



**CITY OF DULUTH**  
Planning Division

411 W 1<sup>st</sup> St, Rm 208 \* Duluth, Minnesota 55802-1197  
Phone: 218/730.5580 Fax: 218/723-3559

**STAFF REPORT**

<b>File Number</b>	PL 14-121	<b>Contact</b>	Steven Robertson, (218) 730 5295	
<b>Application Type</b>	Special Use Permit	<b>Planning Commission Date</b>	September 9, 2014	
<b>Deadline for Action</b>	<b>Application Date</b>	August 12, 2014	<b>60 Days</b>	October 11, 2014
	<b>Date Extension Letter Mailed</b>	August 20, 2014	<b>120 Days</b>	December 10, 2014
<b>Location of Subject</b>	1805 East Skyline, Chester Park			
<b>Applicant</b>	Sprint PCS	<b>Contact</b>		
<b>Agent</b>	Steve Stulz	<b>Contact</b>	aresmidwest@aol.com	
<b>Legal Description</b>				
<b>Site Visit Date</b>	August 7, 2014	<b>Sign Notice Date</b>	August 25, 2014	
<b>Neighbor Letter Date</b>	August 20, 2014	<b>Number of Letters Sent</b>	96	

**Proposal**

Applicant is applying for a Special Use Permit to construct a telecommunications facility at the City owned Chester Park. The facility will include a 75 foot tall stealth monopole (with cellular antennas placed within the monopole) and a 20 foot by 20 foot fenced area for equipment. This facility will support antennas that were relocated from the recently demolished ski jump.

	<b>Current Zoning</b>	<b>Existing Land Use</b>	<b>Future Land Use Map Designation</b>
<b>Subject</b>	R-1	Recreation	Recreation
<b>North</b>	R-1	Recreation/Residential	Preservation/Institutional
<b>South</b>	R-1	Recreation/Residential	Preservation/Traditional Neighborhood
<b>East</b>	R-1	Recreation/Residential	Preservation/Traditional Neighborhood
<b>West</b>	R-1	Recreation/Residential	Preservation/Urban Residential

**Summary of Code Requirements (reference section with a brief description):**

UDC Section 50-37.10. Special Use Permits. The Planning Commission shall approve the application or approve it with modifications if the commission determines that the application meets the following criteria: 1. The application is consistent with the Comprehensive Land Use Plan; 2. The application complies with all applicable provisions of this Chapter, including without limitation any use-specific standards applicable to the proposed use, development or redevelopment, and is consistent with any approved district plan for the area; 3. Without limiting the previous criteria, the commission may deny any application that would result in a random pattern of development with little contiguity to existing or programmed development or would cause anticipated negative fiscal or environmental impacts on the community.

New telecommunications facilities that are located within the Migratory Bird Flight Path are limited to no more than 75 feet. This is defined as "the zone of jurisdictional land located from the Lake Superior and Saint Louis River shorelines to no less than two miles inland or where Skyline Parkway runs parallel to the shoreline, an area from the shoreline to Skyline Parkway or two miles inland, whichever is greater".

III. H-1

**Comprehensive Plan Findings (Governing Principle and/or Policies) and Current History (if applicable):**

Future Land Use Recreation: Park and open space areas dedicated to active recreation, such as neighborhood parks, community centers, downhill ski areas, playgrounds, ball fields, water recreation, and associated facilities such as parking.

Current History: Since around 2000, Sprint has had an existing telecommunication facilities on the 115 foot tall ski jump known as "Big Chester". That structure was demolished on August 19, 2014. Sprint has a temporary facility next to the Big Chester site, but needs to build a permanent facility.

In 2010, the City Council adopted a telecommunications ordinance revising the standards and process for approval of these type of facilities. Prior to the ordinance, a special use permit was only required for towers over 50 feet in height. Facilities less than 50 feet in height, or those located on roof tops, water towers, or similar structures, did not need a special use permit.

The City Council approved a lease contract with Sprint on July 21, 2014. The contact has several conditions, one of them being that the proposal conforms to the City's zoning code and receives a building permit.

**Discussion (use numbered or bullet points; summarize and attach department, agency and citizen comments):**

- 1) Applicant is applying for a Special Use Permit to construct a telecommunications facility at the City owned Chester Park. The facility will include a 75 foot tall stealth monopole (with cellular antennas placed within the monopole) and a 20 foot by 20 foot fenced area for equipment. This facility will support antennas that were relocated from the recently demolished ski jump.
- 2) The city has the ability to regulate land use, however, the FCC preempts local review on the potential environmental effects of radio frequency (RF) emissions, assuming that the provider is in compliance with the Commission's RF rules.
- 3) The code requires that new facilities be located on existing towers or other structures on city owned properties first, and then existing towers on other property, and then a new tower within city owned property. City staff consider this a replacement facility, since it is replacing what was lost with the removal of the ski jump.
- 4) This facility is proposed to be located on city owned property. The proposed location will be inside the existing tree line, and will not interfere with ski runs. The applicant was initially proposing a location for the permanent facility adjacent to the Big Chester ski jump, but was directed by City staff to the revised location, approximately 350 feet west of the Big Chester ski jump.
- 5) The monopole will be painted (green) to match the color of nearby city equipment. At the City's request, the monopole will also have downward casting lights to illuminate the existing ski run. Because the facility is less than 200 feet tall and not within the airport flight path, there will be no mandated FAA safety lights (blinking red or white lights).
- 6) The proposed location is within the Migratory Bird Flight Path area, which limits the height of new telecommunication facilities to no more than 75 feet. The code requires that new tower facilities have room for four additional antenna arrays, but due to the height restriction of the tower, the facility will have room to mount two additional antenna arrays within the structure.
- 7) The facility will surrounded by an 8 foot fence. Staff are recommending some additional screening (coniferous trees) in front of the fenced area to reduce the visual impact.
- 8) The Planning Commission can require additional stealthing, such as camouflaging the monopole to resemble a coniferous tree. Planning staff are not recommending that additional measure, as the camouflage will likely interfere or impact the proposed accessory trail lighting to be mounted on the monopole. In addition, as this is proposed facility is located within a central location of the park, it is unlikely to have a negative impact on the visual aesthetics of adjacent property owners.
- 9) Several citizen contacts have been received. Phone calls have related to the general process and potential appearance of the monopole. Attached to this staff report are several written comments from citizens.

**Staff Recommendation (include Planning Commission findings, i.e., recommend to approve):**

Based on the above findings, Staff recommends Planning Commission approve the Special Use Permit subject to the following conditions:

- 1) The project be limited to, constructed, and maintained according to construction drawings titled "Duluth Chester Park Ski Jump Relo MS25XC156" dated 7/19/14.
- 2) Applicant complies with requirements of items identified in the August 19, 2014 document from Center for Municipal Solutions, including submitting temporary relief items prior to applying for a building permit (including a \$25,000 removal bond, insurance with the city listed as an additional insured, indemnification, geotechnical report, and certified structural analysis).
- 3) Any alterations to the approved plans that do not alter major elements of the plan may be approved by the Land Use Supervisor without further Planning Commission approval; however, no such administrative approval shall constitute a variance from the provisions of Chapter 50.

Note: UDC 50-37.1.N states that an approved Special Use Permit will expire if the project or activity authorized by the permit is not begun within 1 year.

H-2

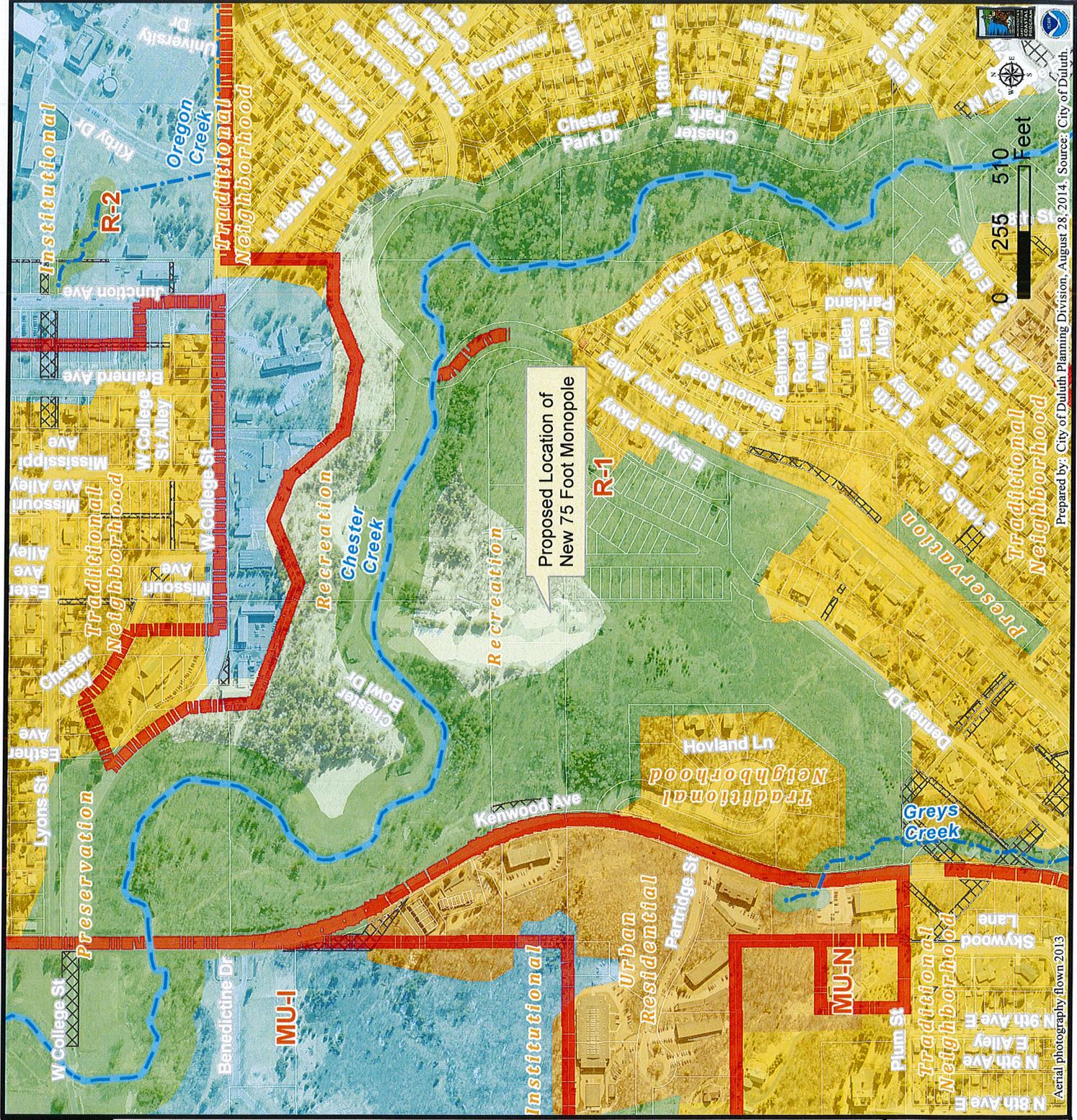
**Attachments (aerial photo with zoning; future land use map; site plan; copies of correspondence)**



PL 14-121, 1805 East Skyline  
75 Foot Monopole Cell Tower

**Legend**

- Trout Stream (GPS)
- Other Stream (GPS)
- Zoning Boundaries**
  - Zoning Boundaries
  - Vacated ROW
- Future Land Use**
  - Preservation
  - Recreation
  - Rural Residential
  - Low-density Neighborhood
  - Traditional Neighborhood
  - Urban Residential
  - Neighborhood Commercial
  - Neighborhood Mixed Use
  - General Mixed Use
  - Central Business Secondary
  - Central Business Primary
  - Auto Oriented Commercial
  - Large-scale Commercial
  - Business Park
  - Tourism/Entertainment District
  - Medical District
  - Institutional
  - Commercial Waterfront
  - Industrial Waterfront
  - Light Industrial
  - General Industrial
  - Transportation and Utilities



Proposed Location of  
New 75 Foot Monopole

Aerial photography, flown 2013

Prepared by: City of Duluth Planning Division, August 28, 2014. Source: City of Duluth.

The City of Duluth has tried to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy or reliability. This drawing/data is neither a legally recorded map nor a survey and is not intended to be used as one. The drawing/data is a compilation of records, information and data located in various City, County and State offices and other sources affecting the area shown and is to be used for reference purposes only. The City of Duluth shall not be liable for errors contained within this data provided or for any damages in connection with the use of this information contained within.

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**PL 14-121, 1805 East Skyline  
75 Foot Monopole Cell Tower**



Proposed Location of  
New 75 Foot Monopole

**Legend**

-  Trout Stream (GPS)
-  Other Stream (GPS)
-  10' Contour (elev. change)

The City of Duluth has tried to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy or reliability. This drawing/data is neither a legally recorded map nor a survey and is not intended to be used as one. The drawing/data is a compilation of records, information and data located in various City, County and State offices and other sources affecting the area shown and is to be used for reference purposes only. The City of Duluth shall not be liable for errors contained within this data provided or for any damages in connection with the use of this information contained within.

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Aerial photography flown: 2013

Prepared by: City of Duluth Planning Division, August 28, 2014. Source: City of Duluth.



H-5

August 11, 2014  
Mr. Steven Robertson  
Senior Planner

City of Duluth  
208 City Hall  
Duluth, MN 55802

Dear Mr. Robertson:

Per our previous discussions, Sprint PCS Wireless (Sprint) is proposing to replace an existing site supporting the Duluth area. This proposed replacement is necessary as the City of Duluth has requested Sprint relocate their existing equipment and Sprint wishes to continue their existing coverage and bandwidth capacity for wifi and increasing smart phone usage and the related services that this area requires.

Enclosed please find the application and information for a proposed relocation of the existing site located on the existing ski jump Chester Park Bowl located at 1805 East Skyline Parkway. This site currently has antennas mounted on the ski jump that will be temporarily relocated to a wooden pole, as well as an existing equipment shelter. Sprint is proposing to construct a 75' stealth monopole approximately 400' from the ski jump site. The antennas mounted inside of a stealth canister and Sprint will be placing a 10' x 12' equipment platform next to the proposed monopole. This replacement pole will comply with the current UDC code requirement of appropriately stealthing cell sites in order to lessen the visual impact of these much needed cell sites. Once the proposed new monopole site is operational, the temporary wooden pole as well as the existing shelter next to the ski jump, will be removed from the site.

Furthermore, the appearance of the tower is designed and constructed so that it will not get in the way of any development of any adjacent properties. There is an existing private access to the property, so it will not be in conflict with the public and will be designed by a qualified and licensed professional engineer to conform to applicable state structural building standards. In an effort to have as little impact as possible on the surrounding environment, Sprint has chosen to mount all antennas on the inside of the pole, so there will be no externally mounted antennas proposed at this location.

Sprint will only post the applicable warning and equipment information signs as required by manufacturer, Federal, State and local authorities. We will also post the name, address and telephone number on site. The proposed monopole will be constructed in a manner to preclude unauthorized climbing and the compound and pole area will be enclosed by a 8' fence and the gate will be locked at all times.

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Per the FAA requirement, a tower under 200' that is not within the flight path of an active airport, no lighting shall be required. The City's Facilities Department has requested that Sprint place lights near the base of the pole to help light the ski run. The lights will be similar in character to the existing lights that are currently used in other areas on the ski hill. Should the City have any additional request for lighting Sprint would be willing to comply with any requirements. The tower will be painted green color with noncorrosive paint. Sprint agrees to abide by any color as well as landscaping requirements suggested by the City to aid the blending in of the pole/platform. We would respectfully ask that this be made a condition of the building permit or SUP.

With regard to the 5 year plan, Sprint currently has planned this monopole replacement as well as previously approved 4G upgrades in Duluth. The wireless services offered through Sprint PCS Wireless are standard cellular services and well as planned wireless device services such as PDA's and ultimately additional capacity for WiFi services. Below are the services currently planned:

- CDMA (Digital)
- LTE (Digital)
- Wi-Max (Digital)

This monopole replacement will not cause any physical or RF interference with other telecommunication facilities.

Sprint will comply with all applicable FCC and FAA requirements associated with the construction and maintenance of the proposed project. Furthermore, AT&T is required to comply with all applicable FCC regulations, which ensures that there is no interference with emergency and/or public safety telecommunications signals or signals from other licensed carriers.

Sprint currently has and will continue at all times during the term of the Agreement, at Sprint's expense, maintain a policy or policies of casualty and comprehensive general liability insurance, issued by and binding upon a solvent insurance company, licensed to conduct business with the State, insuring all of Sprint's equipment and covering acts and omissions of Sprint.

Sprint has a lease for the monopole and ground space necessary to complete this relocation.

Sprint will abide by all conditions and stipulations by the City of Duluth SUP and will operate in compliance with all safety standards, codes, laws, rules and regulations.

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Sprint understands that we will need to apply for and obtain approval of a building permit issued by the City of Duluth to complete this work. This upgrade is legally permissible and Sprint is licensed to do business in the state of Minnesota.

Attached you will find our application package. If you should have any questions regarding this application, please feel free to contact me at 612-414-5013.

Sincerely,



Steve Stulz  
Agent for Sprint  
Phone (612) 414-5013  
Fax (612) 225-1832  
Email [ARESMidwest@aol.com](mailto:ARESMidwest@aol.com)

P.O. Box 119  
Lake Elmo, MN 55042

Enclosures

H-8

CENTER FOR MUNICIPAL SOLUTIONS  
2905 N. 169<sup>th</sup> Avenue, Omaha, NE 68116  
Phone 402-861-5982 yhcinc@cox.net

August 19, 2014

Steven Robertson, Senior Planner  
City of Duluth, Planning Division  
411 W 1st Street, Room 208  
Duluth, MN 55802

RE: **Duluth MN Sprint 1805 E Skyline Parkway**

Dear Steven,

We received and reviewed the above-referenced application initially submitted on August 12<sup>th</sup>, 2014. Based upon the submitted application and supplementary information we find the Application to be complete and ready for consideration by the City of Duluth.

As you are aware on new towers we do allow for the applicant to request temporary relief for high cost items to allow the applicant to secure a permit for a site prior to incurring expense that would be wasted in the event a permit is denied.

In the event that the Special Use Permit is granted, we recommend that it be subject approval of the following requests and recommendations for relief.

**Section 50-20.4 E Major Utility or Wireless Telecommunications Facility**

**Section i)** Applicant shall address capacity for expansion for new towers. **Applicant requested relief based on the following information provided by Sprint.** "Sprint agrees to allow space for additional carriers and EMS to collocate on the proposed tower. The 75' height of the tower does limit the amount of practical collocation heights, but we have shown collocation space for (2) additional carriers. The height of the tower has been limited to 75' due to migratory bird paths." **CMS recommends approval of this relief for this location.**

**Section t)** Applicant shall provide a removal bond per the ordinance requirements. **The applicant has requested relief based on the following information provided by Sprint.** "Upon completion of construction, ownership of the site will be turned over to the City and will become the property of the City, therefore we respectfully request permanent relief from this item." **The license agreement / lease does not have a mechanism for recovery of expenses for removal of abandoned equipment. CMS recommends a \$25,000 bond shall be required. We also recommend temporary relief to allow the provision of this bond on the condition that it is provided to CMS and the City for review and approval prior to the issuance of a building permit.**

**Section u)** Insurance certificate. City shall be named as additional insured per the requirements of the ordinance. **Applicant provided a copy of insurance certificate exhibit "I". It did not have an endorsement for the additional insured. The certificate provided clearly identifies at the top that the policy must be endorsed when the certificate holder is an Additional Insured. We also recommend temporary relief to allow the provision of this endorsed certificate on the condition that it is provided to CMS and the City for review and approval prior to the issuance of a building permit.**

**Section v)** Indemnification requirement. **Applicant stated:** "Indemnification is outline the executed lease agreement between the City and Sprint in Exhibit "G". **CMS has**

H-9

CENTER FOR MUNICIPAL SOLUTIONS  
2905 N. 169<sup>th</sup> Avenue, Omaha, NE 68116  
Phone 402-861-5982    yhcinc@cox.net

reviewed this endorsement and in our opinion this indemnification is only applicable to Hazardous Substances. CMS recommends the applicant provide a statement of indemnification meeting the wording requirements of the ordinance. We also recommend temporary relief to allow the provision of this indemnification on the condition that it is provided to CMS and the City for review and approval prior to the issuance of a building permit.

**3.12 Checklist Requirements:**

**Existing / proposed landscaping / fencing.** Applicant stated: "Sprint is proposing an 8' fence enclosing the equipment platform. We will review additional recommendations for landscaping from City Staff as required." CMS recommends several conifer plantings to further buffer the wood fence from skiers should be planted on the west side of the fenced compound as a condition of approval.

**Geotechnical information.** Applicant stated: "Applicant request temporary relief from this item. Sprint will supply the information prior to the SUP meeting". We also recommend temporary relief to allow the provision of this geotechnical report on the condition that it is provided with the structural analysis to CMS and the City for review and approval prior to the issuance of a building permit.

**Certified structural analysis.** Applicant stated: "Applicant request temporary relief from this item. Sprint will supply this information prior to the issuance of a building permit". We also recommend temporary relief to allow the provision of this structural analysis on the condition that it is provided to CMS and the City for review and approval prior to the issuance of a building permit.

**Additional Requirement:** Applicant shall have sufficient funds in the escrow account with the City to pay all expenses related to the final site review, the issuance of permits and inspections.

After construction is complete CMS and the City will complete a final inspection to verify that the construction is in conformance with the application materials.

Please provide us a copy of the Permit, if granted. If you should have any questions please call me at 402 861-5982, or Dick Comi at 518-439-3079,.

Sincerely,

*Robert A. Naumann*

YHC Inc. / Midwest Representative for CMS

Cc: Steve Stulz (ATT representative) (Via email)  
Richard Comi (e-mail only)

H-10



**SITE NAME:** DULUTH CHESTER PARK SKI JUMP RELO  
**SITE NUMBER:** MS25XC156 (OLD MS03NP156)  
**SITE ADDRESS:** 1805 EAST SKYLINE PARKWAY  
 DULUTH, MN 55805  
**SITE TYPE:** 75'-0" STEALTH MONOPOLE  
 RAWLAND - NEW SITE BUILD/RELO



PROJECT NO: 13.01593  
 DRAWN BY: JMM  
 CHECKED BY: LUO

REV	DATE	DESCRIPTION
1	07/09/14	REVISE TOWER/COAX LOCATION
0	07/02/14	REVISE TOWER/COAX LOCATION
4	10/15/13	ISSUED FOR REVIEW

THE SIGNED DRAWING IS THE CORRECT RECORD DOCUMENT. NOT THE ORIGINAL. ANY CHANGES TO THIS DOCUMENT MUST BE MADE BY THE ORIGINAL DESIGNER OR A PROFESSIONAL ENGINEER UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 DATE: 07-09-14 Lic. No. 79985  
 Isaac O'donnell

**NOT FOR CONSTRUCTION**

MS03NP156  
 DULUTH CHESTER PARK  
 SKI JUMP RELO  
 1805 EAST SKYLINE PKWY  
 DULUTH, MN 55805

SHEET TITLE  
 TITLE SHEET &  
 PROJECT DATA

SHEET NUMBER  
**T-1**

**DRAWING INDEX**

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET & PROJECT DATA
A-1	OVERALL SITE PLAN
A-2	BIRDS EYE VIEW
A-3	PROPOSED SITE PLAN (PROPOSED)
A-4	EXISTING SITE PLAN
A-5	EXISTING/INTERNAL TOWER ELEVATIONS
A-6	PROPOSED TOWER ELEV. & ANTENNA LAYOUTS
A-7	ANTENNA DETAILS & ANTENNA SCHEDULES
A-8	RRU DETAILS
S-1	FOUNDATION PLAN/PLATFORM FRAMING LAYOUT
S-2	SECTIONS & DETAILS
S-3	FENCE DETAILS
E-1	SINGLE LINE DIAGRAM & ELECTRICAL NOTES
G-1	GROUNDING PLAN & NOTES
G-2	GROUNDING DETAILS

**APPLICABLE CODES**

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:  
 IBC 2006 (2007 MINNESOTA STATE BUILDING CODE)  
 2009 MINNESOTA PLUMBING CODE  
 NEC 2008 ELECTRICAL CODE  
 IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL.

**PROJECT DESCRIPTION**

- RELOCATE SPRINT TELECOMMUNICATIONS SITE FROM SKI JUMP
- INSTALL 75' STEALTH MONOPOLE
- INSTALL 10'-0" x 12'-0" STEEL EQUIPMENT PLATFORM
- INSTALL LIGHTS FOR SKI HILL ON MONOPOLE
- INSTALL WOOD FENCE (20'-0" x 20'-0")
- INSTALL (3) SPRINT NETWORK VISION ANTENNAS
- INSTALL (3) SPRINT LEGACY CDMA ANTENNAS
- INSTALL (1) MMBS-BBU CABINET
- INSTALL (1) MMBS-BATTERY CABINET
- INSTALL LEGACY CDMA EQUIPMENT CABINETS
- INSTALL (6) RRU'S AT GROUND LEVEL
- INSTALL JUMPERS
- INSTALL (1) GROUND MOUNTED GPS ANTENNA
- INSTALL HYBRID CABLES
- INSTALL COAX
- INSTALL FIBER AND AW (ND) EQUIPMENT AT CELL SITE
- INSTALL 30'-0" TEMPORARY WOOD POLE NEXT TO EXISTING SPRINT EQUIPMENT SHELTER

**NOTE**

11" x 17" PLOT WILL BE HALF SCALE UNLESS OTHERWISE NOTED

**DRIVING DIRECTIONS FROM NEAREST MAJOR AIRPORT**  
 FROM DULUTH INTERNATIONAL AIRPORT:  
 1. TURN RIGHT ONTO RICE LAKE ROAD (GO 1.5 MILES)  
 2. TURN RIGHT ONTO RICE LAKE ROAD (GO 1.5 MILES)  
 3. TURN LEFT ONTO WEST ARROWHEAD ROAD (GO 1.5 MILES)  
 4. TURN RIGHT ONTO KENNEDY AVENUE (GO 1.2 MILES)  
 5. TURN LEFT ONTO EAST SKYLINE PARKWAY (GO 0.5 MILES)  
 6. TAKE 2ND LEFT ONTO CHESTER PARKWAY (GO 325 FEET TO SITE)

**SITE INFORMATION**

**SITE ADDRESS:** 1805 EAST SKYLINE PARKWAY  
 DULUTH, MN 55805  
**PROPERTY OWNER:** CITY OF DULUTH  
 DULUTH, MN 55805  
**POWER COMPANY:** MINNESOTA POWER  
**TELCO COMPANY:** CENTURION  
**COUNTY:** SAINT LOUIS  
**ZONING JURISDICTION:** CITY OF DULUTH  
**LATITUDE (NAD83):** 46° 48' 41.4" N  
 (TO BE FINALIZED PER FINAL SURVEY)  
**LONGITUDE (NAD83):** 92° 05' 43.1" W  
 (TO BE FINALIZED PER FINAL SURVEY)  
**CONTACT ENGINEER:** ISAAC O'DONNELL  
 651-415-3800  
 isaac.odonnell@ulteig.com

**AREA MAP**



**LOCATION MAP**



H-11



PROJECT NO: 13.01993  
 DRAWN BY: JMM  
 CHECKED BY: UJO

REV	DATE	DESCRIPTION
1	07/09/14	ROSE TOWER/COMP. LOCATION
2	07/09/14	ROSE TOWER/COMP. LOCATION
3	10/13/13	SCALED FOR REVIEW

THE SCALED DRAWING IS THE CORRECT RECORD DOCUMENT. NOT THE ORIGINAL DRAWING. IF ANY CHANGES ARE MADE TO THIS DRAWING, THE PROJECT PROFESSIONAL ENGINEER UNDER THE SEAL OF THE STATE OF MINNESOTA  
 DATE: 07-09-14 Lic. No. 27985  
 ISAAC ODLAND

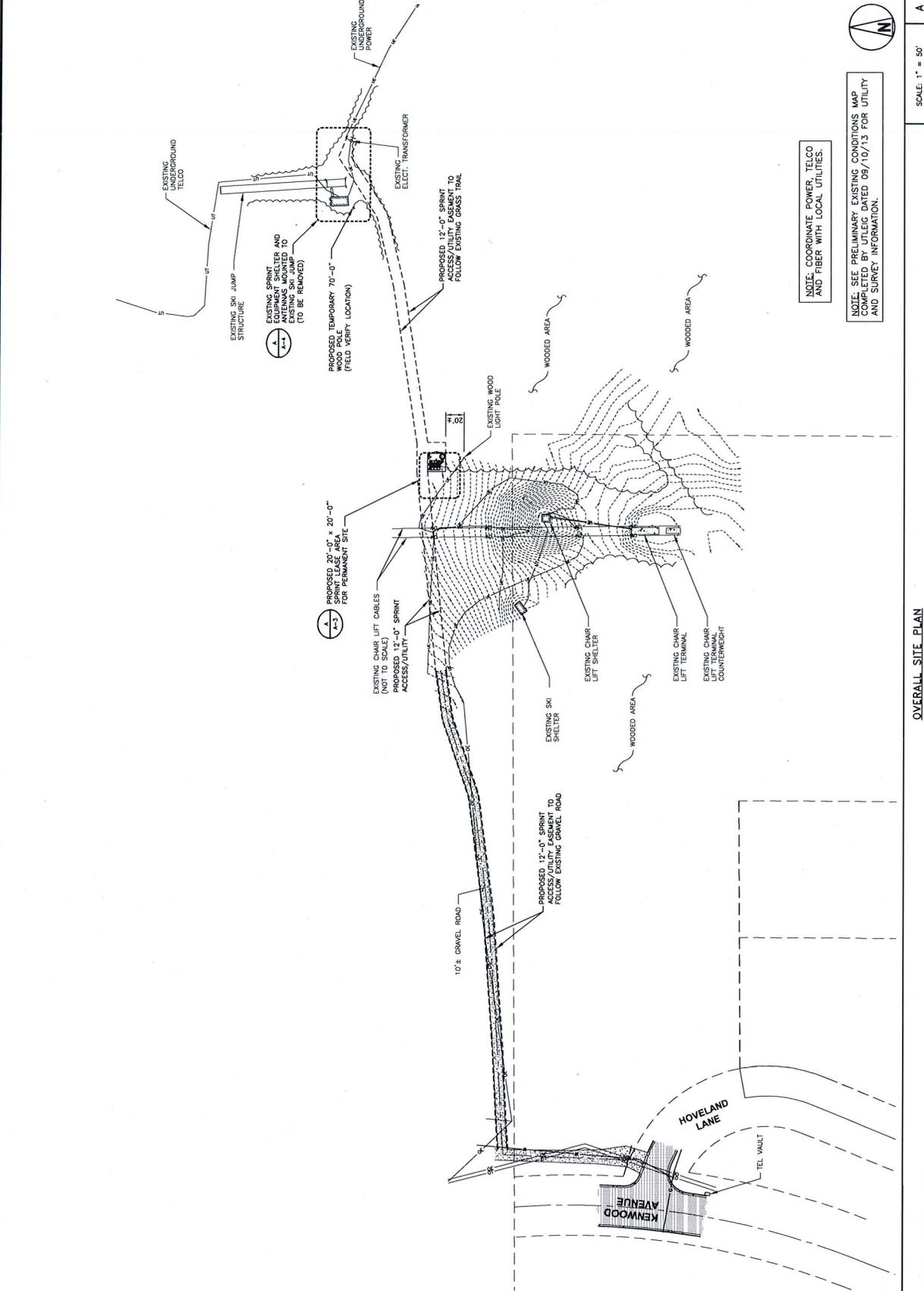
**NOT FOR CONSTRUCTION**

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE AGING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

MS03NP156  
 DULUTH CHESTER PARK  
 SKI JUMP RELO  
 1805 EAST SKYLINE PKWY  
 DULUTH, MN 55805

SHEET TITLE  
**OVERALL SITE PLAN**

SHEET NUMBER  
**A-1**



NOTE: COORDINATE POWER, TELCO AND FIBER WITH LOCAL UTILITIES.

NOTE: SEE PRELIMINARY EXISTING CONDITIONS MAP COMPLETED BY ULTEIG DATED 09/10/13 FOR UTILITY AND SURVEY INFORMATION.



SCALE: 1" = 50'

OVERALL SITE PLAN

H-12



6580 SPRINT PARKWAY  
OVERLAND PARK, KANSAS 66251



4825 Lexington Avenue N.  
Suite 200  
Phone: 612-433-8800 Fax: 612-433-8801  
www.ulteig.com

PROJECT NO: 13.01993  
DRAWN BY: JMM  
CHECKED BY: JLO

REV	DATE	DESCRIPTION
1	07/09/14	REVISE TIME/DATE LOCATION
2	07/02/14	REVISE TIME/DATE LOCATION
3	10/15/13	ISSUED FOR REVIEW

THE SOLE RESPONSIBILITY OF THE LICENSED RECORD DRAWER IS TO VERIFY THE PLAN, SPECIFICATION, AND CONTRACT DOCUMENTS AND THAT ALL WORK DESCRIBED THEREIN IS TO BE PERFORMED IN ACCORDANCE WITH THE LAWS OF THE STATE OF MINNESOTA.  
DATE: 07-09-14 Lic. No. 71985

ISAAC ODLAND

NOT FOR CONSTRUCTION

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MS03NPL55  
DULUTH CHESTER PARK  
SKI JUMP RELO  
1805 EAST SKYLINE PKWY  
DULUTH, MN 55805

SHEET TITLE  
BIRDS EYE VIEW

SHEET NUMBER  
A-2



NO SCALE

BIRDS EYE VIEW

A

H-13





Ulteig Engineering Associates, Inc.  
10101 Lyndon Avenue, N.  
St. Paul, Minnesota 55128  
Phone: 612-941-1000  
Fax: 612-941-1001  
Email: sales@ulteig.com  
Web: www.ulteig.com

PROJECT NO: 13.01593  
DRAWN BY: JMM  
CHECKED BY: LJO

REV	DATE	DESCRIPTION
1	07/08/14	REUSE TOWER/COUP. LOCATION
0	07/02/14	REUSE TOWER/COUP. LOCATION
A	10/15/13	ISSUED FOR REVIEW

THIS SHEET DRAWING IS THE CORRECT RECORD DOCUMENT, NOT THE AUGUST 2013 DOCUMENT. ANY CHANGES TO THIS SHEET DRAWING MUST BE MADE BY THE DESIGNER OR A PROFESSIONAL ENGINEER UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
DATE: 07-09-14 LUC: IN: 47985

ISMAC DDLAND

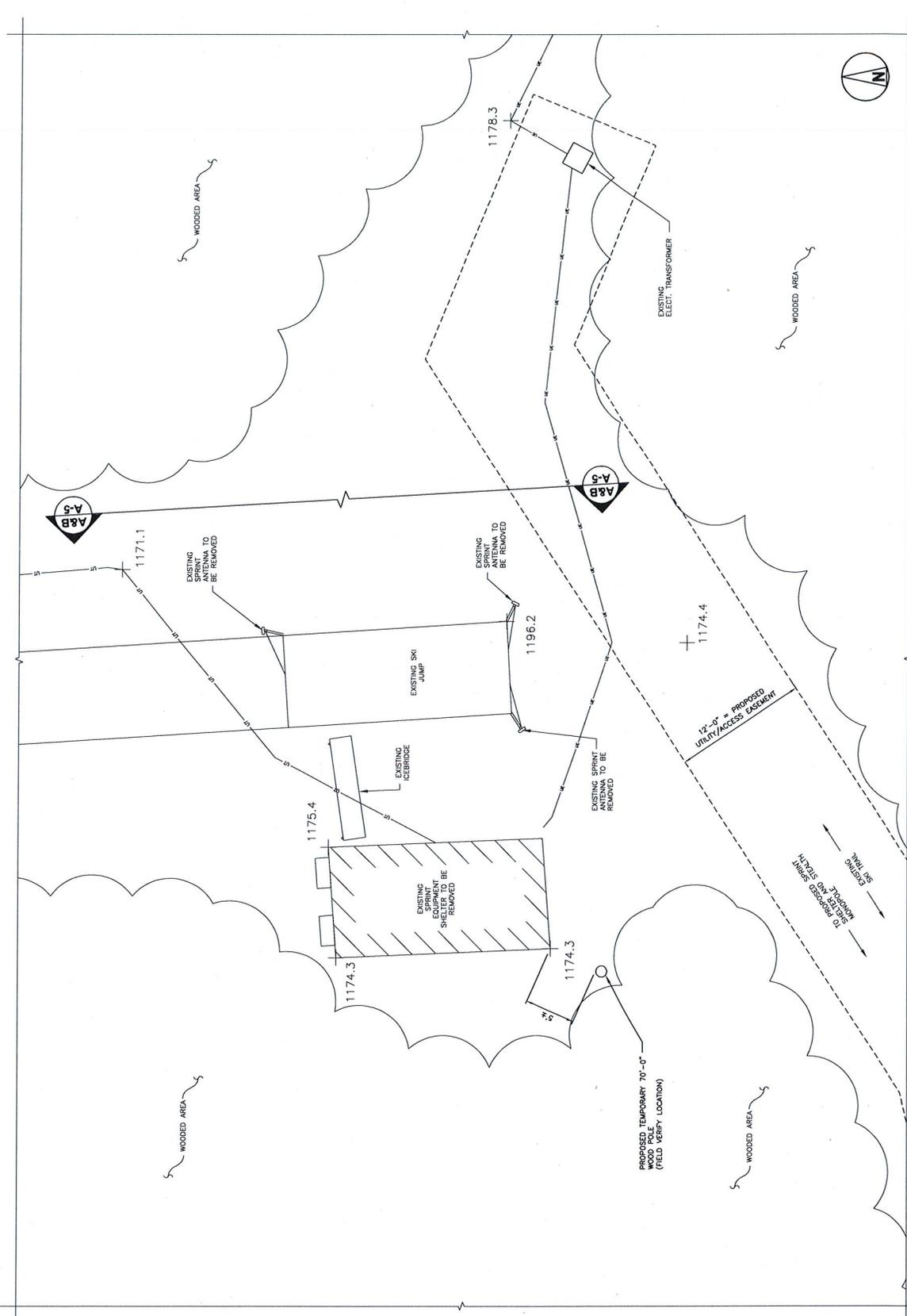
NOT FOR CONSTRUCTION

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

MSC03NP156  
DULUTH CHESTER PARK  
SKI JUMP RELO  
1805 EAST SKYLINE PKWY  
DULUTH, MN 55805

SHEET TITLE  
ENLARGED SITE PLAN  
(EXISTING/INTERIM)

SHEET NUMBER  
A-4



SCALE: 3/8" = 1'-0" A

ENLARGED SITE PLAN (EXISTING/INTERIM)

A-15



PROJECT NO: 13.01593  
 DRAWN BY: JMM  
 CHECKED BY: JUD

REV	DATE	DESCRIPTION
1	07/29/14	INSET TOWER/CLAMP LOCATION
2	07/29/14	INSET TOWER/CLAMP LOCATION
A	10/15/13	ISSUED FOR REVIEW

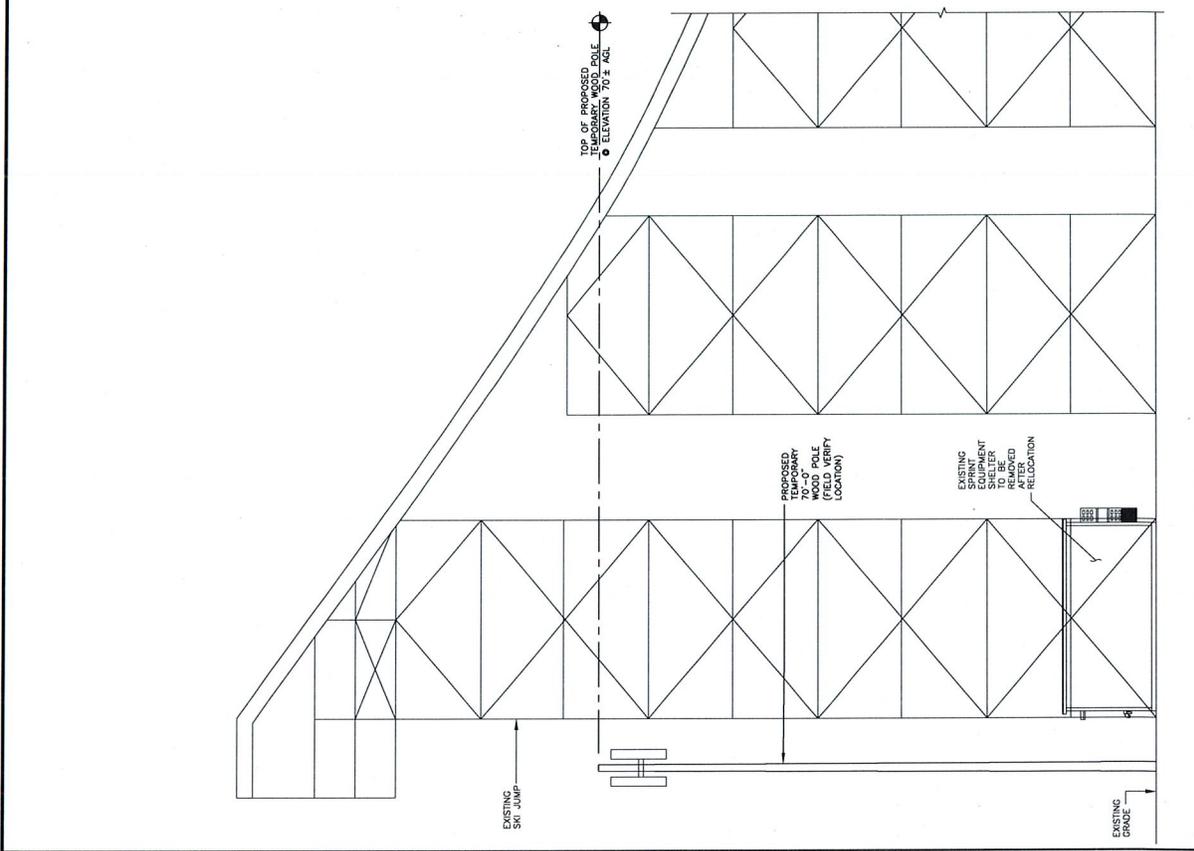
THE SOLE DRAWING IS THE CORRECT RECORD DRAWING FOR THIS PROJECT. ANY CHANGES TO THIS DRAWING MUST BE MADE BY THE DESIGNER OR A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MINNESOTA. DATE: 07-09-14, SHEET NO. 47985

ISAAC ODLAND  
**NOT FOR CONSTRUCTION**  
 IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

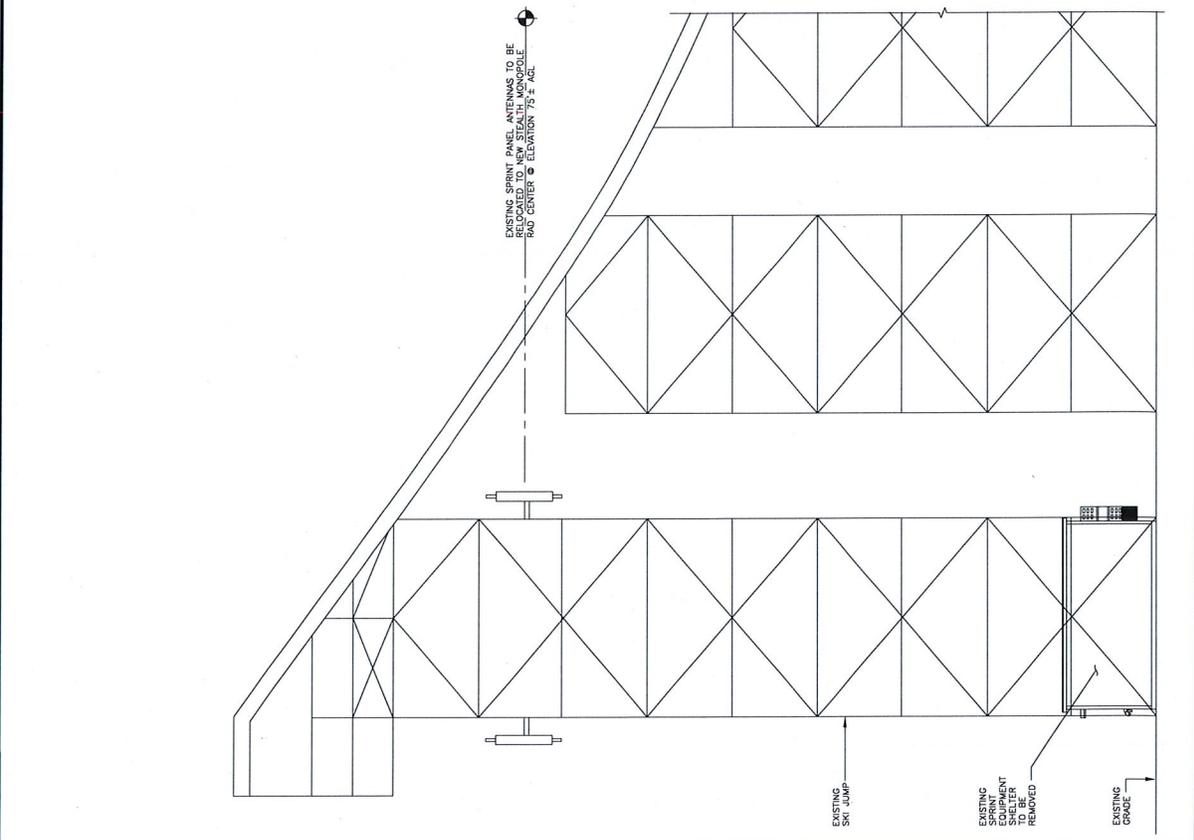
MS03NPT156  
 DULUTH CHESTER PARK  
 SKI JUMP RELO  
 1805 EAST SKYLINE PKWY  
 DULUTH, MN 55805

SHEET TITLE  
 EXISTING/INTERIM TOWER  
 ELEVATIONS

SHEET NUMBER  
**A-5**



EXISTING SITE ELEVATION (LOOKING WEST) B NO SCALE



EXISTING SITE ELEVATION (LOOKING WEST) A NO SCALE

H-16



PROJECT NO: 13.01983  
 DRAWN BY: JMM  
 CHECKED BY: LJO

REV	DATE	DESCRIPTION
1	07/29/14	REUSE TOWER/COMP. LOCATION
0	07/29/14	REUSE TOWER/COMP. LOCATION
A	10/15/13	ISSUED FOR REVIEW

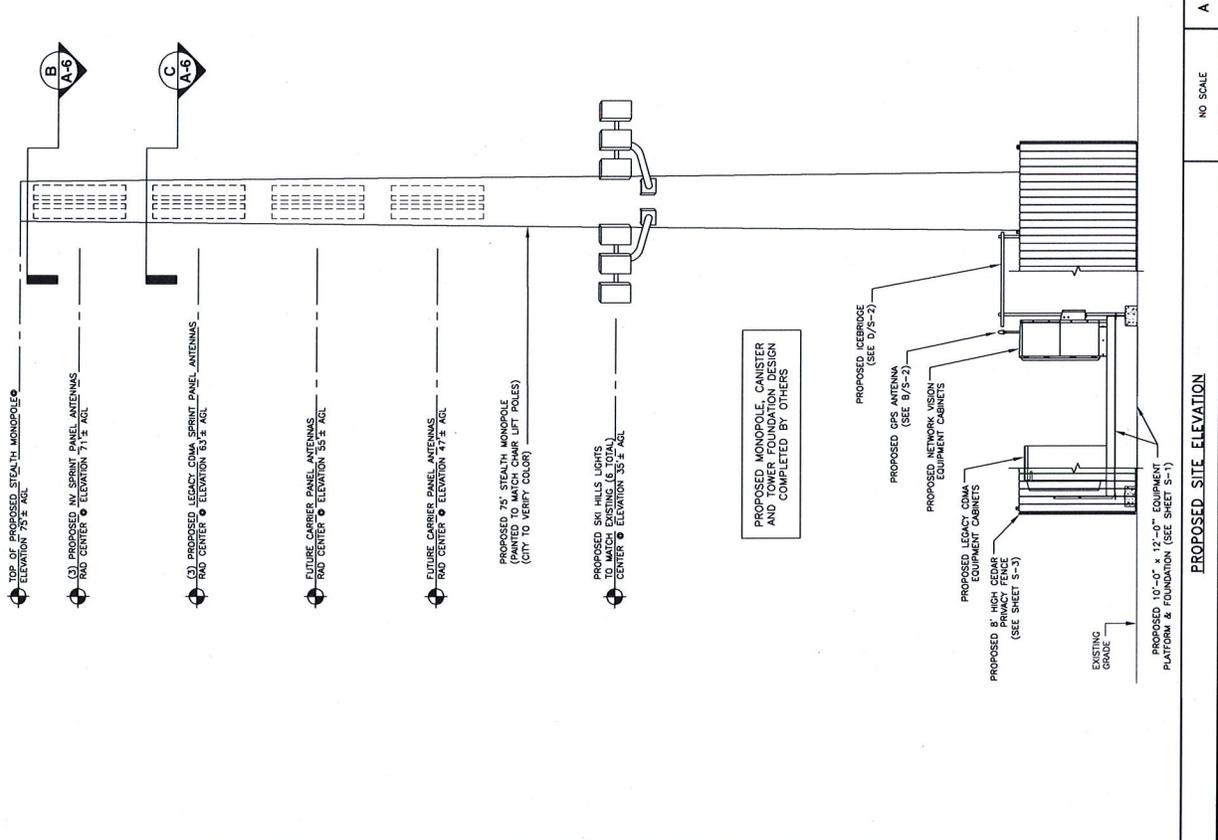
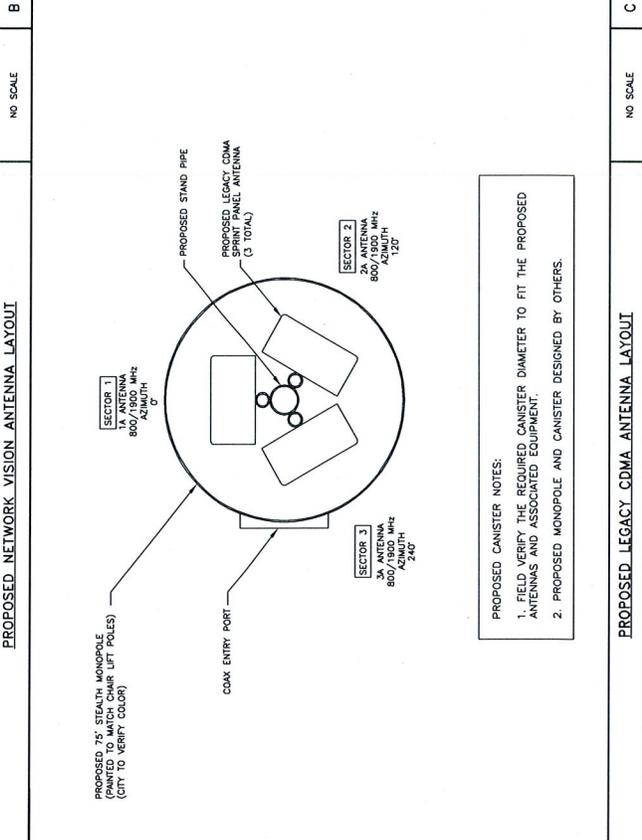
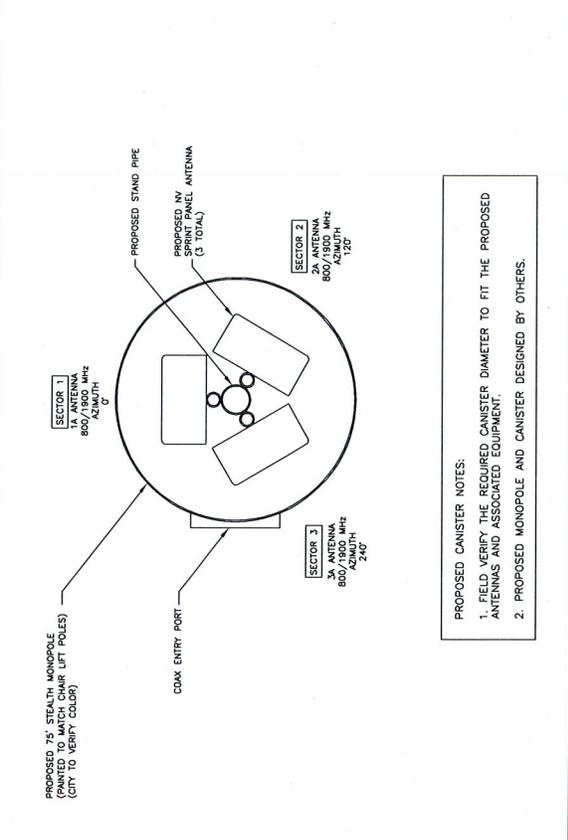
THE OWNER SHALL BE THE CORRECT RECORD DRAWING. VERIFY THE PLAN, SPECIFICATION, AND TOWER FOUNDATION DESIGN WITH THE LOCAL ENGINEER AND THE CITY ENGINEER OF THE CITY OF MINNESOTA.  
 DATE: 07-09-14, Lic. No. 47985  
 ISAAC JOHNSON

**NOT FOR CONSTRUCTION**

MSC3NP156  
 DULUTH CHESTER PARK  
 SKI JUMP RELO  
 1805 EAST SKYLINE PKWY  
 DULUTH, MN 55805

SHEET TITLE  
**PROPOSED TOWER ELEV. & ANTENNA LAYOUTS**

SHEET NUMBER  
**A-6**



H-17



PROJECT NO: 13.01953  
 DRAWN BY: JMM  
 CHECKED BY: JMD

REV	DATE	DESCRIPTION
1	07/26/14	REVERSE TORQUE/CLAMP LOCATION
0	07/22/14	REVERSE TORQUE/CLAMP LOCATION
A	10/15/13	ISSUED FOR REVIEW

THE ABOVE DRAWING IS THE CORRECT RECORD  
 1. USER CANNOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION CONTAINED HEREIN.  
 2. USER CANNOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION CONTAINED HEREIN.  
 3. USER CANNOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION CONTAINED HEREIN.  
 4. USER CANNOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION CONTAINED HEREIN.  
 5. USER CANNOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION CONTAINED HEREIN.  
 DATE: 07-09-14 UC: No. 47955  
 1534C ODLAND

**NOT FOR CONSTRUCTION**

M303NP156  
 DULUTH CHESTER PARK  
 SK JUMP RELO  
 1805 EAST SKYLINE PKWY  
 DULUTH, MN 55805

SHEET TITLE  
 ANTENNA DETAILS

SHEET NUMBER  
**A-7**

PROPOSED ANTENNA SPECIFICATIONS	NO SCALE	A	NO SCALE	NO SCALE	NO SCALE	NO SCALE
<p><b>KIW ANTENNA ET-X-TS-70-16-62-18-IR-RD</b>            DIMENSIONS, HMMOD: 1875x300x150mm (73.8"x11.8"x5.9")            WEIGHT, W/O CLAMP: 41.9 lbs            CONNECTOR: (6) 7/16 DIN FEMALE</p>						

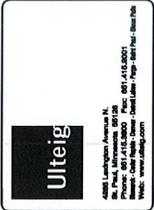
PROPOSED ANTENNA SCHEDULE (NETWORK VISION)										
SECTOR	ANTENNA NUMBER	ANTENNA MANUFACTURER	ANTENNA MODEL	NUMBERS OF HYBRID CABLES	RAZ ANTENNA CENTER	AZIMUTH	ELECT. TILT	MECH. TILT	RRU MODEL	RRU FILTER
1A	800/1900 MHz	KMW	ET-X-TS-70-16-62-18-IR-RD	1 (PER SECTOR)	71'	0°	0/0	0/0	RRH-C2A & RRH-P4	(1) 800 MHz FILTER
2A	800/1900 MHz	KMW	ET-X-TS-70-16-62-18-IR-RD	1 (PER SECTOR)	71'	120°	0/0	0/0	RRH-C2A & RRH-P4	(1) 800 MHz FILTER
3A	800/1900 MHz	KMW	ET-X-TS-70-16-62-18-IR-RD	1 (PER SECTOR)	71'	240°	0/0	0/0	RRH-C2A & RRH-P4	(1) 800 MHz FILTER
-	GPS	PCTEL	GPS-TMG-HR-28NCM	1	-	-	-	-	-	-

PROPOSED ANTENNA SCHEDULE (LEGACY CDMA)							
SECTOR	ANTENNA MANUFACTURER	ANTENNA MODEL	# OF ANTENNAS	MECHANICAL TILT/ELECTRICAL TILT	1900/800 MHz	1500/800 MHz	RAD CENTER
1A	KMW	ET-X-TS-70-16-62-18-IR-RD	1	0/0	-	-	63'
2A	KMW	ET-X-TS-70-16-62-18-IR-RD	1	0/0	-	-	63'
3A	KMW	ET-X-TS-70-16-62-18-IR-RD	1	0/0	-	-	63'

NO SCALE

ANTENNA SCHEDULES

H-18



PROJECT NO:	13.01993	
DRAWN BY:	JMM	
CHECKED BY:	JD	
REV	DATE	DESCRIPTION
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2	07/09/14	REVISE TOWER/COMP. LOCATION
A	10/15/13	ISSUED FOR REVIEW

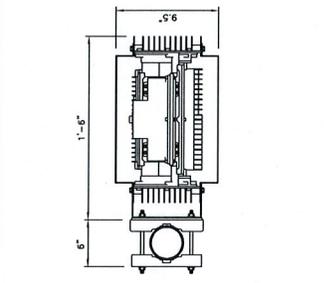
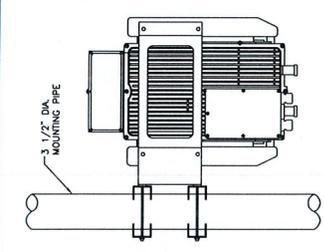
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**NOT FOR CONSTRUCTION**

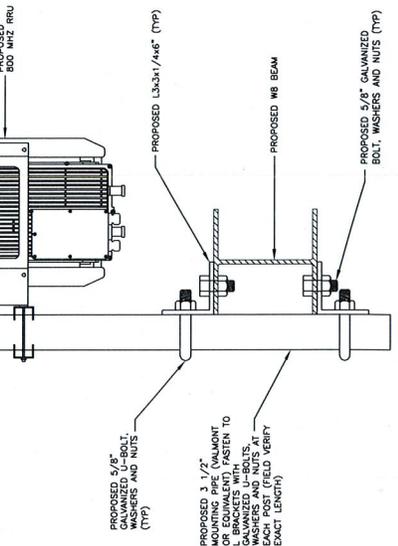
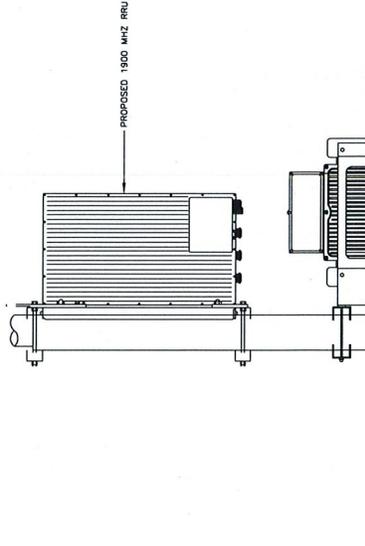
M503NP156  
DULUTH CHESTER PARK  
SKI JUMP RELO  
1805 EAST SKYLINE PKWY  
- DULUTH, MN 55805

SHEET TITLE  
RRU DETAILS

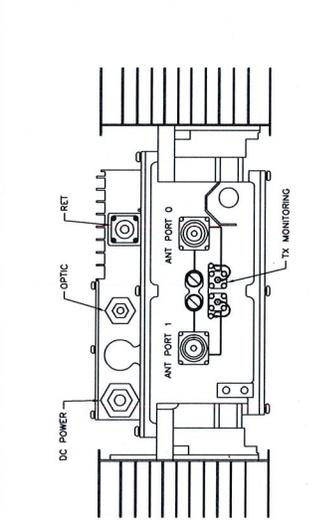
SHEET NUMBER  
**A-8**



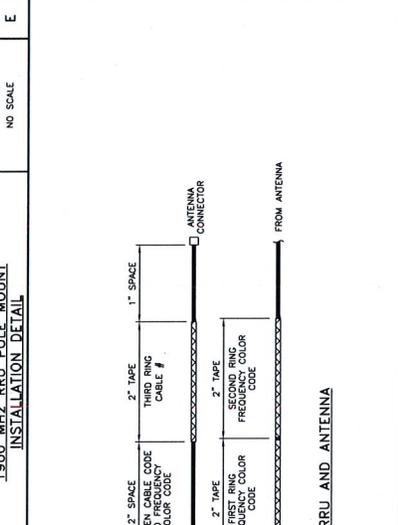
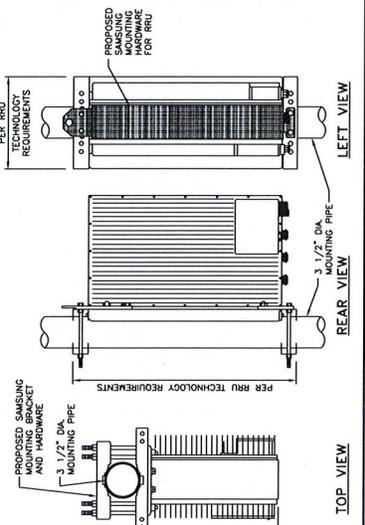
FRONT VIEW  
TOP VIEW  
800\_MHZ\_RRU\_POLE\_MOUNT\_INSTALLATION\_DETAIL  
NO SCALE



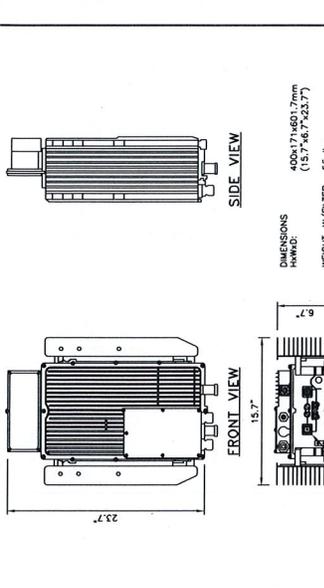
800\_MHZ\_RRU\_POLE\_MOUNT\_INSTALLATION\_DETAIL  
NO SCALE  
1900\_MHZ\_RRU\_POLE\_MOUNT\_INSTALLATION\_DETAIL  
NO SCALE



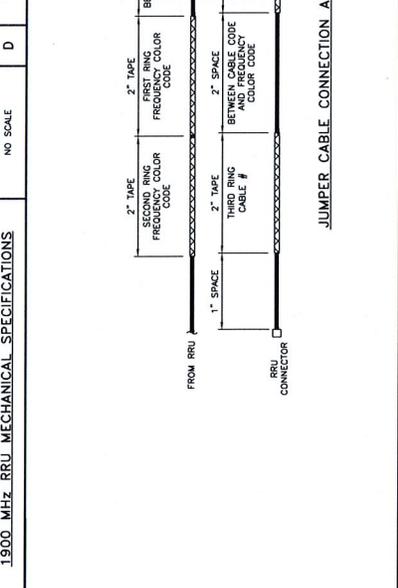
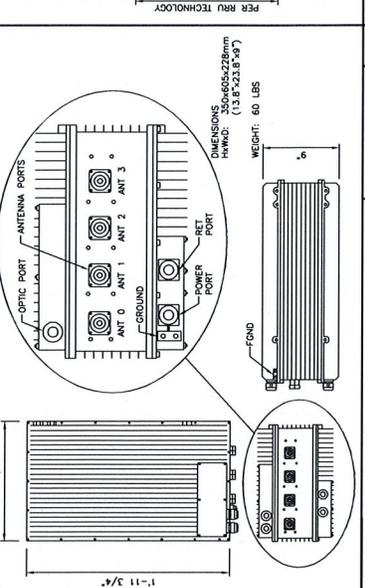
800\_MHZ\_RRU\_BOTTOM\_VIEW  
NO SCALE



800\_MHZ\_RRU\_LEFT\_VIEW  
NO SCALE  
1900\_MHZ\_RRU\_REAR\_VIEW  
NO SCALE



800\_MHZ\_RRU\_MECHANICAL\_SPECIFICATIONS  
NO SCALE



1900\_MHZ\_RRU\_MECHANICAL\_SPECIFICATIONS  
NO SCALE  
1900\_MHZ\_RRU\_INSTALLATION\_DETAIL  
NO SCALE

A-19



6545 SPRING PARKWAY  
OVERLAND PARK, KANSAS 66251



4441 Linderoth Avenue N.  
St. Paul, Minnesota 55118  
Phone: 612.771.1100  
Fax: 612.771.1101  
www.ulteig.com

PROJECT NO: 13.01992  
DRAWN BY: JUM  
CHECKED BY: UO

REV	DATE	DESCRIPTION
1	07/09/14	REUSE TOWER/COMP. LOCATION
0	07/02/14	REUSE TOWER/COMP. LOCATION
A	10/15/13	ISSUED FOR REVIEW

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DATE: 07-09-14 Lic. No. 27985

ISAAC ODLAND

NOT FOR CONSTRUCTION

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MS03NP156  
DULUTH CHESTER PARK  
SKI JUMP RELO  
1805 EAST SKYLINE PKWY  
DULUTH, MN 55805

SHEET TITLE  
FOUNDATION PLAN  
AND DETAILS

SHEET NUMBER  
S-1

# EQUIPMENT PLATFORM FRAMING TO BE DETERMINED UPON EQUIPMENT LAYOUT APPROVAL

## CONCRETE PIER DETAIL

SCALE: 1" = 1'-0"

### STRUCTURAL STEEL

- A. STRUCTURAL STEEL CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE FOLLOWING CODES - LATEST EDITION UNLESS NOTED OTHERWISE:
  - 1. AISC 360 - SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS
  - 2. AISC 358 - SPECIFICATION FOR STRUCTURAL STEEL CONNECTIONS
- B. MATERIAL PROPERTIES:
  - 1. WIDE FLANGE SHAPES - ASTM A992 (F<sub>y</sub> = 50 ksi)
  - 2. HOLLOW STRUCTURAL SECTIONS (HSS) - ASTM A500, GRADE B (F<sub>y</sub> = 48 ksi)
  - 3. PIPE STEEL - ASTM A53, GRADE B (F<sub>y</sub> = 35 ksi)
  - 4. WELDED ELECTRODES - ASTM A5.1
  - 5. WELDED ELECTRODES - ASTM A5.5
  - 6. CONNECTION BOLTS - ASTM A325
- C. ALL BEAMS TO BEAM AND BEAM TO COLUMN CONNECTIONS TO BE STANDARD ASD DOUBLE END PLATE CONNECTIONS (COMBINATION SHOP WELDED AND FIELD BOLTED) UNLESS NOTED OTHERWISE.
- D. ALL BOLTS SHALL BE INSTALLED IN "W" TYPE CONNECTIONS UNLESS NOTED OTHERWISE.
- E. NOTED WELDS ARE TO BE MADE UNLESS THE MEMBERS ARE PROPERLY ALIGNED, FIELD WELDS SHALL BE FULL PENETRATION JOINTS (FPJ) UNLESS OTHERWISE NOTED. TYPE OF WELD SHOWN ON THE DRAWING USING PROPER ELECTRODES AND APPROPRIATE WELD SYMBOLS ON THE DRAWING. ALL WELDS SHALL BE FULL PENETRATION JOINTS (FPJ) UNLESS OTHERWISE NOTED.
- F. DO NOT PAINT STEEL TO BE WELD WELDED OR CAST IN CONCRETE.
- G. ALL WELDS SHALL BE FULL PENETRATION JOINTS (FPJ) UNLESS OTHERWISE NOTED.
- H. ALL WELDS NOT SPECIFIED ARE 1/4" FILLET, CONTINUOUS FOR ALL JOINTS.

### CAST-IN-PLACE CONCRETE

- A. CONCRETE CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE FOLLOWING CODES - LATEST EDITION UNLESS NOTED OTHERWISE:
  - 1. ACI 308 - CONCRETE MIXTURE PROPORTIONS FOR STRUCTURAL CONCRETE
  - 2. ACI 309 - CONSTRUCTION TOLERANCES FOR STRUCTURAL CONCRETE
  - 3. ACI 318 - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
- B. MATERIAL PROPERTIES:
  - 1. MINIMUM COMPRESSIVE STRENGTH (F<sub>c</sub>) AT 28 DAYS SHALL BE:
    - FOOTINGS - 3,000 PSI
    - CONCRETE MIX DESIGN:
      - 1. THE CONTRACTOR SHALL EMPLOY THE SERVICES OF AN INDEPENDENT TESTING AGENCY TO VERIFY THE MIX DESIGN AND PROPORTIONS OF THE CONCRETE. THE MIX DESIGN SHALL BE DESIGNED AND PROPORTIONED TO MEET THE REQUIREMENTS OF THE MINIMUM DESIGN STRENGTH, AS WELL AS PLACEMENT, USE, AND DURABILITY.
- C. REINFORCING BARS - ASTM A603 - GRADE 60 DEFORMED BARS SHALL BE USED UNLESS OTHERWISE NOTED.
- D. REINFORCING BARS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STRUCTURAL ENGINEER.
  - 1. NO TACK WELDING OF REINFORCING BARS WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
  - 2. ALL REINFORCING BARS SHALL BE PER ACI 318 AND AS NOTED ON THE DRAWING.
  - 3. ALL BAR SPLICES SHALL BE LAP TYPE WITH A MINIMUM LAP OF 36 BAR DIAMETERS UNLESS OTHERWISE NOTED.
- E. SPECIAL INSPECTION IS NOT REQUIRED PER 2008 IBC CHAPTER 17. REFER TO THE SPECIAL INSPECTION SCHEDULE AND NOTES FOR INSPECTIONS, TESTING, AND SUBMITTAL REQUIREMENTS.

### FOUNDATIONS

- A. ALL FOOTINGS ARE DESIGNED FOR A MAXIMUM ALLOWABLE NET SOIL BEARING PRESSURE OF 5,000 PSF.
- B. ALL FOOTINGS SHALL BEAR ON NATURAL UNDISTURBED SOIL OR ENGINEERED FILL APPROVED BY A SOILS ENGINEER PRIOR TO PLACING CONCRETE FOR FOOTINGS.
- C. PROVIDE ADEQUATE PROTECTIVE PROTECTION TO THE BOTTOM OF ALL FOOTINGS.

# EQUIPMENT PLATFORM FRAMING TO BE DETERMINED UPON EQUIPMENT LAYOUT APPROVAL

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

EQUIPMENT PLATFORM FRAMING  
LAYOUT & FOUNDATION PLAN

SCALE: NONE

CONCRETE & STRUCTURAL NOTES



H-20



PROJECT NO:	13.01593	
DRAWN BY:	JAM	
CHECKED BY:	UD	
REV	DATE	DESCRIPTION
1	07/29/14	REVISION/LOCATION
2	07/29/14	REVISION/LOCATION
3	10/15/13	ISSUED FOR REVIEW

THE SIGNED DRAWING IS THE CORRECT RECORD FOR CONSTRUCTION. ANY CHANGES TO THE DRAWING MUST BE MADE BY THE DESIGNER OR A PROFESSIONAL ENGINEER. IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS SPECIFICALLY AUTHORIZED BY A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

DATE: 07-09-14 UIC No. 27985

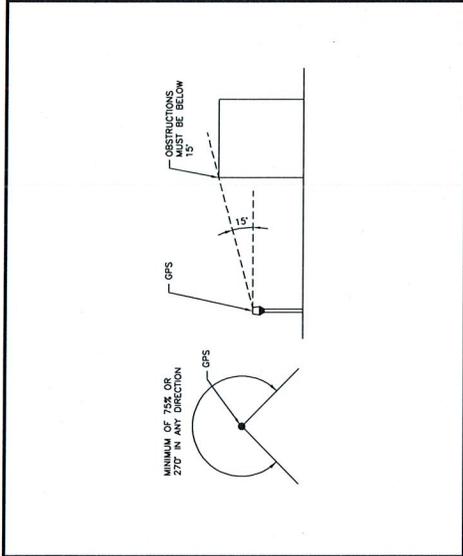
ISAC ODLAND

**NOT FOR CONSTRUCTION**

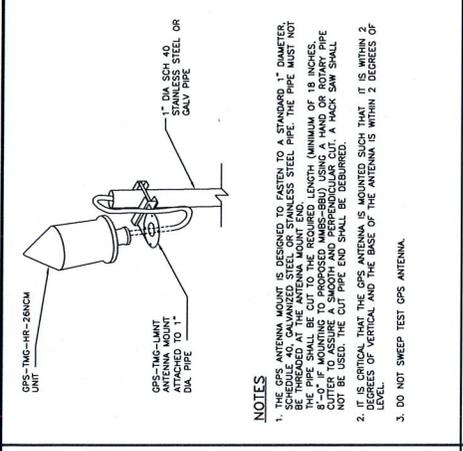
MSO3NP156  
DULUTH CHESTER PARK  
SKI JUMP RELO  
1805 EAST SKYLINE PKWY  
DULUTH, MN 55805

SHEET TITLE  
SECTIONS & DETAILS

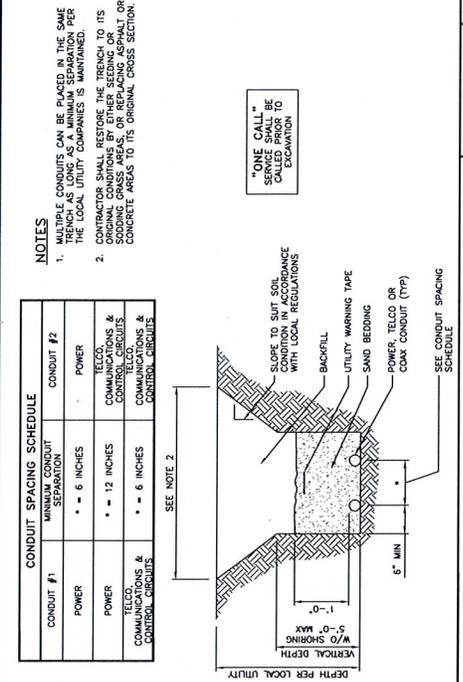
SHEET NUMBER  
**S-2**



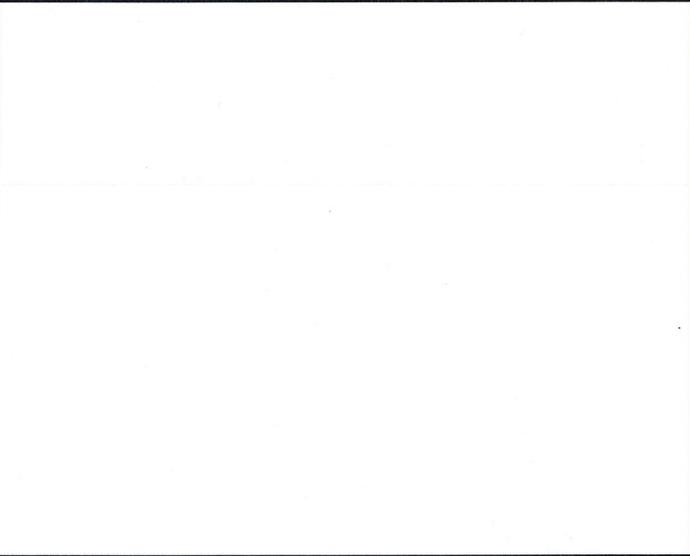
GPS MINIMUM SKY VIEW REQUIREMENTS



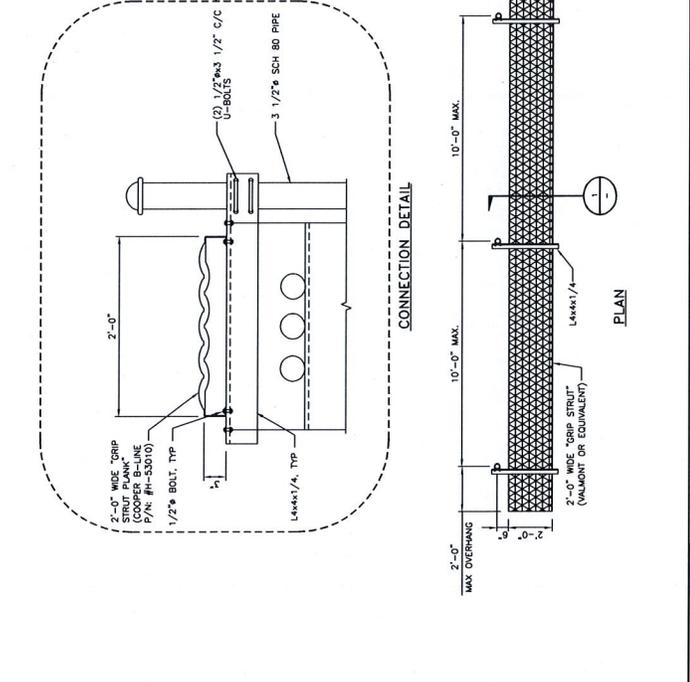
GPS UNIT PIPE MOUNT



TYPICAL UTILITY TRENCH DETAIL



GPS UNIT PIPE MOUNT CONNECTION DETAIL



ICE BRIDGE LAYOUT

H-21



PROJECT NO: 13.01993  
 DRAWN BY: JMM  
 CHECKED BY: UO

REV	DATE	DESCRIPTION
1	07/08/14	REUSE TOWER/TOURP. LOCATION
2	07/02/14	REUSE TOWER/TOURP. LOCATION
A	10/15/13	SCALED FOR REVIEW

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 DATE: 07-09-14 LIC. NO. 27985  
 ISAAC ODLAND

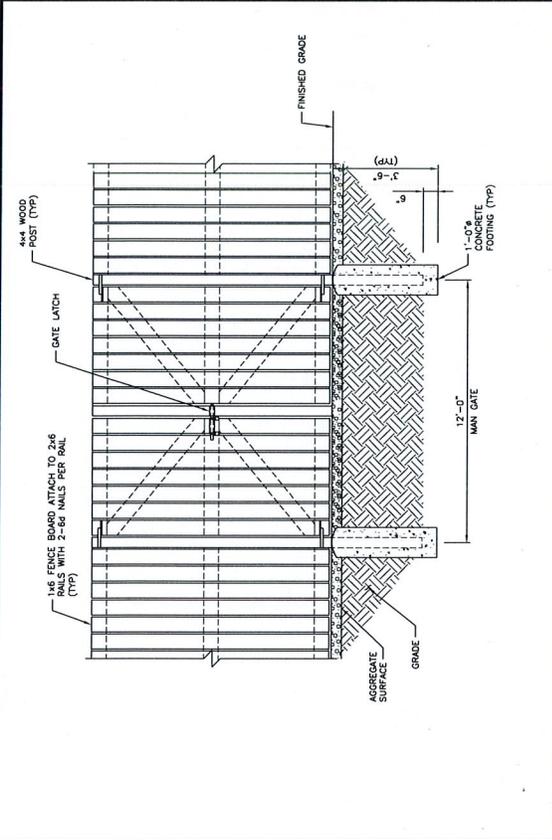
**NOT FOR CONSTRUCTION**

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MS03NP156  
 DULUTH CHESTER PARK  
 SKI JUMP RELO  
 1805 EAST SKYLINE PKWY  
 DULUTH, MN 55805

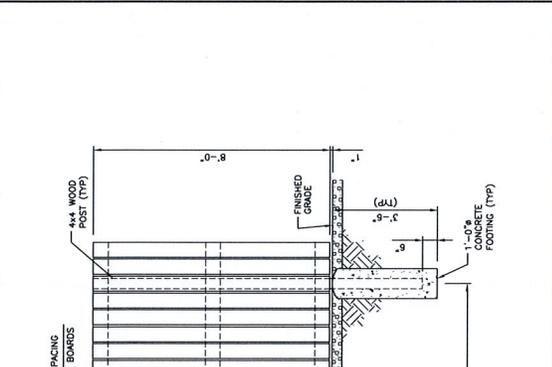
SHEET TITLE  
 FENCE DETAILS

SHEET NUMBER  
**S-3**



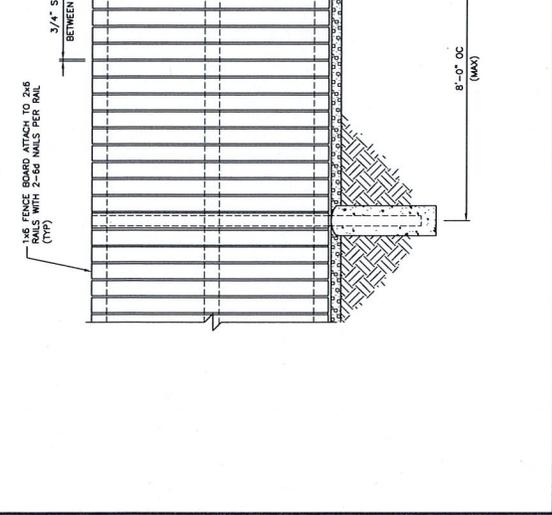
WOOD FENCE GATE ELEVATION (TYP.)

NO SCALE



WOOD FENCE ELEVATION (TYP.)

NO SCALE



TYPICAL FENCE ELEV. (TYP.)

NO SCALE

H-22





PROJECT NO:	13.01935	
DRAWN BY:	JMM	
CHECKED BY:	JLO	
REV	DATE	DESCRIPTION
1	07/09/14	RISE TIME/TEMP. LOCATION
2	07/02/14	RISE TIME/TEMP. LOCATION
3	10/15/13	ISSUED FOR REVIEW

THE LOCAL JURISDICTION IS THE COUNTY RECORDS DEPARTMENT, COUNTY OF JAMES, MINNESOTA. THE PROJECT LOCATION IS 1805 EAST SKYLINE PKWY, DULUTH, MN 55805. DATE: 07-09-14. I.C.C. # 46528. PER: A. DAVIS, JR.

**NOT FOR CONSTRUCTION**

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**MS03NP156**  
DULUTH CHESTER PARK  
SKI JUMP RELO  
1805 EAST SKYLINE PKWY  
DULUTH, MN 55805

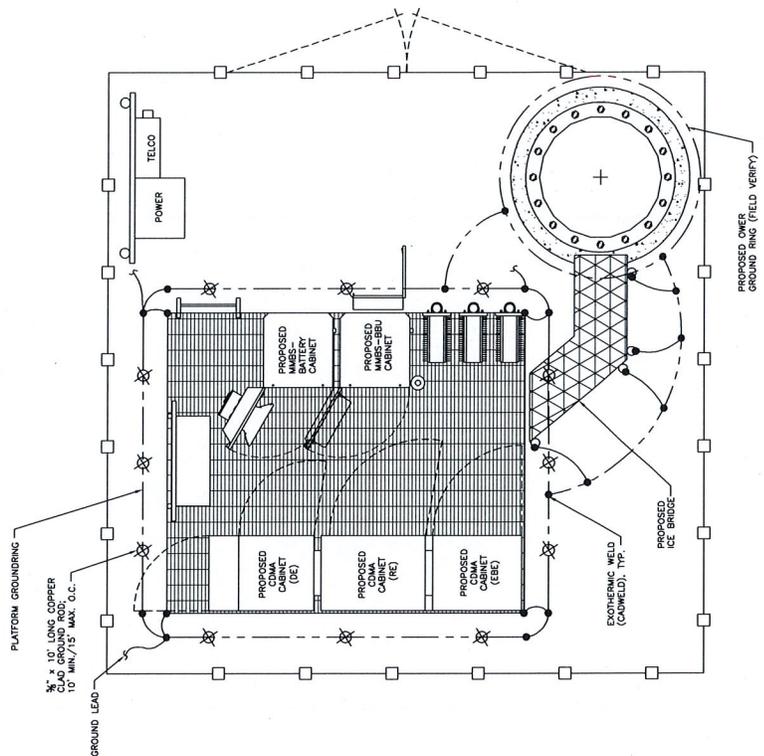
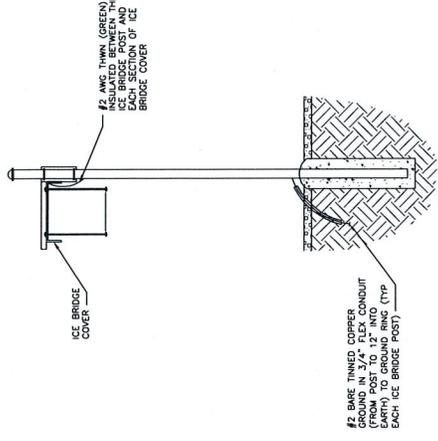
SHEET TITLE  
**GROUNDING PLAN & NOTES**

SHEET NUMBER  
**G-1**

**GROUNDING NOTES**

- CONTRACTOR SHALL COORDINATE INSTALLATION OF GROUND RODS AND GROUND RING WITH FOUNDATION AND UNDERGROUND CONDUIT INSTALLATION.
- CONTRACTOR SHALL HAND DIG AND LOCATE TOWER GROUND RING.
- CONTRACTOR SHALL BOND NEW SPRINT GROUND RING TO TOWER GROUND RING IN TWO PLACES.
- CONTRACTOR SHALL MOUNT MASTER ISOLATED GROUND BAR (MIGB) TO FRAME OF EQUIPMENT PLATFORM CHANNEL NEAR (2) ICE BRIDGE/CABLE TRAY CONNECTION. ROUTE #2 AWG BCW FROM GROUND RING TO MIGB.
- CONTRACTOR SHALL MOUNT COAX ISOLATED GROUND BAR (CIGB) ON THE TOWER STRUCTURE NEAR GRADE LEVEL AND NEAR COAX ANTENNA CABLES. SEE RISER DIAGRAM FOR ADDITIONAL COAX ISOLATED GROUND BARS AT ANTENNA LEVEL TO BE MOUNTED BY THE CONTRACTOR.
- GROUND SERVICE DISCONNECTING MEANS PER NEC.
- GROUND EQUIPMENT ON PLATFORM PER SPRINT AND MANUFACTURER'S RECOMMENDATIONS.
- COAX GROUND CONNECTION AT TOWER BASE TO BE MADE ON VERTICAL PORTION OF THE CABLE ABOVE THE 90° BEND TO THE ICE BRIDGE/CABLE TRAY.
- ALL GROUND WIRES SHALL PROVIDE A STRAIGHT DOWNWARD PATH TO GROUND WITH GRADUAL BENDS TO CHANGE DIRECTION. IF NECESSARY, GROUND WIRES SHALL NOT BE LOOPED OR SHARPLY BENT.
- TESTING SHALL NOT BE REQUIRED UNTIL ALL SPECIFIED TESTS HAVE BEEN PERFORMED AND UNTIL THE GROUNDING SYSTEM CONFORMS TO THE REQUIREMENTS OF THE DRAWINGS AND SPRINT SPECIFICATIONS.
- SPACING BETWEEN GROUND RODS SHALL BE A MAXIMUM OF 10' ON CENTER.
- DAOWELD GROUND TO FOUR CORNERS AT EQUIPMENT PLATFORM.
- THE CONTRACTOR SHALL VERIFY THAT THE SYSTEM IS EFFECTIVELY GROUNDED, MEETS NEC ARTICLE 250 REQUIREMENTS, AND IS ACCEPTABLE TO THE LOCAL UTILITY AND THE LOCAL AUTHORITY HAVING JURISDICTION AND MEETS SPRINT ELECTRICAL AND GROUNDING SPECIFICATIONS.
- ALL EXTERIOR (OUTDOOR) AND UNDERGROUND (BELOW GRADE) CONNECTIONS SHALL BE IN ACCORDANCE WITH SPRINT ELECTRICAL AND GROUNDING SPECIFICATIONS.
- ALL INTERIOR GROUNDINGS AND BONDING CONNECTIONS (WITHIN BUILDINGS) SHALL BE IN ACCORDANCE WITH SPRINT ELECTRICAL AND GROUNDING SPECIFICATIONS.
- REFER TO DRAWINGS FOR GROUND SYSTEM REQUIREMENTS, WHERE SHOWN ON DRAWINGS, CABLE SHALL BE AS FOLLOWS:
  - SOLID OUTDOOR GROUND RING, ALL EQUIPMENT ON POLES, TOWERS, CABLE TRAY;
  - SOLID TINNED (BARE) #2 SOLID TINNED (BARE) #4/0 WELDING CABLE
  - FENCE GATE JUMPEERS;

**GROUNDING NOTES**



**ICE BRIDGE GROUNDING**

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

**GROUNDING PLAN**

*Handwritten: H-24*



PROJECT NO:	13.01593	
DRAWN BY:	JJM	
CHECKED BY:	LJO	
REV	DATE	DESCRIPTION
1	07/29/14	REVISE TOWER/CRIP LOCATION
2	07/29/14	REVISE TOWER/CRIP LOCATION
3	10/15/13	ISSUED FOR REVIEW

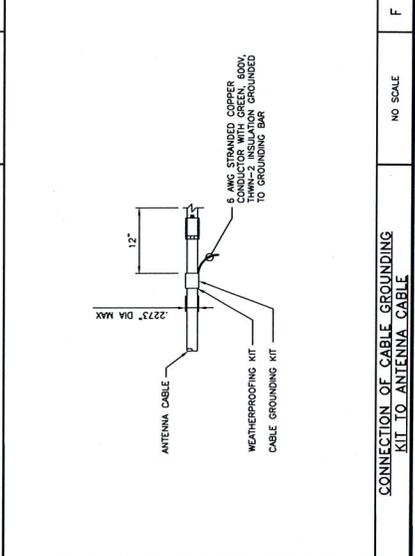
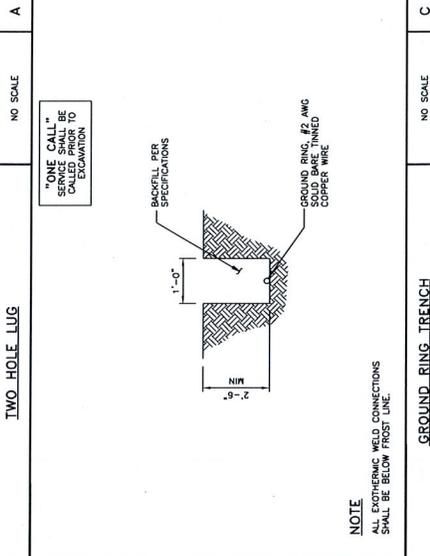
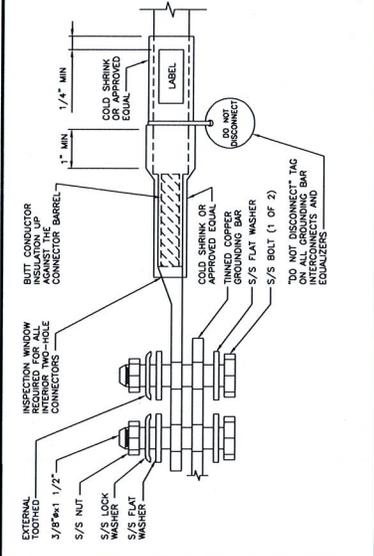
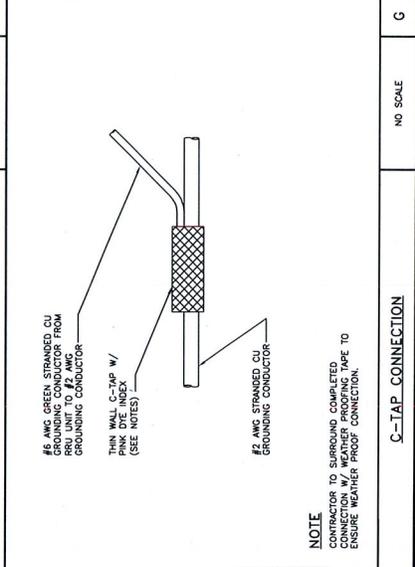
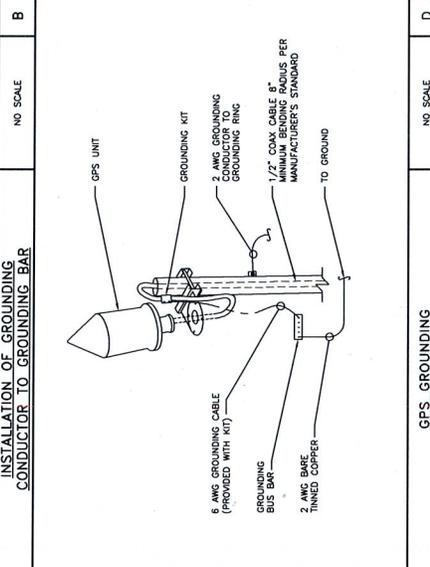
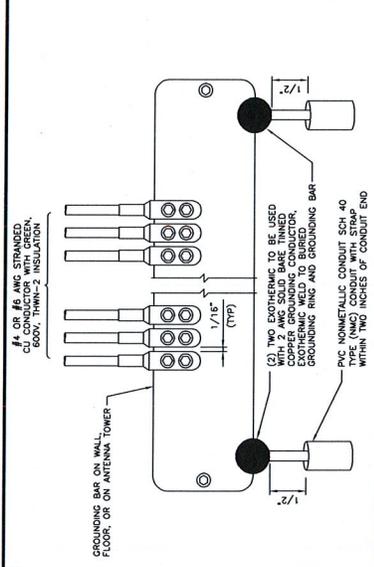
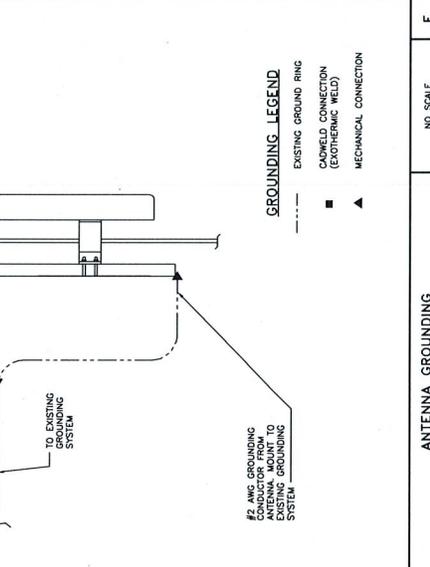
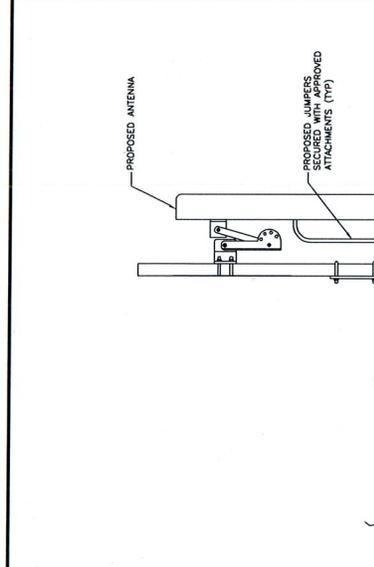
THE LOCATION OF ANY EXISTING UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL JURISDICTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL JURISDICTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL JURISDICTIONS.

**NOT FOR CONSTRUCTION**

MSO3NP156  
DULUTH CHESTER PARK  
SKYLINE PKWY  
DULUTH, MN 55805

SHEET TITLE  
**GROUNDING DETAILS**

SHEET NUMBER  
**G-2**



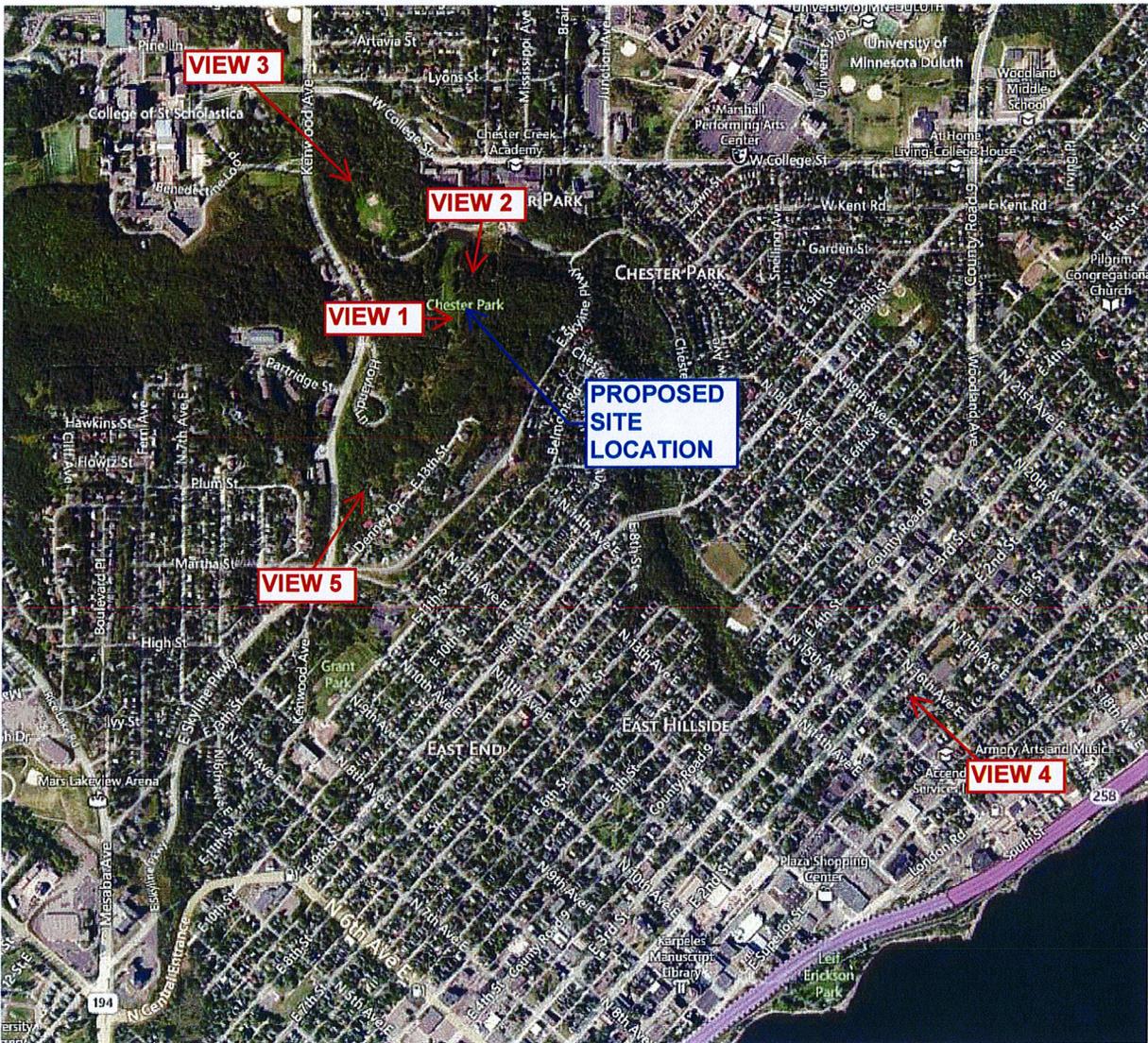
*Handwritten signature: G-2-25*



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 4285 Lexington Ave. N.  
 St. Paul, Minnesota 55126  
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 Web: www.ulteig.com

# PHOTO SIMULATION

**SITE: DULUTH CHESTER PARK SKI JUMP RELO (MS25XC156)**  
**CARRIER: SPRINT**  
**SITE ADDRESS: 1805 EAST SKYLINE PKWY, DULUTH, MN**



**SITE LOCATION MAP**  
 NOT TO SCALE



H-26



**REV 2 - 07.17.14**

**View Type:** Original Photograph - View 1

**Site Address:** 1805 East Skyline Pkwy

**City:** Duluth **State:** MN

**Site Number:** MS25XC156

**View Description:** Looking east at proposed location of stealth monopole and fenced compound.

H-27



**REV 2 - 07.17.14**

**View Type:** Simulated Photograph - View 1  
**Site Address:** 1805 East Skyline Pkwy  
**City:** Duluth **State:** MN  
**Site Number:** MS25XC156  
**View Description:** Looking east at proposed location of stealth monopole and fenced compound.

*Disclaimer:* This picture is an artist's rendition of the completed site layout prior to construction. The completed construction may vary in layout, dimension, and color from the above picture.

H-28



REV 2 - 07.17.14

**View Type:** Simulated/Original Photograph - View 2  
**Site Address:** 1805 East Skyline Pkwy  
**City:** Duluth **State:** MN  
**Site Number:** MS25XC156

**View Description:** Looking south - proposed stealth monopole not visible from this location.  
Page 3 of 6

**Disclaimer:** This picture is an artist's rendition of the completed site layout prior to construction. The completed construction may vary in layout, dimension, and color from the above picture.

H-29



REV 2 - 07.17.14

View Type: Simulated/Original Photograph - View 3  
Site Address: 1805 East Skyline Pkwy  
City: Duluth State: MN  
Site Number: MS25XC156

View Description: Looking southeast - proposed stealth monopole not visible from this location.

Disclaimer: This picture is an artist's rendition of the completed site layout prior to construction. The completed construction may vary in layout, dimension, and color from the above picture.

H-30



REV 2 - 07.17.14

**View Type:** Simulated/Original Photograph - View 4  
**Site Address:** 1805 East Skyline Pkwy  
**City:** Duluth **State:** MN  
**Site Number:** MS25XC156

**View Description:** Looking northwest - proposed stealth monopole not visible from this location.

*Disclaimer:* This picture is an artist's rendition of the completed site layout prior to construction. The completed construction may vary in layout, dimension, and color from the above picture.

14-31



**REV 2 - 07.17.14**

**View Type:** Simulated/Original Photograph - View 5  
**Site Address:** 1805 East Skyline Pkwy  
**City:** Duluth **State:** MN  
**Site Number:** MS25XC156

**View Description:** Looking northeast -  
proposed stealth monopole not visible  
from this location.

*Disclaimer: This picture is an artist's rendition of the completed site layout prior to construction. The completed construction may vary in layout, dimension, and color from the above picture.*

H-32

Sprint PCS is aware of the interference issues that can arise while co-locating with other carriers; therefore, careful isolation studies have been performed to determine the correct vertical and horizontal separation between Sprint's antennas and any other carrier. This avoids any possibility of our frequency interfering with other equipment. In addition, Sprint has acquired an FCC license, which exclusively entitles the company to operate within an assigned frequency range. This in turn eliminates any interference issues from CB radios, electronic appliances, pacemakers, fire and police equipment as well as other carriers. In the highly unlikely event that interference does occur, Sprint agrees to fully cooperate with the entity experiencing interference to identify and correct, to the extent reasonably possible, any issues caused by its installation.

**By: Shawn Kohout**

**RF Engineer III**

**Sprint (Minnesota/Dakotas)**

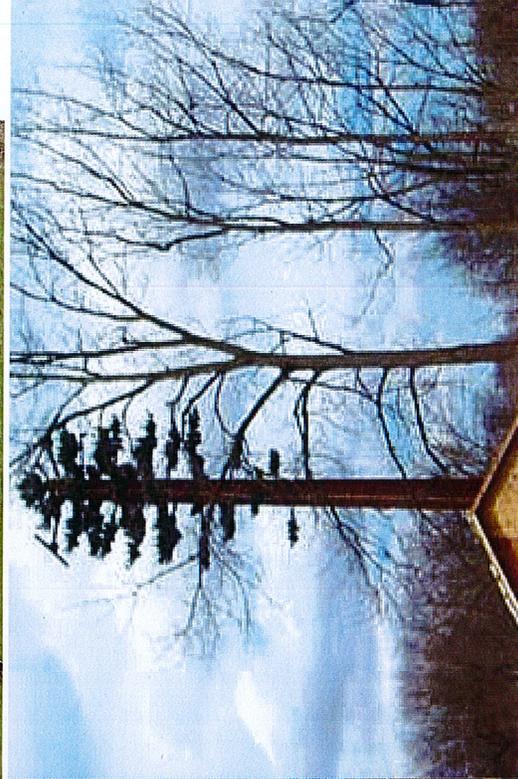
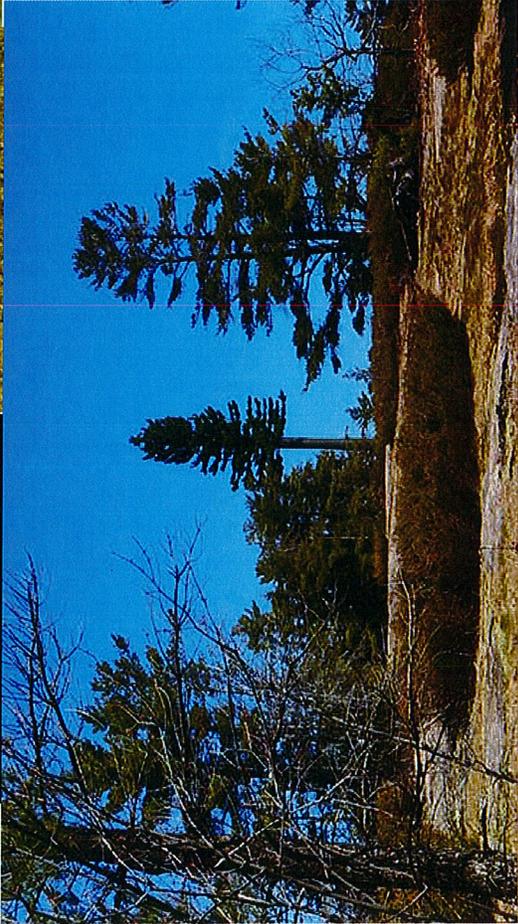
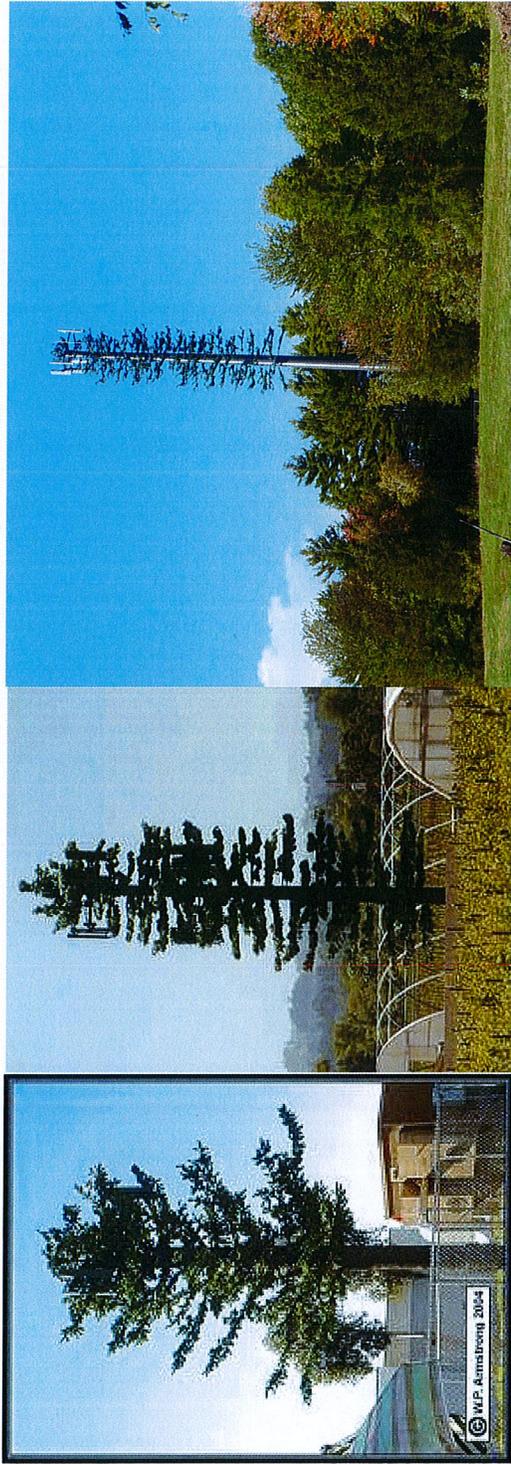
**320-492-1717**

EXHIBIT K

<b>Actual Band Configuration</b>	<b>Channel</b>
3G 800 CDMA Voice	862.9
FDD LTE 800	866.3
3G 1900 MHz A - F Voice	1931.250
3G 1900 MHz A - F Voice	1932.500
3G 1900 MHz A - F EVDO	1933.750
FDD LTE PCS G Block	1992.500
LTE PCS G Block	
LTE PCS G Block	
LTE PCS Block A-F	N/A
LTE PCS Block A-F	N/A
LTE PCS Block A-F	N/A

H-34

Example Images of Camouflaged Telecommunication Monopoles



H-35

## Steven Robertson

---

**From:** Steven Balliette <kd0etc@gmail.com>  
**Sent:** Monday, August 25, 2014 3:49 PM  
**To:** Steven Robertson  
**Subject:** Sprint tower in Chester Park

Mr Robertson,

I received the notice of hearing for the special use permit requested by Sprint.

This antenna tower is planned to be erected on city park property by a private business interest. I am strongly opposed to using city park property for this private use.

I know that cell phone antennas were placed on Big Chester ski jump. To me that seemed a good use for the old relic. Now that it is gone erecting another antenna and fenced in compound is to me a very inappropriate use of city park property.

I suspect Sprint will be required to pay a hefty dollar amount for the privilege of using this high ground for their business but that is not what city parks are for.

If granted, might other companies request to use our parks for their private gain? Might the top of Chester ski hill become an antenna farm?

Please stop this request.

--

Steven Balliette,  
KD0ETC

H-36

## Steven Robertson

---

**From:** Ann Holtz <amhduluth@gmail.com>  
**Sent:** Friday, August 29, 2014 9:53 PM  
**To:** Steven Robertson  
**Subject:** Fwd: Proposed Chester Park Cell Tower

Steven Robertson please see following letter.

Thank-you for your time and attention,  
Steve & Ann Holtz

----- Forwarded message -----

**From:** Ann Holtz <[amhduluth@gmail.com](mailto:amhduluth@gmail.com)>  
**Date:** Fri, Aug 29, 2014 at 10:41 AM  
**Subject:** Proposed Chester Park Cell Tower  
**To:** Don Ness <[dness@duluthmn.gov](mailto:dness@duluthmn.gov)>, Barb Russ <[bruss@duluthmn.gov](mailto:bruss@duluthmn.gov)>, Emily Larson <[el Larson@duluthmn.gov](mailto:el Larson@duluthmn.gov)>, Howie Hanson <[hhanson@duluthmn.gov](mailto:hhanson@duluthmn.gov)>, Jay Fosle <[jfosle@duluthmn.gov](mailto:jfosle@duluthmn.gov)>, Jennifer Julsrud <[jjulsrud@duluthmn.gov](mailto:jjulsrud@duluthmn.gov)>, Joel Sipress <[jsipress@duluthmn.gov](mailto:jsipress@duluthmn.gov)>, Linda Krug <[lkrug@duluthmn.gov](mailto:lkrug@duluthmn.gov)>, Sharla Gardner <[sgardner@duluthmn.gov](mailto:sgardner@duluthmn.gov)>, Zack Filipovich <[zfilipovich@duluthmn.gov](mailto:zfilipovich@duluthmn.gov)>, David Montgomery <[dmontgomery@duluthmn.gov](mailto:dmontgomery@duluthmn.gov)>, [kbergen@duluthmn.gov](mailto:kbergen@duluthmn.gov), [peacepark2@aol.com](mailto:peacepark2@aol.com)

To The Honorable Mayor Ness  
The Honorable Duluth City Council  
David Montgomery  
Kathy Bergen  
Thom Storm

We oppose the conditional use permit and the proposed cell tower in Chester Park and the commercial use of park land in the city of Duluth.

We oppose the proposed cell tower in Chester Park because it puts children's health at risk, particularly those children riding the chair lift. Both suggested locations are unacceptable, the new proposed location and the current location of the antenna tower. We would like the cell tower outside of the Chester Park boundaries.

We oppose the proposed cell tower in Chester Park because of its impact on scenic views which are a vital element contributing to park user's sense of relaxation and renewal.

We oppose the proposed cell tower in Chester Park and the resulting environmental damage caused by the phone company. Every time they drive into Chester Park they create an environmental mess.

--The city fails to maintain the access road the phone company uses. The portion of the access road at Chester Parkway has not been maintained by the city in the over 10 years we have lived in Chester Park. This segment of the access road is the final point of convergence that contributed to the flooding of my neighborhood in the 2012 flood that washed out Chester Parkway. Neighbors basements flooded on Belmont Rd. and neighbors lost furnaces, washers, and dryers, etc. which the runoff from Chester Park via this access road contributed to. [PICTURES OF SAID ACCESS ROAD FOLLOW ]

--The gate on the access road at the Chester Parkway entrance is inadequate and unmaintained. The phone company repeatedly cuts the chain on the gate and leaves the gate unsecured and open. This allows people to drive vehicles into the park just after dark to steal firewood for backyard bonfires that pollute and endanger our neighborhoods. We residents are left to struggle to close this gate and wrap the cumbersome chain around it to make it appear locked. This

H-37

problem with the gate has gone on for years and yes, the city has been informed of this problem but no resolution has come. [PICTURES OF SAID GATE FOLLOW]

1. Access road with Chester Parkway at the far end.



2. The aforementioned gate at Chester Parkway

H-38



3. Close up of the "sophisticated fake" locking mechanism we residents are left to struggle with.



4. The current cell phone antenna tower site on said access road and current park damage.

H-39



Thank-you for your time and attention and all your efforts for the community.

Respectfully,

**Steve Holtz**

Ann Holtz  
1511 Belmont Rd  
Detroit MI 48205

14-40

**Steven Robertson**

---

**From:** Ann Holtz <amhduluth@gmail.com>  
**Sent:** Sunday, August 31, 2014 8:16 AM  
**To:** Steven Robertson  
**Cc:** Barb Russ; Emily Larson; Howie Hanson; Jay Fosle; Jennifer Julsrud; Joel Sipress; Linda Krug; Sharla Gardner; Zack Filipovich  
**Subject:** Questions Regarding Proposed Chester Park Cell Tower

To: Steven Robertson

The following are questions about the proposed cell tower for Chester Park. If you are unable to answer any particular question it would be greatly appreciated if you could direct us to the person who could.

- 1.] What will happen at the September 9 meeting? What is the process, the steps necessary before the phone company can install the proposed cell tower in Chester Park?
- 2.] Is there another cell tower like the proposed cell tower for Chester Park in the city that we could go to and see? What is that location?
- 3.] What will the construction process entail to install the proposed cell tower in Chester Park?  
What is the diameter at the base of the proposed cell tower in Chester Park ?  
What are the dimensions of the entire foot print on the ground of the proposed cell tower including any fencing, barriers, guy wires, etc. ?  
Will any blasting be needed?  
Will any trees be cut down?  
Will there be guy wires, fencing, any other mechanisms on the ground?  
What is the construction schedule? What is the estimated start time for installation of proposed cell tower? Length of construction time?
- 4.] What are the alternate locations for the proposed cell tower in Chester Park?  
Is the Kenwood quarry a possible alternative?  
Is the big rock hill on the other side of the street, opposite the Kenwood gravel pit, an alternative?
- 5.] What is the difference between the existing antenna tower and the new proposed cell tower for Chester Park?
- 6.] While the City Council has tabled an ordinance that could levy steep fines against Duluth's finest citizens if they simply mess up the snow by walking on it, what can be done to hold the City, the Park Dept. and the Phone Company responsible for the repeated and ongoing damage the phone company's use of Chester Park causes and the City's repeated neglect of said damage? [PHOTO TO FOLLOW]
- 7.] We are concerned about the commercialization of Chester Park and future unknown additions and damage to Chester Park. How many antenna's are on/in the proposed Chester Park tower, is it possible to add more antennas, or other towers to the proposed tower, in the future?
- 8.] What is the dollar amount the City collects per antenna per month or on what schedule?
- 9.] What are the public notice posting requirements for the special use permit for the proposed cell tower update in Chester Park?
- 10.] How would future updates be handled?

Preserving the integrity of Chester Park and its green space for future generations is our priority.

Chester Park is the only reason we chose to live within the City of Duluth.

H-41

Thank-you for your time and attention.

Sincerely,  
Steve Holtz  
Ann Holtz  
1511 Belmont Rd.  
Chester Park  
Duluth MN 55805

[One small glimpse of the current damage at the current antenna site in Chester Park.]



H-42

**Steven Robertson**

---

**From:** Ann Holtz <amhduluth@gmail.com>  
**Sent:** Sunday, August 31, 2014 2:27 PM  
**To:** Barb Russ; Emily Larson; Howie Hanson; Jay Fosle; Jennifer Julsrud; Joel Sipress; Linda Krug; Sharla Gardner; Zack Filipovich; David Montgomery; Kathy Bergen; Judy Gibbs; peacepark2@aol.com; Steven Robertson; Don Ness  
**Cc:** Ann Holtz; Betty Christensen; Gary Foley; George Hovland; Jane Hovland; John Pastor; Karl Hodil; Kathy McTavish; Patrick Contardo; Raechel Grefenberg; Robyn Roslak; Sheila Packa; Sue Moyer; Susan Harney  
**Subject:** Planning Commission Letter Re: Special Use Permit for proposed cell tower in Chester Park

*The following is an electronic copy of our hard copy letter we have mailed to the Duluth City Planning Commission:*

---

August 31, 2014

To: The City of Duluth Planning Commission

Subject: Special Use Permit for Proposed Cell Tower in Chester Park



The pressures on Chester Park are many, and the resulting impact on Chester Park Users and Taxpayers great: The 2012 Flood, The recovery from the 2012 Flood, The controversial Chester Park Master Plan, The tragic loss of historic Chester Park ski jumps, The Special Use Permit for the proposed Sprint Cell Tower are a few examples. Chester Park is small and highly used. The resulting Community tensions and conflicts are a continuing, escalating problem. We oppose the Special Use Permit for the Sprint Cell Tower in Chester Park for many reasons, some of which are: Commercial Use of City of Duluth Public Parks, Health Risks, Environmental Impact, which we will demonstrate in pictures and examples that follow.

COMMERCIAL USE: We oppose the Special Use Permit for the proposed cell tower in Chester Park and the commercial use of public park land in the City of Duluth. We are concerned about the precedence of such a special use permit for the proposed cell tower and the unknown future impact of such on Chester Park. How will future updates be handled? Fiber optics? Will multiple towers be added? Will the proposed tower have extensions or additions added to it? How might commercial use of Chester Park be impacted by corporate mergers, say if the phone company merges with a cable company, and the unknown impact of such on Chester Park. We do not want children impacted by the presence of commercial infrastructure, signage, etc. and imposed on the children's experience of the outdoors when using Chester Park.

H-43

HEALTH RISK: We oppose the Special Use Permit for proposed cell tower in Chester Park because it puts children's health at risk, particularly those children riding the chair lift. Both suggested locations are unacceptable, the new proposed location and the current location of the antenna tower. We would like the proposed cell tower located outside of the Chester Park boundaries.

ENVIRONMENTAL IMPACT: We oppose the Special Use Permit for the proposed cell tower in Chester Park and the resulting environmental damage caused by the phone company. Specific examples of damage from phone company's use of Chester Park and the City's neglect follow:

--The City consistently fails to maintain the access road the phone company uses to bring in large equipment, heavy trucks, cranes, etc. When the phone company drives into Chester Park they make a mess that the City then ignores and neglects. It is the Park User and Taxpayer, who is left to deal with the environmental mess and neglect. The portion of the access road at Chester Parkway has received virtually no maintenance from the City in the over 10 years we have lived in Chester Park [residents have been left with the job of maintenance]. This segment of the access road is the final point of trail convergence that contributed to the flooding of my neighborhood in the 2012 flood that washed out Chester Parkway. Neighbors basements flooded on Belmont Rd. causing loss of furnaces, washers, and dryers, hot water tanks, etc.. The runoff from Chester Park via this access road contributed to this private property damage. [PICTURES OF SAID ACCESS ROAD FOLLOW ]

--The gate on the access road at the Chester Parkway entrance is inadequate and unmaintained. The phone company repeatedly cuts the chain on the gate and leaves the gate unsecured and open. This allows people to drive vehicles into the park just after dark to steal firewood for backyard bonfires that pollute and endanger our neighborhoods. We residents are left to struggle to close this gate and wrap the cumbersome chain around it to make it appear locked. This problem with the gate has gone on for years and yes, the city has been informed of this problem but no resolution has come. [PICTURES OF SAID GATE FOLLOW]

--We oppose the Special Use Permit for the proposed cell tower in Chester Park because of the visual pollution of the 75 foot tower, fencing, and unknown footprint on the ground, etc. and the resulting impact on scenic views which are a vital element contributing to park user's sense of relaxation and renewal.

1. Access road with Chester Parkway at the far end.



H-44

2. The aforementioned gate at Chester Parkway



3. Close up of the "sophisticated fake" locking mechanism we residents are left to struggle with.



4. The current cell phone antenna tower site on said access road and current park damage.

H-45



Preserving the integrity of Chester Park and its green space for future generations is our priority.

Chester Park is the only reason we chose to live within the City of Duluth.

We urge the Planning Commission to reject the special use permit and proposed cell tower within the boundaries of Chester Park.

Respectfully,

Steve Holtz



Ann Holtz  
1511 Belmont Rd.  
Chester Park  
Duluth MN 55805

H-46

**Steven Robertson**

---

**From:** Betty Christensen <bjdc41@gmail.com>  
**Sent:** Monday, September 01, 2014 8:52 AM  
**To:** Steven Robertson  
**Subject:** Chester Park cell tower

Dear Mr. Robertson,

Having just lost our ionic ski jumps, we who love and enjoy the beauty and quietude of Chester Park are concerned that the immediate plan to erect a cell tower on the site may have been the reason for the urgent demolition of the historic ski structures.

City officials ignored our pleas to save the jumps in hopes of getting Big Chester designated as a Historic Landmark. We made calls to the City Planning Office and sent letters to Mayor Ness, Dave Montgomery and Paula Reed, challenging their misinformation as to the stability and danger of the jumps, which was contrary to the facts in the KLM Engineering Evaluation Report of 2012 but our questions were not addressed. Now we see that there was another, more urgent agenda.

We want it to be clear that we oppose the commercial usage of private parks and ask that you seek a location, other than our city parks, for the imposing erection of the Sprint cell tower. Irreparable damage has already be done to Chester Park and this would only be adding salt to the wound. Thank you.

Sincerely,  
Betty Christensen

Sent from my Nexux10 Tablet  
"Wherever you go there you are." Jon Kabat-Zinn

H-47

## Steven Robertson

---

**From:** KARL HODIL <karlhodil@msn.com>  
**Sent:** Monday, September 01, 2014 5:13 PM  
**To:** Steven Robertson  
**Cc:** Barb Russ; Emily Larson; Howie Hanson; Jay Fosle; Jennifer Julsrud; Joel Sipress; Linda Krug; Sharla Gardner; Zack Filipovich; Ann Holtz; Thom Storm; Kathy Bergen  
**Subject:** FW: Questions Regarding Proposed Chester Park Cell Tower

**The following is an electronic copy of our hard copy letter we are mailing to the Duluth City Planning Commission:**

To: Steven Robertson - Senior Planner

We live at 15 North Chester Parkway and our house is the residence closest to the existing cell tower, as well as closest to the proposed new location. As such, we have seen the environmental damage, water run-off problems, and condition of the access road at the existing cell tower site. We can only assume that this will continue at any other site within the park.

In general, we also object to the policy of allowing major commercial facilities (such as telecom) to operate in city parks. A commercial facility trying to maximize profit and the city protecting an income source (rent or lease agreements) can easily create conflicts of interest with nearby property owners and park users. Sprint recently completed two technology upgrades and installation of a temporary pole at Chester resulting in significant damage at the existing Chester Park site. In addition, upgrades at three other Duluth cell towers resulted in a 50% increase in the number of antennas per tower at each of these sites. These examples show the "foot in the door" or "Pandora's box" affect that can occur with these conflicts. In fact, the Duluth UDC requires that priority be given to expanding existing sites rather than building new ones if more capacity is needed. This is generally a good policy, but not if the facility is in a park or in proximity to residences.

Although the telecom companies "guarantee" the safety of their transmitter facilities due to their compliance with applicable FCC regulations, there are still a number of sources that question these assertions and the assumptions on which they are based. We feel a significant effort should be made to locate this cell tower in an area outside of city park boundaries.

In addition to the questions asked by Ann and Steve Holtz (below), we would like to add a few more. We realize that some of this information may not be immediately available but would appreciate any help you can provide. If you don't know all of the answers, could you please let us know who else to contact.

1. What is the reason for requesting the relocation of the existing tower? We don't approve of the existing location and the new one may not be any better.
2. Were the proper procedures followed when the original installation was built, and when the "temporary" tower was put up recently? I don't remember a posting or a hearing for a Special Use Permit for either of these occurrences. We found out when surveyors and contractors showed up by our driveway for the original installation.
3. What is the purpose of the facility? Does it serve mostly as a relay station, or as a distribution point to local neighborhood cell phone users?
4. Is it correct that none of the lease money received from the Telecom goes to the park system?

5. Is there a limit to the total transmitter power allowed, now or in the future? If so, what is it? What was the transmitter power a couple years ago compared to today, and what might be expected a few years from now?
6. What are the frequencies used, carrier RF and any special signal frequencies? Do these change periodically or for technology upgrades (i.e., recent change from CDMA to 4G)?
7. Are all technology upgrades, transmitter additions, etc., reviewed by qualified individuals before they are allowed? Duluth UDC appears to allow some of this to happen with little or no review.
8. Where will the new tower get its power, a new 14,000:240 volt transformer at the new location? Any control or fiber optic wiring required? Will the cables be run underground or will a new power line need to be built?
9. I assume that no new lighting will be needed. Is that correct? New lighting could pose a problem for local residents.
10. If a Special Use Permit is issued, can it be written to include safeguards to protect park users and nearby residents from the environmental damage, water run-off problems, and access road problems that we have come to expect? Can it limit additions and modifications? Can and will the limits be enforced, and by whom?

Thank you for your consideration of these issues.  
Karl and Peggy Rae Hodil

---

Date: Sun, 31 Aug 2014 08:15:36 -0500

Subject: Questions Regarding Proposed Chester Park Cell Tower

From: amhduluth@gmail.com

To: srobertson@duluthmn.gov

CC: brass@duluthmn.gov; elarson@duluthmn.gov; hhanson@duluthmn.gov; jfosle@duluthmn.gov; jjulsrud@duluthmn.gov; jsipress@duluthmn.gov; lkrug@duluthmn.gov; sgardner@duluthmn.gov; [zfilipovich@duluthmn.gov](mailto:zfilipovich@duluthmn.gov)

To: Steven Robertson

The following are questions about the proposed cell tower for Chester Park. If you are unable to answer any particular question it would be greatly appreciated if you could direct us to the person who could.

- 1.] What will happen at the September 9 meeting? What is the process, the steps necessary before the phone company can install the proposed cell tower in Chester Park?
- 2.] Is there another cell tower like the proposed cell tower for Chester Park in the city that we could go to and see? What is that location?
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  - What is the diameter at the base of the proposed cell tower in Chester Park ?
  - What are the dimensions of the entire foot print on the ground of the proposed cell tower including any fencing, barriers, guy wires, etc.?
  - Will any blasting be needed?
  - Will any trees be cut down?
  - Will there be guy wires, fencing, any other mechanisms on the ground?
  - What is the construction schedule? What is the estimated start time for installation of proposed cell tower? Length of construction time?
- 4.] What are the alternate locations for the proposed cell tower in Chester Park?
  - Is the Kenwood quarry a possible alternative?
  - Is the big rock hill on the other side of the street, opposite the Kenwood gravel pit, an alternative?

5.] What is the difference between the existing antenna tower and the new proposed cell tower for Chester Park?

6.] While the City Council has tabled an ordinance that could levy steep fines against Duluth's finest citizens if they simply mess up the snow by walking on it, what can be done to hold the City, the Park Dept. and the Phone Company responsible for the repeated and ongoing damage the phone company's use of Chester Park causes and the City's repeated neglect of said damage? [PHOTO TO FOLLOW]

7.] We are concerned about the commercialization of Chester Park and future unknown additions and damage to Chester Park. How many antenna's are on/in the proposed Chester Park tower, is it possible to add more antennas, or other towers to the proposed tower, in the future?

8.] What is the dollar amount the City collects per antenna per month or on what schedule?

9.] What are the public notice posting requirements for the special use permit for the proposed cell tower update in Chester Park?

10.] How would future updates be handled?

Preserving the integrity of Chester Park and its green space for future generations is our priority.

Chester Park is the only reason we chose to live within the City of Duluth.

Thank-you for your time and attention.

Sincerely,  
Steve Holtz  
Ann Holtz  
1511 Belmont Rd.  
Chester Park  
Duluth MN 55805

[One small glimpse of the current damage at the current antenna site in Chester Park.]



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## Steven Robertson

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**From:** Jane Hovland <jane.hovland@gmail.com>  
**Sent:** Tuesday, September 02, 2014 11:28 AM  
**To:** Steven Robertson  
**Subject:** Objection to Special Use Permit re: Chester Park "mono tower"

Dear Mr. Robertson:

I have been a Chester Park resident since 1980, most of those as the most immediate neighbor to the park, at 1616 East Skyline (no longer there due to the mega-flood) and now at 1307 East Skyline. My in-laws chose to live near the park in the early 1920's, even though their home at 10 Chester Parkway was well beyond the "car line" at the time. It was a wonderful place for them to live, and has continued to be a tremendous asset in our neighborhood.

Over the past 35 years, I have noticed trends in the use of the park, some of which I celebrate and others which are quite discouraging. As you may know, my husband and I donated an acre of land for the location of an upper chair lift, and as a result of that generosity and demands by the city regarding proposed future development, essentially lost the entire upper Chester hillside to the City of Duluth. The property taken from us was the last, open prairie hillside in the city, and since that time, individuals have been allowed to plant myriad species of trees which essentially block the view from the hilltop. The prairie that "used to be" was kept so by controlled burning, but now, the entire hilltop is a tangle of brush and non-native trees. I raise this issue because to me, it demonstrates that the City of Duluth is incapable of stewarding the land it holds, including the former Hovland property it so relentlessly pursued.

Now we are faced with another example of the City of Duluth failing to recognize the value of its parks. Chester Park has been languishing because of storm damage and the inability of the city to plan carefully for its use. The park has been a mess in the last few years, with trails inaccessible and ponds clogged with rocks and debris and a debate raging about brown trout habitat. Because of the rush to tear down the largest Chester Park ski jumps (which had been listed as historic structures in a 1986 survey) the city is now trying to fulfill what I assume are contractual obligations by allowing Sprint PCS and AT&T to pursue a special use permit to locate a tower in the confines of the park. If the city hadn't been hell-bent on the destruction of Big and Little Chester, one of which also served as a cellphone tower, we wouldn't now be dealing with the issue of where to locate a new tower. How cellphone antennas were permitted on the jump in the first place is a question underlying this whole issue. Since when is it reasonable for a for-profit group to use a public park for year around commercial purposes?

In the last decade, the city has placed an emphasis on careful planning. I would like to remind the Planning Commission that the Chester Park Planning Process is far from over. Portions of the plan, as currently proposed, are inadequate and raise significant questions about what should be restored to the park and how those restorations will occur. No where in the planning process did I hear a mention of a cellphone monotower. Certainly, there are hundreds of other sites available for the tower that will not increase visual pollution as the mono tower will if allowed in the confines of the park.

I realize that the City of Duluth gains revenue when it allows cellphone towers on its property. However, permitting a tower in a busy park that is used in every season is not acceptable, even if revenue is the issue. There are non-park lands aplenty in this city where towers could be easily and safely located, so the question remains: Why in the park?

Lastly, I want to comment on the idea of notifying residents of the proposed tower. For all practical purposes, access to Chester Park has been significantly curtailed this summer due to repair projects occurring on East Skyline Parkway between West Kent Road and Kenwood Avenue. The required zoning notices regarding the application for a special use permit were placed at the foot of Hovland Lane, where there are three homes, and in front of the Chester Park ski chalet. No one skis in the summer and only a walker who braves a muddy trail is able to see the zoning appeal sign.

Parents using the playground with children would never see such a zoning notice sign, nor would those coming into the park from Denny Drive, near the Aftenroe House or driving into the soccer fields. Was the idea to give only minimal notice and gain approval? I certainly hope not, but given the City's responses to neighborhood concerns about the destruction of the ski jumps, it would not surprise me. Nor does it surprise me that some one in city government had a "great idea" to increase revenues in this way. To all of this, I say: NOT IN CHESTER PARK.

Jane Hovland

[jane.hovland@gmail.com](mailto:jane.hovland@gmail.com)

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