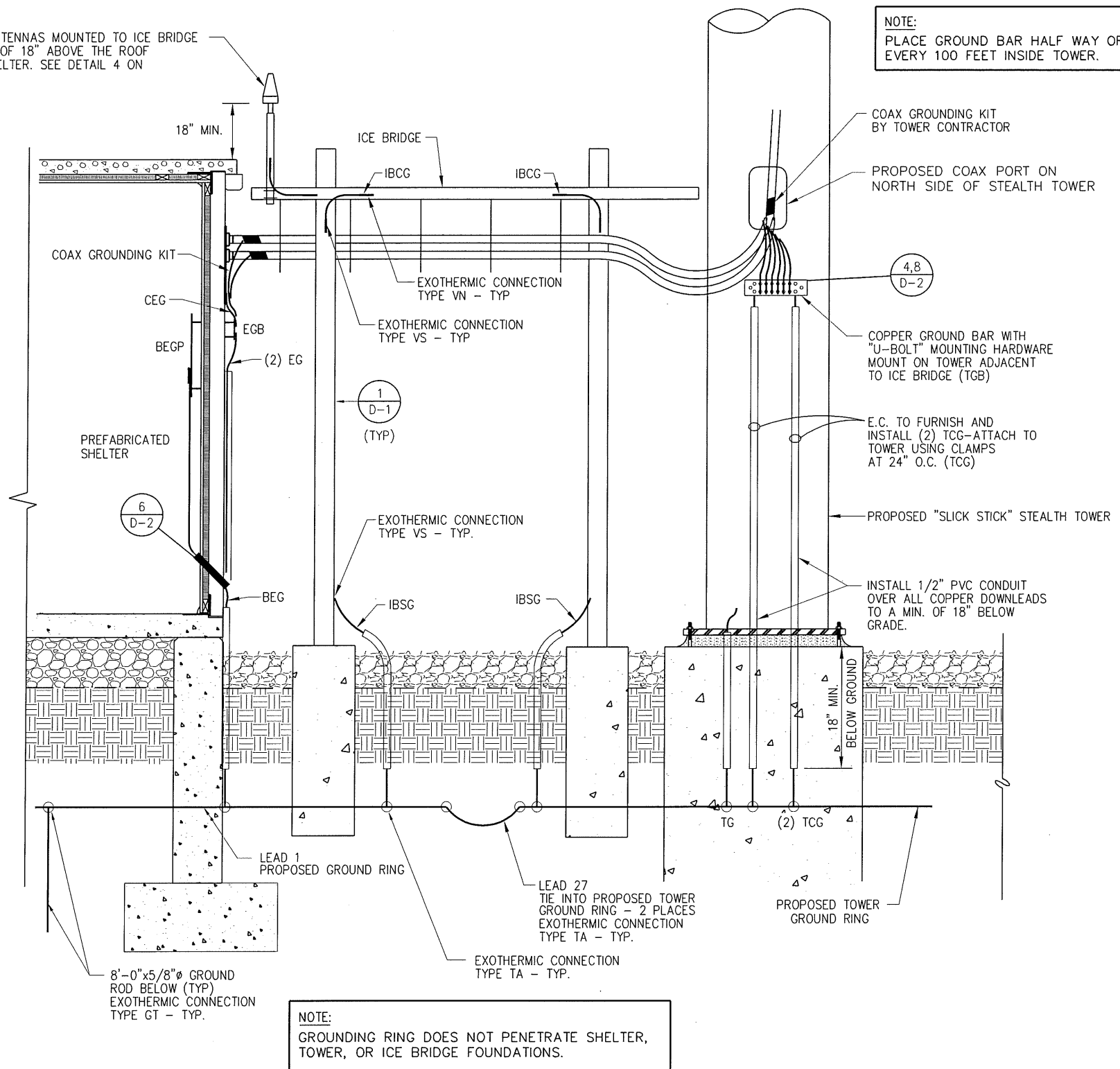
SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
ANTENNA INFORMATION

SHEET NUMBER
A-1.1

JOB NUMBER
9468-43-8-8B-03

(2) GPS ANTENNAS MOUNTED TO ICE BRIDGE
A MINIMUM OF 18" ABOVE THE ROOF
OF THE SHELTER. SEE DETAIL 4 ON
SHEET D-1



NOTE:
PLACE GROUND BAR HALF WAY OR
EVERY 100 FEET INSIDE TOWER.

NOTE:
GROUNDING RING DOES NOT PENETRATE SHELTER,
TOWER, OR ICE BRIDGE FOUNDATIONS.

SEE SHEET A-3 FOR SHELTER AND TOWER
GROUNDING SCHEMATIC WITH LEGEND.

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PREPARED BY: HRH 5-12-15

1	10-20-15	REVISED TO "SLICK STICK" STEALTH TOWER

(CST)
IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
ICE BRIDGE/COAX PROFILE WITH GROUNDING

SHEET NUMBER
A-2

JOB NUMBER
9468-43-8-8B-03

LEGEND

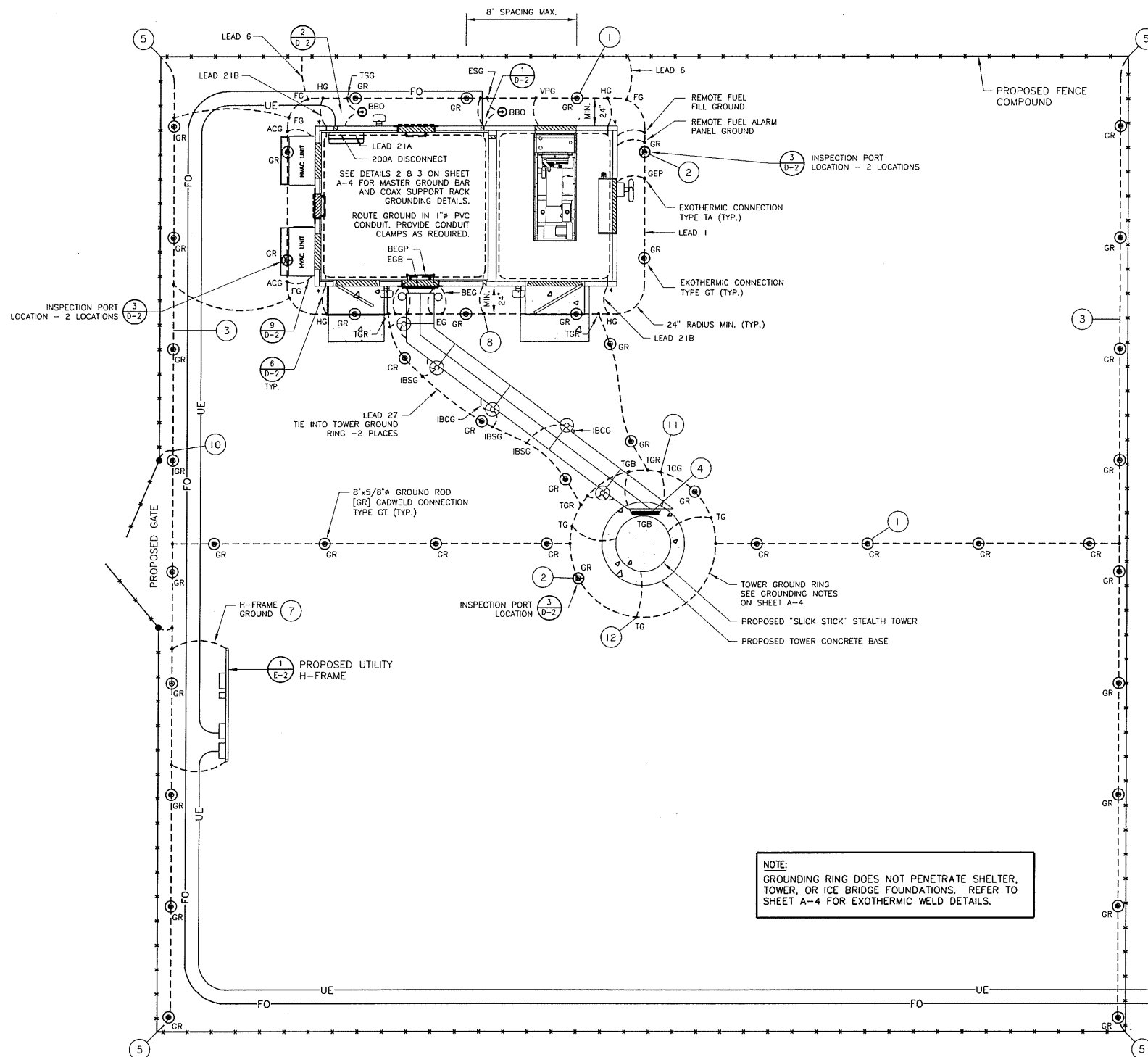
- LEAD 6 FG FENCE GROUND: E.C. TO PROVIDE AND INSTALL #2 AWG BARE SOLID TINNED COPPER GROUND WIRE AT EACH FENCE CORNER POST. GROUND WIRE TO BE WOVEN THROUGH FENCE FABRIC AND CADWELDED THREE PLACES. CADWELDS REQUIRED AT TOP RAIL, BOTTOM OF CORNER POST, AND GROUND RING.
- TG TOWER GROUND: E.C. SHALL PROVIDE AND INSTALL (1) #2 AWG BARE SOLID TINNED COPPER GROUND WIRE FROM THE TOWER BASE TO GROUNDING RING. BOTH CONNECTIONS ARE CADWELD.
- TCG TOWER COAX GROUND: E.C. SHALL PROVIDE AND INSTALL (2) #2 AWG BARE SOLID TINNED COPPER GROUND WIRES FROM TOWER COAX GROUND BAR (TGB) TO THE GROUNDING RING. BOTH CONNECTIONS ARE CADWELD.
- IBCG ICE BRIDGE CHANNEL GROUND: E.C. SHALL PROVIDE AND INSTALL (1) #2 AWG BARE SOLID TINNED COPPER GROUND WIRE FROM ICE BRIDGE CHANNEL TO GROUNDING RING. BOTH CONNECTIONS ARE CADWELD.
- IBSG ICE BRIDGE SUPPORT GROUND: E.C. SHALL PROVIDE AND INSTALL (1) #2 BARE SOLID TINNED COPPER GROUND WIRE FROM ICE BRIDGE SUPPORT COLUMN TO GROUNDING RING. BOTH CONNECTIONS ARE CADWELD.
- TVSS TRANSIENT VOLTAGE SURGE SUPPRESSER: E.C. TO INSTALL PER TOWER MANUFACTURERS REQUIREMENTS.
- TVSG TRANSIENT VOLTAGE SURGE SUPPRESSER GROUND: E.C. SHALL PROVIDE AND INSTALL (1) #2 BARE SOLID TINNED GROUND WIRE FROM PROVIDED SURGE SUPPRESSER TO GROUNDING RING. CONNECTION TO SURGE SUPPRESSER IS MECHANICAL. CONNECTION TO GROUNDING RING IS CADWELD.
- TGB TOWER COAX GROUND BAR: E.C. TO PROVIDE AND INSTALL (2) 20"x4"x1/4" COPPER GROUND BARS ON THE TOWER. ONE TO BE LOCATED AT ANTENNA MOUNT ELEVATION (ATTACHED TO TOWER STEEL), THE OTHER AT THE BASE OF TOWER ADJACENT TO ICE BRIDGE (ISOLATED FROM TOWER STEEL).
- ACG AIR CONDITIONER GROUND: E.C. TO PROVIDE AND INSTALL (1) #2 AWG BARE SOLID TINNED COPPER GROUND WIRE FROM CABINET OF HVAC UNIT TO GROUNDING RING. CONNECTION TO CABINET IS MECHANICAL. CONNECTION TO GROUNDING RING IS CADWELD (TYPICAL OF 2).
- TSG TELCO SERVICE GROUND: E.C. TO PROVIDE AND INSTALL (1) #2 AWG BARE SOLID TINNED COPPER GROUND FROM TELCO GROUND BAR IN 1 1/2" PVC SLEEVE TO (1) 8'-0"x5/8" CLAD STEEL GROUND ROD (TOP AT 42" BELOW FINISH GRADE). SEAL SHELTER PENETRATION WITH CLEAR SILICONE SEALANT.
- ESG ELECTRICAL SERVICE GROUND: E.C. SHALL PROVIDE AND INSTALL #2 AWG BARE SOLID TINNED COPPER GROUND FROM MAIN A/C SERVICE DISCONNECT SWITCH NEUTRAL BUS BAR TO ONE SEPARATE 8'-0"x5/8" COPPER CLAD STEEL GROUND ROD (TOP AT 42" BELOW FINISH GRADE). CONNECTION TO BUS BAR TO BE MECHANICAL. CONNECTION TO GROUND ROD TO BE CADWELD.
- HG GENERATOR HOOD GROUND: E.C. TO PROVIDE AND INSTALL (1) #2 AWG BARE SOLID TINNED COPPER GROUND WIRE FROM GENERATOR INTAKE AND EXHAUST HOOD TO GROUNDING RING. CONNECTION TO CABINET IS MECHANICAL. CONNECTION TO GROUNDING RING IS CADWELD (NOT NEEDED IF HOOD IS FIBERGLASS).
- LEAD 21B HG HALO GROUND: E.C. TO INSTALL #2 AWG BARE SOLID TINNED COPPER GROUND WIRE THROUGH PROVIDED SHELTER PENETRATION TO GROUNDING RING. GROUND WIRE IS PROVIDED. CONNECTION TO GROUNDING RING IS CADWELD. SEAL BOTH SIDES OF SHELTER PENETRATION WITH CLEAR SILICONE SEALANT (TYPICAL OF 4).
- BBO BOND TO BURIED OBJECTS: E.C. TO PROVIDE AND INSTALL #2 BARE SOLID TINNED COPPER GROUND WIRE FROM GROUND ROD TO GROUNDING RING AT TSG AND ESG. BOTH CONNECTIONS ARE CADWELD.
- BEGP BUILDING ENTRY GROUND BAR: E.C. TO PROVIDE AND INSTALL 20"x16"x1/4" COPPER GROUND PLATE ON INTERIOR OF SIDE WALL BELOW COAX BUILDING ENTRY LOCATION.
- BEG BUILDING ENTRY GROUND: E.C. TO PROVIDE AND INSTALL (2) #2 AWG BARE SOLID TINNED COPPER WIRE FROM BEGP TO GROUNDING RING. E.C. TO PROVIDE OPENING IN SIDE WALL SIMILAR TO DETAIL 9/D-2 AND SEAL BOTH ENDS WEATHER TIGHT. BOTH CONNECTIONS ARE CADWELD.
- EGB EXTERIOR GROUND BAR: E.C. TO PROVIDE AND INSTALL 20"x4"x1/4" COPPER GROUND BAR ON EXTERIOR OF SIDE WALL BELOW COAX BUILDING ENTRY LOCATION.
- EG EXTERIOR GROUND: E.C. TO PROVIDE AND INSTALL (2) #2 AWG BARE SOLID TINNED COPPER WIRES FROM EGB TO GROUNDING RING. BOTH CONNECTIONS ARE CADWELD.
- CEG COAX ENTRY GROUND: E.C. TO PROVIDE AND INSTALL (1) #6 AWG BARE SOLID TINNED COPPER WIRE FROM COAX BUILDING ENTRY TO EGB. CONNECTION AT COAX PLATE CADWELD, CONNECTION AT EGB 2 HOLE LUG MECHANICAL.
- PBG POWER BOARD GROUND: E.C. TO PROVIDE AND INSTALL INSULATED #2 AWG STRANDED COPPER WIRE FROM EXTERIOR GROUND RING WITH SUFFICIENT LENGTH COILED INSIDE TO REACH TOP OF DELTA POWER BOARD. CONNECTION AT GROUND RING TO BE CADWELD.
- LEAD 1 GR 8'-0"x5/8" COPPER CLAD STEEL GROUND ROD DRIVEN VERTICAL TO 42" BELOW GRADE (OR FROST LINE - WHICHEVER IS GREATER). SPACING OF THE GROUND RODS SHALL BE 8' MAXIMUM. ALL CONNECTIONS TO BE CADWELD.
- * EXISTING SHELTER PENETRATION LOCATION - REFER TO DETAIL 6/D-2.
- LEAD 5 MGB MASTER GROUND BAR: E.C. TO PROVIDE AND INSTALL (2) #2 AWG BARE SOLID TINNED COPPER WIRES FROM MGB TO GROUNDING RING. CONNECTION TO GROUNDING RING CADWELDED. SEAL BOTH SIDES OF SHELTER PENETRATION WITH CLEAR SILICONE SEALANT. (TYPICAL OF 2)
- GEP GENERATOR EXHAUST PIPE: E.C. TO PROVIDE AND INSTALL (1) #2 AWG BARE SOLID TINNED COPPER WIRE FROM GENERATOR EXHAUST PIPE TO GROUNDING RING. CONNECTION TO EXHAUST PIPE AND GROUNDING RING SHOULD BE CADWELDED.
- VPG VENT PIPE GROUND: E.C. TO PROVIDE AND INSTALL (1) #2 AWG BARE SOLID TINNED COPPER WIRES FROM VENT PIPE TO GROUNDING RING. CONNECTION TO VENT PIPE AND GROUNDING RING SHOULD BE CADWELDED.
- LEAD 27 TGR TOWER GROUND RING: E.C. TO PROVIDE AND INSTALL A MINIMUM OF (2) #2 AWG BARE SOLID TINNED COPPER WIRES FROM LEAD 1 TO THE EXTERNAL RADIO TOWER GROUND RING.
- LEAD 21A IHR INTERIOR HALO RING: THIS IS THE INTERIOR HALO RING THE E.C. IS TO PROVIDE AND INSTALL #2 AWG INSULATED COPPER WIRE AROUND THE INTERIOR OF THE EQUIPMENT SHELTER.

BALLOON REFERENCE NOTES

- 1 5/8" DIA X8' COPPER CLAD GROUND ROD BURIED 36" BELOW GRADE (MIN.)
- 2 GROUND ROD ACCESS WELL (MIN. OF 4 EACH PER COMPOUND)
- 3 #2 SOLID, TINNED, BARE COPPER WIRE GROUND RING (CONTINUOUS STRAND)
- 4 1/4"x4"x20" TINNED COPPER GROUND BAR. 2 TYP. AT BASE AND TOP OF TOWER. MOUNT DIRECT TO TOWER, DO NOT ISOLATE.
- 5 #2 SOLID, TINNED, BARE COPPER WIRE GROUND LEAD TO FENCE CORNER POST.
- 6 NOT USED
- 7 #2 SOLID, TINNED, BARE COPPER WIRE GROUND LEAD TO UTILITY H-FRAME SUPPORT POST
- 8 SERVICE ENTRANCE GROUND TO DEDICATED GROUND ROD
- 9 #2 INSULATED, STRANDED COPPER GROUND LEAD ROUTED IN CONDUIT TO 200A LOAD CENTER.
- 10 #2 INSULATED, STRANDED COPPER BOND STRAP FROM GATE FRAME TO GATE POST. (TYP. EACH GATE)
- 11 #2 SOLID, TINNED, BARE COPPER GROUND LEAD FROM GROUND BAR AT TOWER BASE TO GROUND RING. ROUTE IN 3/4" FLEX CONDUIT AND WEATHERPROOF OPEN END. (2 TYPICAL)
- 12 #2 SOLID, TINNED, BARE COPPER GROUND LEAD FROM BASE TO GROUND RING. (2 TYPICAL, 180' SEPARATION)
- 13 TOWER LIGHT CONTROLLER (GROUND PER MANUFACTURERS RECOMMENDATIONS) (IF REQUIRED)



THE INTENT OF THIS DRAWING IS FOR GROUNDING SCHEMATICS ONLY. SEE SHEETS C-1 AND C-2 FOR SITE PLAN LAYOUT AND DIMENSIONS.



NOTE:
GROUNDING RING DOES NOT PENETRATE SHELTER, TOWER, OR ICE BRIDGE FOUNDATIONS. REFER TO SHEET A-4 FOR EXOTHERMIC WELD DETAILS.

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PREPARED BY: HRH 5-12-15

NO.	DATE	REVISIONS PER CITY COMMENTS
1	10-20-15	



IL 00-5777

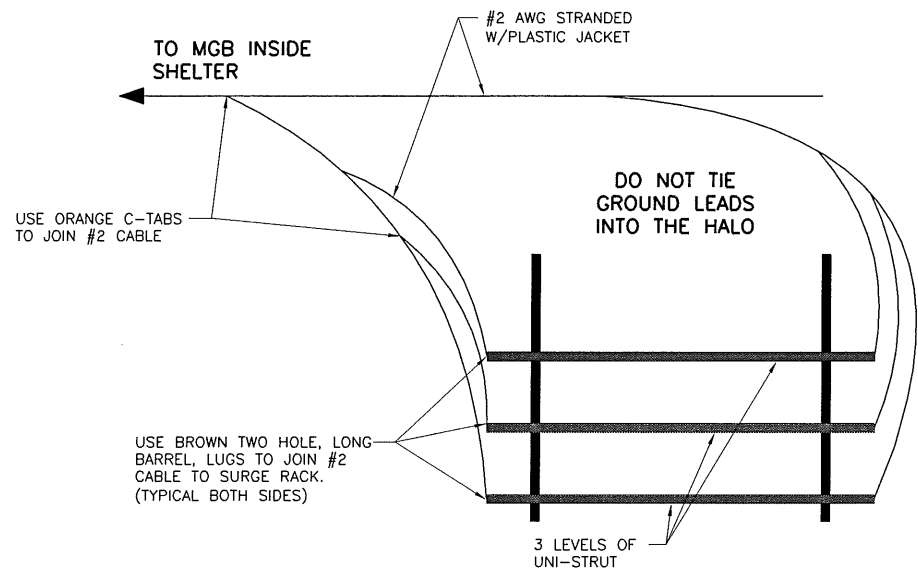
SITE NAME:

CRYSTAL LAKE SOUTH

SHEET NAME
SHELTER AND TOWER GROUNDING SCHEMATIC WITH LEGEND

SHEET NUMBER
A-3

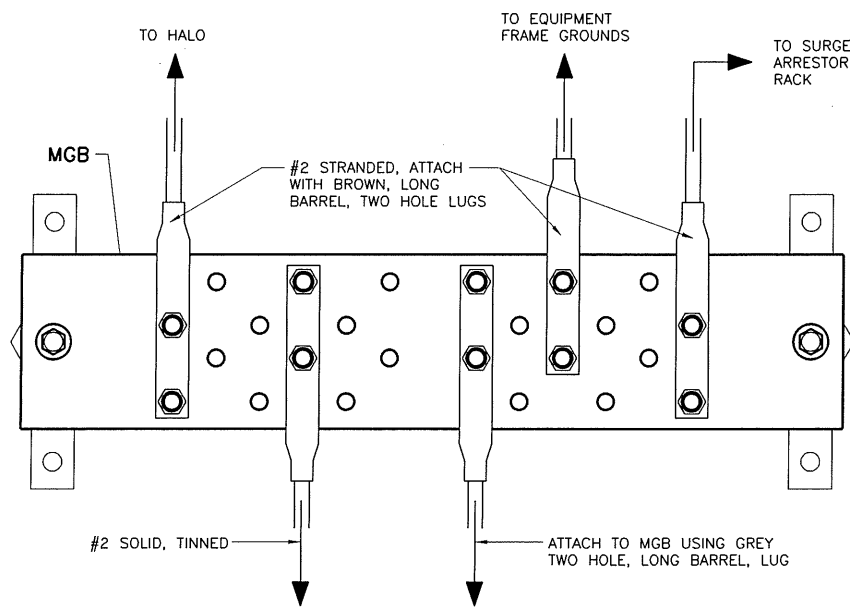
JOB NUMBER
9468-43-8-8B-03



COAX SUPPORT RACK GROUNDING

NOT TO SCALE

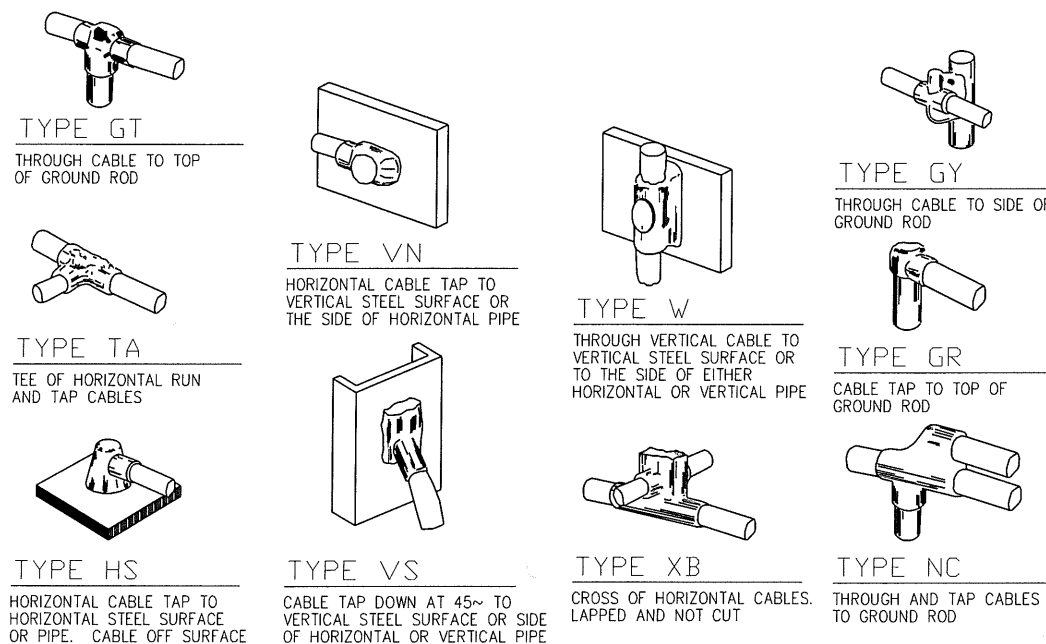
2



MASTER GROUND BAR CONNECTIONS

NOT TO SCALE

3



EXOTHERMIC WELD DETAILS

NOT TO SCALE

4

GROUNDING NOTES

- ALL UNDERGROUND CONNECTIONS ON THE LIGHTNING PROTECTION SYSTEM SHALL BE EXOTHERMIC WELDED USING THE CADWELD PROCESS. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL THESE CONNECTIONS INCLUDING WELD METALS, MOLDS, AND TOOLS.
- THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL #2 AWG BARE TINNED COPPER SOLID GROUND CONDUCTOR AT A DEPTH OF 42" BELOW GRADE FOR THE SHELTER.
- GROUND SYSTEM TO BE VISUALLY INSPECTED BY THE CONSTRUCTION MANAGER BEFORE BACKFILLING. SEE NOTE 10 BELOW.
- E.C. SHALL REFER TO GROUNDING GUIDELINES WITH SPECIAL REGARD TO CADWELD GROUNDING AND TYPICAL DRAWINGS.
- ALL MECHANICAL CONNECTIONS TO GROUND BARS AND BUS BARS ARE TO BE GREASED WITH A CORROSION INHIBITOR ("NO OX").
- ALL EXTERIOR CONNECTIONS TO BE CADWELD UNLESS NOTED OTHERWISE.
- THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING A WRITTEN MEGGER TEST UPON COMPLETION OF ALL GROUNDING WORK. IF THE RESISTANCE LEVEL EXCEEDS FIVE, NOTIFY THE ENGINEER IMMEDIATELY. THIS CONTRACTOR WILL BE REQUIRED TO SUBMIT A QUOTE TO THE PROJECT ADMINISTRATOR FOR THE LABOR AND MATERIALS NECESSARY TO ACHIEVE PROPER RESISTANCE LEVELS. THIS CONTRACTOR WILL BE REQUIRED TO BEGIN WORK IMMEDIATELY UPON APPROVAL FROM OWNER.
- THE COPPER WAVEGUIDE ENTRANCE PANEL MUST BE ASSEMBLED USING COPPER JOINT COMPOUND AND BOLTED COMPRESSION CONNECTIONS. THE LOW INDUCTANCE COPPER GROUNDING STRAPS ARE ATTACHED TO THE EXTERIOR OF THE PANEL USING COPPER JOINT COMPOUND AND BOLTED TO THE PANEL. THE CONNECTIONS OF THE GROUNDING STRAPS TO THE EARTH ELECTRODE RING GROUND ARE VIA A SANDWICH BAR THAT IS COATED WITH COPPER COMPOUND AND BOLTED TO THE STRAPS. THE SANDWICH BAR IS THEN EXOTHERMICALLY WELDED TO THE #2 BARE TINNED COPPER EARTH ELECTRODE GROUND RING. THE SANDWICH BAR THEN CAN BE SILVER SOLDERED TO PREVENT CORROSION OF THE CONNECTION WHEN IT IS BURIED IN THE GROUND. ALSO IF SOIL CONDITIONS ARE HIGHLY CORROSIVE SPECIAL TINNED COPPER GROUNDING STRAPS ARE AVAILABLE THROUGH SOURCES OTHER THAN POLYPHASER.
- NO 90° BENDS WILL BE USED WITH #2 BARE SOLID TINNED COPPER GROUND WIRE. A MINIMUM 24" RADIUS BEND IS ACCEPTABLE IF REQUIRED.
- CONTRACTOR SHALL NOTIFY THE PROJECT ADMINISTRATOR 48 HOURS PRIOR TO BACKFILLING GROUNDING RING TRENCH.
- ALL MATERIALS, COPPER STRAP, GROUND RODS, WIRE, ETC. REQUIRED FOR GROUNDING SYSTEM SHALL BE PROVIDED AND INSTALLED BY THE E.C.
- ALL RIGID EXTERIOR CONDUITS (POWER, TELCO, H-FRAME, ETC.) SHALL HAVE SEPERATE LEADS TO THE GROUNDING RING AND BE CADWELDED AT ALL CONNECTIONS.
- GROUND ROD SPACING ON SHELTER OR TOWER GROUNDING RING SHALL HAVE 8' SPACING MAXIMUM.
- ALL GROUNDING LEADS GOING TO THE H-FRAME AND FENCE SHALL HAVE GROUND ROD INSTALLED EVERY 8 FEET.
- CONNECTIONS:
ALL GROUNDING CONNECTIONS SHALL BE MADE BY THE "CADWELD" PROCESS CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE, SPLICES, ETC. ALL CABLE TO GROUND RODS, GROUND RODS SPLICES AND LIGHTNING PROTECTION SYSTEM AS INDICATED. GROUND FOUNDATION ONLY AS INDICATED BY PM. ALL MATERIALS USED (MOLDS, WELDING, METAL, TOOLS, ETC.) SHALL BE "CADWELD" PROCESS AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND PROCEDURES. GROUND CONDUCTOR SHALL HAVE A MINIMUM OF 24" BENDING RADIUS.
- ALL CADWELD CONNECTIONS ON GALVANIZED SURFACES SHALL BE CLEANED THOROUGHLY AND COLORED TO MATCH SURFACE WITH (2) COATS OF SHERWIN-WILLIAMS GALVITE (WHITE) PAINT B50W3 (OR EQUAL) OR SHERWIN-WILLIAMS SILVERBRITE (ALUMINUM) B59S11 (OR EQUAL).
- ALL ELECTRICAL AND MECHANICAL GROUND CONNECTIONS SHALL HAVE ANTIOXIDANT COMPOUND APPLIED TO CONNECTION.
- UTILITY COMPANY COORDINATION:
ELECTRICAL CONTRACTOR SHALL CONFIRM THAT ALL WORK IS IN ACCORDANCE WITH THE RULES OF THE LOCAL UTILITY COMPANY BEFORE SUBMITTING THE BID, THE CONTRACTOR SHALL CHECK WITH THE UTILITY COMPANIES SUPPLYING SERVICE TO THIS PROJECT SHALL DETERMINE FROM THEM ALL EQUIPMENT AND CHARGES WHICH THEY WILL REQUIRE AND SHALL INCLUDE THE COST IN THE BID.
- GROUND TESTS:
GROUND TESTS SHALL BE PERFORMED AS REQUIRED BY LESSEE STANDARD PROCEDURES. GROUND RESISTANCE SHALL NOT EXCEED 5-OHMS.
- CONTRACTOR SHALL SUBMIT THE GROUND RESISTANCE TEST REPORT AS FOLLOWS:
1. ONE (1) COPY TO OWNER REPRESENTATIVE
2. ONE (1) COPY TO ENGINEER
3. ONE (1) COPY TO KEEP INSIDE EQUIPMENT ENCLOSURE

GROUNDING NOTES

1

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PREPARED BY: HRH 5-12-15

(CST)

IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
GROUNDING DETAILS AND NOTES

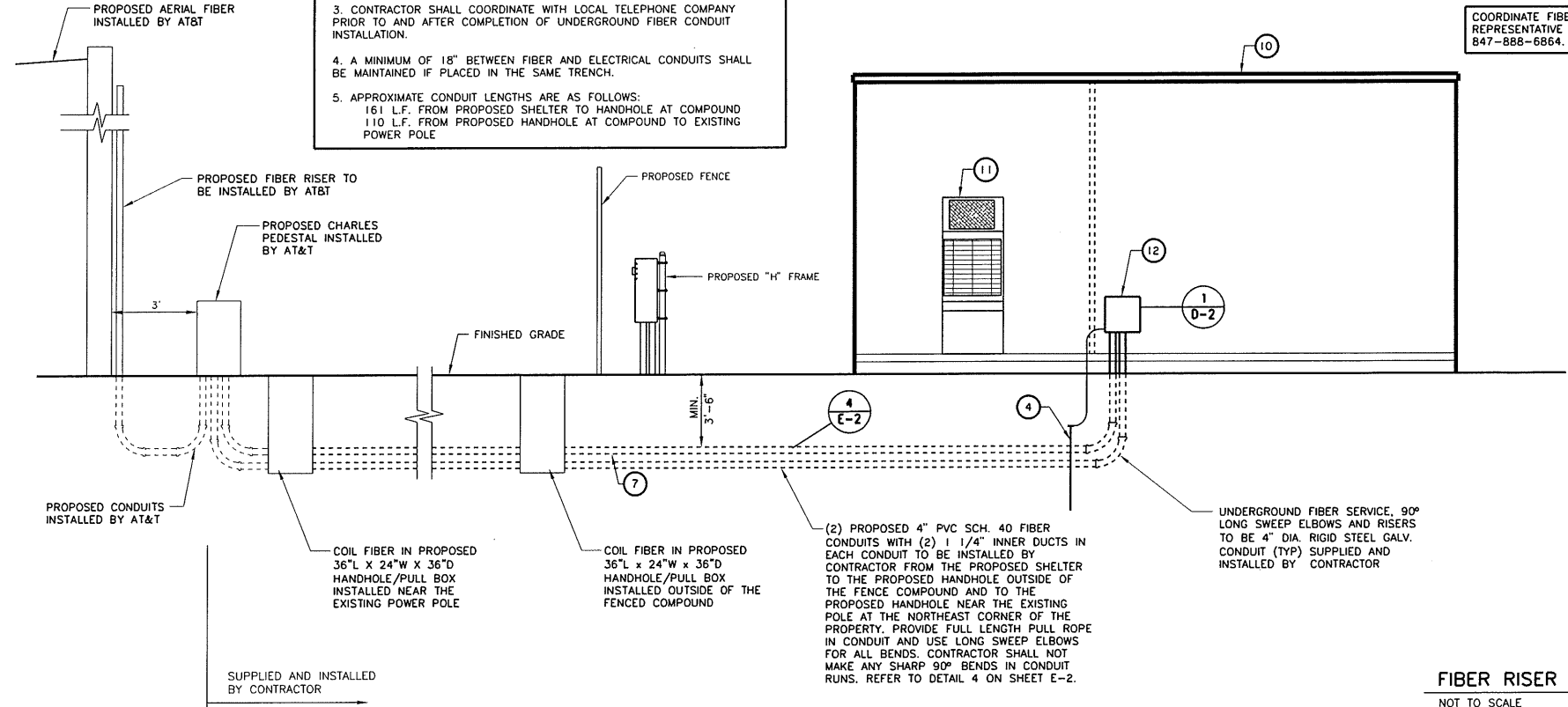
SHEET NUMBER
A-4

JOB NUMBER
9468-43-8-88-03

GENERAL NOTES:
 1. FOR DIAGRAM OF ELECTRICAL SERVICE, REFER TO DETAIL 2, THIS SHEET.
 2. PROVIDE PULL BOXES FOR UNDERGROUND FIBER RUNS AT 250'-0" O.C. AND AT ALL DIRECTION CHANGES AS REQUIRED.
 3. CONTRACTOR SHALL COORDINATE WITH LOCAL TELEPHONE COMPANY PRIOR TO AND AFTER COMPLETION OF UNDERGROUND FIBER CONDUIT INSTALLATION.
 4. A MINIMUM OF 18" BETWEEN FIBER AND ELECTRICAL CONDUITS SHALL BE MAINTAINED IF PLACED IN THE SAME TRENCH.
 5. APPROXIMATE CONDUIT LENGTHS ARE AS FOLLOWS:
 161 L.F. FROM PROPOSED SHELTER TO HANDHOLE AT COMPOUND
 110 L.F. FROM PROPOSED HANDHOLE AT COMPOUND TO EXISTING POWER POLE

THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITY LINES, GROUNDING LINES, ETC. PRIOR TO INSTALLATION FIBER CONDUITS.

COORDINATE FIBER SERVICE WITH AT&T REPRESENTATIVE HECTOR SUAREZ AT 847-888-6864.



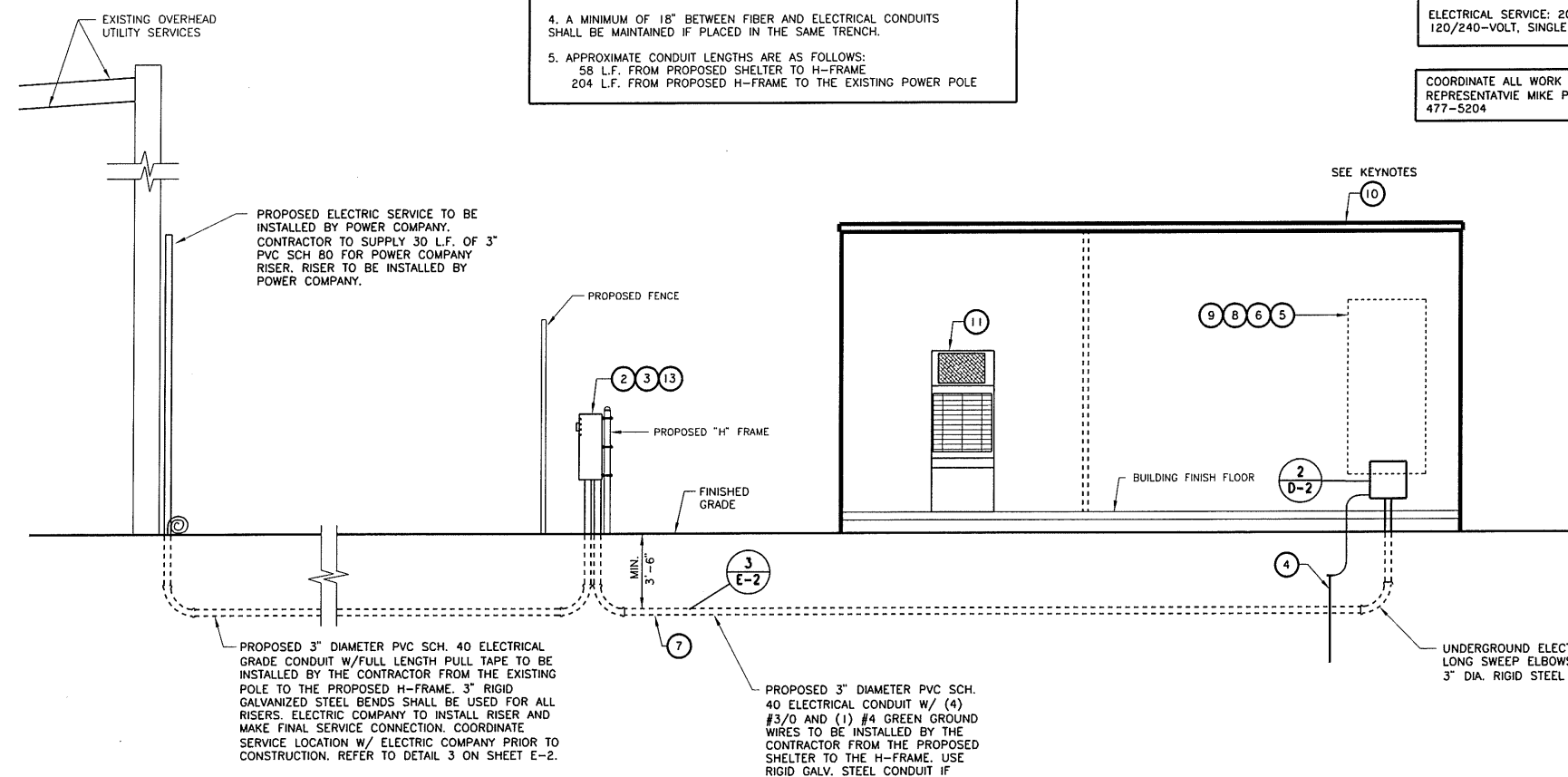
FIBER RISER DIAGRAM
NOT TO SCALE 3

GENERAL NOTES:
 1. FOR DIAGRAM OF FIBER SERVICE, REFER TO DETAIL 3, THIS SHEET.
 2. ELECTRICAL SERVICE: 200 AMP, 120/240-VOLT, SINGLE PHASE, 3-WIRE
 3. CONTRACTOR SHALL COORDINATE WITH LOCAL POWER COMPANY PRIOR TO START OF CONSTRUCTION.
 4. A MINIMUM OF 18" BETWEEN FIBER AND ELECTRICAL CONDUITS SHALL BE MAINTAINED IF PLACED IN THE SAME TRENCH.
 5. APPROXIMATE CONDUIT LENGTHS ARE AS FOLLOWS:
 58 L.F. FROM PROPOSED SHELTER TO H-FRAME
 204 L.F. FROM PROPOSED H-FRAME TO THE EXISTING POWER POLE

THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITY LINES, GROUNDING LINES, ETC. PRIOR TO INSTALLATION OF ELECTRIC CONDUITS.

ELECTRICAL SERVICE: 200 AMP, 120/240-VOLT, SINGLE PHASE, 3-WIRE

COORDINATE ALL WORK WITH COM-ED REPRESENTATIVE MIKE PERRON AT (815) 477-5204



ELECTRICAL RISER DIAGRAM
NOT TO SCALE 2

ELECTRIC & FIBER RISER KEY NOTES

- ① NOT USED
- ② METER SOCKET. LOCAL POWER COMPANY APPROVED VENDOR ONLY. SUPPLIED AND INSTALLED BY CONTRACTOR.
- ③ ELECTRICAL METER BY UTILITY COMPANY.
- ④ GROUND ROD FOR UTILITY COMPANY GROUNDING OF SERVICE CONNECTION.
- ⑤ 200 AMP DISTRIBUTION PANEL (42 SPACE) WITH MAIN BREAKER. SUPPLIED AND INSTALLED BY SHELTER MANUFACTURER.
- ⑥ SURGE ARRESTOR LOCATED WITHIN PANEL.
- ⑦ PROPOSED ELECTRIC & FIBER SERVICES TO CONNECT WITH EXISTING UTILITY SERVICES.
- ⑧ 200 AMP DISCONNECT. SUPPLIED AND INSTALLED BY SHELTER MANUFACTURER.
- ⑨ 225 AMP AUTOMATIC TRANSFER SWITCH LOCATED IN SHELTER.
- ⑩ PREFABRICATED EQUIPMENT SHELTER.
- ⑪ EMERGENCY GENERATOR SUPPLIED WITH SHELTER
- ⑫ 12" x 12" x 6" JUCTION BOX FOR FIBER SERVICE SERVICE
- ⑬ PROPOSED SERVICE BOX AND METER MOUNTED ON PROPOSED "H" FRAME SUPPORT.

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PREPARED BY: HRH 5-12-15

NO.	DATE	REVISION
1	8-25-15	REVISED PER FIBER WALK
2	9-8-15	ADDED FIBER HH PER AT&T COMMENTS

(CST)
 IL 00-5777

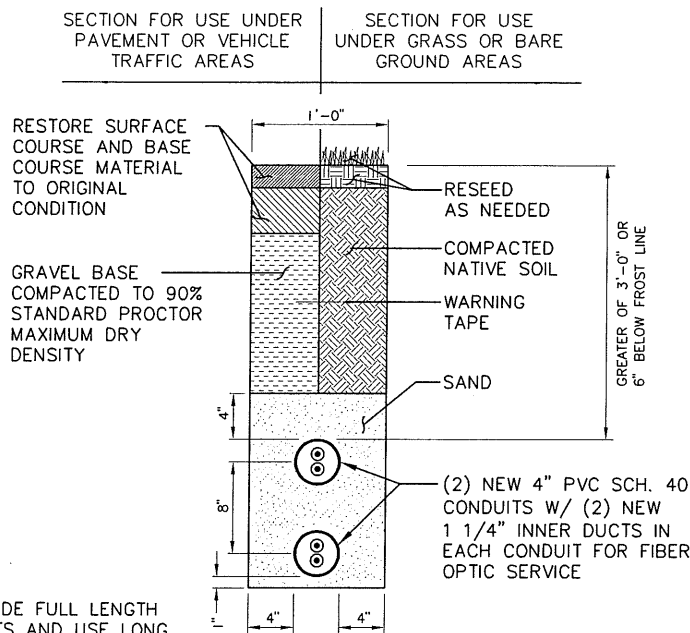
SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
UTILITY ROUTING PLAN AND NOTES

SHEET NUMBER
E-1

JOB NUMBER
 9468-43-8-8B-03

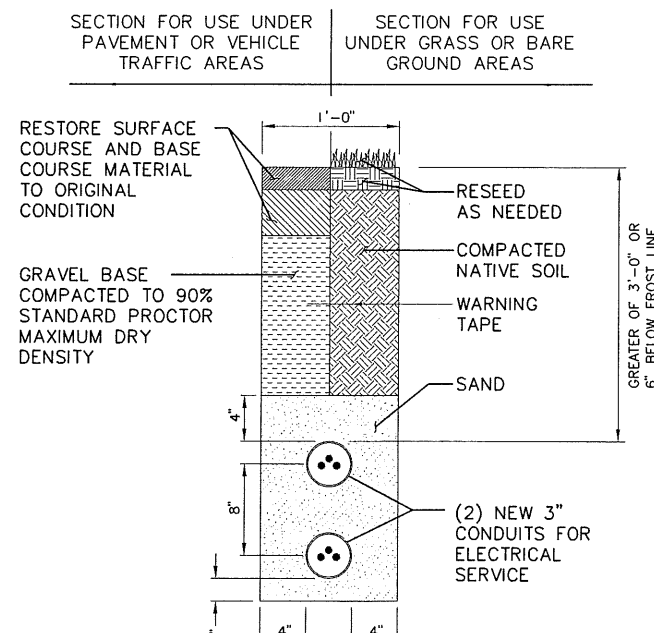
NOTES
NOT TO SCALE



CONTRACTOR TO PROVIDE FULL LENGTH PULL ROPE IN CONDUITS AND USE LONG SWEEP ELBOWS FOR ALL BENDS. CONTRACTOR SHALL NOT MAKE ANY SHARP 90° BENDS IN CONDUIT RUNS.

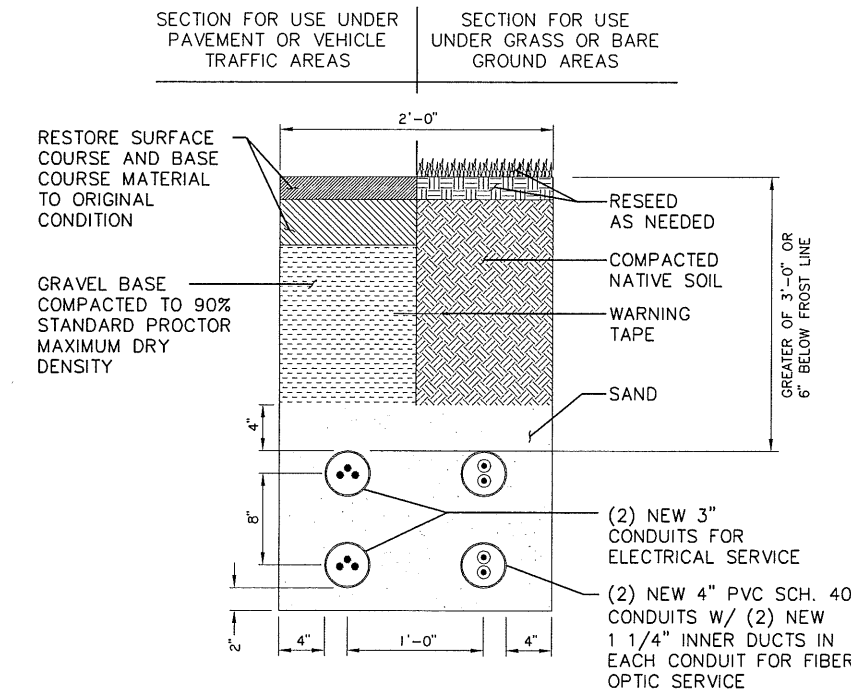
FIBER OPTIC TRENCH DETAIL
NO SCALE

4



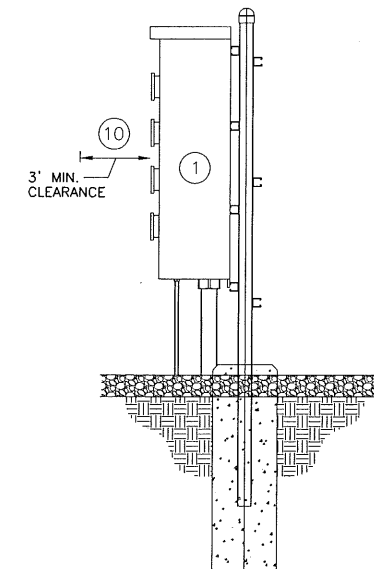
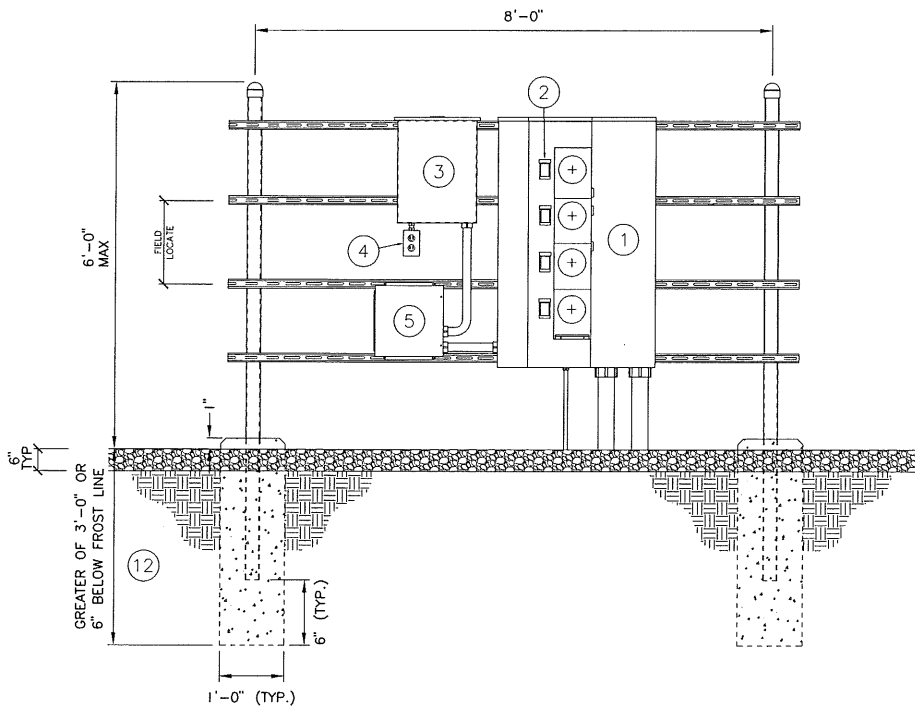
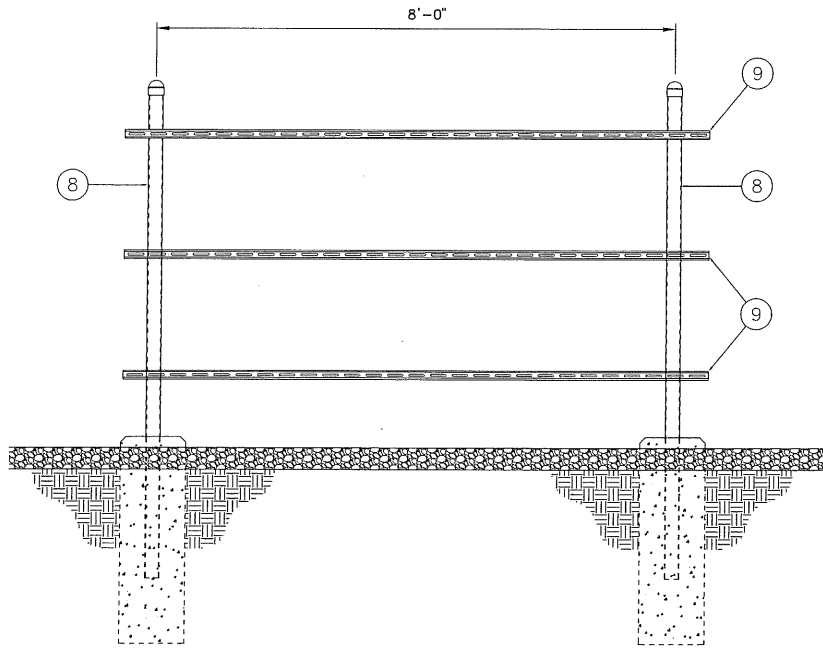
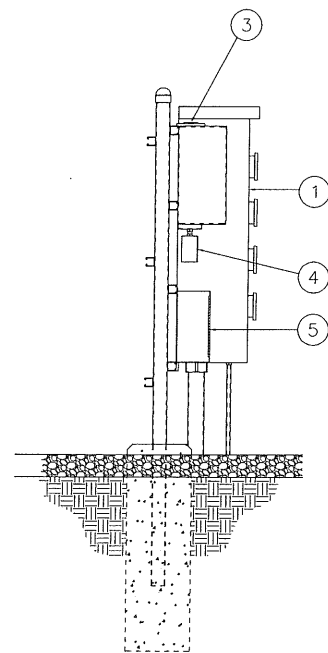
ELECTRICAL TRENCH DETAIL
NO SCALE

3



JOINT UTILITY TRENCH DETAIL
NO SCALE

2



BALLOON REFERENCE NOTES:

- ① 800A, 120/240V, 1 PHASE, 3 WIRE, 4 POSITION METERING CENTER (200A MAX CIRCUIT BREAKER) (SQUARE D METER PAK EZMR114125, OR EQUAL)
- ② 125A TENANT SERVICE DISCONNECT (SQUARE D CATALOG #QOM2125MVH, OR EQUAL)
- ③ 125A 120/240V 1 PHASE, 3 WIRE, 12 POSITION LOAD CENTER (SQUARE D QO LOAD CENTER #Q0112L125GRB, OR APPROVED EQUAL)
- ④ 120/240V 1-GANG COMMERCIAL GRADE OUTDOOR ELECTRICAL BOX W/ 20A COMMERCIAL GRADE DUPLEX RECEPTACLE
- ⑤ 80kA 120/240V, 1 PHASE, 3 WIRE TRANSIENT VOLTAGE SURGE SUPPRESSOR (TESSCO CATALOG #302065, OR APPROVED EQUAL)
- ⑥ NOT USED
- ⑦ NOT USED
- ⑧ 3" NOMINAL GALVANIZED STEEL PIPE WITH PIPE CAP
- ⑨ HORIZONTAL SUPPORT MEMBER (UNISTRUT P1000, OR APPROVED EQUAL)
- ⑩ CONTRACTOR TO MAINTAIN 3'-0" MINIMUM CLEARANCE FROM METERING CENTER TO NEAREST OBSTRUCTION
- ⑪ NOT USED
- ⑫ 3'-0" OR 6" BELOW FROST DEPTH, WHICHEVER IS GREATER

PROPOSED H-FRAME
NO SCALE

1

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PREPARED BY: HRH 5-12-15



IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
H-FRAME AND TRENCH DETAILS

SHEET NUMBER
E-2

JOB NUMBER
9468-43-8-8B-03

UTILITY GENERAL NOTES

- UNLESS OTHERWISE NOTED, ALL WORK ON SHEETS A-2 AND E-1 SHALL BE PERFORMED BY THE E.C.
- THE E.C. MUST BE LICENSED TO PERFORM WORK IN THIS COUNTY, AND SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY ELECTRICAL PERMITS FROM LOCAL BUILDING DEPARTMENTS.
- UNDERGROUND CONDUIT SHALL BE SCH. 40 PVC PLASTIC DUCT WITH ALL BENDS TO BE MINIMUM 18" RADIUS 90° SWEEP UNLESS NOTED OTHERWISE
- ABOVE GRADE RISER CONDUIT TO BE GALVANIZED STEEL WITH MATCHING FITTINGS.
- METERING PEDESTAL TO BE CONSTRUCTED OF GALVANIZED HARDWARE.
- E.C. SHALL CONTACT TELEPHONE AND ELECTRIC COMPANIES AT LEAST TWENTY (20) WORKING DAYS PRIOR TO NEEDING INSTALLATION OF ELECTRIC AND TELCO SERVICE. CONTACT NAMES AND PHONE NUMBERS ARE LISTED ON TITLE SHEET T-1.
- ALL 2/C #22 SHLD CABLE SHALL BE BELDEN #8450 OR EQUAL.
- ALL WIRE SHALL BE (600V THHN) U.N.O.
- SEAL ALL PENETRATIONS.
- ALL WORK IS TO BE IN ACCORDANCE WITH NFPA, NEME, NEC, & ALL LOCAL CODES.
- REPAIR AND/OR REPLACE ANY DISTURBED AGGREGATE TO MATCH EXISTING SURROUNDINGS AND GRADE AFTER SUB-GRADE GROUNDING AND UTILITY WORK IS COMPLETE.
- CAUTION NEEDS TO BE TAKEN WHEN EXCAVATING FOR NEW SHELTER FOUNDATION SO NOT TO DAMAGE ANY EXISTING UNDERGROUND GROUNDING SYSTEM OR UTILITIES.
- ANY EXCAVATION FOR FOUNDATIONS AND TRENCHING FOR UTILITIES WITHIN COMPOUND SHOULD BE DONE BY HAND, OR AS APPROVED BY THE CONSTRUCTION MANAGER.
- NOT ALL NOTES OR DETAILS MAY BE APPLICABLE TO THE CONSTRUCTION OF THIS SITE DUE TO EXISTING SITE CONDITIONS.
- E.C. TO ADJUST LAYOUT TO SITE CONDITIONS WITH APPROVAL FROM CONSTRUCTION MANAGER.
- ELECTRICAL SERVICE WILL BE 120/240V, 1PH, 3W.

CONDUIT ESTIMATE:

APPROX. 204 L.F. OF 3" DIAMETER PVC SCH. 40 ELECTRICAL CONDUIT FROM EXISTING POWER POLE TO PROPOSED H-FRAME. USE RIGID GALV. STEEL CONDUIT IF REQUIRED PER LOCAL CODE.

APPROX. 58 L.F. OF 3" DIAMETER PVC SCH. 40 ELECTRICAL CONDUIT FROM PROPOSED H-FRAME TO PROPOSED SHELTER. USE RIGID GALV. STEEL CONDUIT IF REQUIRED PER LOCAL CODE.

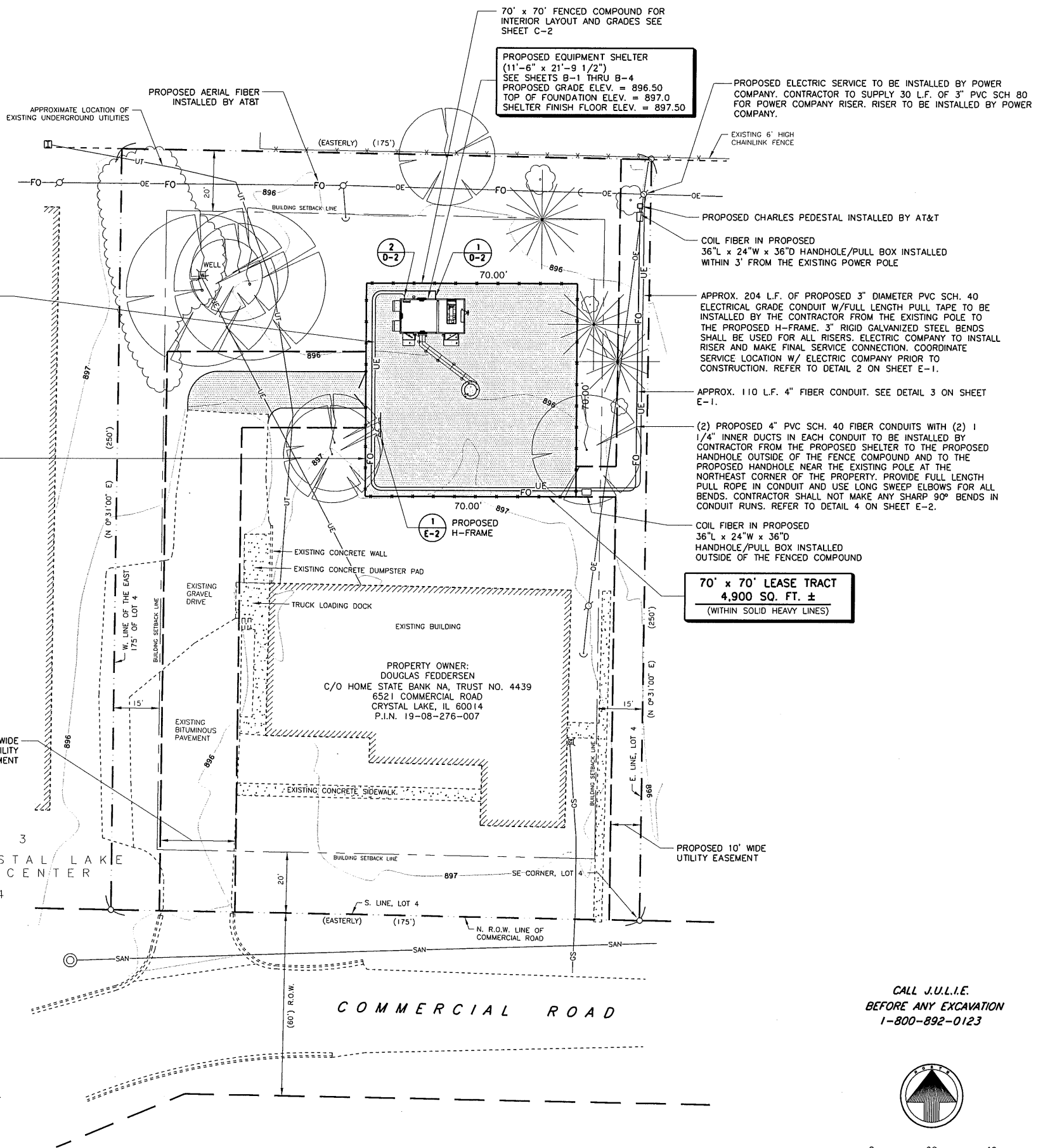
APPROX. 161 L.F. 4" DIAMETER PVC SCH. 40 FIBER CONDUIT FROM PROPOSED PULL BOX NEAR FENCE COMPOUND TO PROPOSED SHELTER.

APPROX. 110 L.F. 4" DIAMETER PVC SCH. 40 FIBER CONDUIT FROM PROPOSED PULL BOX NEAR FENCE COMPOUND TO THE EXISTING POLE AT THE NORTHEAST CORNER OF THE PROPERTY.

APPROX 58 L.F. OF PROPOSED 3" DIAMETER PVC SCH. 40 ELECTRICAL CONDUIT W/ (4) #3/0 AND (1) #4 GREEN GROUND WIRES TO BE INSTALLED BY THE CONTRACTOR FROM THE PROPOSED SHELTER TO THE H-FRAME. USE RIGID GALV. STEEL CONDUIT IF REQUIRED PER LOCAL CODE. PROVIDE 3/8" ROPE AND PULL TAPE WITH FOOTAGE MARKING IN CONDUIT. REFER TO DETAIL 2 ON SHEET E-1.

APPROX. 161 L.F. 4" FIBER CONDUIT. SEE DETAIL 3 ON SHEET E-1.

- LEGEND :
- EXISTING FENCE COMPOUND
 - UE --- PROPOSED UNDERGROUND ELECTRICAL SERVICE
 - FO --- PROPOSED UNDERGROUND FIBER SERVICE
 - UT --- EXISTING UNDERGROUND TELEPHONE SERVICE
 - UE --- EXISTING UNDERGROUND ELECTRIC SERVICE



CALL J.U.L.I.E.
BEFORE ANY EXCAVATION
1-800-892-0123



0 20 40
scale feet

CHICAGO SMSA LIMITED PARTNERSHIP, D.B.A. VERIZON WIRELESS

REAL ESTATE MANAGER:
OCTAVIO HERRERA
1515 EAST WOODFIELD RD.
SCHAUMBURG, IL 60173
OFFICE: (847) 619-4142

CONSTRUCTION MANAGER:
RON PAULY
500 TECHNOLOGY DRIVE
2ND FLOOR
WELDON SPRING, MO 63304
OFFICE: (636) 793-9278

CLS
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1300 W. COMMERCE DR. STE. 700
PEORIA, ILLINOIS 61615

LAND SURVEYORS
AND PROFESSIONAL ENGINEERS
PHONE: 309-692-3434
FAX: 309-692-3433
PROFESSIONAL DESIGN FIRM NO. 184-002756

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PREPARED BY: HRH 5-12-15

NO.	DATE	REVISION
1	8-25-15	REVISED PER FIBER WALK
2	9-8-15	ADDED FIBER HH PER AT&T COMMENTS



IL 00-5777

SITE NAME:

CRYSTAL LAKE SOUTH

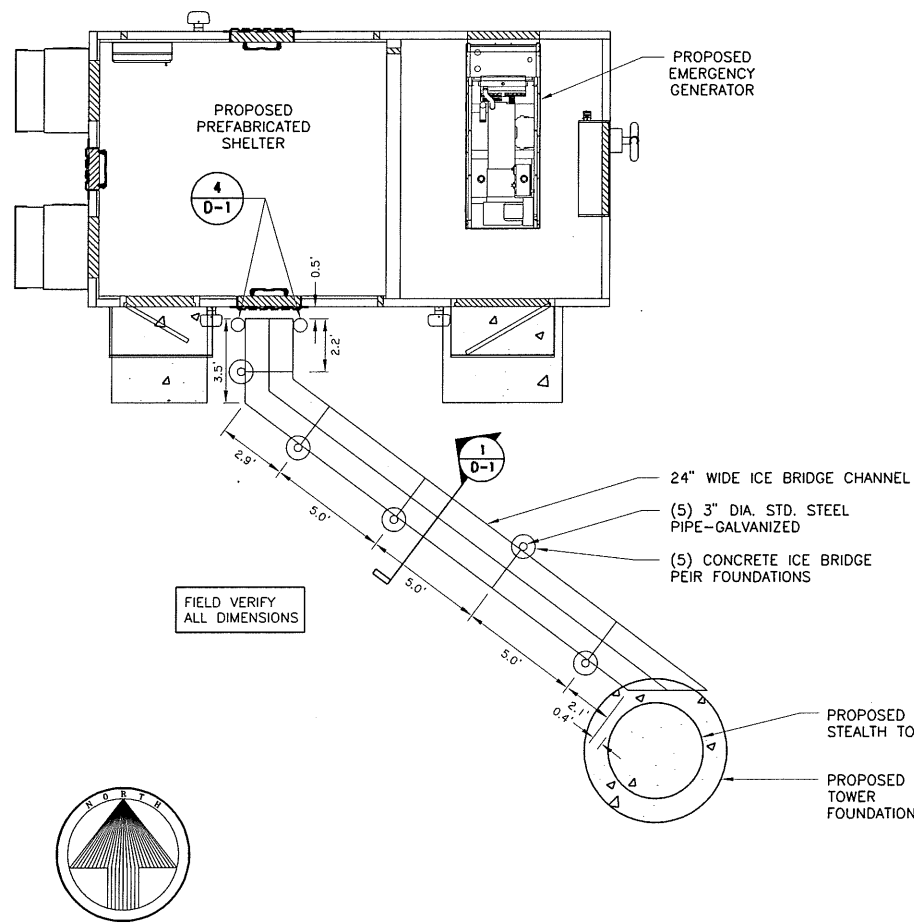
SHEET NAME
UTILITY PLAN,
DETAILS AND
NOTES

SHEET NUMBER

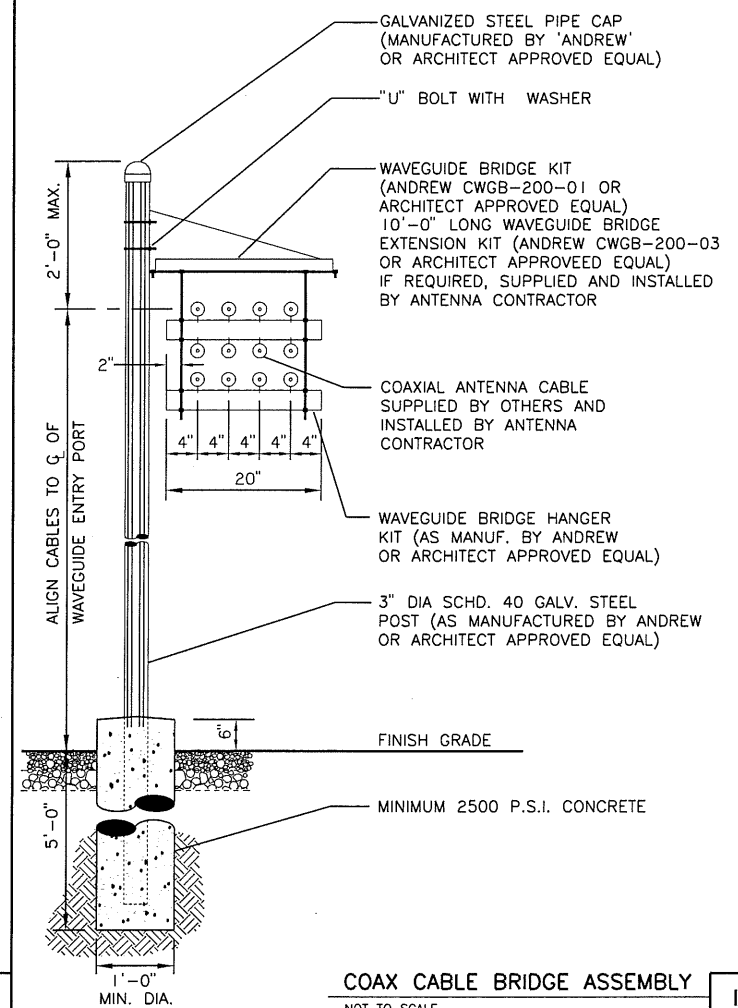
E-3

JOB NUMBER

9468-43-8-8B-03



COAX ICE BRIDGE PLAN
NOT TO SCALE



COAX CABLE BRIDGE ASSEMBLY
NOT TO SCALE

NOT USED
NOT TO SCALE

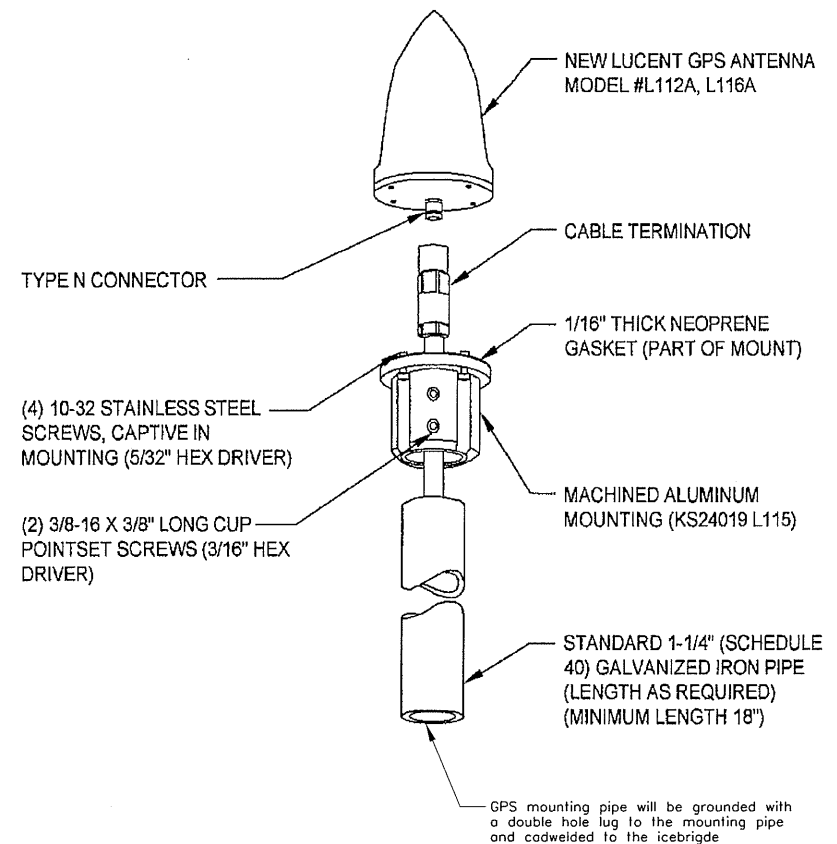
3

GPS Antenna Mounting Instructions

- The antenna mount is designed for use with standard 1 - 1/4" galvanized iron (Schedule 40) pipe. The pipe must not be threaded at the antenna mount end. The pipe must be cut to the required length (minimum of 18"), typically the length is determined by obstructions. The entire gps antenna must be above obstructions such as the ice bridge (if mounted to the ice bridge), the shelter, or nearby trees. The cut pipe end must be deburred and smooth so that it can seal against the neoprene gasket attached to the antenna mount.
- Mount the support pipe to an appropriate support structure such as a mounting pole, antenna mast, antenna tower, or ice bridge and assure that the support pipe is within 2 degrees of vertical.
 - Mounting requirements:
 - GPS antenna requires a clear view of the Southern Hemisphere.
 - This would be from East to South to West.
 - If obstructions such as nearby buildings or trees prevent this when mounted on the ice bridge or low on the tower, then (2) GPS antennas and coax must be mounted at same level as the cellular antennas on the tower.
 - Attach mounting pipe to one of the cellular antenna mounting pipes, but do not obstruct the pipe so a cellular antenna cannot be mounted.
 - If no obstructions are nearby, including the tower itself, then the GPS antenna may be mounted to the ice bridge using a pipe to pipe clamp set or by simply drilling holes in the ice bridge and using u-bolts to secure to the ice bridge.
- Slip the antenna mount with flat side up over the 1 1/4" pipe so that it does not contact the bottom side of the neoprene gasket and loosely fasten it to the pipe with the two 3/8" set screws (Included with GPS antenna kit).
NOTE: Neoprene gasket is attached to top portion of antenna mount.
- Install and or mount the pipe. Run coax through the pipe, and attach to the antenna. Do not seal this connection, the antenna mount acts as a seal for the connection. Do not twist the antenna and connector together, Hold both the antenna and cable stationary and turn the cable connector to draw the connection tight. The pipe is to be level for proper operation of antenna.
- Lower the antenna onto the mount, and tighten the four screws into the antenna base.
- Loosen the 2 side set screws, and slide the antenna mount with the mounted antenna and cable completely onto the pipe to seal the antenna mount to the top of the pipe and securely fasten the two set screws on the side of the antenna mounting pipe.
- DO NOT seal the cable at that bottom of the support pipe.
- The 1/2" cable will be ran in to the shelter and terminated at the lightning arrester bar. It will then be attached to the supplied lightning arrester mounted to the bar.
- Materials needed:
 - (1) or (2) GPS antennas depending on mounting requirements described above.
 - 1/2" coax cable, length will vary depending on location of mount
 - Connectors - Quantity depends on mounting requirements. Will be an N - Male at the GPS antenna and at the lightning arrester.
 - Mounting pipe - can be bought at most hardware stores. 1 1/4" o.d. To be sure, the mounting collar should be taken along for proper fit. The collar should fit snug around the pipe. If too loose the collar will not seal properly to the pipe nor will the antenna be level.
 - Boot & cushion for the hatchplate if possible. Otherwise, a hole can be drilled through the metal hatchplate on the building and sealed once line is run through.
 - 1/2" grounding kit. Ground once at the building if mounted on the ice bridge. Ground as normal if mounted on the tower.

NOT USED
NOT TO SCALE

5



SEE SHEETS A-1, A-2 AND C-2 FOR LOCATION.

GPS ANTENNA MOUNTING DETAIL
NOT TO SCALE

4

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PREPARED BY: HRM 5-12-15

1	10-20-15	REVISED TO "SLICK STICK" STEALTH TOWER

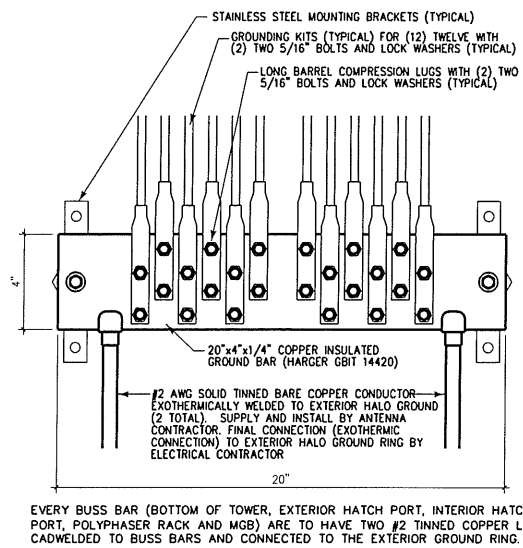
(CST)
IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

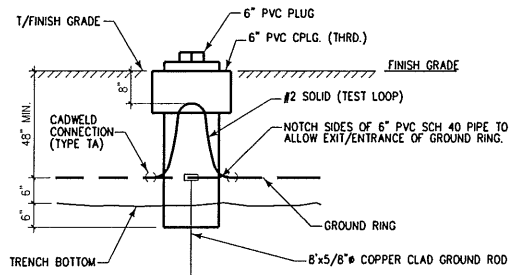
SHEET NAME
SITE DETAILS

SHEET NUMBER
D-1

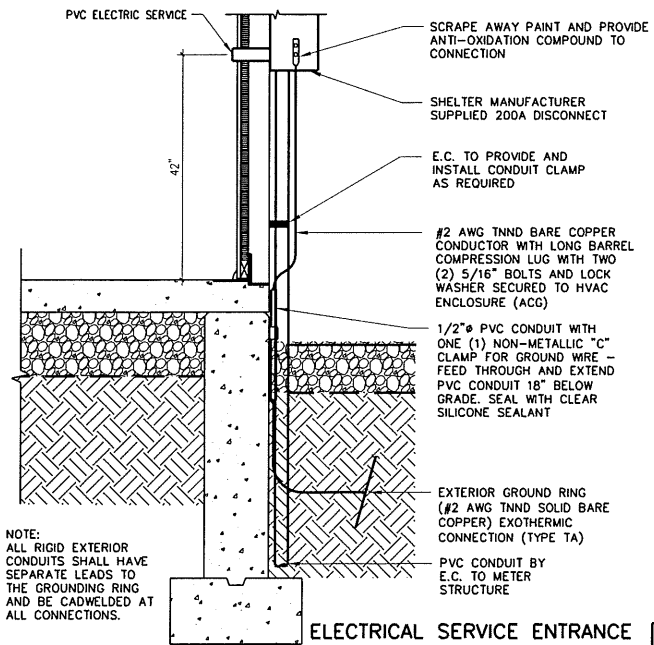
JOB NUMBER
9468-43-8-8B-03



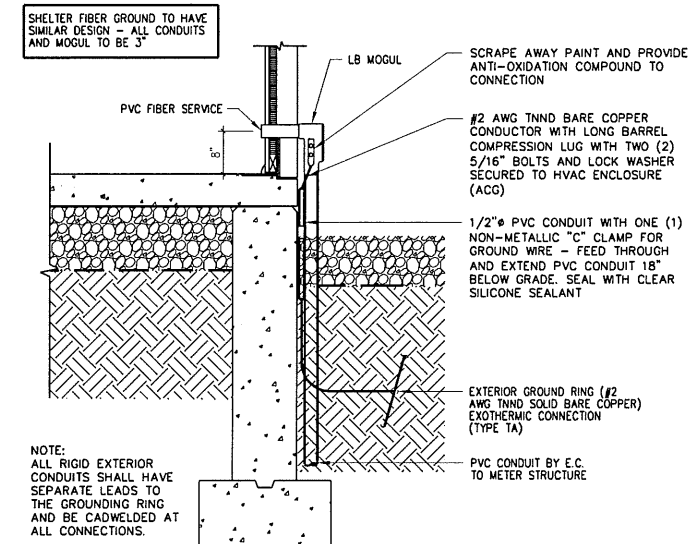
TOWER GROUND BAR (TGB)
 NOT TO SCALE



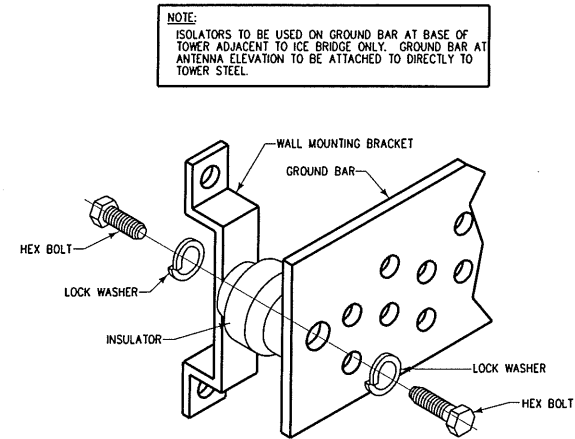
INSPECTION PORT DETAIL
 NOT TO SCALE



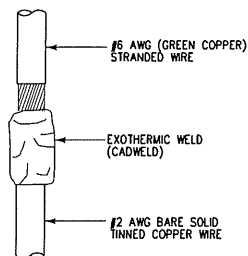
ELECTRICAL SERVICE ENTRANCE
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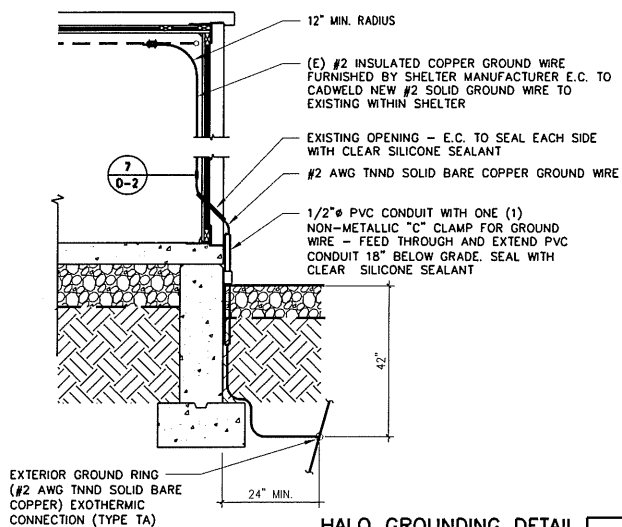
FIBER SERVICE ENTRANCE
 NOT TO SCALE



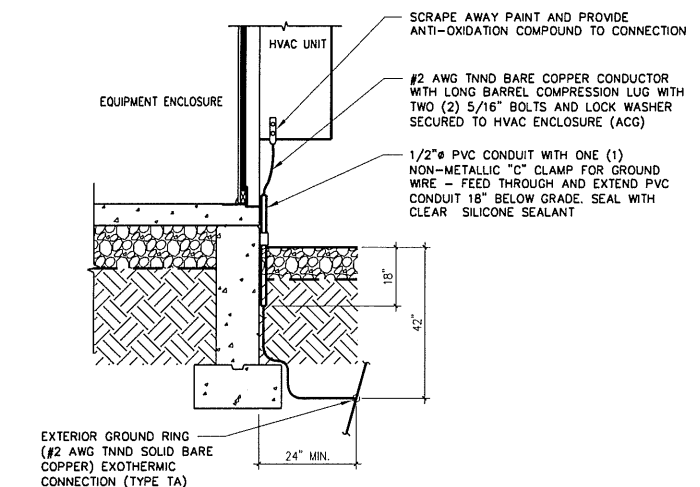
GROUND BAR INSTALLATION
 NOT TO SCALE



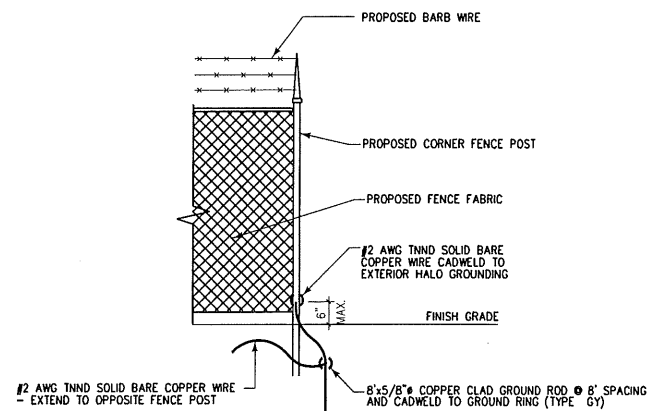
CADWELDED VERTICAL DROP
 NOT TO SCALE



HALO GROUNDING DETAIL
 NOT TO SCALE



HVAC (ACG)/METALLIC COMPONENTS GROUNDING DETAIL
 NOT TO SCALE



FENCE GROUNDING DETAIL
 NOT TO SCALE

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PREPARED BY: HRH 5-12-15

NOT APPLICABLE
 NOT TO SCALE

CST

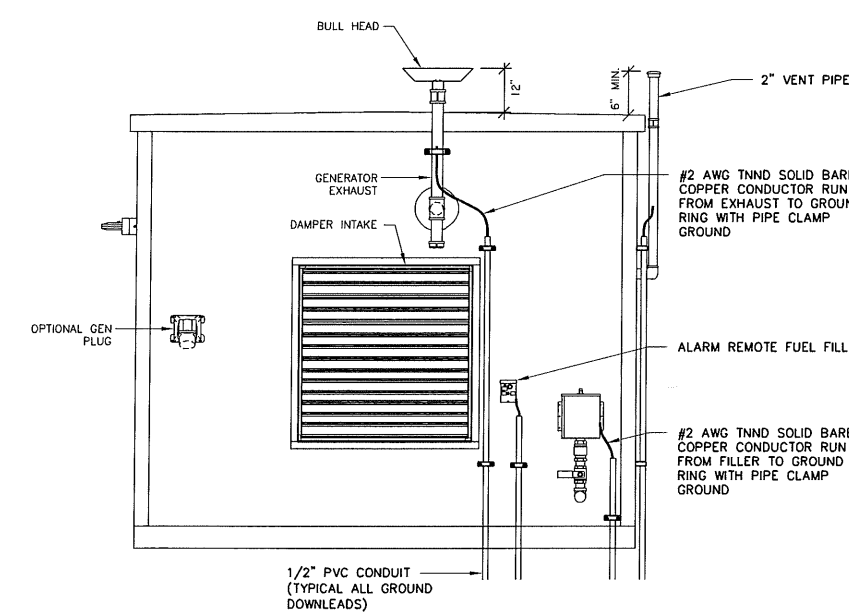
IL 00-5777

SITE NAME:
 CRYSTAL LAKE SOUTH

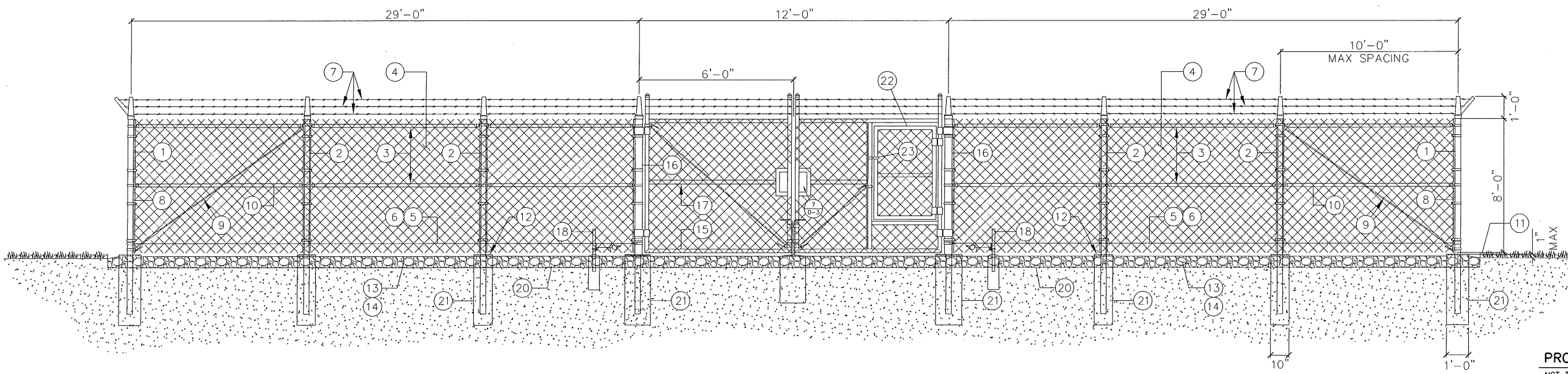
SHEET NAME
 GROUNDING DETAILS

SHEET NUMBER
 D-2

JOB NUMBER
 9468-43-8-8B-03



GENERATOR EQUIPMENT GROUNDING
 NOT TO SCALE

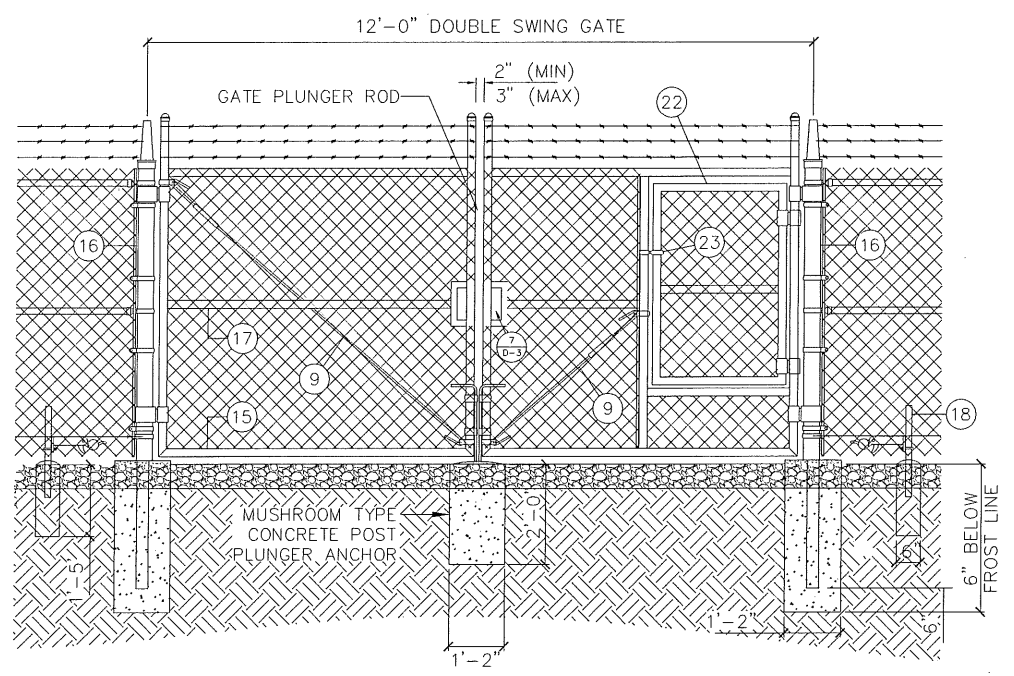


PROPOSED FENCE SECTION
NOT TO SCALE

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SWING GATE DETAIL
NOT TO SCALE

GENERAL NOTES:

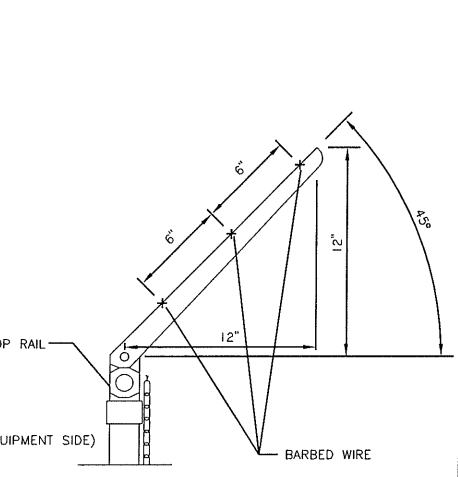
1. INSTALL FENCING PER ASTM F-567
2. INSTALL SWING GATES PER ASTM F- 900
3. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED IF REQUIRED.
4. POST & GATE PIPE SIZES ARE INDUSTRY STANDARDS. ALL PIPE TO BE GALVANIZED (HOT DIP, ASTM A120 GRADE "A" STEEL). ALL GATE FRAMES SHALL BE WELDED. ALL WELDING SHALL BE COATED WITH (3) COATS OF COLD GALV. (OR EQUAL).
5. ALL OPEN POSTS SHALL HAVE END-CAPS.
6. USE GALVANIZED HOG-RING WIRE TO MOUNT ALL SIGNS.
7. ALL SIGNS MUST BE MOUNTED ON INSIDE OF FENCE FABRIC.
8. MUSHROOM ANCHOR & PLUNGER REQUIRED FOR GATE.
9. G.C. RESPONSIBLE FOR GATE LOCK

GENERAL NOTES
NOT TO SCALE

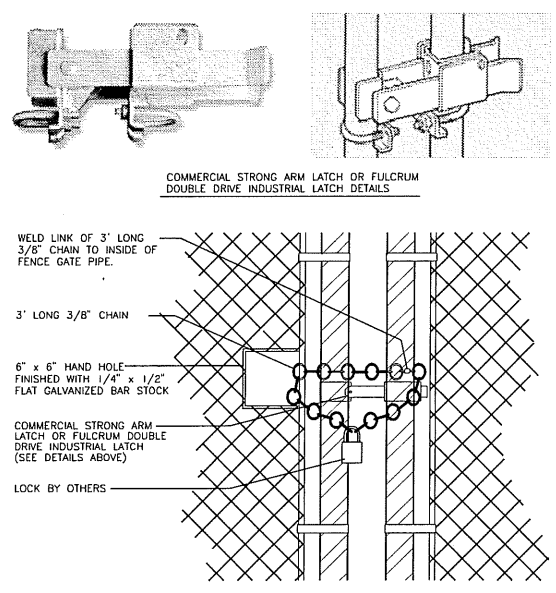
BALLOON REFERENCE NOTES:

- ① CORNER, END OR PULL POST: 3" O.D. SCHEDULE 40 PIPE.
- ② LINE POST: 2 1/2" NOMINAL SCHEDULE 40 PIPE, PER ASTM-F1083. LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM 10'-0" O.C.
- ③ TOP RAIL & BRACE RAIL: 1-5/8" O.D. STANDARD ROUND PIPE, PER ASTM-F1083.
- ④ FABRIC: 9 GA CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
- ⑤ TIE WIRE: 9 GA ALUMINUM. A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED 12" O.C. POSTS/GATES AND 24" RAILS/WIRE.
- ⑥ TENSION WIRE: 9 GA ALUMINUM
- ⑦ BARBED WIRE: DOUBLE STRAND 12-1/2" O.D. TWISTED WIRE TO MATCH WITH FABRIC. 14 GA, 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS.
- ⑧ 3/16" X 3/4" (MIN) FULL HEIGHT STRETCHER BAR.
- ⑨ 3/8" DIAGONAL ROD WITH GALVANIZED STEEL TURNBUCKLE OR DIAGONAL THREADED ROD.
- ⑩ FENCE CORNER POST BRACE: 1 5/8" NOMINAL PIPE.
- ⑪ 1" MAXIMUM CLEARANCE FROM FINISH GRADE.
- ⑫ FENCE POST FOUNDATION TO BE 1" FINISH ABOVE FINISHED GRADE
- ⑬ 6" COMPACTED BASE MATERIAL
- ⑭ FINISH GRADE SHALL BE UNIFORM AND LEVEL.
- ⑮ WELDED GATE FRAME: 2" O.D., SCHEDULE 40 PIPE, PER ASTM-F1083.
- ⑯ GATE POST 6 5/8" O.D., SCHEDULE 40 PIPE, PER ASTM-F1083.
- ⑰ GATE FRAME BRACE RAIL: 1 1/2" NOMINAL PIPE, PER ASTM-F1083.
- ⑱ DUCK BILL OPEN GATE HOLDER. VERIFY LOCATION IN FIELD PRIOR TO INSTALLATION.
- ⑲ STYMIE LOCK MULTI-TENANT LOCKING DEVICE
- ⑳ GEOTEXTILE FABRIC
- ㉑ CONCRETE FOUNDATION (MIN 3000 PSI). MINIMUM DEPTH: 6" BELOW FROST LINE
- ㉒ 4' WIDE SNOW GATE WITHIN DOUBLE SWING GATE FRAME.
- ㉓ FORK LATCH WITH COMBINATION LOCK.

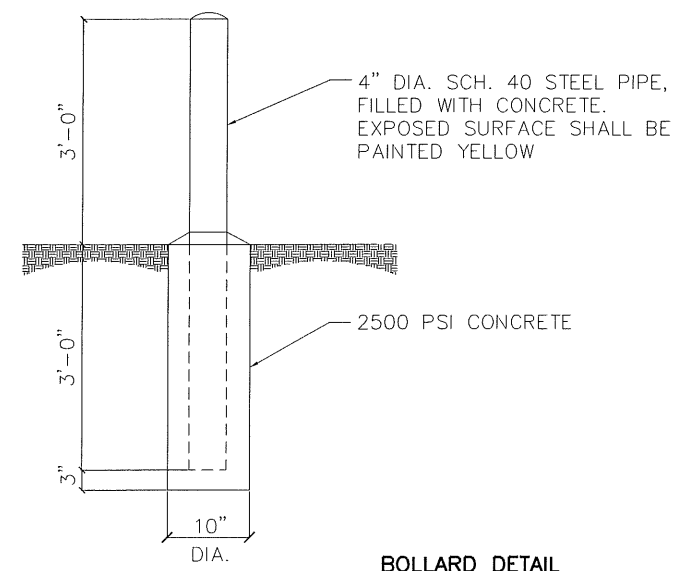
FENCE REFERENCE NOTES
NOT TO SCALE



BARBED WIRE ARM DETAIL
NOT TO SCALE



TYPICAL GATE LATCH & HAND HOLE DETAILS
NOT TO SCALE



BOLLARD DETAIL
NOT TO SCALE

PREPARED BY: HRH		5-12-15
1	10-20-15	REVISED FENCE TO 8' PER CITY COMMENTS

(CST)
IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
FENCING DETAILS

SHEET NUMBER
D-3

JOB NUMBER
9468-43-8-8B-03



STANDING ACROSS THE STREET FROM EXISTING PROPERTY ENTRANCE (LOOKING NORTH)



STANDING NEAR EAST PROPERTY LINE (LOOKING NORTH)



STANDING IN EXISTING DRIVEWAY (LOOKING NORTH)



STANDING IN THE ACCESS LANE FACING PROPOSED COMPOUND (LOOKING NORTHEAST)



STANDING AT PROPOSED ACCESS DRIVE (LOOKING EAST)



STANDING EAST OF PROPOSED COMPOUND (LOOKING WEST)



STANDING AT EAST PROPERTY LINE (LOOKING NORTH)



STANDING SOUTH OF PROPOSED COMPOUND (LOOKING NORTH)



STANDING SOUTH OF PROPOSED COMPOUND (LOOKING NORTH)

CHICAGO SMSA LIMITED PARTNERSHIP, D.B.A. VERIZON WIRELESS

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SITE NAME:

CRYSTAL LAKE SOUTH

SHEET NAME

SITE PHOTOS

SHEET NUMBER

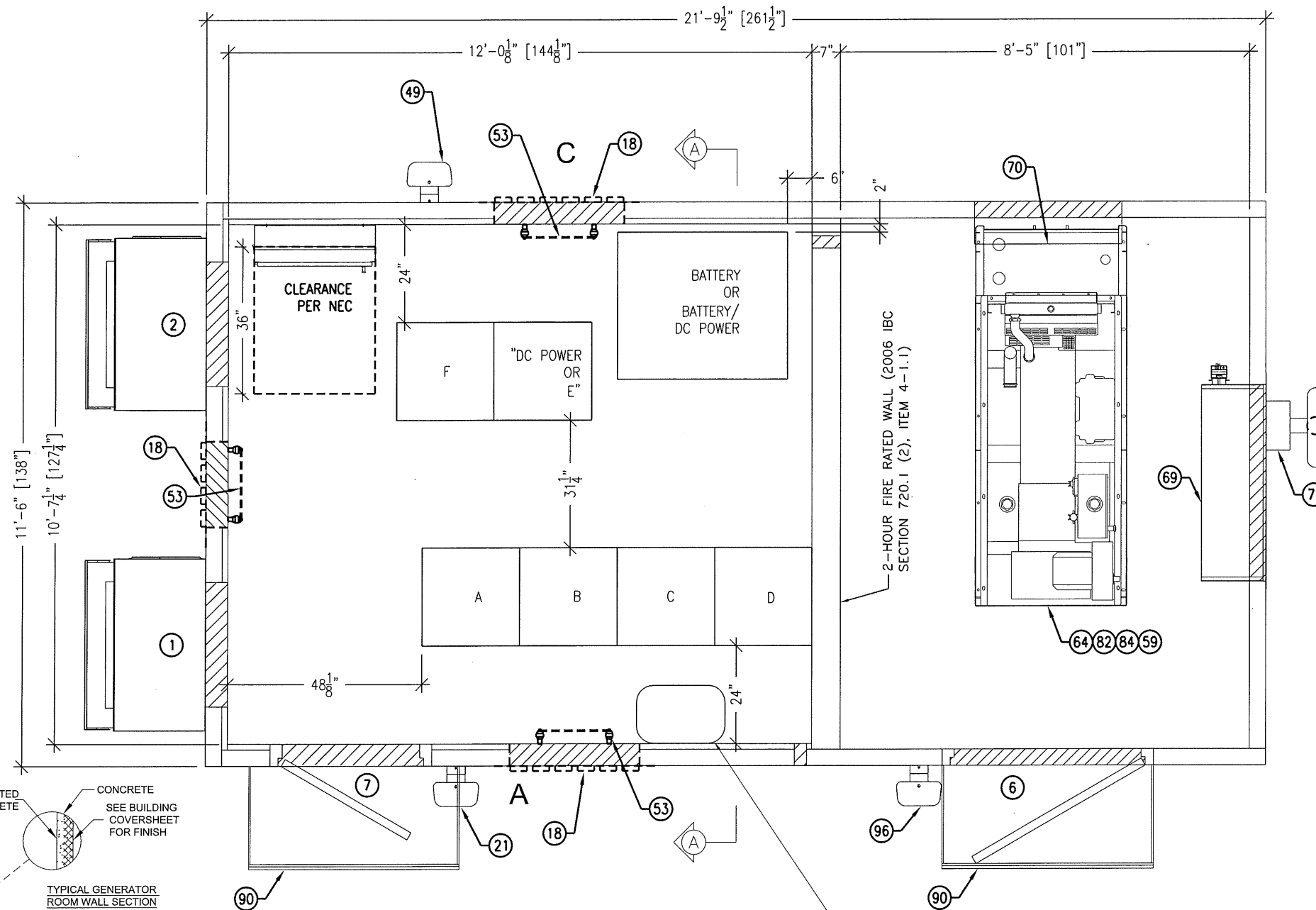
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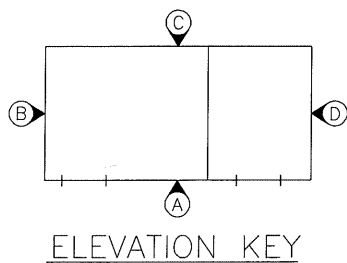
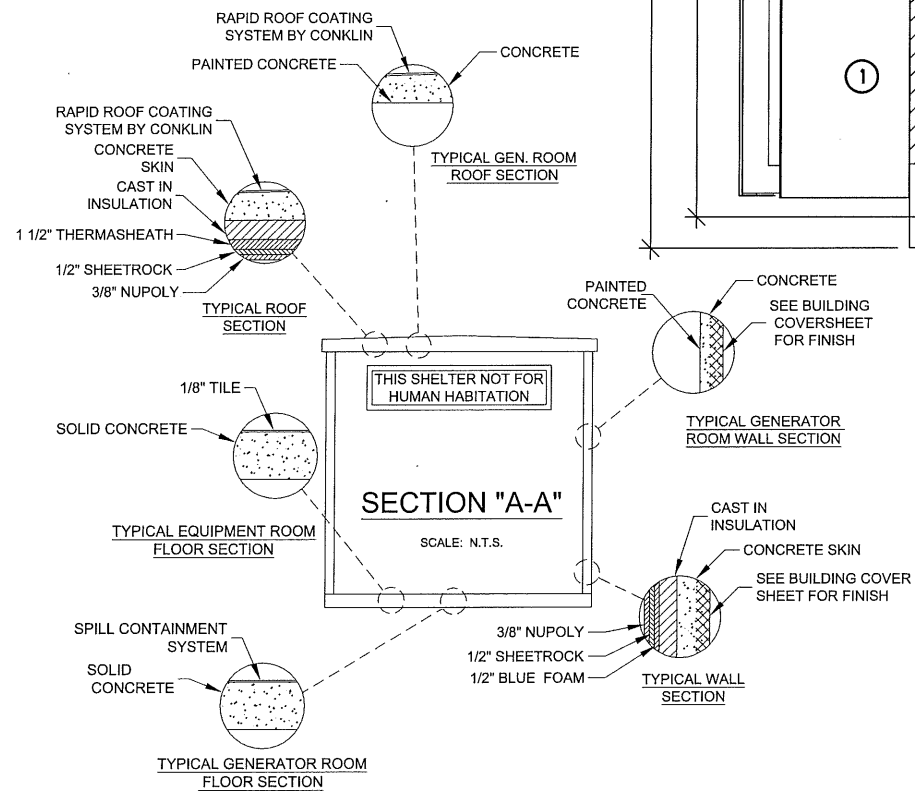
9468-43-8-8B-03

NOTES:

1. ALL ITEM MARKED FIELDWORK SHALL BE INSTALLED, TESTED, REMOVED & PACKED IN BUILDING PRIOR TO SHIPMENT.
2. SEE BUILDING COVERSHEET FOR WAVEGUIDE/COVER PLATE LOCATION.
3. ITEMS #18, #53 & #48 ARE SHOWN IN ALL OPTIONAL LOCATIONS.
4. WHEN SHELTER HAS A DOOR CANOPY, CONNECT THE DOOR CANOPY TO DOOR FRAME USING A #6 AWG STRANDED GREEN WIRE WITH A MINIMUM 12" BEND RADIUS/MAXIMUM 18" BEND RADIUS, TWO HOLE LONG BARREL LUG (830-21023), DRAGON TOOTH WASHERS, & #8 S.S. FASTENERS. REMOVE MOVE ALL SURFACE PAINT AND USE ANTIOXIDANT COMPOUND BETWEEN METAL AND WASHER.



FLOOR PLAN
250.6 sq. ft.



CONTRACTOR TO VERIFY PRIOR TO INSTALLATION THAT THE RAYCAP JUNCTION BOX WILL HAVE 24" OF VERTICAL CLEARANCE TO ALLOW FOR THE COVER TO BE REMOVED.

THESE PLANS ARE A GENERAL SHELTER SCHEMATIC LAYOUT AND ARE FOR REFERENCE ONLY. THEY ARE NOT TO BE USED FOR ORDERING SHELTERS. REFER TO SHEET T-1 FOR SHELTER TYPE FOR SHELTER ORDERING.

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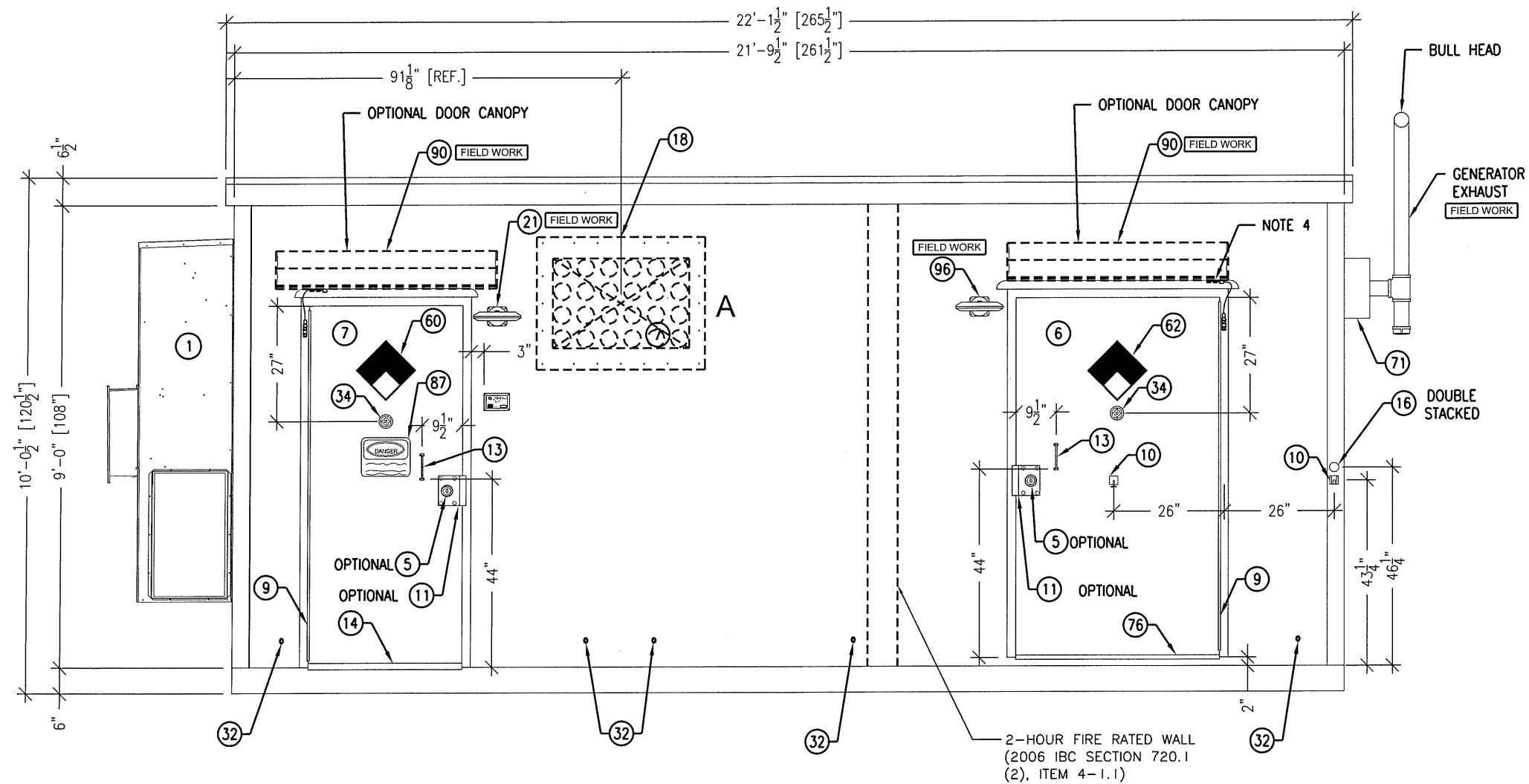
(CST)
IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
SHELTER DETAILS

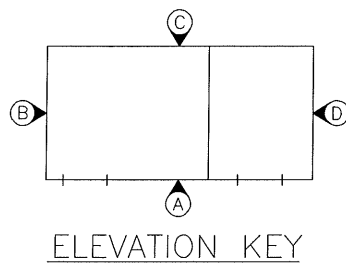
SHEET NUMBER
B-1

JOB NUMBER
9468-43-8-88-03



NOTE:
SEE FLOOR PLAN SHEET FOR NOTES.

ELEVATION "A"



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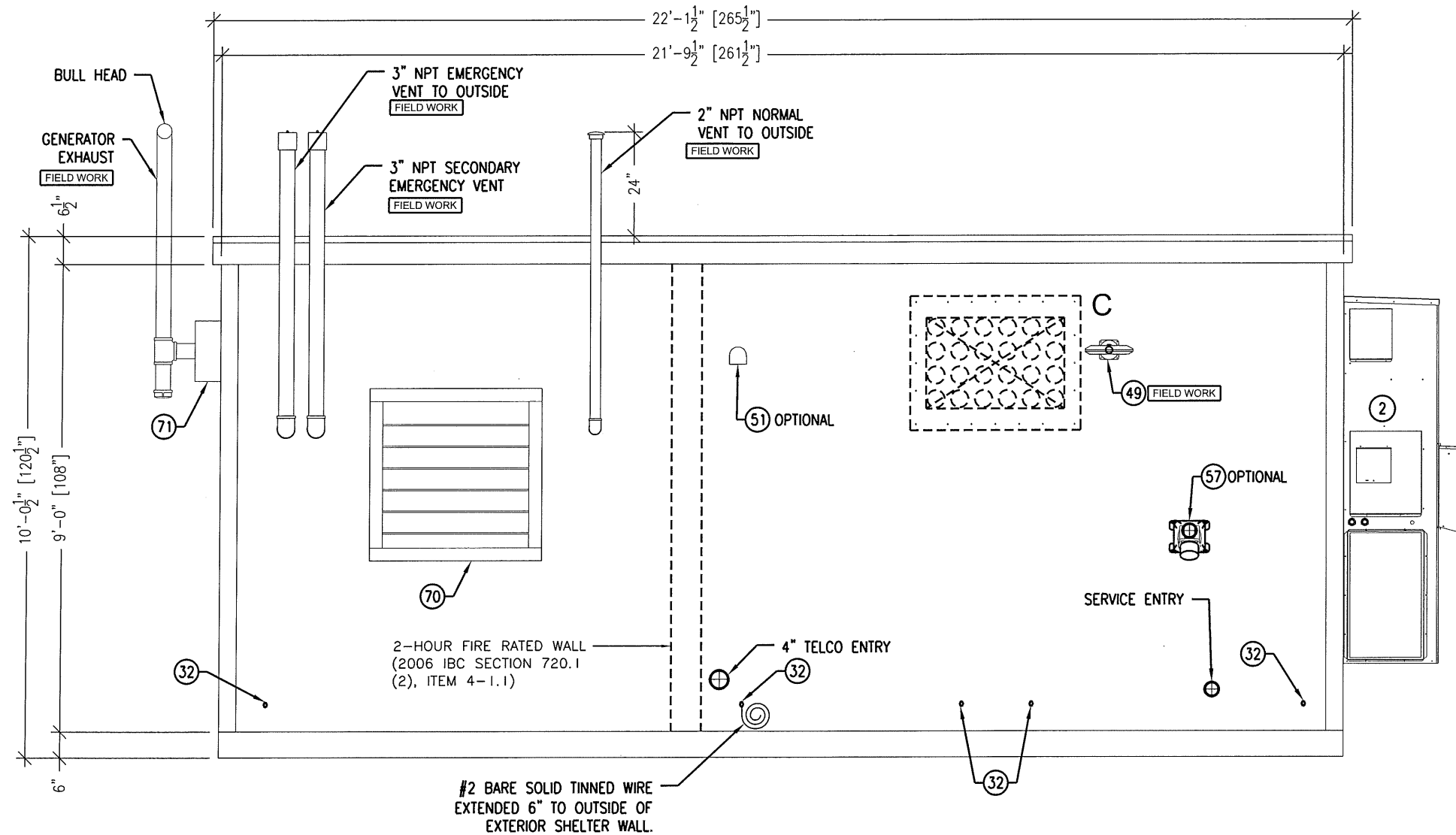
(CST)
 IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
SHELTER DETAILS

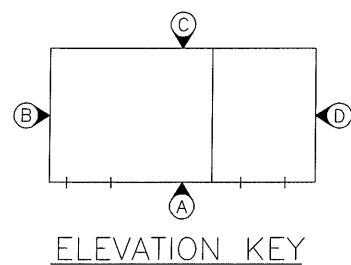
SHEET NUMBER
B-2

JOB NUMBER
 9468-43-8-8B-03



NOTE:
SEE FLOOR PLAN SHEET FOR NOTES.

ELEVATION "C"



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CHICAGO SMSA LIMITED
PARTNERSHIP, D.B.A.
VERIZON WIRELESS

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CONSOLIDATED LAND SURVEYING
1300 W. COMMERCE DR. STE. 700
PEORIA, ILLINOIS 61615
LAND SURVEYORS
AND PROFESSIONAL ENGINEERS
PHONE: 309-692-3434
FAX: 309-692-3433
PROFESSIONAL DESIGN FIRM NO. 184-002756

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PREPARED BY: HRH 5-12-15

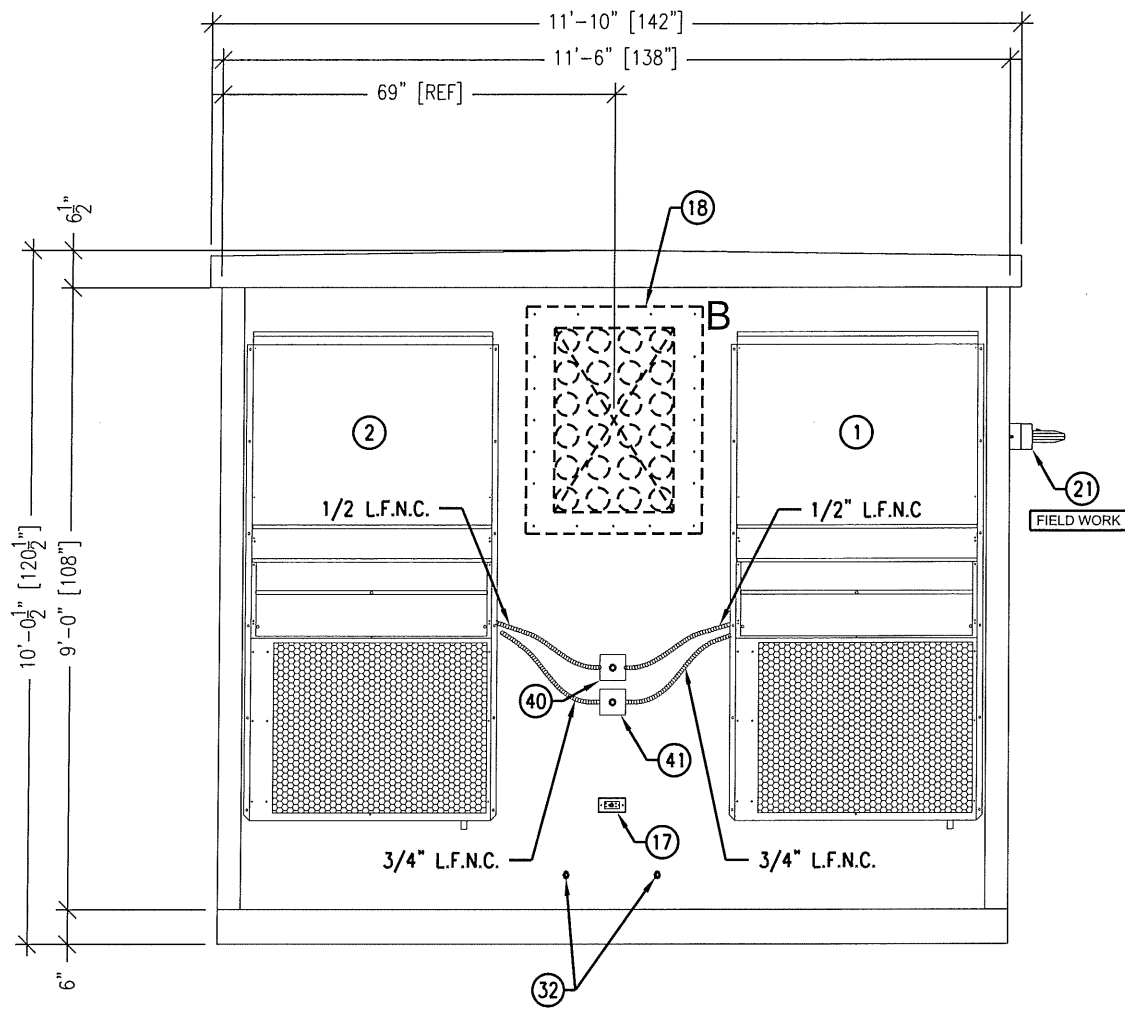
(CST)
IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

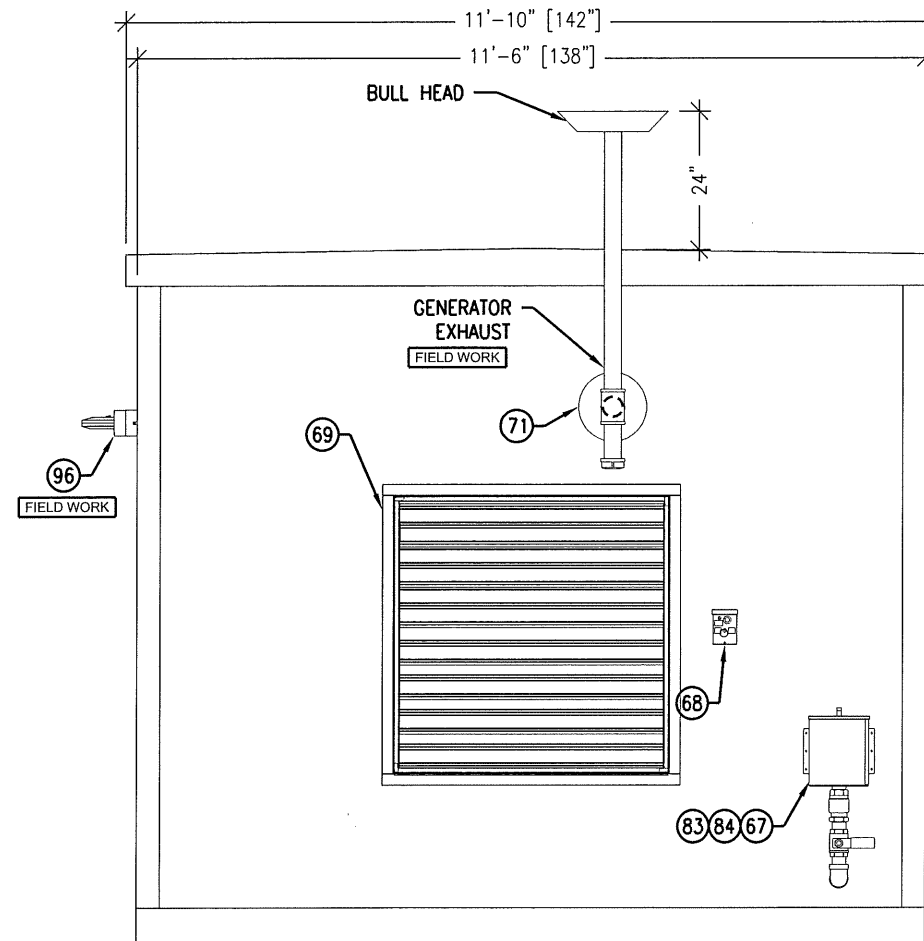
SHEET NAME
SHELTER DETAILS

SHEET NUMBER
B-3

JOB NUMBER
9468-43-8-8B-03



ELEVATION "B"

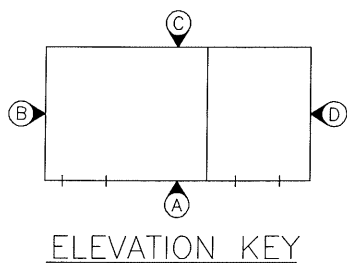


ELEVATION "D"

NOTE:
SEE FLOOR PLAN SHEET FOR NOTES.

DUE TO THE LARGE BLOCKOUT THIS WALL HAS A 0 HOUR FIRE RATING. SEPARATION OF 10'-0" REQUIRED TO CLOSEST LOT LINE, CENTERLINE OF STREET, ALLEY, OR PUBLIC WAY OR BETWEEN TWO BUILDINGS.

THESE PLANS ARE A GENERAL SHELTER SCHEMATIC LAYOUT AND ARE FOR REFERENCE ONLY. THEY ARE NOT TO BE USED FOR ORDERING SHELTERS. REFER TO SHEET T-1 FOR SHELTER TYPE FOR SHELTER ORDERING.



CHICAGO SMSA LIMITED PARTNERSHIP, D.B.A. VERIZON WIRELESS
 REAL ESTATE MANAGER: OCTAVIO HERRERA
 1515 EAST WOODFIELD RD. SCHAUMBURG, IL 60173
 OFFICE: (847) 619-4142
 CONSTRUCTION MANAGER: RON PAULY
 500 TECHNOLOGY DRIVE 2ND FLOOR WELDON SPRING, MO 63304
 OFFICE: (636) 793-9278

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(CST)
 IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
SHELTER DETAILS

SHEET NUMBER
B-4

JOB NUMBER
 9468-43-8-8B-03

CHICAGO SMSA LIMITED
PARTNERSHIP, D.B.A.
VERIZON WIRELESS

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1515 EAST WOODFIELD RD.
SCHAUMBURG, IL 60173
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PREPARED BY: HRH 5-12-15

(CST)

IL 00-5777

SITE NAME:

**CRYSTAL
LAKE
SOUTH**

SHEET NAME

**NOTICE TO
CONTRACTORS**

SHEET NUMBER

NTC-1

JOB NUMBER

9468-43-8-88-03



200 North Glebe Road, Suite 1000
Arlington, VA 22203-3728

June 5, 2015

FDH Velocitel
Attn: Jennifer Young
Regulatory Compliance Manager – E. PA/S. NJ/DE
570 Colonial Park Drive Suite 307
Roswell, GA 30076

Re: Potential Interference from site RO534, 902 Patrick Henry Drive, Blacksburg, VA 24060.

Dear Mr. Mayo:

Based on the AT&T Mobility, LLC application, dated Aug. 7, 2014, AT&T Mobility, LLC will be operating UMTS and LTE equipment at this site on the basis of FCC licenses which exclusively entitles the company to transmit within their assigned frequency ranges. Their operating frequencies should not cause interference issues with public safety, broadcast or other communications service users in the vicinity of this site.

In the unlikely event that interference is created, AT&T Mobility, LLC, as a condition of their FCC licenses, assumes full responsibility to take necessary measures to resolve these issues.

Please feel free to contact me at any time if additional information or clarification on interference issues is needed.

Sincerely,

David C. Cotton, Jr, PE (VA 45496)
Director, RF Compliance

Site Safe, Inc.
743 Gold Hill Pl S, PMB 307
Woodland Park CO 80863-1101
719.434.0700 mobile
719.687.4514 office
719.629.7020 home
dcotton@sitesafe.com
www.sitesafe.com



1515 E Woodfield Rd
Suite 1000
Schaumburg, IL 60173

October 30, 2015

To whom it may concern,

Regarding the proposed Crystal Lake South cell site:

Operating Frequencies (MHz):

700 MHz: Tx 746-757 MHz, Rx 776-787 MHz

AWS: Tx 2110-2130 MHz, Rx 1710-1730 MHz

Power Levels:

700 MHz: 40W

AWS: 60W

Azimuths:

90, 210, 330

Antenna Type:

PANEL

Verizon Wireless (VZW) Regulatory Compliance Department complies with all applicable Federal, State and Local laws, statutes and regulations governing the design, construction, operation and maintenance of the VZW network. The VZW Network Regulatory Department completes formulation, administration and distribution of Regulatory Compliance Policies to reference and highlight specific filing, notification and other compliance requirements for the proposed Crystal Lake South cell site.

Sincerely,

A handwritten signature in black ink, appearing to read "Shoaib Nagi".

Shoaib Nagi
Engr. III Cslt-RF, NET-System Performance

Common Name: Verizon / Lease ID: L000008514**Frequency Band (MHz): 746-757, 776-787****Expiration Date** 06/13/2019**Lessee FRN** 0002846962**Lease Classifications** Spectrum Manager Lease - Long Term**Market** REA003 - Great Lakes**Frequency Band (MHz)** 746-757, 776-787**Licensee** Cellco Partnership - WQJQ691**Radio Service** WU -700 MHz Upper Band (Block C)**Lessee Details**

Chicago SMSA Limited Partnership
 1120 Sanctuary Pkwy #150, GASA5REG
 Alpharetta, GA 30009
 Attn: Regulatory
 Phone: (770) 797-1070
 Fax: (770) 797-1036
 Email:
 licensingcompliance@verizonwireless.com

Contact Details

Verizon Wireless
 1300 I Street, NW - Suite 400 West
 Washington, DC 20005
 Phone: (202) 589-3764
 Fax: (202) 589-3750
 Email: sarah.trosch@verizonwireless.com

Market Details

* Population is based on 2010 Census figures (Note: US territories are based on 2000 Census figures)

1. Spectrum (MHz): 746-757, 776-787**State/County**

Illinois
 9 of 102 Counties

County	Population *	Geographic Coverage (%)
1. Cook County	5,194,675	100
2. DuPage County	916,924	100
3. Grundy County	50,063	100
4. Kane County	515,269	100
5. Kankakee County	113,449	100
6. Kendall County	114,736	100
7. Lake County	703,462	100
8. McHenry County	308,760	100
9. Will County	677,560	100

Indiana
 3 of 92 Counties

County	Population *	Geographic Coverage (%)
1. LaPorte County	111,467	100
2. Lake County	496,005	100
3. Porter County	164,343	100

Common Name: Verizon / Lease ID: L000008514

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[Help](#)

Frequency Band (MHz): 746-757, 776-787

