

MEMORANDUM

CITY & BOROUGH OF JUNEAU

55 South Seward Street, Juneau, Alaska 99801

DATE: August 9, 2012

TO: Planning Commission

FROM: Laura A. Boyce, AICP, Planner
Community Development Department

FILE NO.: USE2012 0009

PROPOSAL: Conditional use application for a 100' monopole with associated equipment, enclosed within a 35' by 35' leased area, located along Montana Creek Road

GENERAL INFORMATION

Applicant: GCI Communications Corp.

Property Owner: Coogan General LLC

Property Address: 5600 Montana Creek Road

Legal Description: Glacier Lands Lot 2

Parcel Code Number: 4-B29-0-115-006-0

Site Size: 5.78 Acres (251,776 sf)

Comprehensive Plan Future Land Use Designation: ULDR (Urban/Low Density Residential)

Zoning: D-1

Utilities: CBJ Water and Sewer

Access: Montana Creek Road

Existing Land Use: Industrial

Surrounding Land Use:

North	-	RR, US Forest Service Land
South	-	D-3, Single-family Dwellings; Gravel Extraction proposed (under appeal)
East	-	D-3, Gravel Extraction/Reclamation
West	-	RR, Juneau Gun Range Club, Montana Creek R.O.W.



CITY & BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

ATTACHMENTS

Attachment A	Vicinity Map
Attachment B	Project Application
Attachment C	Project Plans
Attachment D	Project Appraisal Report by Horan & Company, LLC
Attachment E	FCC RF Exposure Limits & Issues
Attachment F	Public Hearing Notification
Attachment G	Tower Location Map
Attachment H	Public Correspondence

PROJECT DESCRIPTION

The applicant requests a Conditional Use permit for the development of a 100 foot tall telecommunications monopole and associated equipment. A five foot tall lightning rod will be attached to the top of the monopole, for a maximum height of 105 feet. The monopole and associated equipment will be located within a 35' by 35' leased area located on the subject property, enclosed within a 34' by 34' fenced area. GCI will lease the area from the property owners, Coogan General LLC.

BACKGROUND

The site was originally part of the West Glacier Borrow Pit which opened in the mid-1950s. In 1961, the Green Construction Company (GCC) established an asphalt plant at the West Glacier pit and extracted materials for general construction fill and as asphalt aggregate. The site was operated by GCC until the mid-1970s, at which time it was leased to various other local contractors until its sale in 1983. In 2003, Glacier Lands, Inc. subdivided the property into three lots. The subject parcel is one of the lots created by that subdivision.

In 2011, Conditional Use permit (USE2011 0014) was approved for five mini-storage buildings, totaling 64,800 square feet. Three conditions were approved with that project, requiring the following prior to issuance of a building permit:

- additional vegetative cover to be provided;
- a revised site plan submitted showing 65 parking spaces, 3 accessible vehicle spaces, 2 loading zones, and circulation aisles;
- and a lighting plan submittal.

This project was approved by the Planning Commission on August 9, 2011. To date, a building permit has not been applied for, for this project.

ANALYSIS

Agency Review Comments –

Staff solicited comments from the CBJ Community Development Department's Building Division, CBJ Streets Division, CBJ General Engineering, CBJ Fire Department, CBJ Police Department, CBJ Parks and Recreation, CBJ Emergency Programs, CBJ Public Works, and the State Department of Environmental Conservation. Although the site is beyond the boundaries of the Federal Aviation Administration Juneau Airport Contour Map, staff solicited comments from the CBJ Airport Manager.

Comments received included the following:

Ed Foster, CBJ Streets Superintendent
Streets and Fleet Division has no issues with this project.

Dan Jager, Fire Marshall
There do not appear to be any fire department issues with this project. Thanks.

Dave Crabtree, CBJ Public Works Water Utility
The water utility has no concerns with this proposal.

Greg Browning, Juneau Police Department
We have no issues at the Police Department.

Brent Fischer, Director, CBJ Parks and Recreation
Parks and Recreation has no concerns with this project.

Ron King, Chief Regulatory Surveyor, CBJ Engineering
A complete site plan is required to include existing/new elevations for the pad, access, stormwater runoff; guidelines as stated in a grading permit checklist.
CBJ Staff confirmed with Mr. King that these are requirements for the building permitting stage of development.

Charlie Ford, Building Official, CBJ CDD Building Division
The Building Department has no issues with the proposed project.

Steve Turner, Manager with FAA
From an air traffic point of view, this tower shouldn't pose any problem for us. But I did pass the info on to TEMSCO and Coastal Helicopters, you may have already heard from them. They are two frequent users of that area.

Staff spoke with a representative from Coastal Helicopters. They do not have issue with this tower as proposed. Additionally, see comments from Temsco below.

Eric Main, Juneau Flight Operations Manager, Temsco Helicopters Inc.

With response to the proposed cell tower at 5600 Montana Creek Road located near the rifle range; any structure that rises beyond that of the natural terrain, I feel having it marked with high visibility colors and/ or with a marker light on top is always a safer option than painting a tower structure in a way that "camouflages" the tower especially along a high traffic designated helicopter route.

Staff followed up with Mr. Main to clarify that the tower would be approximately 20 to 30 feet above the tree tops and asked if in his opinion that would still represent a flight safety hazard. Mr. Main said that a projection 20 to 30 feet above the tree tops would not be a danger to helicopter aviation, as they don't fly that low.

Project Site -

The project site is 5.78 acres with frontage on Montana Creek Road. The property is zoned D-1 and is currently used for construction storage and includes a shop building; the shop building will remain. The site has a level gravel surface and is accessed from Montana Creek Road.

Project Design -

The proposed tower will be located on a 35' by 35' leased area located on the eastern side of the property, as shown on the proposed site plan, page C-1, in Attachment C. There will also be a 10 foot wide access easement from the Montana Creek Road property line to the tower leased area. The tower will be set back over 380 feet from Montana Creek Road. Additionally, it will be setback over 50 feet from the eastern property line and 200 feet from the rear property line.

The D-1 zone district requires 20% vegetative cover on site, which is approximately 50,355 square feet of the subject property. The boundaries of this property do currently contain vegetative cover and it appears from reviewing recent aerial photos that close to 20% of the site includes vegetative cover. However, if at the time of building permit approval it has been determined that 20% of the site is not covered with vegetation, it will be required to be installed prior to final inspection. Staff proposes the following condition to address this:

- *Twenty percent of vegetative cover (at a minimum) is required. If 20 percent vegetative cover is not present, it shall be installed or the installation shall be bonded for and approved by CDD staff prior to final inspection for the tower.*

Traffic, Parking, and Circulation -

The project site is currently used as a construction storage yard with an associated shop building. No additional impacts to traffic, parking, or circulation are expected with this proposed use.

Noise -

Noise is not expected to be an issue with this proposed tower as a generator is not proposed. A radio back-up unit is anticipated to provide up to 8 hours of service in the event of a power outage.

Public Health or Safety -

All telecommunication towers must be designed and constructed to meet specific wind and weight bearing loads, as specified in local building codes. This review will be done during the building permitting process if this Conditional Use Permit is approved. With compliance to building codes, the tower installation will be safe.

Regarding radio frequency emissions, antenna arrays distribute radio waves that contain levels of radio frequency (RF) emissions. Radio Frequency emissions from these structures cannot exceed levels regulated by the Federal Communication Commission (FCC) to ensure compliance with National Environmental Protection Agency (NEPA). According to the 1996 Telecommunications Act, municipalities have zoning authority over towers but may not regulate the location of or deny a personal wireless facility based on environmental effects of radio frequency emissions to the extent that such facilities comply with the FCC regulations of emissions.¹ Though municipalities cannot modify FCC's emission levels, they can require proof of compliance. Staff recommends two conditions of approval requiring that the applicant submit a letter from a radio frequency expert indicating compliance with FCC emission levels during pre- and post-construction, as follows:

- *Prior to the issuance of a Building Permit, the applicant shall submit a letter to the Community Development Department from a radio frequency expert indicating that structures will comply with electromagnetic radio emission levels set by the Federal Communications Commission (FCC).*
- *Prior to receiving Building Permit Final Inspection and Approval, the applicant shall submit a letter to the Community Development Department from a radio frequency expert indicating the structures as constructed and at optimal emission levels comply with electromagnetic radio emission levels set by the Federal Communications Commission (FCC).*

Habitat -

The project does not require fill in wetlands. No evidence indicates that the project will impact sensitive habitat. Additionally, no Land Use Code habitat regulations appear to be relevant to the proposed development.

Property Value or Neighborhood Harmony -

The applicant has provided a report by Horan & Company, LLC, titled "Appraisal Report of Perceived Impact of Installation of 100' Tall Telecommunications Monopole on Neighboring Property Values, Juneau, Alaska" (See Attachment D). The Report states that the proposed tower would be 20 to 30 feet above the existing tree height surrounding the subject property and would have screened visibility from Montana Creek Road through the trees. Additionally, the report states, "...locations up to a mile or more away from vantages to the South where there is more traffic, say along the Mendenhall Loop Road and even as far as Glacier Highway may have intermittent distant

¹ Section 704 (a)(7)(B)(iv) of the Telecommunications Act of 1996 of the US Federal Communications Commission. For further details of this Act, click the following link: <http://transition.fcc.gov/telecom.html>

views....” Horan & Company interviewed and reviewed data from area brokers, real estate appraisers, site developers, and the property owners and concluded that, *“In my opinion, this would be similar to other monopoles found in other residential settings in the Mendenhall Valley. As planned, it would not cause serious view blight and would not provide noise, smell, or any other tactile interference to make it disharmonious with the neighborhood. Based on our interviews ... it does not appear that there would be any substantial or measurable decrease in value of neighborhood property due to the proposed development.”* The CBJ Assessor’s Office reviewed the report and concurred with the analysis and conclusions. Robin Potter, CBJ Assessor, stated the following, *“I concur with Mr. Horan’s opinion contained within the appraisal report dated June 6, 2012.”*

The plans for the monopole indicate that the tower will be coated in a galvanized finish, however, no color has been proposed. Because of potential visibility concerns, staff recommends the following condition:

- *Prior to issuance of a Building permit, the applicant shall submit to the Community Development Department’s planning staff for approval, dark green or brown paint color paint samples to be used for the tower and antennas.*
- *Prior to final inspection, the tower and antennas shall be painted the color approved by CDD planning staff.*

Conformity with Adopted Plans -

The 2008 Comprehensive Plan designates the subject property as Urban/Low Density Residential (ULDR), defined as lands that are characterized by urban and suburban residential lands with detached single-family units, duplex, cottage or bungalow housing, zero-lot line dwelling units and manufactured homes on permanent foundations at densities of one to six units per acre. Any commercial development should be of a scale consistent with a single-family residential neighborhood.

Telecommunication towers are not specifically identified within the Comprehensive Plan. However, telecommunication services are vital for Juneau as the Capital City and regional hub for Southeast Alaska. The Comprehensive Plan states, *“As Alaska’s Capital City, it is vital for the CBJ to offer modern transport and communication systems and facilities to Alaskan residents who wish to participate in State legislative affairs.”* Telecommunication infrastructure is also a form of a communication utility. As stated in the Comprehensive Plan, *“Together with the transportation network and private utility and communication systems, public services and facilities provide the community’s ‘urban glue’ and require efficient and timely provision.”*

With increasing demand for telecommunication technology usage throughout the nation, additional communication coverage will be needed in areas not served or underserved. Most telecommunication services in suburban or rural areas are distributed from towers because there are so few tall structures above the tree line. Taking this fact into consideration for the subject area, one can infer that

neighborhoods near the vicinity of the subject parcel are underserved by wireless communication service by the lack of towers. Existing towers in the vicinity are shown on the Tower Location Map in Attachment G. Enabling towers to be built throughout the borough in ways that do not disrupt neighborhood harmony, property value, or the public's health or safety meets the intent of the Comprehensive Plan. With the recommended conditions, the proposed tower will meet the intent of the Comprehensive Plan.

Public Comment -

Staff received three public inquiries about this proposed project to date. The correspondence is found in Attachment H. Mr. Jon Torrella emailed asking for information regarding the project. Staff sent Mr. Torrella the project application, site plans, and related materials. No follow up correspondence has been received from this resident at this time.

Staff also received an email from Patricia O'Brien. Staff sent her the application materials as well. Ms. O'Brien has concerns about the project and towers in general, yet also stresses the importance of approving a telecommunications ordinance for the City.

Finally, Bob Louiselle emailed his support of the proposed project. He notes that cell coverage is spotty in this area and this tower's placement would provide needed coverage.

FINDINGS

CBJ §49.15.330 (e)(1), Review of Director's Determinations, states that the Planning Commission shall review the Director's report to consider:

1. Whether the application is complete;
2. Whether the proposed use is appropriate according to the Table of Permissible Uses;
and,
3. Whether the development as proposed will comply with the other requirements of this chapter.

The Commission shall adopt the Director's determination on the three items above unless it finds, by a preponderance of the evidence, that the Director's determination was in error, and states its reasoning for each finding with particularity.

CBJ §49.15.330 (f), Commission Determinations, states that even if the Commission adopts the Director's determination, it may nonetheless deny or condition the permit if it concludes, based upon its own independent review of the information submitted at the public hearing, that the development will more probably than not:

1. Materially endanger the public health or safety;
2. Substantially decrease the value of or be out of harmony with property in the neighboring area;
or,
3. Not be in general conformity with the comprehensive plan, thoroughfare plan, or other officially adopted plans.

Per CBJ §49.15.330 (e) & (f), Review of Director's & Commission's Determinations, the Director makes the following findings on the proposed development:

1. Is the application for the requested conditional use permit complete?

Yes. We find the application contains the information necessary to conduct full review of the proposed operations. The application submittal by the applicant, including the appropriate fees, substantially conforms to the requirements of CBJ Chapter 49.15.

2. Is the proposed use appropriate according to the Table of Permissible Uses?

Yes. The requested permit is appropriate according to the Table of Permissible Uses. The permit is listed at CBJ §49.25.300, Section 18.300 for the D-1 zoning district.

3. Will the proposed development comply with the other requirements of this chapter?

Yes. The proposed development complies with the other requirements of this chapter. Public notice of this project was provided in the August 3, 2012 and August 13, 2012 issues of the Juneau Empire's "Your Municipality" section, and a Notice of Public Hearing was mailed to all property owners within 3,200 feet of the subject parcel. Moreover, a Public Notice Sign was posted on the subject parcel, visible from the public Right of Way (Montana Creek Road).

4. Will the proposed development materially endanger the public health or safety?

No. Based upon the preceding staff analysis, available evidence does not indicate that the proposed development will materially endanger public health or safety.

5. Will the proposed development substantially decrease the value of or be out of harmony with property in the neighboring area?

No. Based upon the preceding staff analysis with the recommended conditions, such as painting the tower, the property value and neighborhood harmony will be preserved.

6. Will the proposed development be in general conformity with the land use plan, thoroughfare plan, or other officially adopted plans?

Yes. Based upon staff's review and with the recommended conditions, staff finds that the intent of the 2008 Comprehensive Plan will be met.

Per CBJ §49.70.900 (b)(3), General Provisions, the Director makes the following Juneau Coastal Management Program consistency determination:

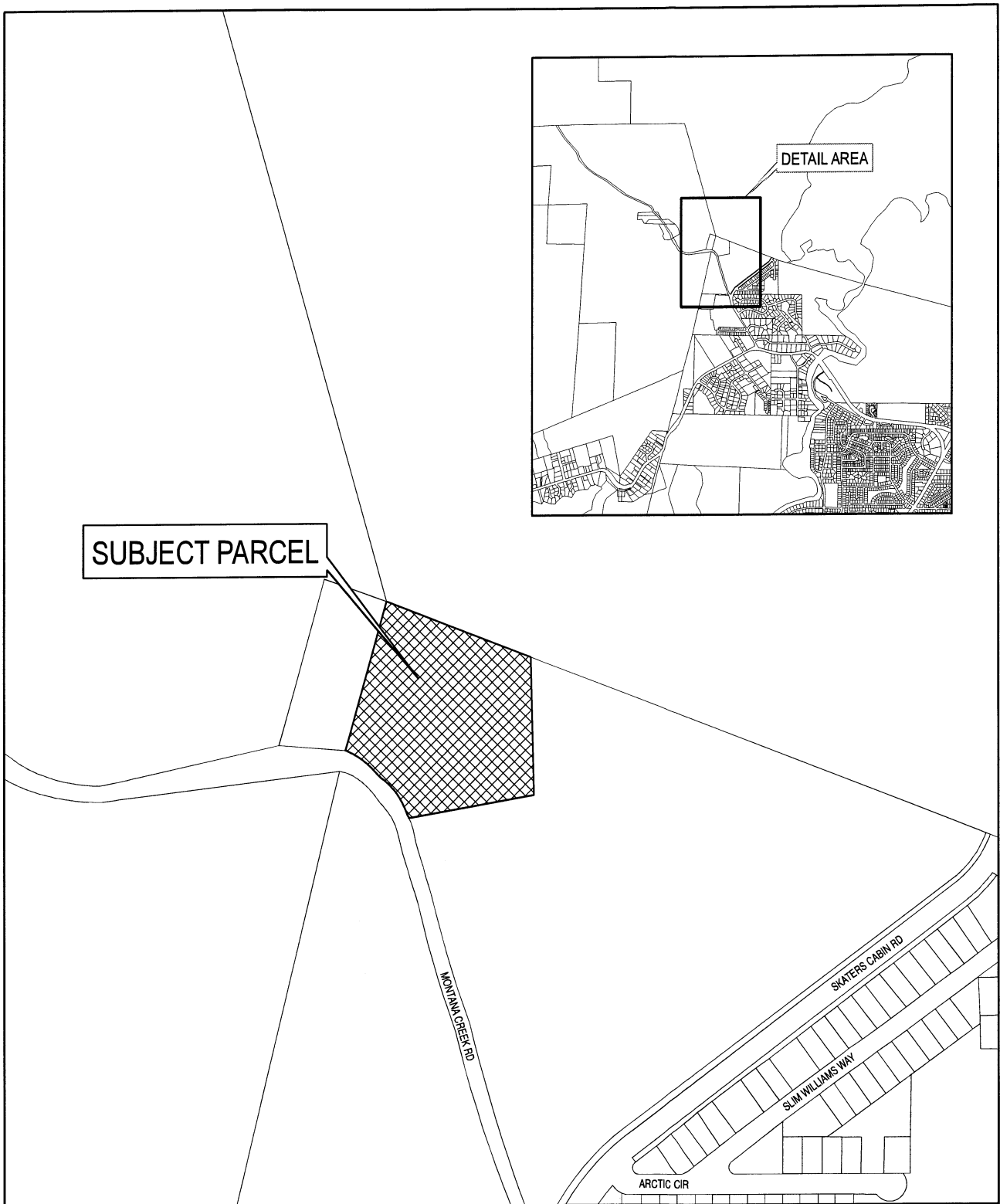
7. Will the proposed development comply with the Juneau Coastal Management Program?

Not applicable. The project does not affect sensitive habitat and no policies in the Juneau Coastal Management Program apply.

RECOMMENDATION

It is recommended that the Planning Commission adopt the Director's analysis and findings and grant the requested Conditional Use permit. The permit would allow the development of a new 100 foot telecommunications monopole with an additional five foot lighting rod atop it for a total height of 105 feet, along with associated equipment, enclosed within a 35' by 35' leased area, located on residential zoned property along Montana Creek Road. The approval is subject to the following conditions:

1. Twenty percent of vegetative cover (at a minimum) is required. If 20 percent vegetative cover is not present, it shall be installed or the installation shall be bonded for and approved by CDD staff prior to final inspection for the tower.
2. Prior to the issuance of a Building Permit, the applicant shall submit a letter to the Community Development Department from a radio frequency expert indicating that structures will comply with electromagnetic radio emission levels set by the Federal Communications Commission (FCC).
3. Prior to receiving Building permit final inspection and approval, the applicant shall submit a letter to the Community Development Department from a radio frequency expert indicating the structures as constructed and at optimal emission levels comply with electromagnetic radio emission levels set by the Federal Communications Commission (FCC).
4. Prior to issuance of a Building permit, the applicant shall submit to the Community Development Department's planning staff for approval, dark green or brown matte finish color paint samples to be used for the tower and antennas.
5. Prior to final inspection, the tower and antennas shall be painted the color approved by CDD planning staff.



5600 MONTANA CREEK RD
VICINITY

0 125 250 500 Feet

-NOT A SURVEY-
Property lines are approximate



ATTACHMENT A

TO BE COMPLETED BY THE APPLICANT

NOTE: MUST BE ACCOMPANIED BY DEVELOPMENT PERMIT APPLICATION FORM

DEVELOPMENT PERMIT APPLICATION

Project Number _____	CITY and BOROUGH of JUNEAU	Date Received _____
Project Name City Hall to Cedar Street		
Project Description Construction of a telecommunications facility consisting of antennas & associated accessories on a proposed monopole. Second command & service building for State police. No water or sewer is required.		
Street Address 5600 Montana Creek Rd. (Legal Description) of Planning Subdivision Survey, Block, Tract, Lot Lot 2, Glacier Lands Subdivision. Plat # 2003-27 Anchorage's Parcel Number(s) CBU Tax Map 482301150060		
Property Owner's Name Googan General LLC		Contact Person Lloyd Googan
Mailing Address PO Box 34499 Juneau AK 99803		Work Phone: 907-780-6000
E-mail Address mail@googanalaska.com		Home Phone: _____ Fax Number: _____
Other Contact Phone Number(s): _____		
I am (we are) the owner(s) of the property subject to this application and I (we) consent, as follows: A. This application for a land use or zoning review for development on my (our) property is made with my complete understanding and permission. B. I (we) grant permission for officials and employees of the City and Borough of Juneau to inspect my property as needed for purposes of this application.		
X _____ Landowner/Lessee Signature		_____ Date
X _____ Landowner/Lessee Signature		_____ Date
NOTICE: The City and Borough of Juneau staff may need access to the subject property during regular business hours and will attempt to contact the landowner in addition to the formal consent given above. Further, members of the Planning Commission may visit the property before the scheduled public hearing date.		
Applicant's Name GCI Communication Corp		Contact Person: David Baker
Mailing Address 3127 Commercial Drive Anchorage, AK 99501		Work Phone: 907-222-9215
E-mail Address dbaker@gci.com		Home Phone: _____ Fax Number: _____
Other Contact Phone Number(s): _____		
X _____ Applicant's Signature		6-8-12 Date of Application

STAFF APPROVALS

Building Use Permit City Code Project Review and City Land Action Inquiry Case Fee in L.A. Letter of 20, Use Not Listed Moving Case Street, Lane, Road, Intersection, Districts Sign Approval If more than one, fill in all applicable permit #'s Subdivision (Other, Motor, P.U.D., St. Vacation, St. Home Change) Use Approval (Alcohol, Gambling, College Housing, Mobile Home Parks, Accessory Apartments) Variance Case (No Minors and all other Variance cases typed) Wetlands Permit Zone Change Application Other (Describe)	6/26/12	44-12-009
Comments:		

NOTE: DEVELOPMENT PERMIT APPLICATION FORMS MUST ACCOMPANY ALL OTHER COMMUNITY DEVELOPMENT DEPARTMENT APPLICATIONS

Allowable/Conditional Use Permit Application Instructions

Pre-Application Conference: A pre-application conference is required prior to submitting an application. The applicant will meet with City & Borough of Juneau and Agency staff to discuss the proposed development, the permit procedure and to determine the application fees. To schedule a pre-application conference, please contact the Permit Center at 586-0770 or via e-mail at Permits@ci.juneau.ak.us.

Application: An application for an Allowable/Conditional Use Permit will not be accepted by the Community Development Department until it is determined to be complete. The items needed for a complete application are:

Forms: A completed Allowable/Conditional Use Permit Application and Development Permit Application form. The "land owner or lessee consent" signature and initials are mandatory on the Development Permit Application form.

Fees: The fee is dependent upon the class of the proposed use. Land Use fees generally range from \$300 to \$1,350. Any development, work or use done without a permit issued will be subject to double fees. All fees are subject to change.

Project Description: A detailed letter or narrative describing the project.

Plans: All plans are to be drawn to scale and clearly show the items listed below:

- A. Site plan, floor plan and elevation views of existing and proposed structures
- B. Existing and proposed parking areas, including dimensions of the spaces, aisle width and driveway entrances
- C. Proposed traffic circulation within the site including access/egress points and traffic control devices
- D. Existing and proposed lighting (including cut sheets for each type of lighting)
- E. Existing and proposed vegetation with location, area, height and type of plantings
- F. Existing physical features of the site (i.e. drainage, eagle trees, hazard areas, salmon streams, wetlands, etc.)

Document Format: All information that is submitted as part of an application shall be submitted in either of the following formats:

- A. Electronic copies may be submitted by CD, DVD or E-mail in the following formats: .doc, .txt, .xls, .bmp, .pdf, .jpg, .gif, .xlm, .rtf or other formats pre-approved by the Community Development Department.
- B. Paper copies may not be larger than 11" X 17" (Unless a larger paper size is preapproved by the Community Development Department).

Application Review & Hearing Procedure: Once the application is determined to be complete, the Community Development Department will initiate the review and scheduling of the application. This process includes:

Review: As part of the review process the Community Development Department will evaluate the application for consistency with all applicable City & Borough of Juneau codes and adopted plans. Depending on unique characteristics of the permit request the application may be required to be reviewed by other municipal boards and committees. During this review period, the Community Development Department also sends all applications out for a 15-day agency review period. Review comments may require the applicant to provide additional information, clarification, or submit modifications/alterations for the proposed project.

Hearing: All Allowable/Conditional Use Permit Applications must be reviewed by the Planning Commission. Once an application has been deemed complete and has been reviewed by all applicable parties the Community Development Department will schedule the requested permit for the next appropriate meeting.

Public Notice Responsibilities: As part of the Allowable/Conditional Use permitting process, all permit requests must be given proper public notice, which consists of the following:

Community Development Department: Will give notice of the pending Planning Commission meeting and its agenda in the local newspaper a minimum of 10-days prior to the meeting. Furthermore, the department will mail abutters notices to all property owners within 500-feet of the project site.

Applicant: Will post a sign on the site at least 14-days prior to the meeting. The sign shall be visible from a public right-of-way or where determined to be appropriate by the Department. Signs may be produced by the Community Development Department for a preparation fee of \$50, and a \$100 deposit that will be refunded in full if the sign is returned by 4:30 p.m. on the Monday following the scheduled hearing date. If the sign is returned later than the Monday after the Planning Commission meeting, but within two weeks of the meeting, \$50.00 may be refunded. The applicant may make and erect their own sign. Please speak with the Community Development Department for more information.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

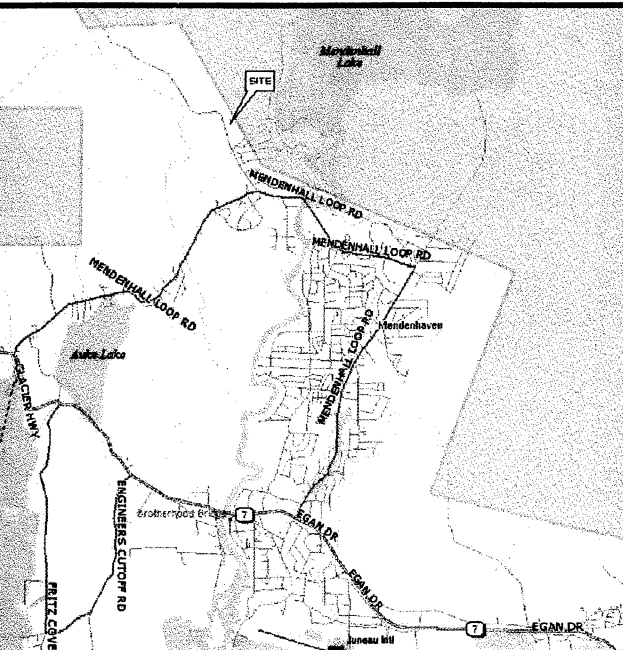
SITE NAME: COOGAN AK
PROJECT DESCRIPTION: PROPOSED TELECOMMUNICATIONS FACILITY
TOWER TYPE: 100' MONOPOLE
SITE ADDRESS: 5600 MONTANA CREEK ROAD
(E911 ADDRESS TBD) JUNEAU, AK 99803
(JUNEAU BOROUGH)
ZONING JURISDICTION: JUNEAU
ZONING: D-1
(COMMERCIAL/INDUSTRIAL)
AREA OF CONSTRUCTION: 1,225 ± SQ. FT.
(LEASE AREA)
PRESENT OCCUPANCY TYPE: CONSTRUCTION YARD
LEGAL DESCRIPTION: LOT 2, GLACIER LANDS
SUBDIVISION, PLAT # 2003-27
JUNEAU RECORDING DIST.

PROJECT INFORMATION

LATITUDE N 58° 24' 51.55" (NAD '83) *
LONGITUDE W 134° 36' 05.01" (NAD '83) *
GROUND ELEVATION = 92.1' (NAVD '88) *

* INFORMATION PROVIDED BY SURVEY PROVIDED BY
ACUTEK GEOMATICS. DATED APRIL 17, 2012.

TOWER COORDINATES



LOCATION MAP

FROM DOWNTOWN JUNEAU HEAD NORTH OF MENDENHALL LOOP RD FOR 3.66 MILES
(STREET TURNS LEFT NORTH OF MENDENHAVEN, FOLLOW SIGNS). STAY RIGHT ONTO
MONTANA CREEK ROAD. AFTER 0.59 MILES SITE WILL BE ON THE RIGHT IN THE
COOGAN GENERAL LLC LOT.

DRIVING DIRECTIONS



CALL FOR UNDERGROUND
UTILITIES PRIOR TO DIGGING

811
OR
(800) 478-3121

EMERGENCY:

CALL 911



ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN
ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES
AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE
PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE
LATEST EDITIONS OF THE FOLLOWING:

1. INTERNATIONAL BUILDING CODE
(2006 EDITION, DIVISION OF FIRE
PREVENTION)
2. INTERNATIONAL CODE COUNCIL
ANSI/TIA/EIA-222-G
4. NATIONAL ELECTRIC CODE
(2005 EDITION, ALASKA
ADMINISTRATIVE CODE)
5. LOCAL BUILDING CODE
6. CITY/COUNTY ORDINANCES

CODE COMPLIANCE

SITE NAME:
COOGAN AK

5600 MONTANA CREEK RD.
JUNEAU, AK 99803
(JUNEAU BOROUGH)

CONSTRUCTION OF A TELECOMMUNICATION FACILITY, CONSISTING OF ANTENNAS
& ASSOCIATED APPURTENANCES ON A PROPOSED MONOPOLE, FENCED
COMPOUND & SERVICE EQUIPMENT FOR FUTURE CARRIERS. NO WATER OR
SEWER IS REQUIRED.

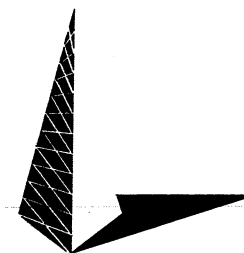
1. FACILITY DESIGNED IN ACCORDANCE WITH JUNEAU BOROUGH REGULATIONS.
2. THIS IS AN UNMANNED FACILITY WHICH WILL NOT REQUIRE ANY WATER OR
SEWER FACILITIES.
3. TRAFFIC WILL CONSIST ONLY OF MAINTENANCE PERSONNEL, VISITING THE SITE
APPROXIMATELY TWICE A MONTH.

PROJECT DESCRIPTION & NOTES

SHEET	DESCRIPTION	REV
T1	TITLE SHEET	3
N1	GENERAL NOTES	3
C1	SITE PLAN	3
C2	TOWER ELEVATION	3
C3	COMPOUND DETAIL	3
C4	PLATFORM FOUNDATION DETAILS	3
C5	ICE BRIDGE DETAILS	3
C6	FENCE DETAILS	3
C7	SOIL AND EROSION CONTROL PLAN	3
E1	ELECTRICAL NOTES	3
E2	UTILITY PLAN	3
E3	H-FRAME DETAILS	3
E4	TOWER GROUNDING PLAN	3
E5	GROUNDING DETAILS	3
E6	GROUNDING DETAILS	3

INDEX OF SHEETS

PLANS PREPARED BY:



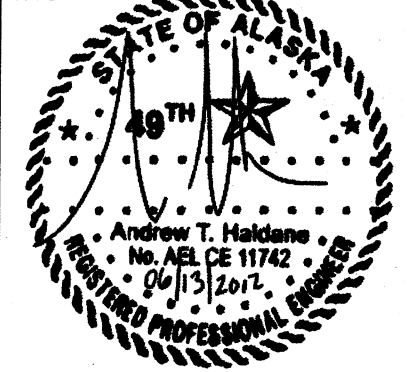
TOWER ENGINEERING PROFESSIONALS
3703 JUNCTION BOULEVARD
RALEIGH, NC 27603-5263
OFFICE: (919) 661-6351
www.tepgroup.net

AK LICENSE # 11742

REV	DATE	ISSUED FOR:
3	06-13-12	CONSTRUCTION
2	05-12-12	PRELIMINARY CONSTRUCTION
1	05-01-12	ZONING
0	04-21-12	ZONING

DRAWN BY: NMC CHECKED BY: JRH

SEAL:



SEAL:

SHEET NUMBER:

T-1

REVISION:

3

TEP #: 122326

TOWER OWNER:
NAME: GCI
CONTACT: TO BE DETERMINED
PHONE: (800) 770-7886

SITE APPLICANT:
NAME: MARSH CREEK LLC
ADDRESS: 2000 EAST 88th AVENUE
CITY, STATE, ZIP: ANCHORAGE, AK 99507
CONTACT: BRAD MELLO
PHONE: (907) 343-0403

SURVEYOR:
NAME: ACUTEK GEOMATICS
ADDRESS: 600 OUTLET VIEW DR.
CITY, STATE, ZIP: WASILLA, AK 99654
CONTACT: TERRY L. NICODERMUS
PHONE: (907) 376-8800

CIVIL ENGINEER:
NAME: TOWER ENGINEERING PROFESSIONALS
ADDRESS: 3703 JUNCTION BOULEVARD
CITY, STATE, ZIP: RALEIGH, NC 27603
CONTACT: ANDREW T. HALDANE, P.E.
PHONE: (919) 661-6351

ELECTRICAL ENGINEER:
NAME: TOWER ENGINEERING PROFESSIONALS
ADDRESS: 3703 JUNCTION BOULEVARD
CITY, STATE, ZIP: RALEIGH, NC 27603
CONTACT: ANDREW T. HALDANE, P.E.
PHONE: (919) 661-6351

PROPERTY OWNER:
NAME: COOGAN GENERAL LLC
ADDRESS: 5600 MONTANA CREEK RD
CITY, STATE, ZIP: JUNEAU, AK 99803
CONTACT: UNKNOWN
PHONE: (907) 780-6433

CONTACT INFORMATION

UTILITIES:
POWER COMPANY: ALASKA ELECTRIC LIGHT &
POWER COMPANY
CONTACT: CUSTOMER SERVICE
PHONE: (907) 780-2222

TELEPHONE COMPANY: GCI
CONTACT: CUSTOMER SERVICE
PHONE: (907) 265-5454

GENERAL NOTES:

1. ALL REFERENCES TO OWNER IN THESE DOCUMENTS SHALL BE CONSIDERED GCI, OR ITS DESIGNATED REPRESENTATIVE.
2. ALL WORK PRESENTED ON THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS NOTED OTHERWISE. THE CONTRACTOR MUST HAVE CONSIDERABLE EXPERIENCE IN PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE CONTRACTOR IS ATTESTING THAT HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY, THAT HE IS KNOWLEDGABLE OF THE WORK TO BE PERFORMED AND THAT HE IS PROPERLY LICENSED AND PROPERLY REGISTERED TO DO THIS WORK IN THE STATE OF ALASKA.
3. STRUCTURE IS DESIGNED IN ACCORDANCE WITH ANSI/TIA-222-G, 2005, FOR A 105 MPH 3-SECOND GUST WIND LOAD. THIS CONFORMS TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, 2009 EDITION.
4. WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, 2009 EDITION.
5. UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT.
6. ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERCEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
7. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND IT'S COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.
8. ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. CONTRACTOR SHALL NOT SCALE CONTRACT DRAWINGS IN LIEU OF FIELD VERIFICATIONS. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNER'S ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE OWNER AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE PROCEDURES.
9. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK.
11. ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE RESIDENT LEASING AGENT FOR APPROVAL.
12. BILL OF MATERIALS AND PART NUMBERS LISTED ON CONSTRUCTION DRAWINGS ARE INTENDED TO AID CONTRACTOR. CONTRACTOR SHALL VERIFY PARTS AND QUANTITIES WITH MANUFACTURER PRIOR TO BIDDING AND/OR ORDERING MATERIALS.
13. ALL PERMITS THAT MUST BE OBTAINED ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
14. 24 HOURS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, THE CONTRACTOR MUST NOTIFY THE APPLICABLE JURISDICTIONAL (STATE, COUNTY OR CITY) ENGINEER.
15. THE CONTRACTOR SHALL REWORK (DRY, SCARIFY, ETC.) ALL MATERIAL NOT SUITABLE FOR SUBGRADE IN ITS PRESENT STATE. AFTER REWORKING, IF THE MATERIAL REMAINS UNSUITABLE, THE CONTRACTOR SHALL UNDERCUT THIS MATERIAL AND REPLACE WITH APPROVED MATERIAL. ALL SUBGRADES SHALL BE PROOFROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PRIOR TO PAVING. ANY SOFTER MATERIAL SHALL BE REWORKED OR REPLACED.
16. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL PIPES, DITCHES, AND OTHER DRAINAGE STRUCTURES FREE FROM OBSTRUCTION UNTIL WORK IS ACCEPTED BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO MAINTAIN DRAINAGE STRUCTURE IN OPERABLE CONDITION.
17. ALL MATERIALS AND WORKMANSHIP SHALL BE WARRANTED FOR ONE YEAR FROM ACCEPTANCE DATE.
18. ALL BUILDING DIMENSIONS SHALL BE VERIFIED WITH THE PLANS (LATEST REVISION) PRIOR TO COMMENCING CONSTRUCTION. NOTIFY THE ENGINEER IMMEDIATELY IF ANY DESCREPANCEIES ARE DISCOVERED. THE OWNER SHALL HAVE A SET OF APPROVED PLANS AVAILABLE AT THE SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY GOVERNING AGENCY INSPECTORS.

STRUCTURAL STEEL NOTES:

1. THE FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATION FOR MANUAL OF STEEL CONSTRUCTION, 13TH EDITION.
2. UNLESS OTHERWISE NOTED, ALL STRUCTURAL ELEMENTS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

A. STRUCTURAL STEEL, ASTM DESIGNATION A36 OR A992.

B. ALL BOLTS, ASTM A325 TYPE I GALVANIZED HIGH STRENGTH BOLTS.

C. ALL NUTS, ASTM A563 CARBON AND ALLOY STEEL NUTS.

D. ALL WASHERS, ASTM F436 HARDENED STEEL WASHERS.
3. ALL CONNECTIONS NOT FULLY DETAILED ON THESE PLANS SHALL BE DETAILED BY THE STEEL FABRICATOR IN ACCORDANCE WITH AISC SPECIFICATION FOR MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN, 13TH EDITION.
4. HOLES SHALL NOT BE FLAME CUT THROUGH STEEL UNLESS APPROVED BY THE ENGINEER.
5. HOT-DIP GALVANIZE ALL ITEMS ULESS OTHERWISE NOTED, AFTER FABRICATION WHERE PRACTICABLE. GALVANIZING: ASTM A123, ASTM, A153/A153M OR ASTM A653/A653M, G90, AS APPLICABLE.
6. REPAIR DAMAGED SURFACES WITH GALVANIZING REPAIR METHOD AND PAINT CONFORMING TO ASTM A780 OR BY APPLICATION OF STICK OR THICK PASTE MATERIAL SPECIFICALLY DESIGNED FOR REPAIR OF GALVANIZING. CLEAN AREAS TO BE REPAIRED AND REMOVE SLAG FROM WELDS. HEAT SURFACES TO WHICH STICK OR PASTE MATERIAL IS APPLIED, WITH A TORCH TO A TEMPERATURE SUFFICIENT TO MELT THE METALLICS IN STICK OR PASTE; SPREAD MOLTEN MATERIAL UNIFORMLY OVER SURFACES TO BE COATED AND WIPE OFF EXCESS MATERIAL.
7. A NUT LOCKING DEVICE SHALL BE INSTALLED ON ALL PROPOSED AND/OR REPLACED BOLTS.
8. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH TO EXCLUDE THE THREADS FROM THE SHEAR PLANE.
9. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT BE AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
10. ALL ASSEMBLY BOLTS ARE TO BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED IN SECTION 8.1 OF THE AISC, "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", DATED JUNE 30, 2004.
11. FLAT WASHERS ARE TO BE INSTALLED WITH BOLTS OVER SLOTTED HOLES.
12. DO NOT OVER TORQUE ASSEMBLY BOLTS. GALVANIZING ON BOLTS, NUTS, AND STEEL PARTS MAY ACT AS A LUBRICANT, THUS OVER TIGHTENING MAY OCCUR AND MAY CAUSE BOLTS TO CRACK AND SNAP OFF.
13. PAL NUTS ARE TO BE INSTALLED AFTER NUTS ARE TIGHT AND WITH EDGE LIP OUT. PAL NUTS ARE NOT REQUIRED WHEN SELF-LOCKING NUTS ARE PROVIDED.
14. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
15. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AMERICAN WELDING SOCIETY (AWS) D1.1-98 STRUCTURAL WELDING CODE - STEEL.

PROJECT INFORMATION:

COOGAN AK

5600 MONTANA CREEK RD.
JUNEAU, AK 99803
(JUNEAU BOROUGH)

PLANS PREPARED FOR:



3120 Denali Street, Suite 5
Anchorage, AK 99503
Office: (800) 770-7886

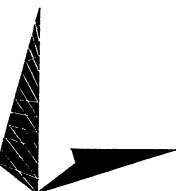
PLANS PREPARED FOR:



MARSHCREEK

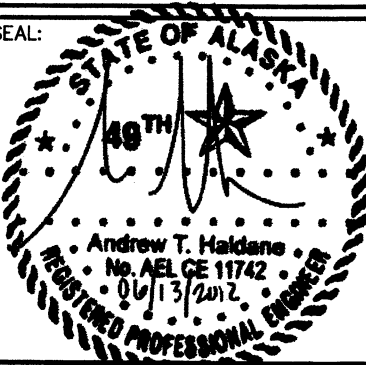
2000 East 88th Avenue
Anchorage, AK 99507
Office: (907) 343-0403

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
3703 JUNCTION BOULEVARD
RALEIGH, NC 27603-5263
OFFICE: (919) 681-6351
www.tepgroup.net

SEAL:



3	06-13-12	CONSTRUCTION
2	05-21-12	PRELIMINARY CONSTRUCTION
1	05-01-12	ZONING
0	04-21-12	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: NMC | CHECKED BY: JRH

SHEET TITLE:

GENERAL
NOTES

SHEET NUMBER:	REVISION:
N-1	3
	TEP #: 122326

NOTES:

1. THE BASIS OF THE MERIDIANS AND COORDINATES FOR THIS PLAT IS THE ALASKA STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983 (AKSPCS NAD 83).
2. VERTICAL INFORMATION SHOWN, BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88) IN FEET.
3. ALL DISTANCES ARE GROUND UNLESS OTHERWISE NOTED.
4. THE TOWER IS LOCATED IN ZONE C, AREAS OF MINIMAL FLOODING. FEMA FLOOD MAP #020009 0878 C, DATED SEPTEMBER 28, 1990.

BUILDING SETBACKS

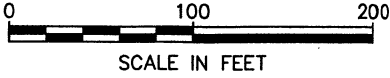
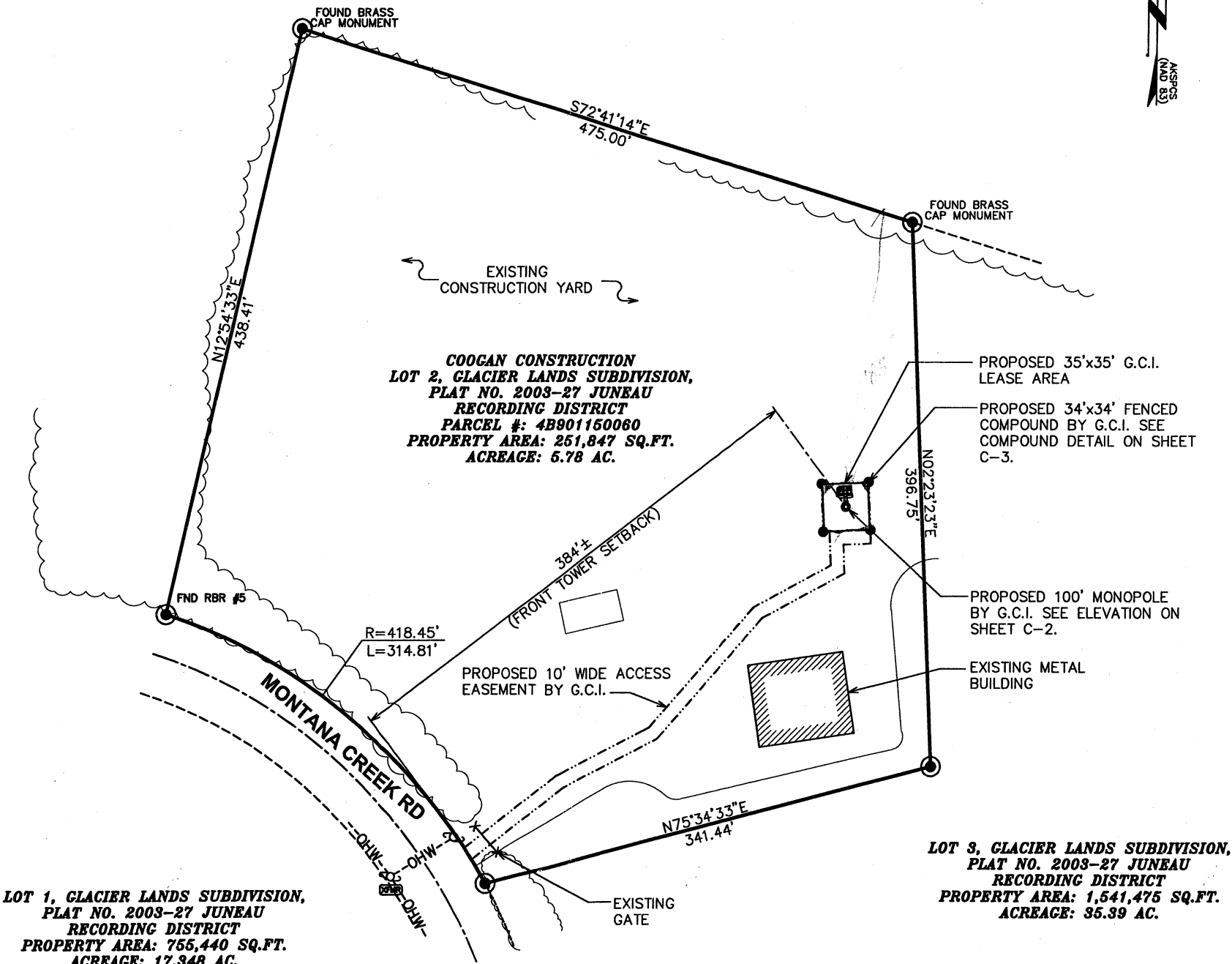
	REQUIRED	PROPOSED
FRONT	25'	384'-0"±
SIDE	10'	51'-0"±
REAR	10'	202'-6"±

LEGEND

—	PARENT PROPERTY LINE
⊙	EXIST. WATER WELL
⊕	EXIST. UTILITY POLE
⊡	EXIST. TELCO PEDESTAL
⊞	EXIST. TRANSFORMER
●	PROPERTY CORNER
⊙ _{IP}	SET IRON PIN
---200---	EXIST. CONTOUR LINE
///	EDGE OF PAVEMENT
---OHW---	OVERHEAD WIRE
---R/W---	RIGHT-OF-WAY
—X—	CHAIN LINK FENCE
—W—	WOOD FENCE
~~~~~	EXISTING TREE LINE
~~~~~	PROPOSED TREE LINE

SITE PLAN

SCALE: 1" = 100'



PROJECT INFORMATION:

COOGAN AK

5600 MONTANA CREEK RD.
JUNEAU, AK 99803
(JUNEAU BOROUGH)

PLANS PREPARED FOR:



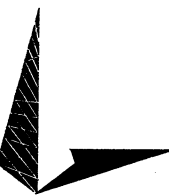
3120 Denali Street, Suite 5
Anchorage, AK 99503
Office: (800) 770-7886

PLANS PREPARED FOR:



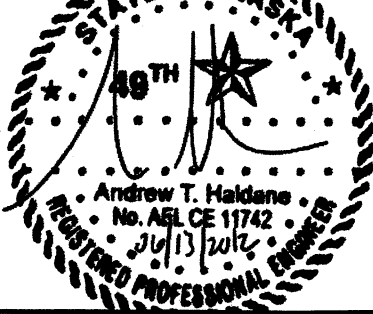
2000 East 88th Avenue
Anchorage, AK 99507
Office: (907) 343-0403

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
3703 JUNCTION BOULEVARD
RALEIGH, NC 27603-5263
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:



3	06-13-12	CONSTRUCTION
2	05-21-12	PRELIMINARY CONSTRUCTION
1	05-01-12	ZONING
0	04-21-12	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: NMC CHECKED BY: JRH

SHEET TITLE:

SITE PLAN

SHEET NUMBER:

C-1

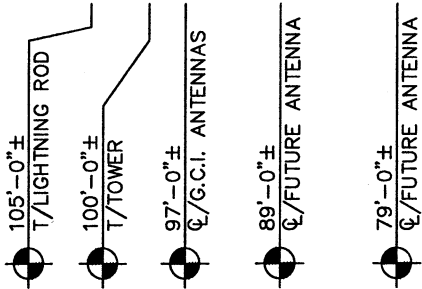
REVISION:

3

TEP # 122326

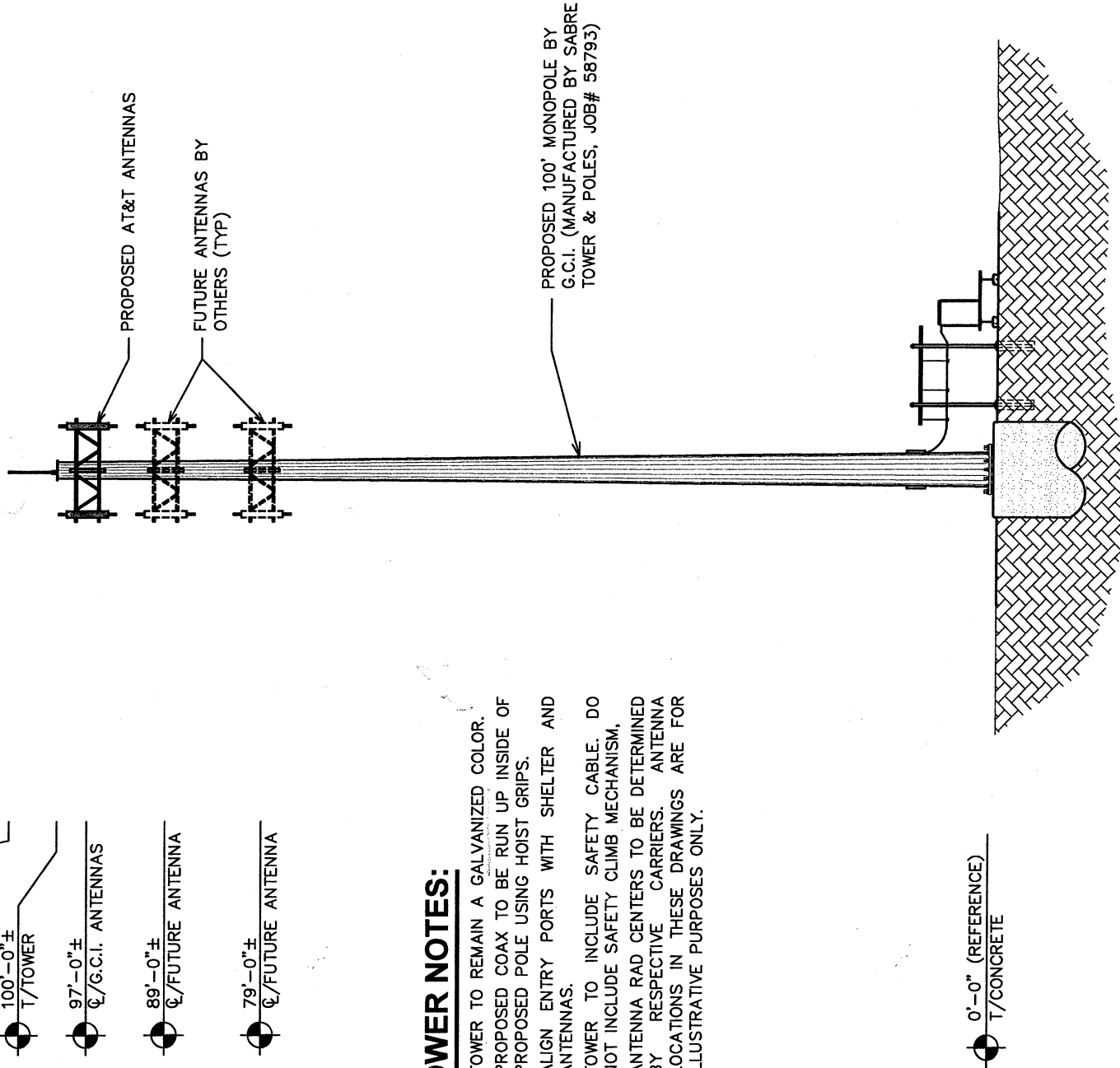
ANTENNA/COAX SCHEDULE

CARRIER	TECHNOLOGY	MANUFACTURER (MODEL #)	MOUNTING HEIGHT	COAX SIZE	AZIMUTH (TN)	COAX LENGTH	FREQUENCY (MHz)
G.C.I.	TBD	(6) APXV18-206516L-C	CL @ 97'±	(12) LDF7-50A	60°, 180°, 300°	120'±	TBD
FUTURE	TBD	8' PANEL ANTENNA	CL @ 89'±	TBD	60°, 180°, 300°	110'±	TBD
FUTURE	TBD	8' PANEL ANTENNA	CL @ 79'±	TBD	60°, 180°, 300°	100'±	TBD



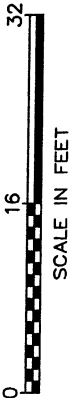
TOWER NOTES:

1. TOWER TO REMAIN A GALVANIZED COLOR.
2. PROPOSED COAX TO BE RUN UP INSIDE OF PROPOSED POLE USING HOIST GRIPS.
3. ALIGN ENTRY PORTS WITH SHELTER AND ANTENNAS.
4. TOWER TO INCLUDE SAFETY CABLE. DO NOT INCLUDE SAFETY CLIMB MECHANISM.
5. ANTENNA RAD CENTERS TO BE DETERMINED BY RESPECTIVE CARRIERS. ANTENNA LOCATIONS IN THESE DRAWINGS ARE FOR ILLUSTRATIVE PURPOSES ONLY.



TOWER ELEVATION

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



PROJECT INFORMATION:
COOGAN AK
5600 MONTANA CREEK RD.
JUNEAU, AK 99803
(JUNEAU BOROUGH)

PLANS PREPARED FOR:

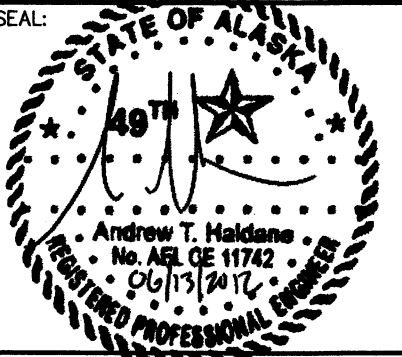
3120 Denali Street, Suite 5
Anchorage, AK 99503
Office: (800) 770-7886

PLANS PREPARED FOR:

2000 East 88th Avenue
Anchorage, AK 99507
Office: (907) 343-0403

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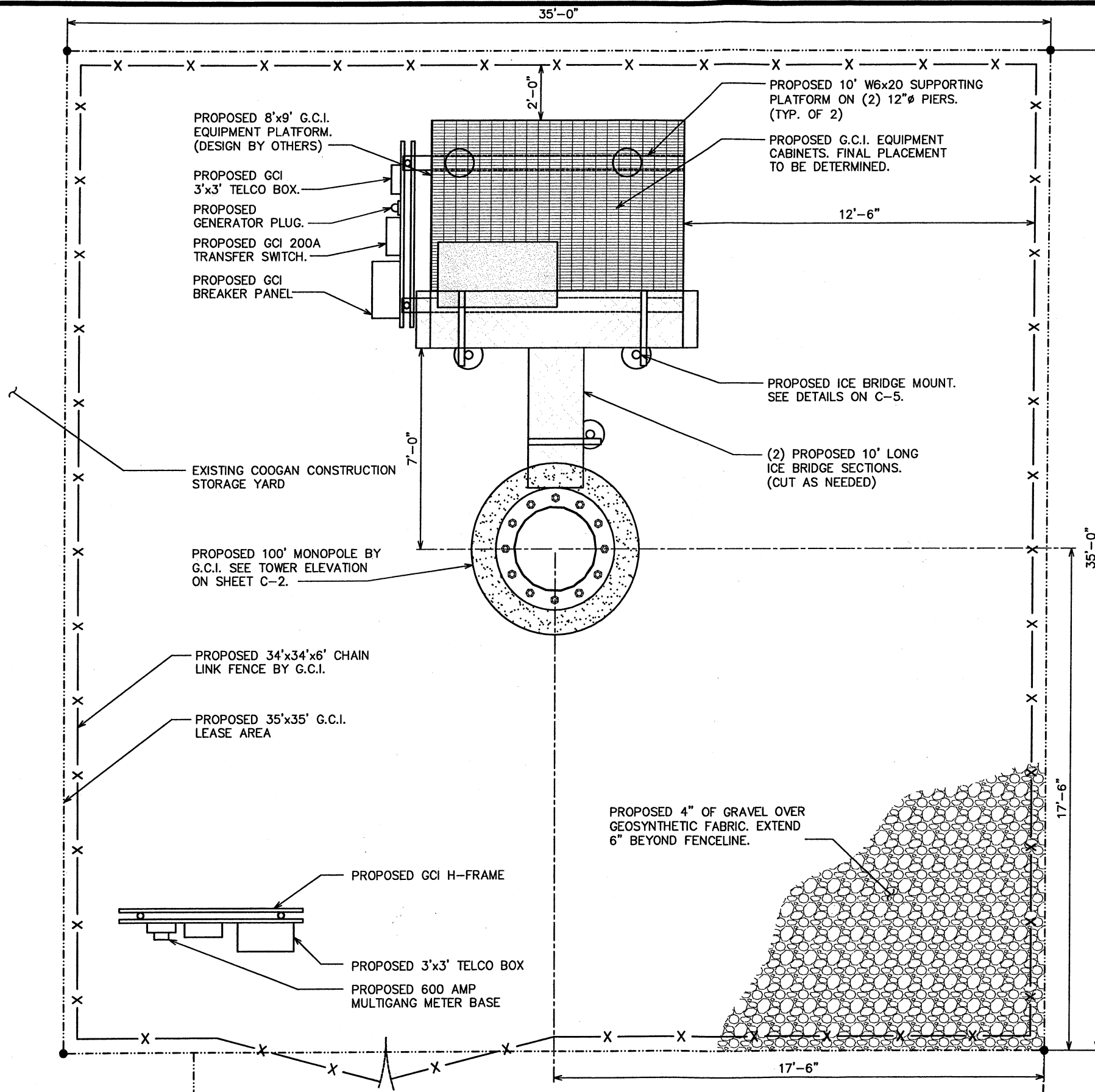


3	06-13-12	CONSTRUCTION
2	05-21-12	PRELIMINARY CONSTRUCTION
1	05-01-12	ZONING
0	04-21-12	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: NMC CHECKED BY: JRH

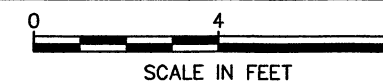
SHEET TITLE:
TOWER ELEVATION

SHEET NUMBER: C-2	REVISION: 3 TEP #: 122326
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COMPOUND DETAIL

SCALE: 1/4" = 1'-0"



PROJECT INFORMATION:

COOGAN AK

5600 MONTANA CREEK RD.
JUNEAU, AK 99803
(JUNEAU BOROUGH)

PLANS PREPARED FOR:



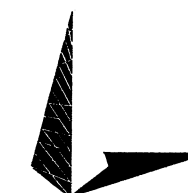
3120 Denali Street, Suite 5
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Office: (800) 770-7886

PLANS PREPARED FOR:



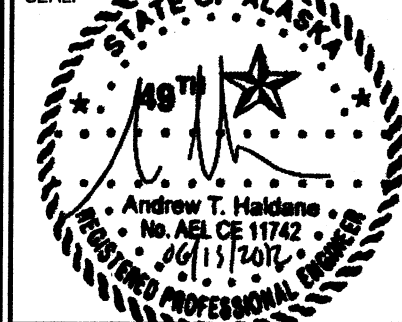
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Anchorage, AK 99507
Office: (907) 343-0403

PLANS PREPARED BY:



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SEAL:



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0	04-21-12	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: NMC CHECKED BY: JRH

SHEET TITLE:

COMPOUND DETAIL

SHEET NUMBER:

C-3

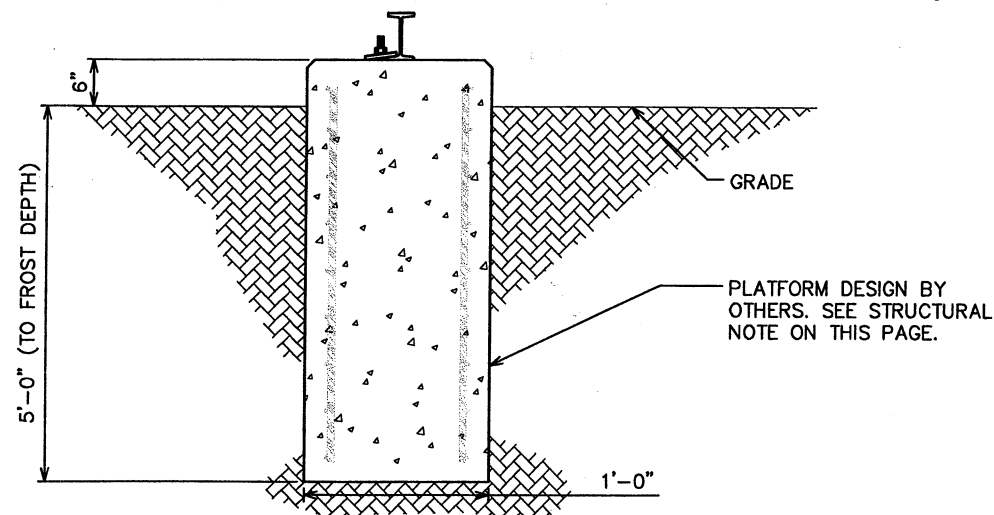
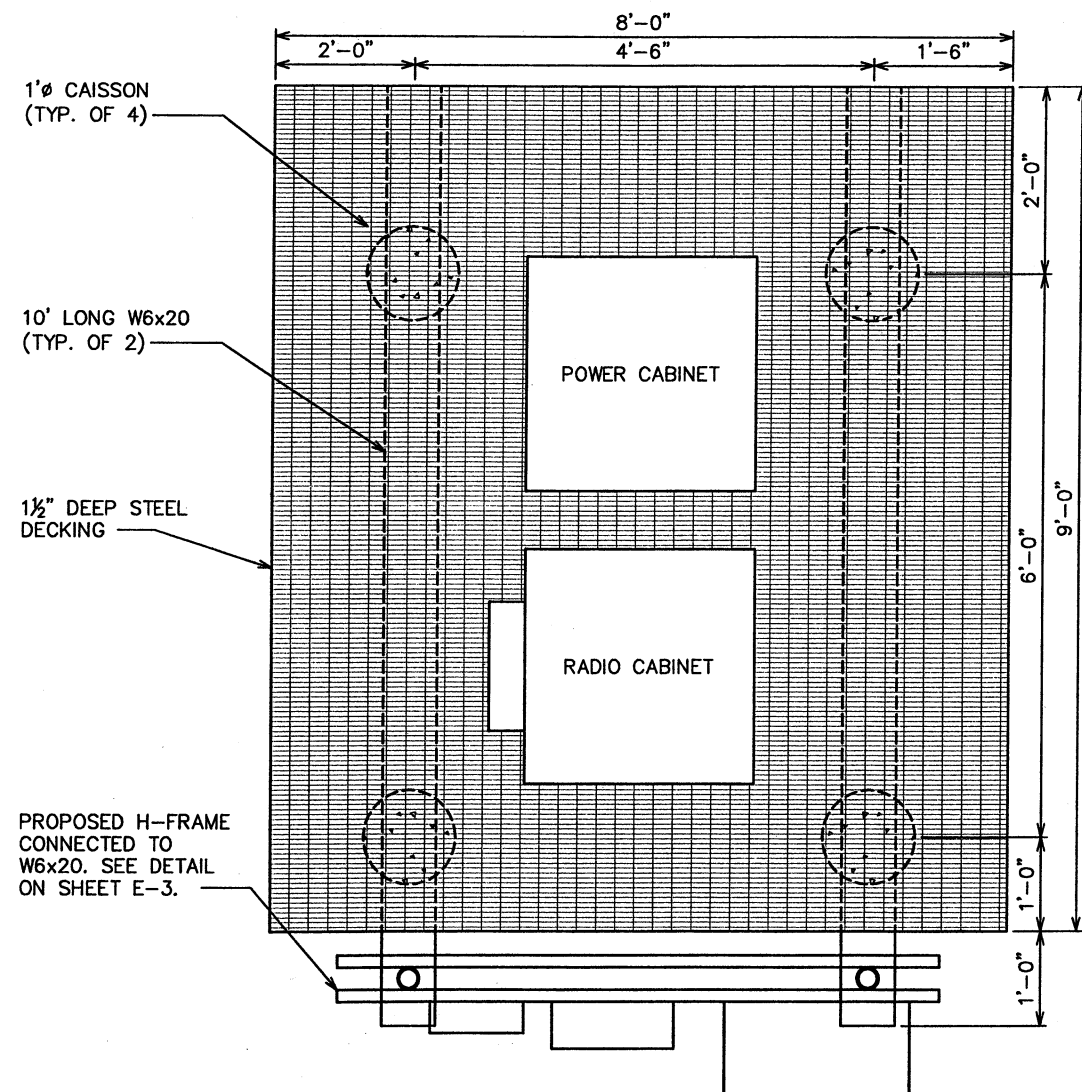
REVISION:

3

TEP #: 122326

STRUCTURAL NOTE:

PLATFORM SHOWN FOR REFERENCE ONLY. SEE
PLATFORM STRUCTURAL DRAWINGS BY LANGDON
ENGINEERING FOR ADDITIONAL DETAILS.



PROJECT INFORMATION:
COOGAN AK
5600 MONTANA CREEK RD.
JUNEAU, AK 99803
(JUNEAU BOROUGH)

PLANS PREPARED FOR:

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Anchorage, AK 99503
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Anchorage, AK 99507
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PLANS PREPARED BY:

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3703 JUNCTION BOULEVARD
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OFFICE: (919) 661-6351
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SEAL:

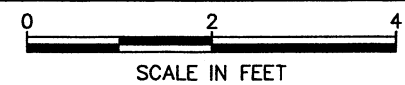
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2	05-21-12	PRELIMINARY CONSTRUCTION
1	05-01-12	ZONING
0	04-21-12	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: MWB | CHECKED BY: NMC

SHEET TITLE:
**PLATFORM
FOUNDATION
DETAILS**

SHEET NUMBER: C-4	REVISION: 3 TEP #: 122326
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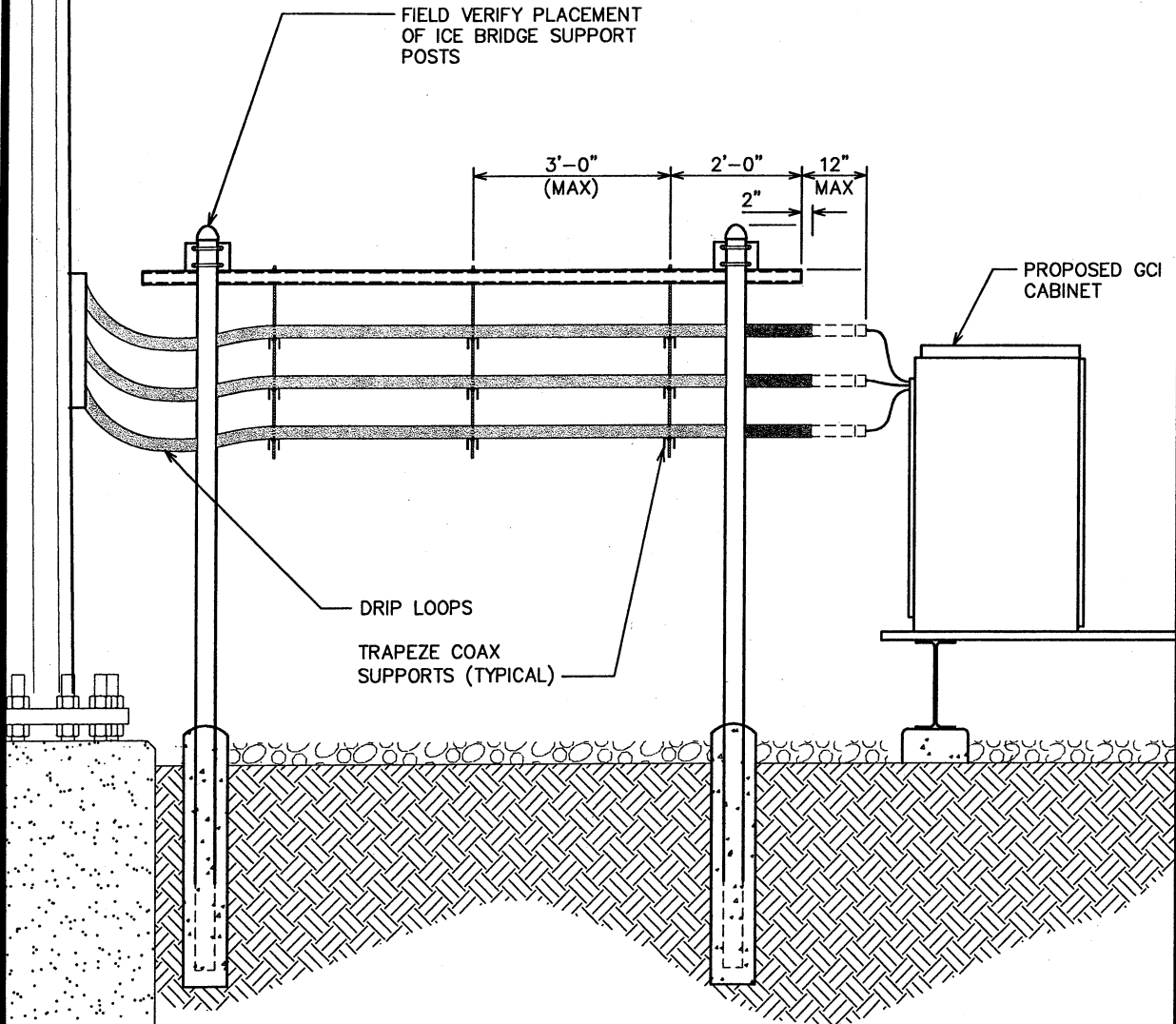
PLATFORM FOUNDATION PLAN
SCALE: 1/2"=1'-0"



PLATFORM FOUNDATION SECTION
SCALE: N.T.S.

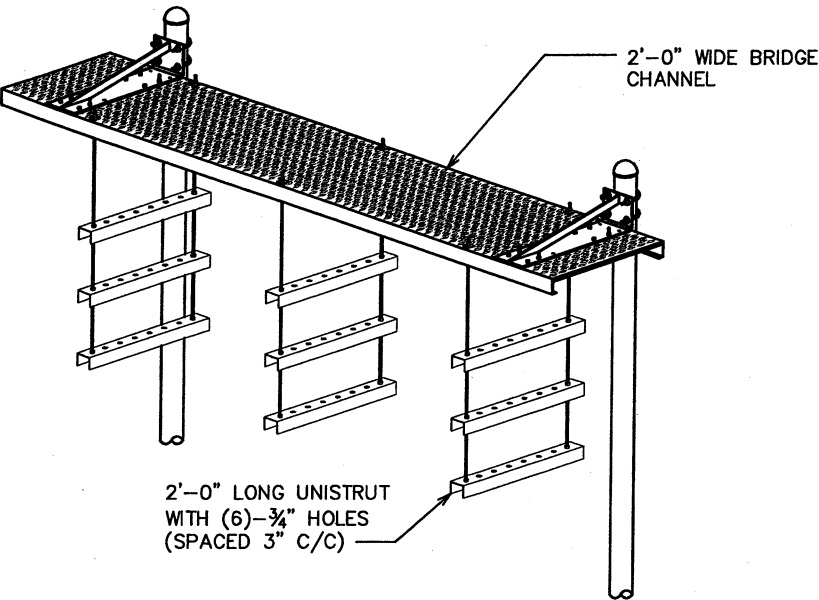
NOTES:

- 1. COAX MUST COME OFF ON TOWER AT AN ELEVATION LOWER THAN RF ENTRY PORT TO PREVENT WATER MIGRATING TOWARDS SHELTER.
- 2. ZIP TIES ARE NOT TO BE PERMANENT BUT MAY BE USED FOR TEMPORARY CONSTRUCTION.



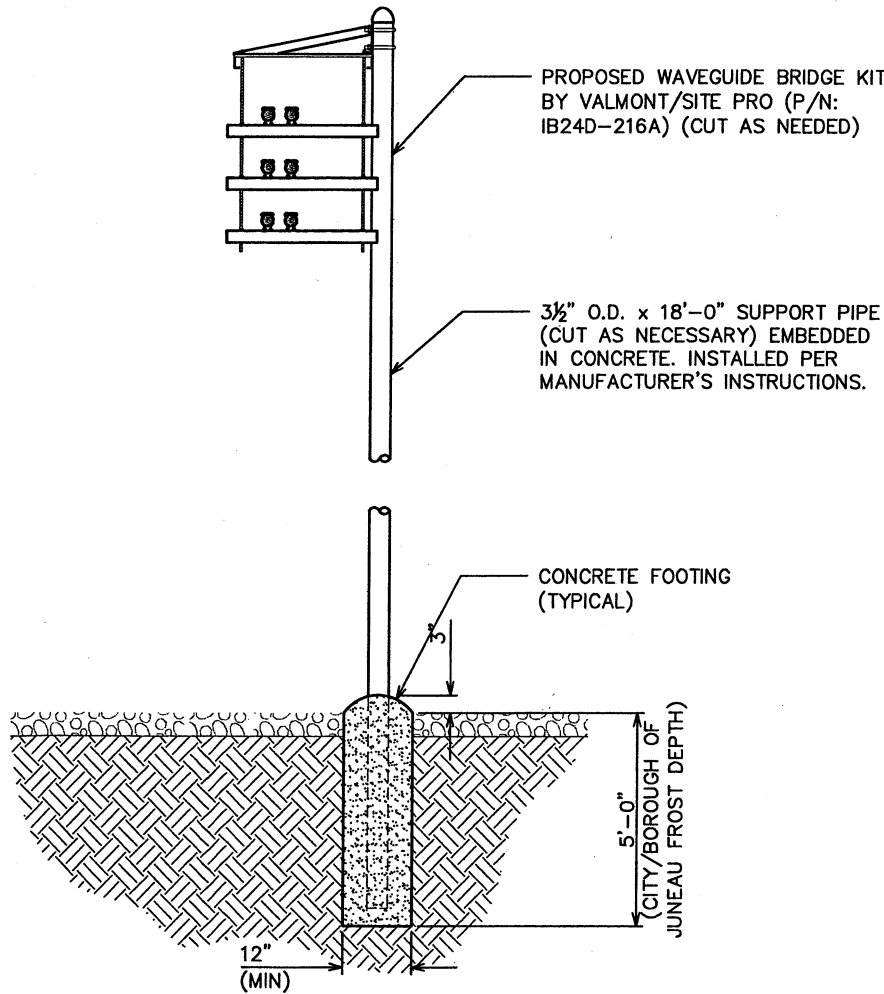
ICE BRIDGE ON PLATFORM

SCALE: N.T.S.



ISOMETRIC VIEW

SCALE: N.T.S.



ICE BRIDGE ON GROUND

SCALE: N.T.S.

PROJECT INFORMATION:
COOGAN AK
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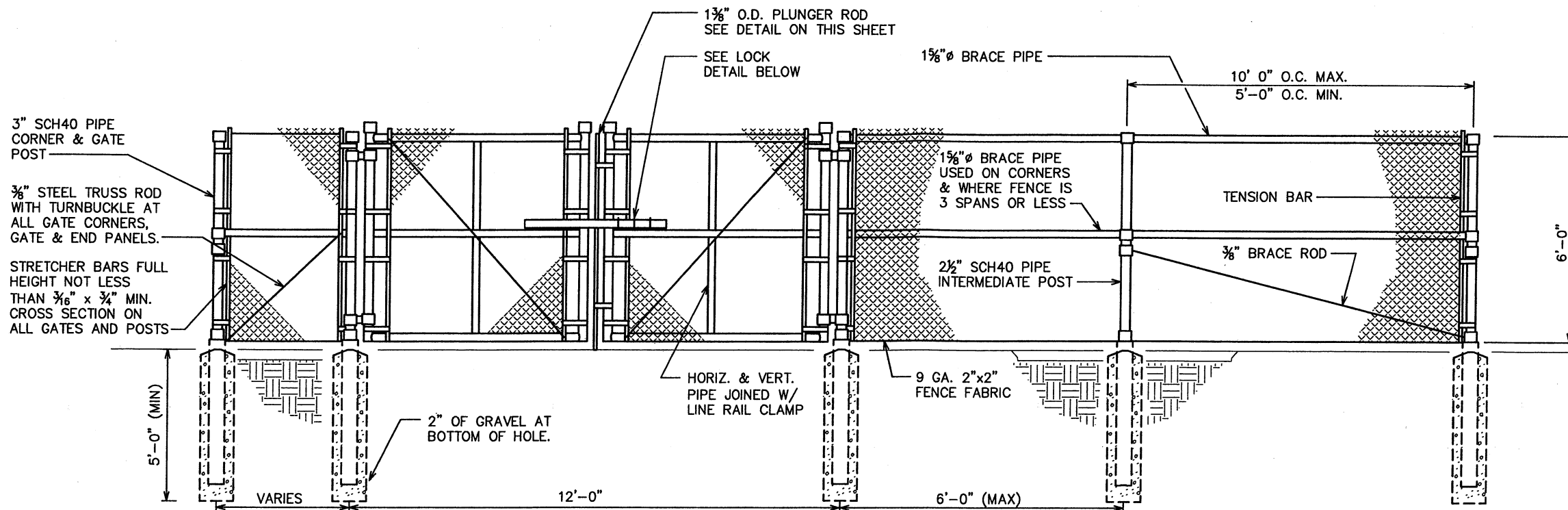
SEAL:

3	06-13-12	CONSTRUCTION
2	05-21-12	PRELIMINARY CONSTRUCTION
1	05-01-12	ZONING
0	04-21-12	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: NMC CHECKED BY: GMA

SHEET TITLE:
ICE BRIDGE DETAILS

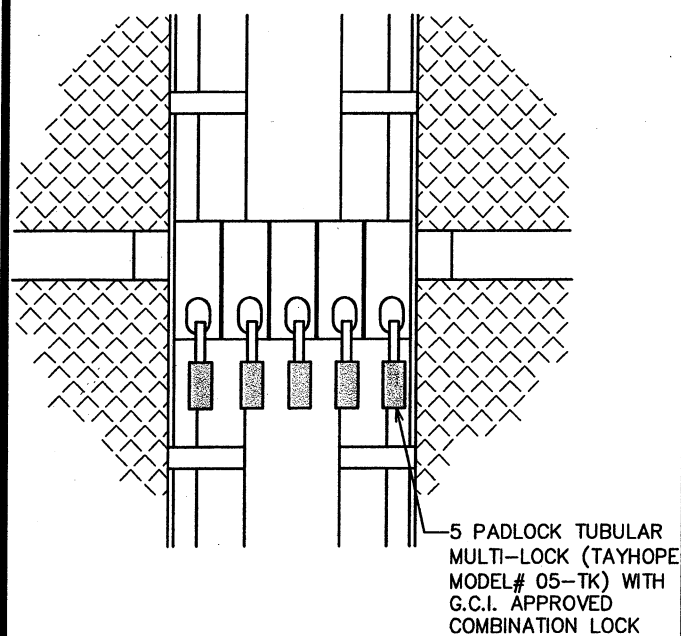
SHEET NUMBER: C-5	REVISION: 3 TEP #: 122326
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TYPICAL FENCE ELEVATION

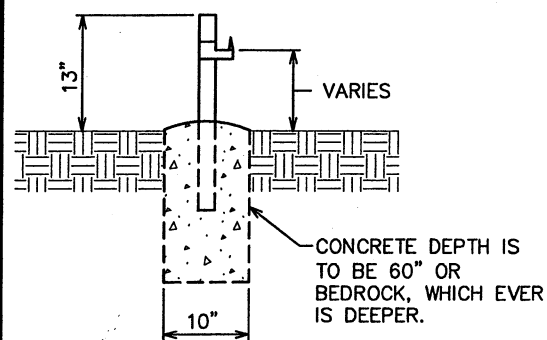
SCALE: N.T.S.

TAYHOPE ENTERPRISES, LTD.
PH.: 416-364-5624
FAX: 216-364-2716
www.tayhope.com



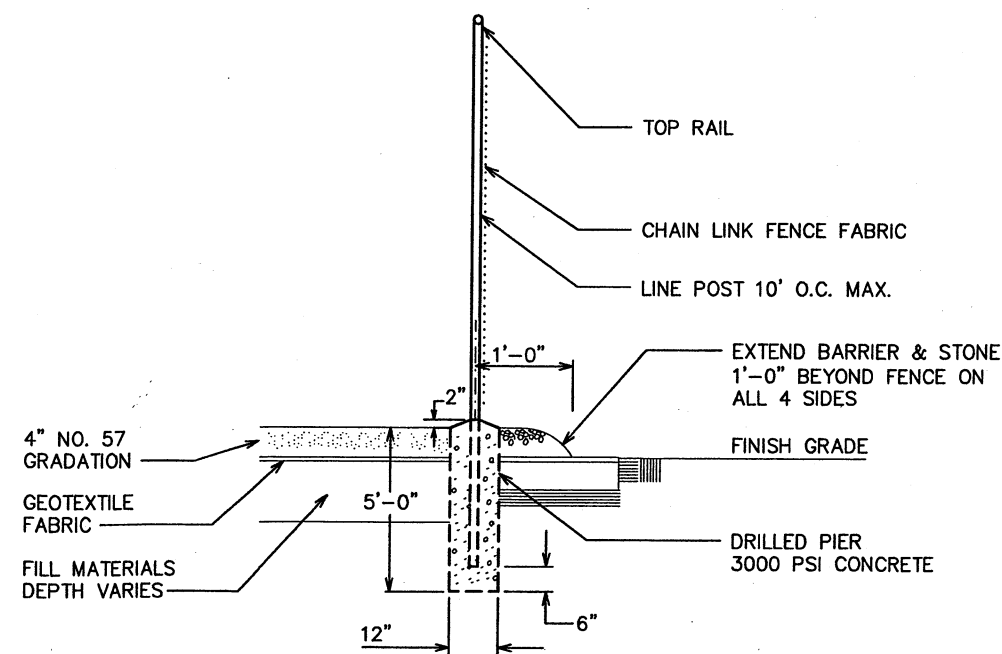
GATE LOCK DETAIL

SCALE: N.T.S.



GATE STOP/KEEPER DETAIL

SCALE: N.T.S.



FENCE / BARBED WIRE ARM DETAIL

SCALE: N.T.S.

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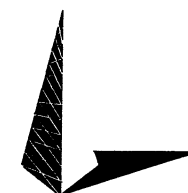
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SEAL:



3	06-13-12	CONSTRUCTION
2	05-21-12	PRELIMINARY CONSTRUCTION
1	05-01-12	ZONING
0	04-21-12	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: NMC CHECKED BY: JRH

SHEET TITLE:

FENCE DETAILS

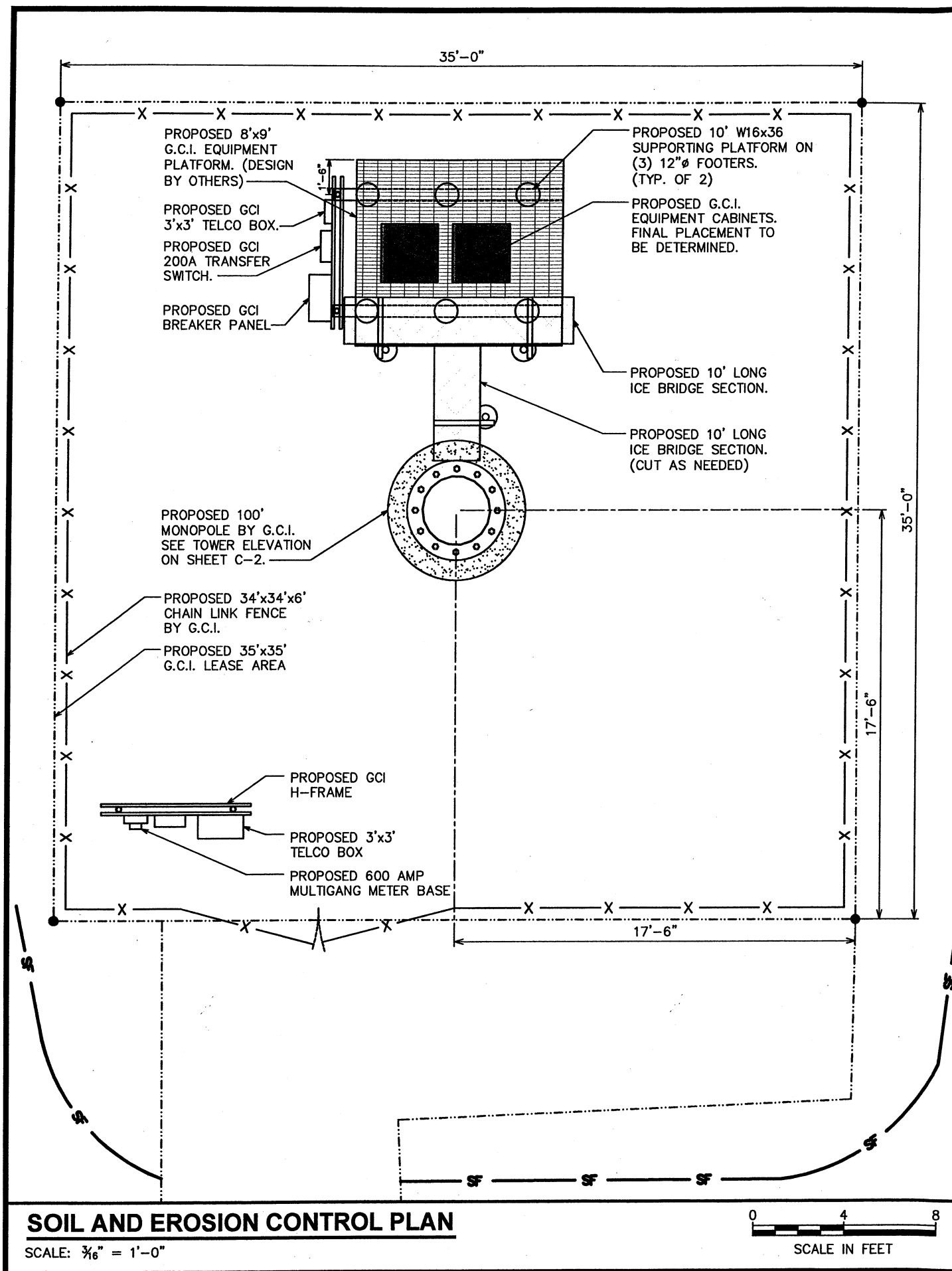
SHEET NUMBER:

C-6

REVISION:

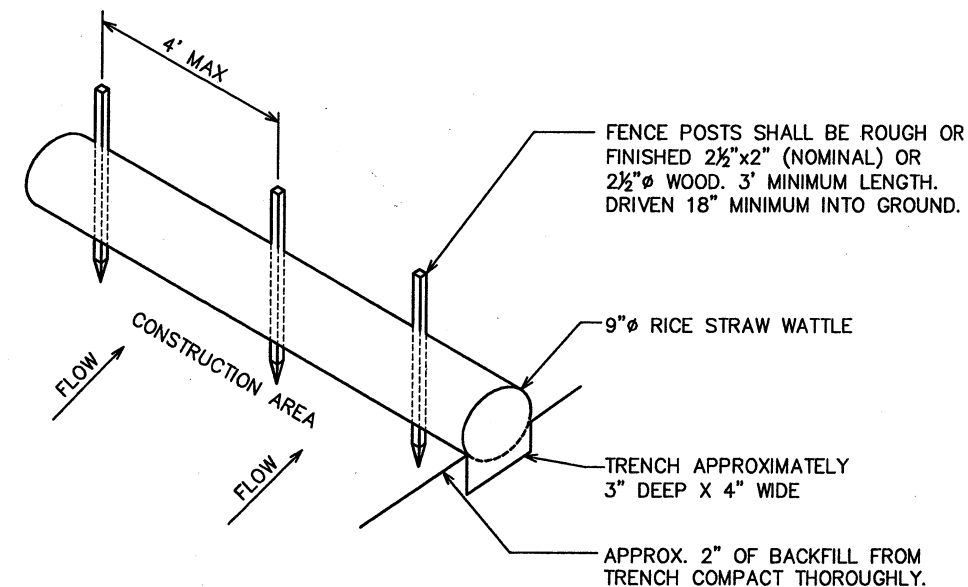
3

TEP #: 122326



NOTES:

1. LAY WATTLE SNUGLY IN TRENCH. NO DAYLIGHT SHOULD BE SEEN UNDER THE WATTLE. PACK SOIL FROM TRENCHING AGAINST WATTLE ON THE UPHILL SIDE. TIGHTLY BUTT ADJOINING WATTLES. DO NOT OVERLAP THE ENDS.
2. STAKE WATTLES AT EACH END AND MAXIMUM OF 4' ON CENTER. STAKES TO BE DRIVEN THROUGH THE CENTERS OF WATTLES. INSTALL STAKES PERPENDICULAR TO GRADE SLOPE.
3. THIS DEVICE IS INTENDED TO CONTROL SHEET FLOW ONLY. IT WILL NOT BE USED IN AREAS OF CONCENTRATED FLOW WITH A DRAINAGE AREA OF $\frac{1}{2}$ ACRE OR MORE.
4. SOIL AND EROSION CONTROL DETAILS ARE PROVIDED FOR REFERENCE, BUT WILL ONLY BE USED IF NECESSARY, AS MANDATED BY THE CONDITIONS ON THE SITE.



SILT FENCE DETAILS

N.T.S.

PROJECT INFORMATION:

COOGAN AK

5600 MONTANA CREEK RD.
JUNEAU, AK 99803
(JUNEAU BOROUGH)

PLANS PREPARED FOR:



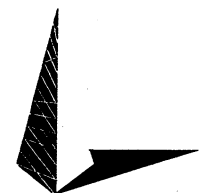
3120 Denali Street, Suite 5
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PLANS PREPARED FOR:



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Office: (907) 343-0403

PLANS PREPARED BY:



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SEAL:



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DRAWN BY: JCM CHECKED BY: NMC

SHEET TITLE:

SOIL AND EROSION CONTROL PLAN

SHEET NUMBER:

C-7

REVISION:

3

TEP #: 122326

SCOPE:

SHALL INCLUDE ALL LABOR, MATERIALS AND APPLIANCES REQUIRED FOR THE FURNISHING. INSTALLING AND TESTING, COMPLETE AND READY FOR OPERATION OF ALL WORK SHOWN ON THE DRAWING AS SPECIFIED HEREIN:

- 1. ELECTRICAL SERVICE
- 2. CONDUIT AND RACEWAY
- 3. CONDUCTORS
- 4. MISCELLANEOUS MATERIALS
- 5. TELEPHONE CONDUITS
- 6. LIGHTNING ARRESTING SYSTEM

CODES:

THE INSTALLATION SHALL COMPLY WITH ALL LAWS APPLYING TO ELECTRICAL INSTALLATION IN EFFECT WITH THE REGULATIONS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL SAFETY CODE, NATIONAL ELECTRIC CODE, AND ALL LOCAL GOVERNING CODES AND ORDINANCES WITH THE REGULATION OF THE SERVING UTILITY COMPANY. ALL PERMITS REQUIRED SHALL BE OBTAINED AND, AFTER COMPLETION OF WORK, THE OWNER SHALL BE FURNISHED A CERTIFICATE OF FINAL INSPECTION AND APPROVAL.

TESTING:

UPON COMPLETION OF THE INSTALLATION, OPERATE AND ADJUST ALL EQUIPMENT AND SYSTEMS TO MEET SPECIFIED PERFORMANCE REQUIREMENTS. ALL TESTING SHALL BE DONE BY QUALIFIED PERSONNEL.

GUARANTEE:

IN ADDITION TO THE GUARANTEE OF THE EQUIPMENT BY THE MANUFACTURER, EACH PIECE OF EQUIPMENT SPECIFIED HEREIN SHALL ALSO BE GUARANTEED FOR DEFECTS OF MATERIAL OR WORKMANSHIP OCCURRING DURING A PERIOD OF ONE (1) YEAR FROM FINAL ACCEPTANCE OF THE WORK BY THE OWNER WITHOUT EXPENSE TO THE OWNER. ALL WARRANTEE CERTIFICATES AND GUARANTEES FURNISHED BY THE MANUFACTURERS SHALL BE TURNED OVER TO THE OWNER.

CO-ORDINATION

CONTRACTOR SHALL COORDINATE ALL WORK WITH THE POWER AND TELEPHONE COMPANIES AND SHALL COMPLY WITH ALL SERVICE REQUIREMENTS OF EACH UTILITY COMPANY.

EXAMINATION OF SITE:

PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL VISIT THE SITE OF THE JOB AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED ELECTRICAL INSTALLATION AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. FAILURE TO COMPLY WITH THE INTENT OF THIS PARAGRAPH WILL IN NO WAY RELIEVE THE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM OR SYSTEMS.

CUTTING, PATCHING AND EXCAVATION:

- 1. COORDINATION OF ALL SLEEVES, CHASES, ETC., WILL BE REQUIRED PRIOR TO THE CONSTRUCTION OF ANY PORTION OF THE WORK. ALL CUTTING AND PATCHING OF WALLS, PARTITIONS, FLOORS, AND CHASES IN CONCRETE, WOOD, STEEL OR MASONRY SHALL BE DONE AS PROVIDED ON THE DRAWINGS.
- 2. ALL EXCAVATIONS AND BACKFILLING INCIDENTAL TO THE WORK UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR.

EXTERIOR CONDUIT:

ALL EXPOSED CONDUIT SHALL BE NEATLY INSTALLED AND RUN PARALLEL OR PERPENDICULAR TO STRUCTURAL ELEMENTS. SUPPORTS AND MOUNTING HARDWARE SHALL BE HOT DIPPED GALVANIZED STEEL.

RACEWAYS:

- 1. ALL CONDUCTORS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE RIGID STEEL, EMT, OR SCH40 PVC. AS INDICATED ON THE DRAWINGS. ALUMINUM CONDUIT SHALL NOT BE ALLOWED.
- 2. WHERE INSTALLED ON EXTERIORS AND EXPOSED TO DAMAGE, ALL CONDUIT SHALL BE RIGID STEEL.
- 3. CONCEALED CONDUIT IN WALLS OR INTERIOR SPACES ABOVE GRADE MAY BE EMT.
- 4. UNDERGROUND CONDUITS SHALL BE RIGID STEEL OR SCH40 PVC AS INDICATED ON THE DRAWINGS.
- 5. ALL CONDUIT RUNS SHALL USE APPROVED COUPLINGS AND CONNECTORS. PROVIDE INSULATED BUSHING FOR ALL CONDUIT TERMINATIONS. ALL CONDUIT RUNS IN A WET OCATIONS SHALL HAVE WATERPROOF FITTINGS.
- 6. PROVIDE SUPPORTS FOR ALL CONDUITS IN ACCORDANCE WITH NEC REQUIREMENTS. ALL CONDUITS SHALL BE SIZED AS REQUIRED BY NEC.
- 7. BURIAL DEPTH OF ALL CONDUITS SHALL BE AS REQUIRED BY CODE FOR EACH SPECIFIC CONDUIT TYPE AND APPLICATION.
- 7. CONDUIT ROUTES ARE SCHEMATIC. CONTRACTOR SHALL FIELD VERIFY BEFORE BID. COORDINATE ROUTE WITH WIRELESS CARRIER AND BUILDING OWNER.

EQUIPMENT:

- 1. ALL DISCONNECT SWITCHES SHALL BE SERVICE ENTRANCE RATED, HEAVY DUTY TYPE.
- 2. NEW CIRCUIT BREAKERS SHALL BE RATED TO WITHSTAND THE MAXIMUM AVAILABLE FAULT CURRENT AS DETERMINED BY THE LOCAL UTILITY. CONTRACTOR SHALL VERIFY MAXIMUM AVAILABLE FAULT CURRENT, AND COORDINATE INSTALLATION WITH THE LOCAL UTILITY BEFORE STARTING WORK.

CONDUCTORS:

- 1. FURNISH AND INSTALL CONDUCTORS CALLED FOR IN THE DRAWINGS. ALL CONDUCTORS SHALL HAVE TYPE THWN OR THW (75 DEGREE) INSULATION, RATED FOR 600 VOLTS.
- 2. ALL CONDUCTIONS SHALL BE COPPER, THE USE OF ALUMINUM CONDUCTORS SHALL NOT BE ALLOWED. ALL CONDUCTORS SHALL BE UL LISTED AND SHALL BE PROVIDED AND INSTALLED AS FOLLOWS:
 - A. MINIMUM WIRE SIZE SHALL BE #12 AWG.
 - B. ALL CONDUCTORS SIZE #8 AND LARGER SHALL BE STRANDED. CONDUCTORS SIZED #10 AND SMALLER MAY BE SOLID OR STRANDED.
 - C. CONNECTION FOR #10 AWG AND SMALLER SHALL BE BY TWISTING TIGHT AND INSTALLING INSULATED PRESSURE OR WIRE NUT CONNECTORS.
 - D. CONNECTION FOR #8 AWG AND LARGER SHALL BE BY USE OF STEEL CRIMP-ON SLEEVES WITH NYLON INSULATOR.
- 3. ALL CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH NEC STANDARDS.
- 4. THE RACEWAY SYSTEM SHALL BE COMPLETE BEFORE INSTALLING CONDUCTORS.

PENETRATIONS:


CONTRACTOR SHALL COMPLY WITH UL PENETRATION DETAILS FOR PENETRATIONS OF ALL RATED WALLS, ROOF, ETC.

GROUNDING:

- 1. ALL ELECTRICAL NEUTRALS, RACEWAYS AND NON-CURRENT CARRYING PARTS OF ELECTRICAL EQUIPMENT AND ASSOCIATED ENCLOSURES SHALL BE GROUNDED IN ACCORDANCE WITH NEC ARTICLE 250. THIS SHALL INCLUDE NEUTRAL CONDUCTORS, CONDUITS, SUPPORTS, CABINETS, BOXES, GROUND BUSSES, ETC. THE NEUTRAL CONDUCTOR FOR EACH SYSTEM SHALL BE GROUNDED BY ONE POINT ONLY.
- 2. PROVIDE GROUND CONDUCTOR IN ALL RACEWAYS.
- 3. PROVIDE BONDING AND GROUND TO MEET NFPA 780 – LIGHTNING PROTECTION AS A MINIMUM.
- 4. PROVIDE GROUNDING SYSTEM AS INDICATED ON THE DRAWINGS, AS REQUIRED BY THE NATIONAL ELECTRIC CODE AND RADIO EQUIPMENT MANUFACTURERS.

ABBREVIATIONS AND LEGEND

A	-	AMPERE	PVC	-	SCH40 RIGID NON-METALLIC CONDUIT
AFG	-	ABOVE FINISHED GRADE	RGS	-	RIGID GALVANIZED STEEL CONDUIT
ATS	-	AUTOMATIC TRANSFER SWITCH	SW	-	SWITCH
AWG	-	AMERICAN WIRE GAUGE	TGB	-	TOWER GROUND BAR
BCW	-	BARE COPPER WIRE	UL	-	UNDERWRITERS LABORATORIES
BFG	-	BELOW FINISHED GRADE	V	-	VOLTAGE
BKR	-	BREAKER	W	-	WATTS
C	-	CONDUIT	XFMR	-	TRANSFORMER
CKT	-	CIRCUIT	XMTR	-	TRANSMITTER
DISC	-	DISCONNECT			
EGR	-	EXTERNAL GROUND RING			
EMT	-	ELECTRIC METALLIC TUBING			
FSC	-	FLEXIBLE STEEL CONDUIT			
GEN	-	GENERATOR			
GPS	-	GLOBAL POSITIONING SYSTEM			
GRD	-	GROUND			
IGB	-	ISOLATED GROUND BAR			
IGR	-	INTERIOR GROUND RING (HALO)			
KW	-	KILOWATTS			
NEC	-	NATIONAL ELECTRIC CODE			
PCS	-	PERSONAL COMMUNICATION SYSTEM			
PH	-	PHASE			
PNL	-	PANEL			
PNLBD	-	PANELBOARD			

-----E-----	UNDERGROUND ELECTRICAL CONDUIT
-----T-----	UNDERGROUND TELEPHONE CONDUIT
	KILOWATT-HOUR METER
-----	UNDERGROUND BONDING AND GROUNDING CONDUCTOR.
Ø	GROUND ROD
●	CADWELD
■	GROUND ROD WITH INSPECTION WELL

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PLANS PREPARED FOR:



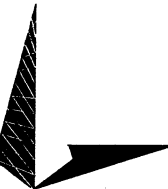
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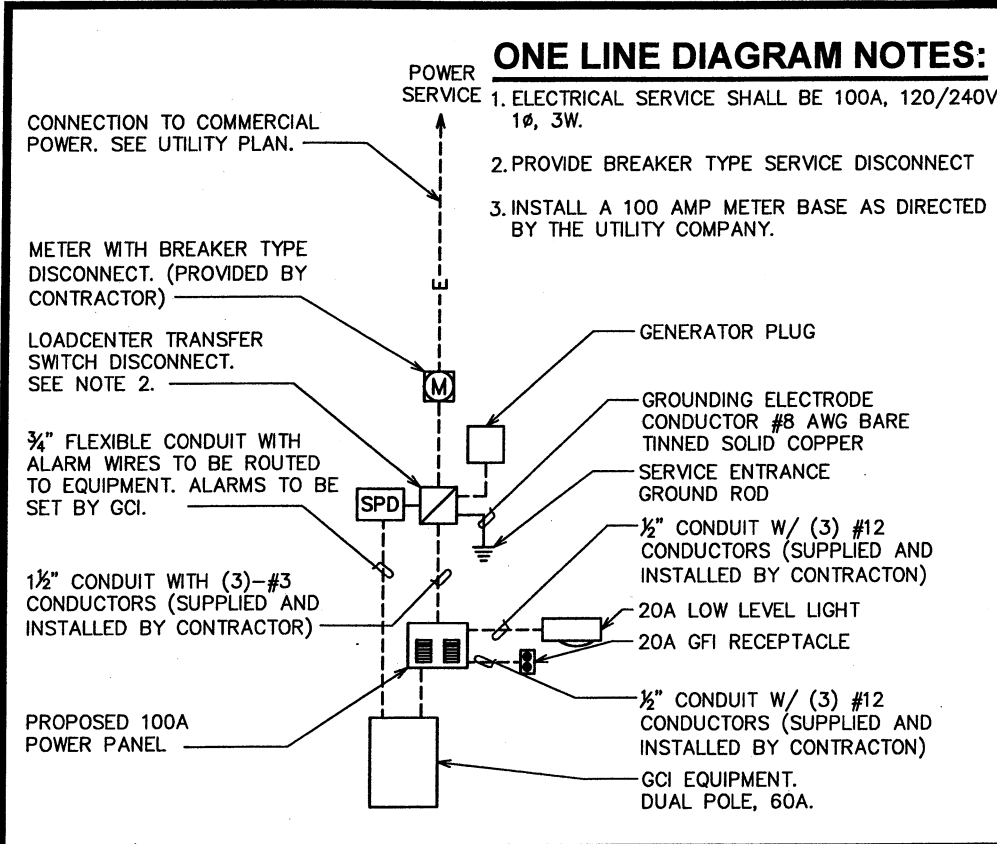
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DRAWN BY: KCS CHECKED BY: JRH

SHEET TITLE:

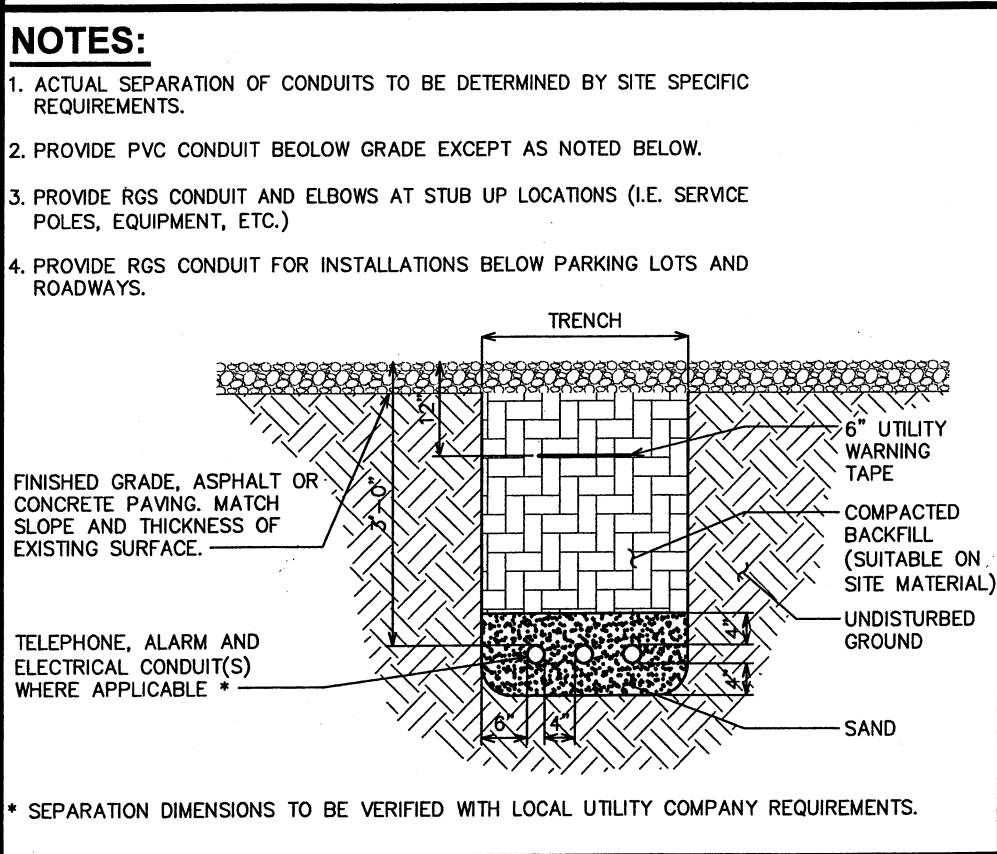
ELECTRICAL
NOTES

SHEET NUMBER: E-1	REVISION: 3 TEP #: 122326
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ONE-LINE DIAGRAM

SCALE: N.T.S.



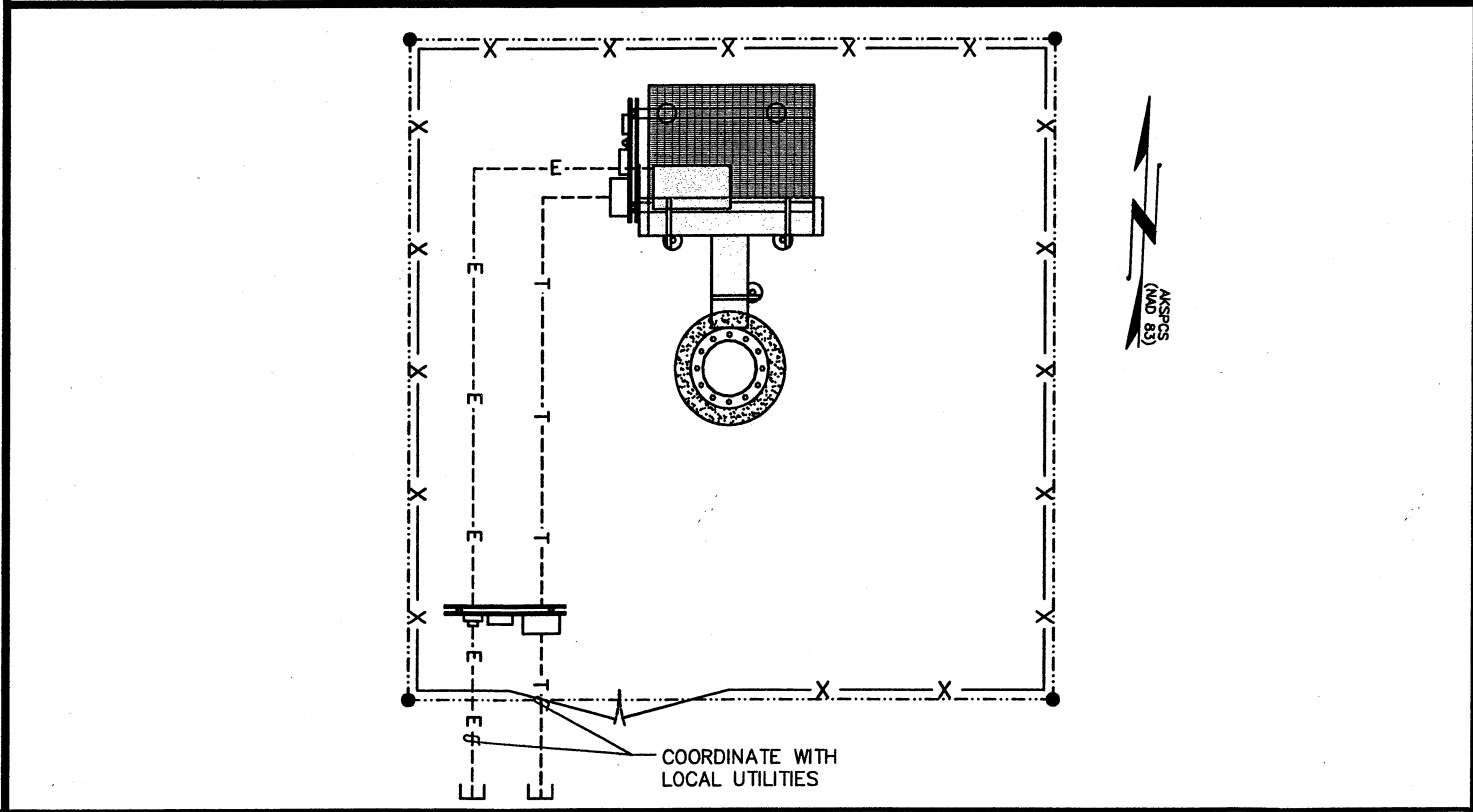
UNDERGROUND CONDUIT(S) TRENCH DETAIL

SCALE: N.T.S.

POWER PANEL SCHEDULE															
LOAD SERVED	VOLT AMPERES (WATTS)		WIRE	BREAKER		CKT #	PHASE	CKT #	BREAKER		WIRE	VOLT AMPERES (WATTS)		LOAD SERVED	
	L1	L2		P	TRIP				TRIP	P		L1	L2		
GFI RECEPTACLE	400			1	20A	1	A	2		20A	2		0	SURGE SUPPRESSOR	
LOW LEVEL LIGHT		400		1	20A	3	B	4					0		
						5	A	6		40A	2		3600	CABINET	
						7	B	8					3600		
						9	A	10							
						11	B	12							
						13	A	14							
						15	B	16							
						17	A	18							
						19	B	20							
						21	A	22							
						23	B	24							
VOLT AMPS	400	400											3600	3600	VOLT AMPS
L1 VOLT AMPERES						4000	4000	L2 VOLT AMPERES TOTAL VOLT AMPERES TOTAL AMPS AMPS X 125% X 110% FOR MAIN							
						8000									
						33.46									
						41.83									
						46.00									

POWER PANEL

SCALE: N.T.S.



POWER AND TELCO PLAN


SCALE: N.T.S.

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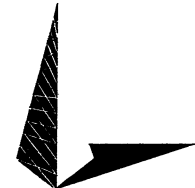
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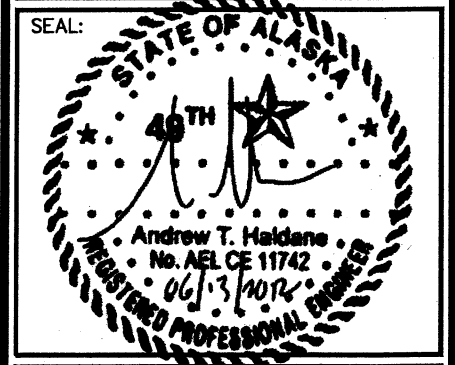


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DRAWN BY: NMC CHECKED BY: GMA

SHEET TITLE:

UTILITY PLAN

SHEET NUMBER: **E-2**

REVISION: **3**

TEP #: 122326

MUTLIGANG METER (TO BE PROVIDED BY GENERAL CONTRACTOR)

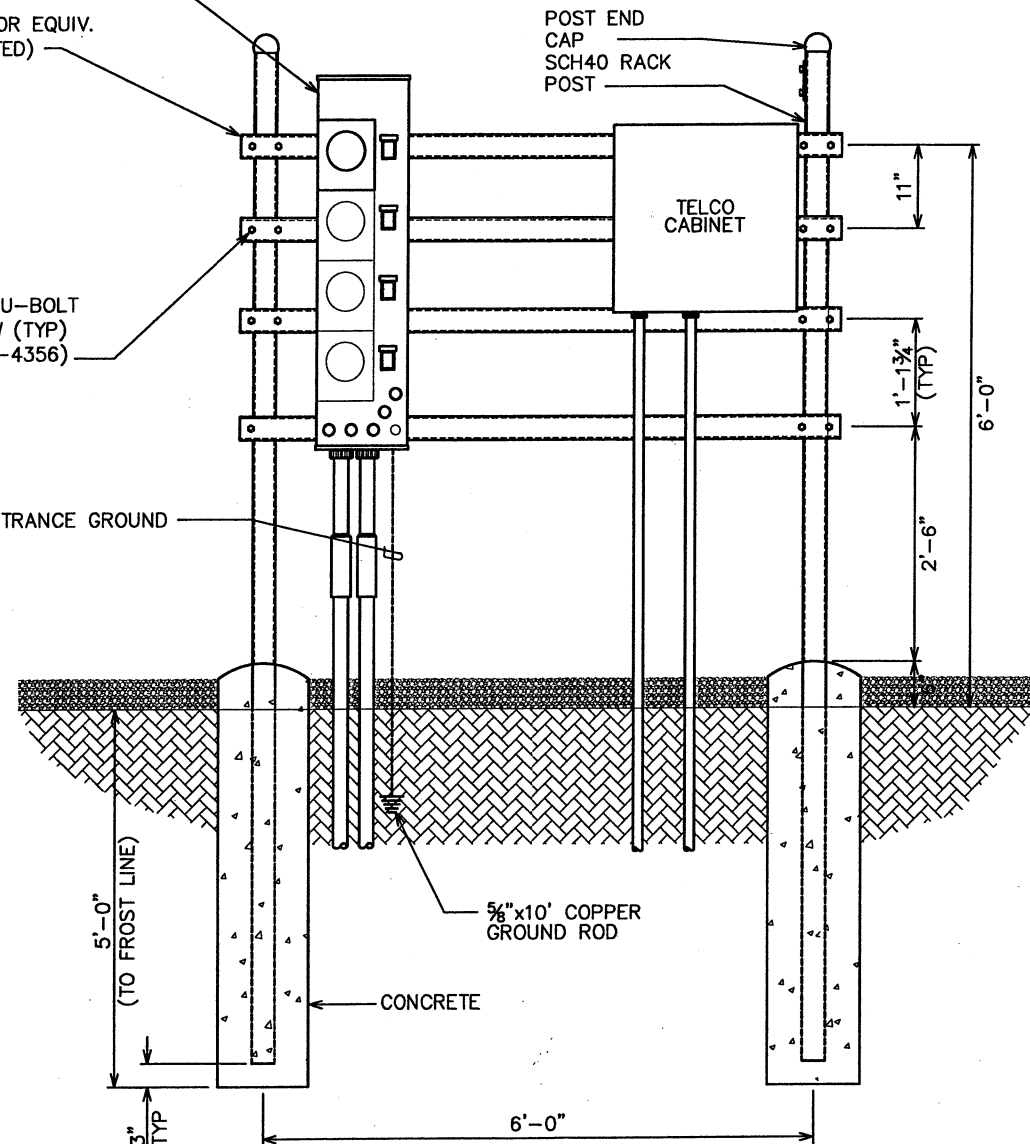
UNISTRUT OR EQUIV. (ZINC PLATED)

PROPOSED U-BOLT BY ANDREW (TYP) (P/N: GUB-4356)

SERVICE ENTRANCE GROUND

POST END CAP
SCH40 RACK POST

TELCO CABINET



FRONT VIEW

LOW LEVEL LIGHT

SURGE PROTECTION DEVICE

WEATHER CAP

LOADCENTER TRANSFER SWITCH DISCONNECT

UNISTRUT OR EQUIV. (ZINC PLATED)

GROUND LEAD

GENERATOR PLUG

GFI RECEPTACLE

6"x6"x1/4" FLANGE W/ (4) 3/4" Ø BOLTS

PLATFORM FOUNDATION. (SEE SHEET C-4 FOR DETAILS)

ICE BRIDGE

100A POWER PANEL

2 1/2" SCH40 PIPE (TYP)

TELCO CABINET

12" (TYP)

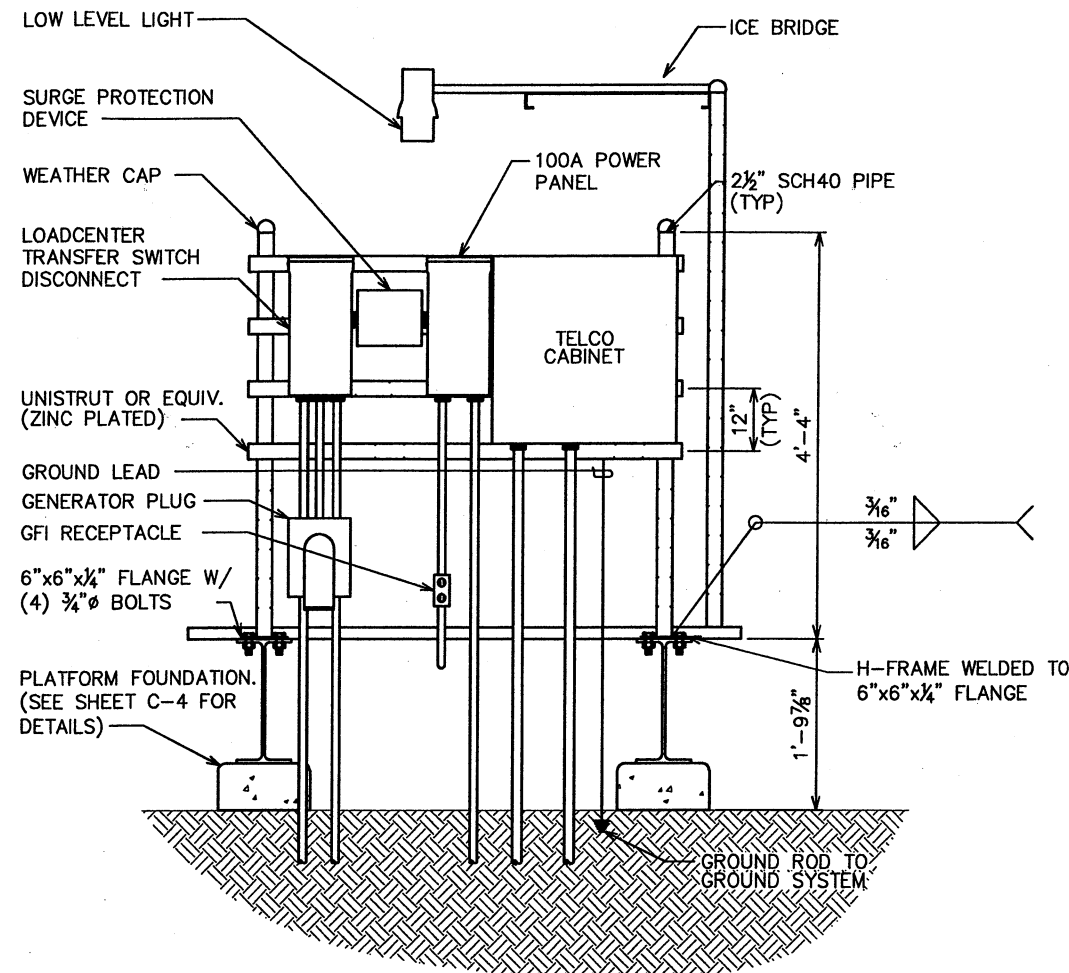
4'-4"

3/16"

3/16"

H-FRAME WELDED TO 6"x6"x1/4" FLANGE

GROUND ROD TO GROUND SYSTEM

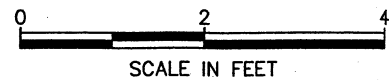
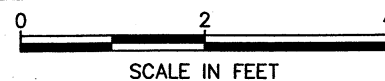


H-FRAME ON PLATFORM

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

H-FRAME NEAR FENCE

SCALE: 1" = 10'



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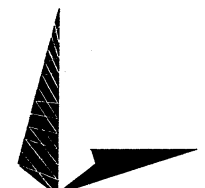
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DRAWN BY: NMC CHECKED BY: JRH

SHEET TITLE:

H-FRAME DETAILS

SHEET NUMBER:	REVISION:
E-3	3
	TEP #: 122326

DRAWING NOTES

- 1

TOWER GROUND RING TO FENCE (TYP OF 4)
- 2

TOWER BONDING TO GROUND RING (TYP OF 3, MIN)
- 3

GATE POST BONDING. SEE SHEET E-4 FOR DETAILS
- 4

TOWER GROUND BAR
- 5

GROUND LEAD FROM LIGHTNING ROD TO PROPOSED TOWER GROUND RING
- 6

#2 AWG BARE TINNED COPPER CONDUCTOR (TYP) TO BE BURIED 5'-0" BELOW GRADE.
- 7

5/8"Øx10' COPPER GROUND ROD
- 8

PROPOSED TOWER GROUND RING
- 9

#2 GND CONDUCTOR FROM EQUIPMENT GROUND TO EXISTING TOWER GROUND (TYP OF 2)
- 10

PROPOSED PLATFORM GROUND RING
- 11

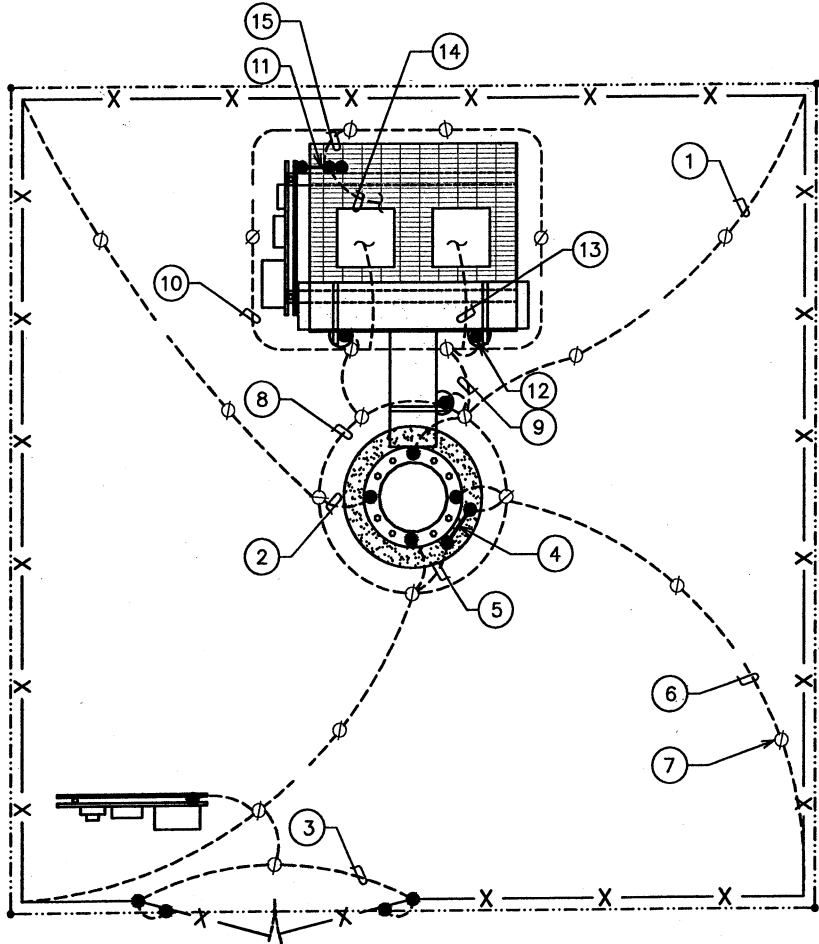
PROPOSED 2"x12" PLATFORM GROUND BAR. (SEE SHEET E-2 FOR DETAILS)
- 12

ICE BRIDGE SUPPORT POST (TYP)
- 13

#2 GND CONDUCTOR FROM PLATFORM GROUND BAR TO GCI EQUIPMENT CABINET. (GROUND PER MANUFACTURER SPECS).
- 14

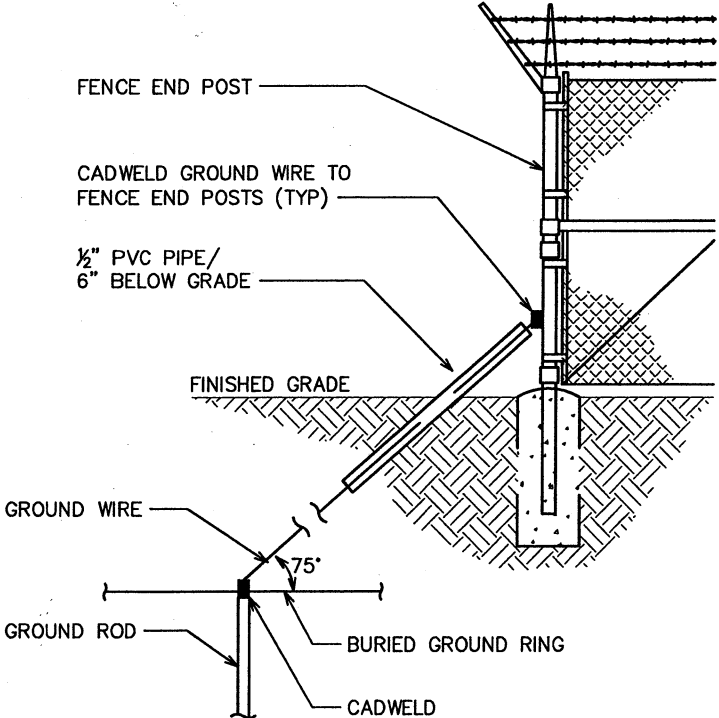
#2 GND CONDUCTOR FROM PLATFORM STRUCTURAL STEEL TO GROUND BAR.
- 15

(2) #2 GND CONDUCTORS FROM EQUIPMENT PLATFORM GROUND BAR TO EARTH GROUND SYSTEM



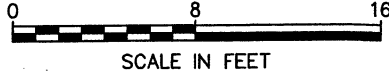
GROUNDING NOTES

1. GROUNDING ELECTRODES SHALL BE CONNECTED IN A RING USING #2 AWG BARE TINNED COPPER WIRE. THE TOP OF THE GROUND RODS AND THE RING CONDUCTOR SHALL BE 120" BELOW FINISHED GRADE. GROUNDING ELECTRODES SHALL BE DRIVEN ON 10'-0" CENTERS. (MINIMUM; 15'-0" MAX.)
2. BONDING OF THE GROUNDED CONDUCTOR (NEUTRAL) AND THE GROUNDING CONDUCTOR SHALL BE AT THE SERVICE DISCONNECTING MEANS. BONDING JUMPER SHALL BE INSTALLED PER N.E.C. ARTICLE 250.30.



TOWER GROUNDING PLAN

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



FENCE GROUNDING


SCALE: N.T.S.

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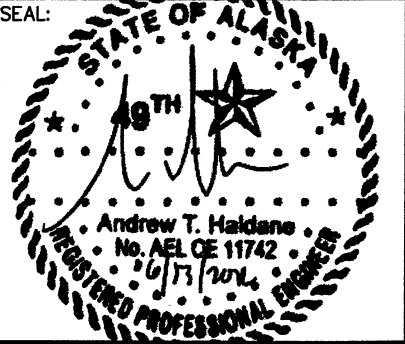
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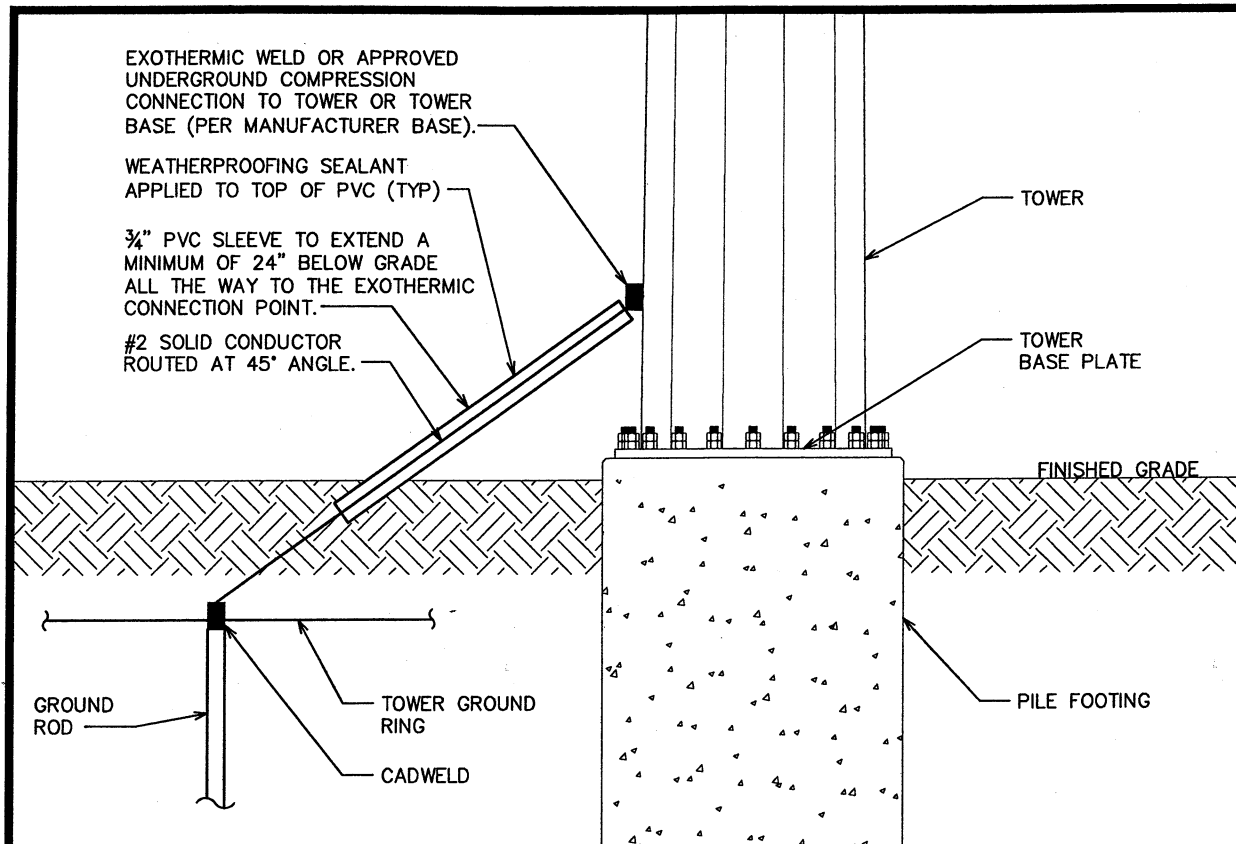
SHEET TITLE:

TOWER GROUNDING PLAN

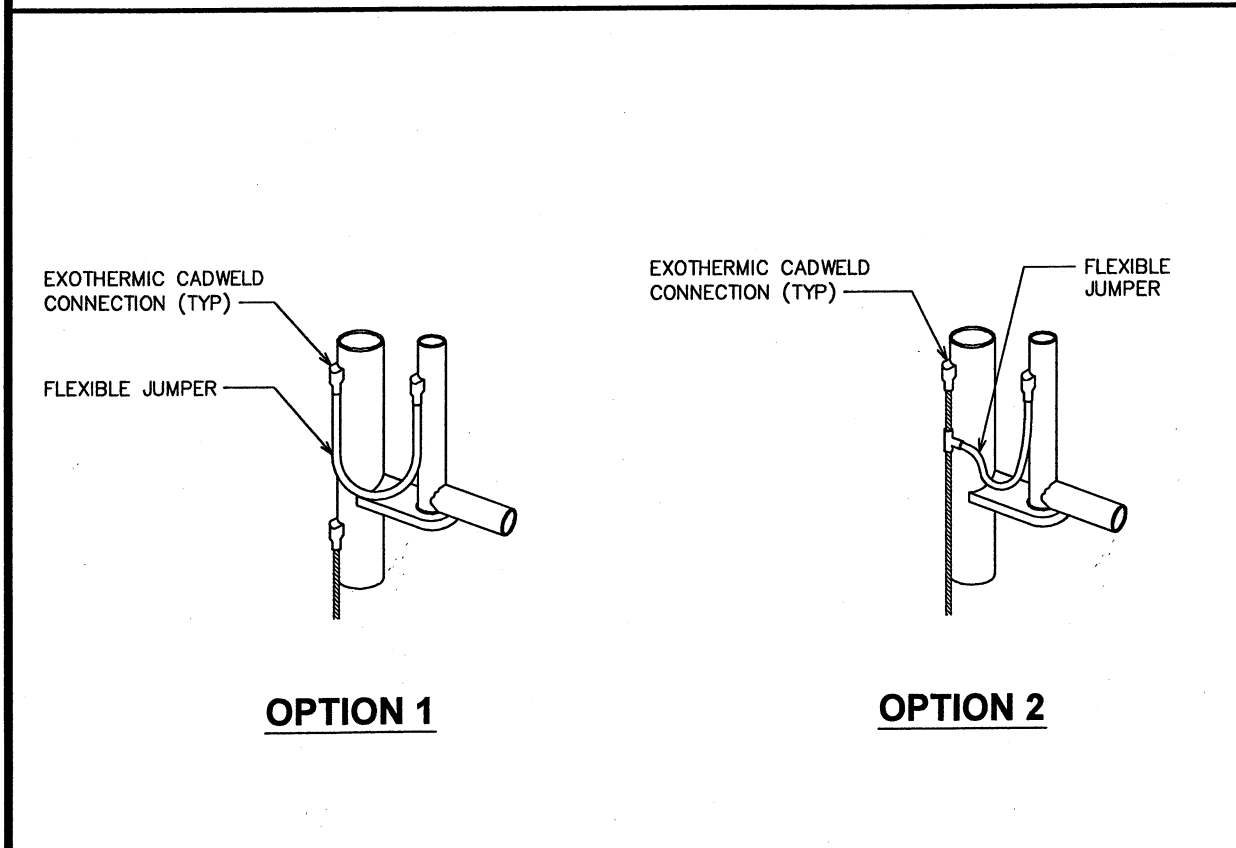
SHEET NUMBER: E-4

REVISION: 3

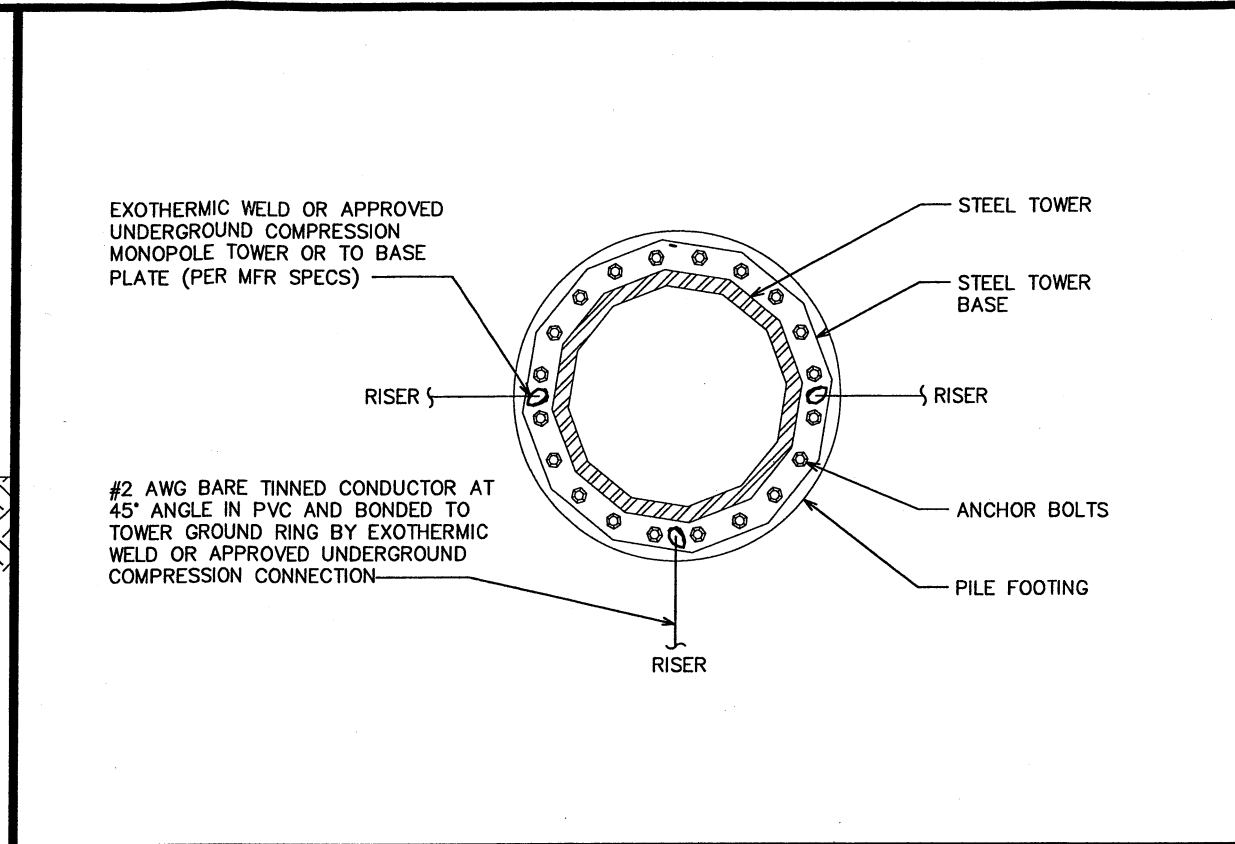
TEP #: 122326



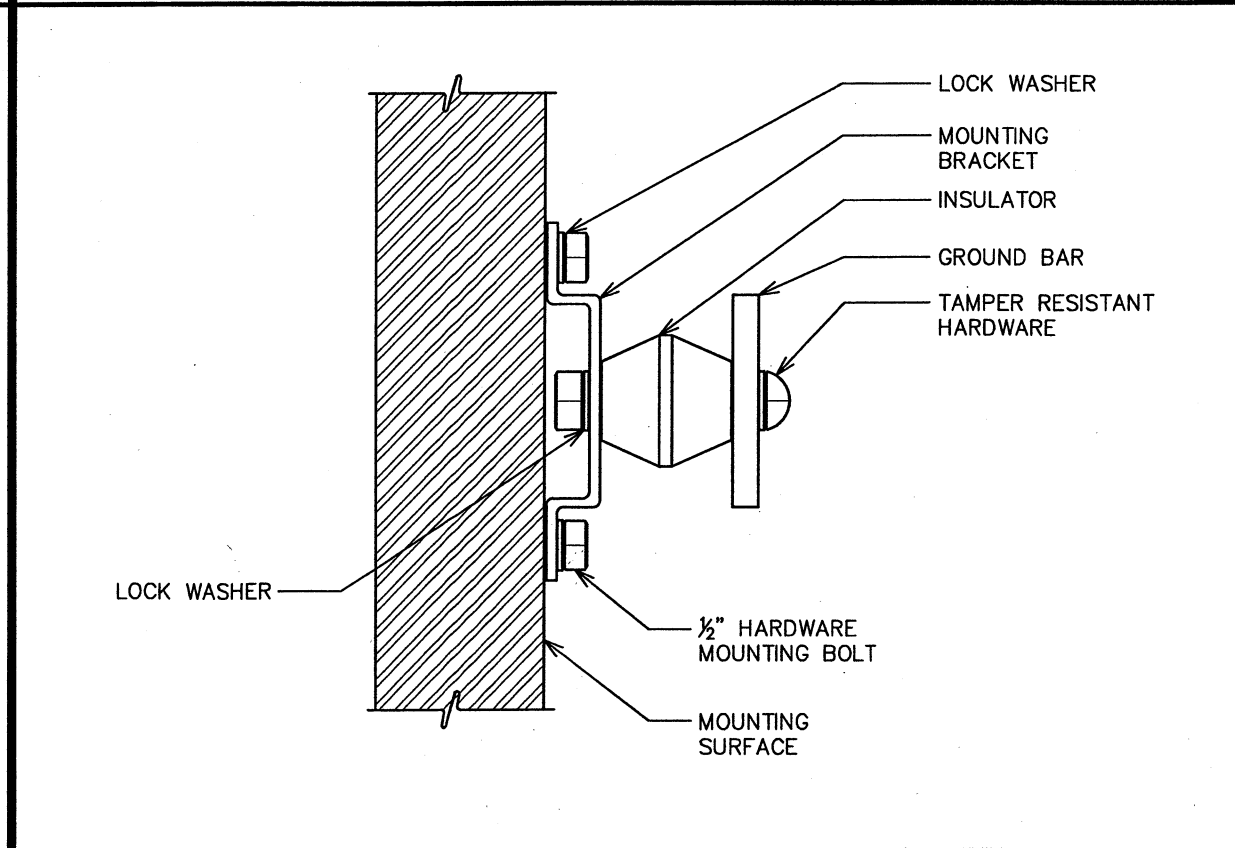
TOWER GROUNDING
SCALE: N.T.S.



FENCE GATE POST GROUNDING
SCALE: N.T.S.



TOWER BASE GROUNDING DETAIL
SCALE: N.T.S.




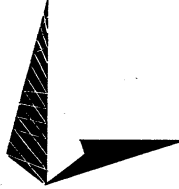
TOWER GROUND BAR DETAIL
SCALE: N.T.S.

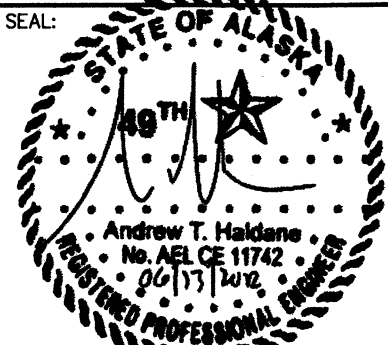
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SEAL:

Andrew T. Haldane
No. AEL CE 11742
06/13/2012
REGISTERED PROFESSIONAL ENGINEER


3	06-13-12	CONSTRUCTION
2	05-21-12	PRELIMINARY CONSTRUCTION
1	05-01-12	ZONING
0	04-21-12	ZONING
REV	DATE	ISSUED FOR:


DRAWN BY: NMC CHECKED BY: JRH

SHEET TITLE:
GROUNDING DETAILS

SHEET NUMBER: **E-5** REVISION: **3**
TEP #: 122326

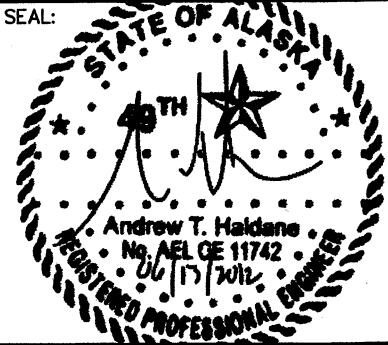
PROJECT INFORMATION:
COOGAN AK
 5600 MONTANA CREEK RD.
 JUNEAU, AK 99803
 (JUNEAU BOROUGH)

PLANS PREPARED FOR:

 3120 Denali Street, Suite 5
 Anchorage, AK 99503
 Office: (800) 770-7886

PLANS PREPARED FOR:

 2000 East 88th Avenue
 Anchorage, AK 99507
 Office: (907) 343-0403

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
 3703 JUNCTION BOULEVARD
 RALEIGH, NC 27603-5263
 OFFICE: (919) 661-6351
 www.tepgroup.net

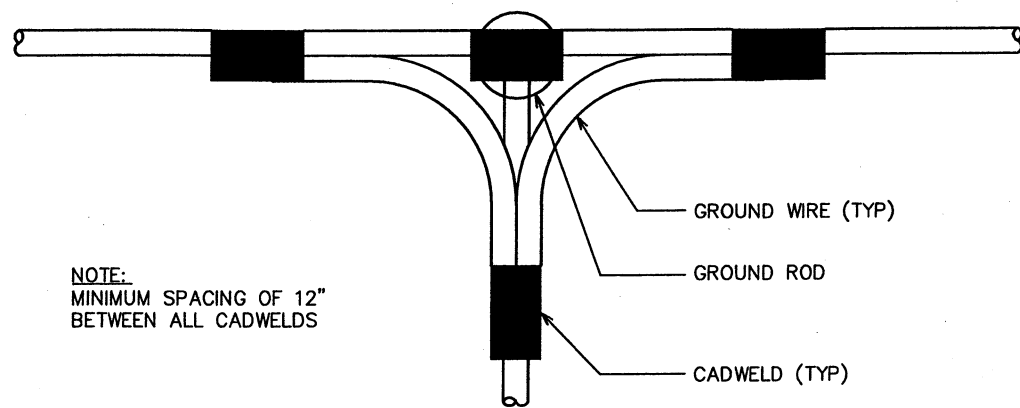
SEAL:


3	06-13-12	CONSTRUCTION
2	05-21-12	PRELIMINARY CONSTRUCTION
1	05-01-12	ZONING
0	04-21-12	ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: BKL CHECKED BY: KMM

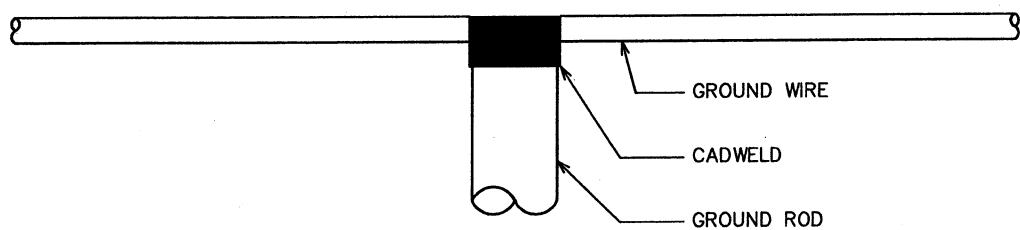
SHEET TITLE:
GROUNDING DETAILS

SHEET NUMBER: **E-6** REVISION: **3**
 TEP #: 122326



NOTE:
 MINIMUM SPACING OF 12"
 BETWEEN ALL CADWELDS

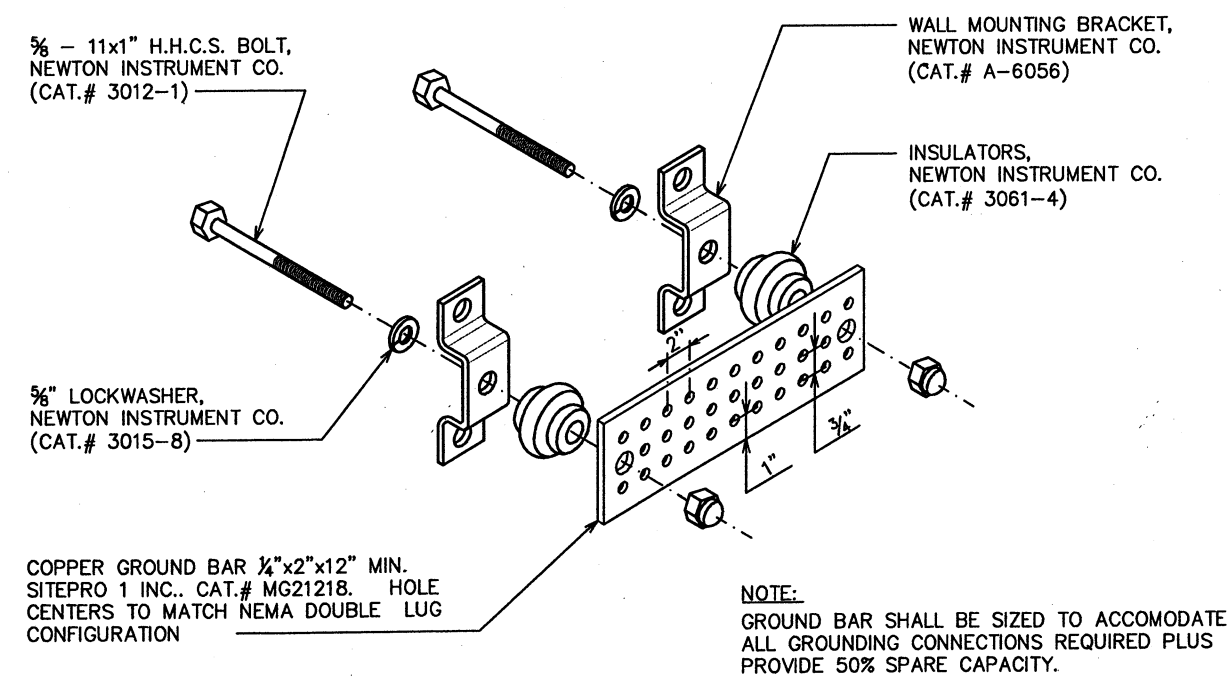
TOP VIEW



SIDE VIEW

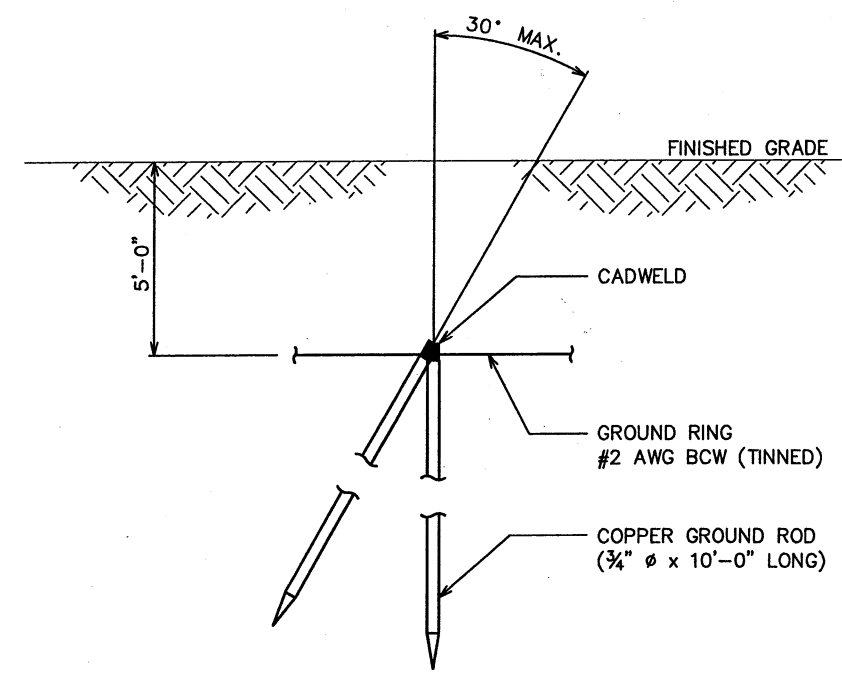
CADWELD GROUNDING DETAIL

SCALE: N.T.S.



STANDARD GROUND BAR DETAIL

SCALE: N.T.S.



COPPER-CLAD STEEL GROUND ROD

SCALE: N.T.S.

APPRAISAL REPORT

OF PERCEIVED IMPACT OF INSTALLATION OF
100' TALL TELECOMMUNICATIONS MONOPOLE
ON NEIGHBORING PROPERTY VALUES,
JUNEAU, ALASKA



Prepared For: Wayne Haerer, Jr.
GCI Network Services
2550 Denali Street Suite 1000
Anchorage, Alaska, 99503-2751

Prepared By: Charles E. Horan AA41
Horan & Company, LLC
403 Lincoln Street, Suite 210
Sitka, AK 99835

Effective Date: May 31, 2012

Report Date: June 6, 2012

Our File Number: 12-083

HORAN & COMPANY

REAL ESTATE APPRAISERS/CONSULTANTS

CHARLES E. HORAN MAI / WILLIAM G. FERGUSON, TIMOTHY W. RILEY, JOSHUA C. HORAN,
JAMES A. CORAK, AND SARAH ADAY

403 LINCOLN STREET, SUITE 210, SITKA, ALASKA 99835

PHONE NUMBER: (907)747-6666

FAX NUMBER (907)747-7417

commercial@horanappraisals.com

June 6, 2012

Attention: Wayne Haerer, Jr.

GCI Network Services

2550 Denali Street, Suite 1000

Anchorage, Alaska 99503

VIA Email: whaerer@gci.com

Re: Appraisal Report of Perceived Impact of Installation of 100' Tall Telecommunications Monopole on Neighboring Property Values, Based on Interviews with Knowledgeable Market Observers, Juneau, Alaska; Our File No. 12-083

Dear Mr. Haerer,

GCI is developing communication facilities in Juneau that include a 100 foot tall monopole with a 5 foot lightning rod mounted atop and associated equipment cabinet and appurtenances at Coogan General LLC lot, 5600 Montana Creek Rd. A conditional use permit is required from the City and Borough of Juneau (CBJ) to be obtained for this development. One of the requirements of the permit is to determine the impact of the proposed facility on surrounding neighborhood property values. I have completed a study to identify the valuation issues through discussions with local knowledgeable people involved in this issue, the property owner and local real estate appraisers, brokers and other market participants who would enable me to discern the market perception relative to this issue in the Juneau market.

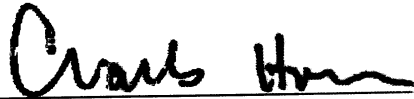
I have viewed the subject site, interviewed the property owners, site developers and the CBJ planner, and reviewed the development plans. It appears that the tower, a monopole, will be 20' to 30' above the existing tree height surrounding the subject property. In my opinion, this would be similar to monopoles found in other residential settings in the Mendenhall Valley. As planned, it would not cause serious view blight and would not provide noise, smell, or any other tactile interference to make it disharmonious with the neighborhood. Based on our interviews with four Realtors, eight appraisers, and our own experience in the market place, it does not appear that there would be any substantial or measurable decrease in value of neighborhood property due to the proposed development.

In addition to interviewing knowledgeable market observers, we have collected anecdotal information which substantiates this finding. The only additional research that might be done to further probe the issue would be to identify recent sales in residential areas where there are cell towers and do a one-on-one comparison to see how those sale prices compare to the sale values of other properties with a lesser presence of cell tower influence. In my opinion, it is highly probable that the results of this additional analytical effort would not differ from the conclusions found from interviewing local, knowledgeable market observers.

Your attention is invited to the attached report which describes the subject property, outlines our methodology, discerns the opinions of knowledgeable market observers and identifies areas of other cell towers in residential settings that might have comparisons to the subject. Also, we have outlined what type of locational impacts may result in substantial decrease in property values. The report contains other background information relative to our conclusions, and summarizes Assumptions and Limiting Conditions, Definitions and Certification of this consultation.

If you have any questions or comments, please do not hesitate to call.

Sincerely,

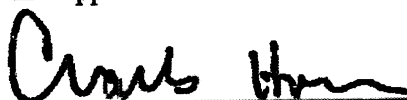
A handwritten signature in dark ink, appearing to read "Charles Horan", written over a horizontal line.

Charles Horan, AA41
HORAN & COMPANY

CERTIFICATION OF CONSULTATION

I certify that, to the best of my knowledge and belief:

- The statements of fact contained in this report are true and correct.
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
- I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- The reported analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics & Standards of Professional Appraisal Practice of the Appraisal Institute, which include the Uniform Standards of Professional Appraisal Practice.
- The use of this report is subject to the requirements of the Appraisal Institute relating to the review by its duly authorized representatives.
- I have made a personal inspection of the property that is the subject of this report.
- No one provided significant real property appraisal assistance to the person signing this certification.
- I have not performed any services regarding the subject property within the prior three years, as an appraiser or in any other capacity.
- As of the date of this report, I, Charles Horan, have completed the continuing education program of the Appraisal Institute.


Charles E. Horan, Real Estate Appraiser
AA41

May 31, 2012

Effective Date

June 6, 2012

Report Date

PROPOSED VIEW FROM LOCATION 1

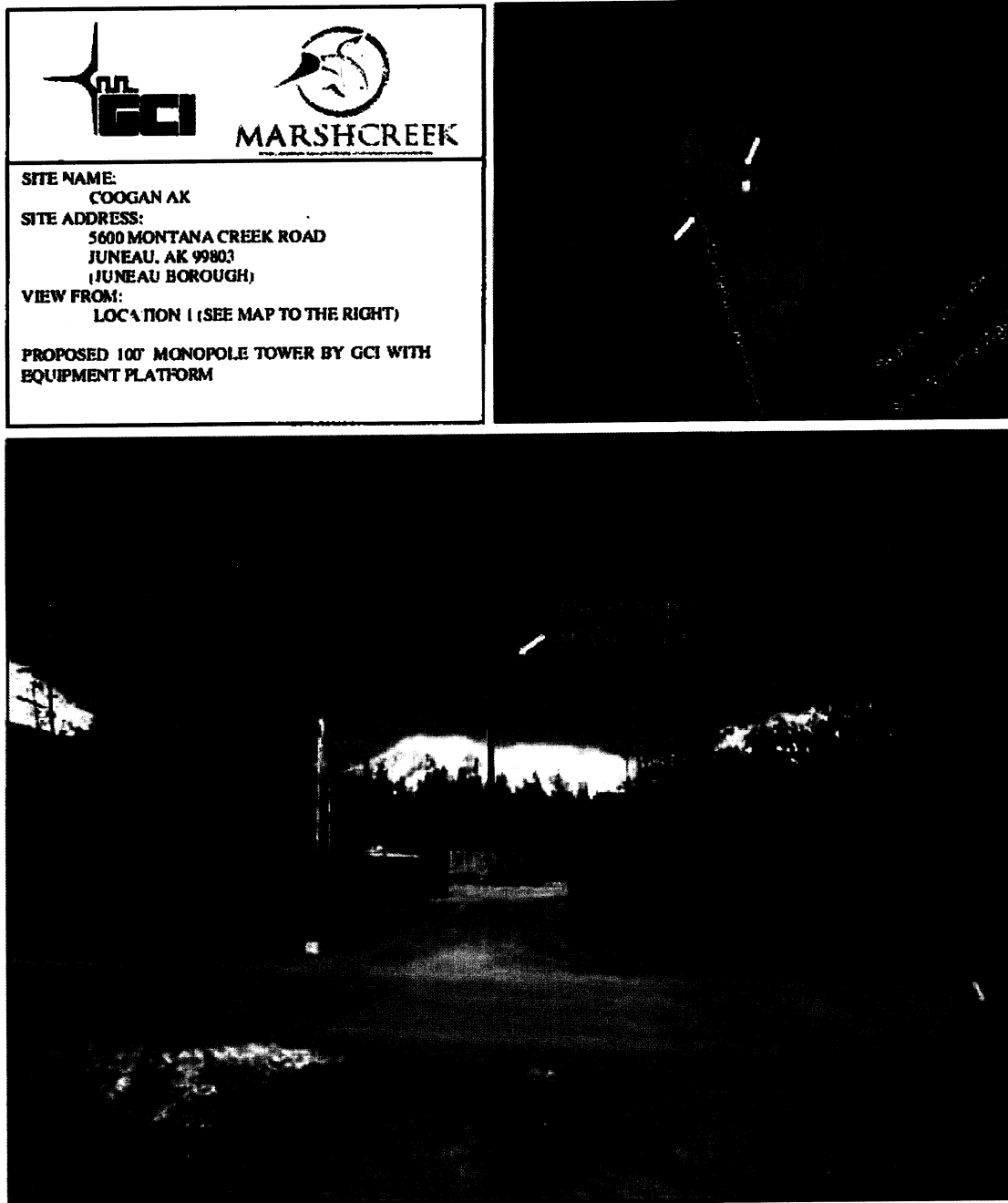


 PHOTO RENDERING PROVIDED BY TOWER ENGINEERING PROFESSIONALS, INC.

FIGURE 1 - LOCATION AND STREET VIEW

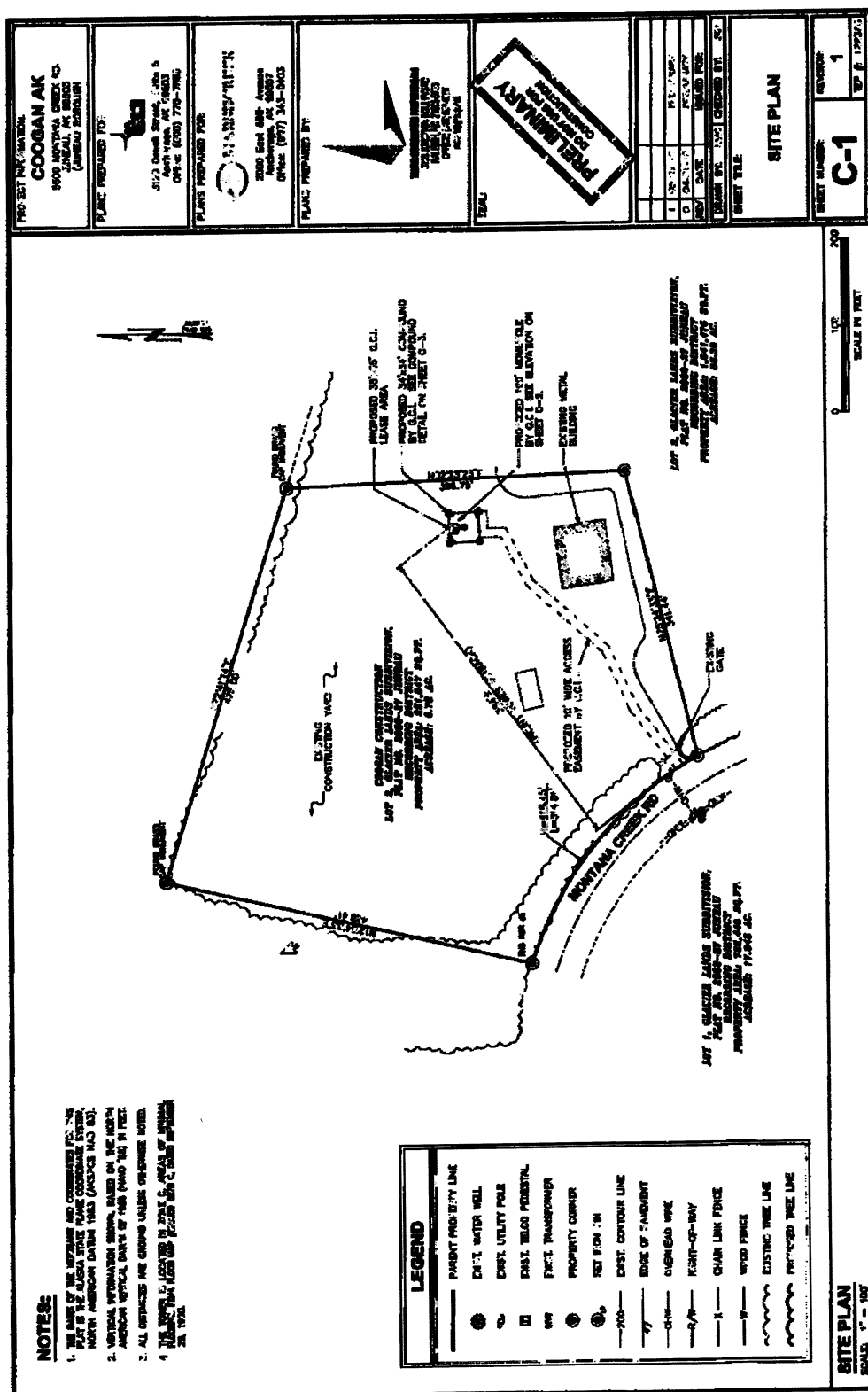


FIGURE 2 - SITE PLAN

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PROPOSED PROJECT

GCI is negotiating approximately a 35'x35' lease from the owners of the Coogan General LLC lot, which is located at 5600 Montana Creek Road, Juneau, Alaska described as Lot 2, Glacier Land Subdivision, Plat 2003-27, Juneau Recording District. The site is zoned D3, a medium density residential zone. The site has a row of tall spruce trees along the highway, approximately 80' to 100' tall.

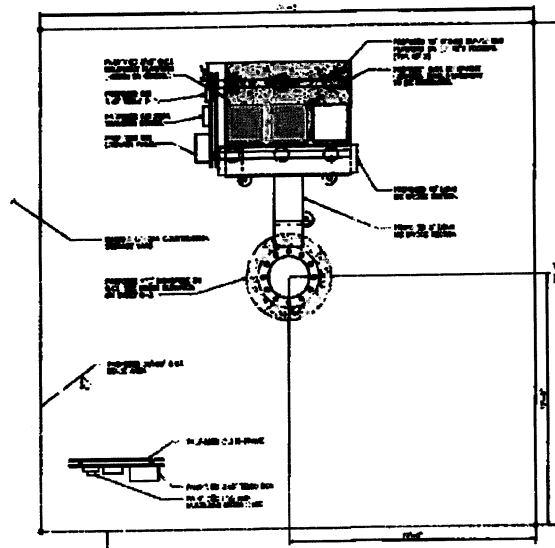


FIGURE 3

The site has a driveway access leading into the large graded predominantly cleared site filled with construction material equipment and mounds of unclassified fill material. There is a large shop building in the southeast corner. The common lines between the subject and adjacent property are generally have a berm of soil 5'-15' high or a band of trees.

Although the subject is zoned for residential, it has industrial characteristics which are evident of a neighborhood in transition. There has been a slow absorption of residential development south moving towards the subject. Immediately adjacent and south of the subject is a 35 acre parcel operating as a dredge and stump fill site. South and west of the subject across Montana Creek Road is a 17 acre privately owned parcel which it could be developed as similarly. The

subject itself is a large contractor storage yard and is permitted for ministorage. The surrounding land to the west is zoned Rural Reserve owned by the City and Borough of Juneau. It is presently the site of the Juneau rifle range.

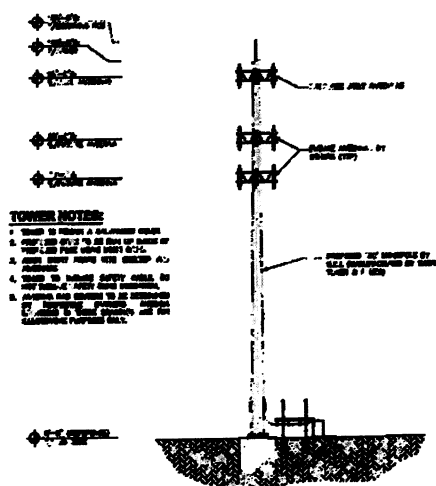


FIGURE 4

The project as proposed would be a 100 foot tall monopole with an additional 5 foot lightning rod. At about the 96 foot level there would be an antenna. The poll has capabilities of future antennas being installed at the 70 foot and 80 foot level. The 35 x 35' site is purposed to be fenced. There will be an equipment platform several equipment cabinets connected the by ice bridges to the monopole tower. This power will be

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extended to the site by 10 foot easement extended to the roadway. The tower will be located about 360 feet off the Montana Creek Road property line.

As proposed it's not expected that the facility will generate significant sound. The tower will be easily visible from adjacent property over the low lying berm. Cars approaching the site from Montana Creek Road may have screened view through the trees which are close to the road. Locations up to a mile or more away from vantages to the South where there is more traffic, say along the Mendenhall Loop Road and even as far as glacier Highway may have intermittent distant views of the subject.

It is assumed the structure will meet wind and weight bearing specifications as it goes through the local building code process. The antennas will distribute electromagnetic radio waves that contain some level of radiation. These radio frequency levels must be in compliance with FCC emissions. There is a concern on the local level about the health hazards of cell tower emissions. There have been local concerns about these health risks and these risks are also expressed in national and international literature on the issues on cell towers and their possible bio-hazards. There are two sides to this debate. While a sincere concern for health risks have been raised at a number of public meetings for conditional use permits in conjunction with tall cellular phone tower development in Juneau, there is extensive public literature that indicates there is no convincing scientific evidence that weak radio frequency signals from base stations and wireless networks cause adverse health effects.¹ New research and information may emerge over time and the arguments for and against the health concerns may change in the future. The only purpose of our study is to determine if there is a current negative market response to the presence of cell towers in the type of screened setting anticipated at the Glacier Meadows RV Park as of December 2011.

JUNEAU REAL ESTATE MARKET

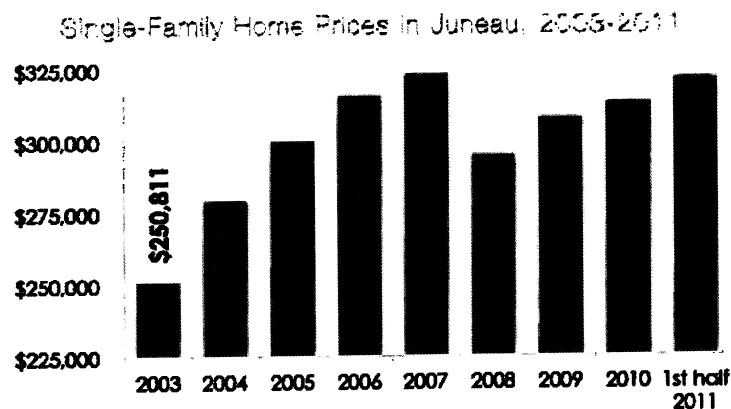
A market is a place where buyers and sellers meet to determine a price. The market in Juneau is relatively well developed with most transactions being handled by Realtors. There is an active Multiple Listing Service (MLS) that gives reasonable exposure for the bulk of the sales. As an indicator of the volume and pricing trends in this market, Figure 4 from the Juneau Economic Development Association shows average selling price of a single-family residence through the first quarter of 2011. The market has remained strong throughout the year. There is some discernible appreciation in the market place.

¹ See American Cancer Society web site under question Do Cellular Phone Towers Cause Cancer?
<http://www.cancer.org/Cancer/CancerCauses/OtherCarcinogens/AtHome/cellular-phone-towers>

Housing

Juneau Housing Sales and Prices

In the first half of 2011, home prices were up, and the average number of days on the market was down. The average price of a single-family residence was \$321,391—a three percent increase over the first half of 2009 and similar to 2007 (peak) prices. During the same period, the price of single-family homes nationally fell by 7 percent. Nationally homes are at their 2003 prices.



Source: Juneau and Southeast Economic Indicators 2011, Juneau Economic Development Council

FIGURE 5

This trend covers a period when housing prices had run up, which generally follows the national trend, peaking in 2007 and then cooling in the following years based on the national recession and the uncertainty in the real estate market. The Juneau market, however, has remained strong over the past three years with a persistent employment and population base. Also, the capital creep ended or slowed significantly in 2009 along with the announcement that the Kensington Mine would come online. Indeed, production began in June 2010. Further, the influence of the state government

in Juneau remained positive due to the strength of the treasury as a result of persistent high oil prices. In this environment, demand is good, sales brisk and the market would be characterized as in balance.

At the same time, the demand for cell phone usage has increased significantly. The increased demand has been filled mostly by AT&T and GCI within the Juneau area. They or their contractors have developed cell towers within the community in an attempt to get as complete coverage as possible. The Mendenhall Valley residential area has seen a development of several towers and some permitting of towers that have not been built. It is reported that within the subject area itself, reception is spotty for some carriers. The subject tower is proposed by GCI but the area has also been of interest to contractors for Verizon, which would introduce a new cell carrier in the Juneau market. Residents and business owners in the area have indicated that reception had been spotty and there is some desire from neighbors along Mendenhall Loop Road and further north to have better cell reception.

VALUE IMPACT AND HARMONY OF CELL TOWER PRESENCE

This study specifically addresses the City and Borough of Juneau Code 49.15.330 (d) (5) (B) f, which require the Planning Director and Commission to answer the question “Will [the proposed development] substantially decrease the value of or be out of harmony with property

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in the neighborhood area?" The term "substantially decrease the value" would mean there would be a measurable negative influence. In the subject instance, this would come from the visual impact of the tower and the market's perceived health and safety risks that would be substantial enough to be discernible through sales activity reflecting a measurable downward pricing trend discernible in the market. The term "be out of harmony" would be captured in these elements of market diminution due to the negative impact of sight, sound, smell or other perceived health or safety risks that were not present prior to the permitted use.

In the past, the appraiser has studied the Juneau market including specific sales research and interviews with knowledgeable market observers to discern what types of negative uses or situations may result in an impact on property values. Some of these impacts may be substantial or measurable to pricing in the market. Some impacts are more subtle and not considered to have a measurable impact on property values relative to comparable properties in areas without the particular disharmonious use. Some examples of situations that, in the extreme, may impact property values and on the other hand, if more subtle, probably would not impact property values include the following:

- A home in a slide area;
- Properties next to high voltage power lines, with view obstruction;
- Properties with significant view obstructions such as power poles, commercial and industrial or degraded uses within the view shed;
- Properties next to noxious odors or noises such as sewage treatment plants or airport noise;
- Properties within avalanche areas;
- Properties that have had oil spills or other bio-hazardous events that have been mitigated by cleaned up or managed in place.

In order to determine the impact of these types of negative attributes, we have considered a variety of methods including matched-paired sales studies and interviews with local knowledgeable market observers. The matched-paired sales method would include identifying recent sales of properties near cell towers that are similarly situated to the proposed situation. These sales could then be contrasted with other neighborhood sales or sales as similar as can be found in all regards except for the influence of cell towers due to proximity or visual orientation. This would be a time consuming and costly study. Its ultimate reliability would depend upon the availability of observations or sales that would provide the needed contrast. In situations where cell towers are large, of noticeable contrasting colors, and provide extreme

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nearby view obstructions in a residential settings, it would be an easier hypothesis to test. In the subject's case, where the cell tower would be more subtle, it may be difficult to discern the subtle differences and would require a greater amount of market research with a questionable outcome depending on the quality of available data. As an alternative, there is a more direct way to address the problem. We developed a second method, interviewing knowledgeable market observers.

Ultimately, real estate is local. Prices paid and the factors influencing those prices are based on local preferences and market knowledge. Trends observed in other areas may not be immediately applicable to the local market. Professionals who have observed their local market, especially Realtors and appraisers who are familiar with hundreds or thousands of transactions in the local market, would be the best to first discern what the expected impact of cellular phone towers would be on price or market value. The definition of market value is:

The most probable price that a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition are the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

1. Buyer and seller are typically motivated;
2. Both parties are well informed or well advised, and acting in what they consider their best interests;
3. A reasonable time is allowed for exposure in the open market;
4. Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
5. The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

The Dictionary of Real Estate Appraisal, 5th Edition, Appraisal Institute, Pages

123

The critical element here is the knowledge of the buyers and sellers. In order to determine the buyer and seller knowledge base, we have interviewed appraisers, Realtors and others who are knowledgeable within the market place, having observed buyer and seller response to prices for various positive and negative aspects of residential real estate transactions in Juneau.

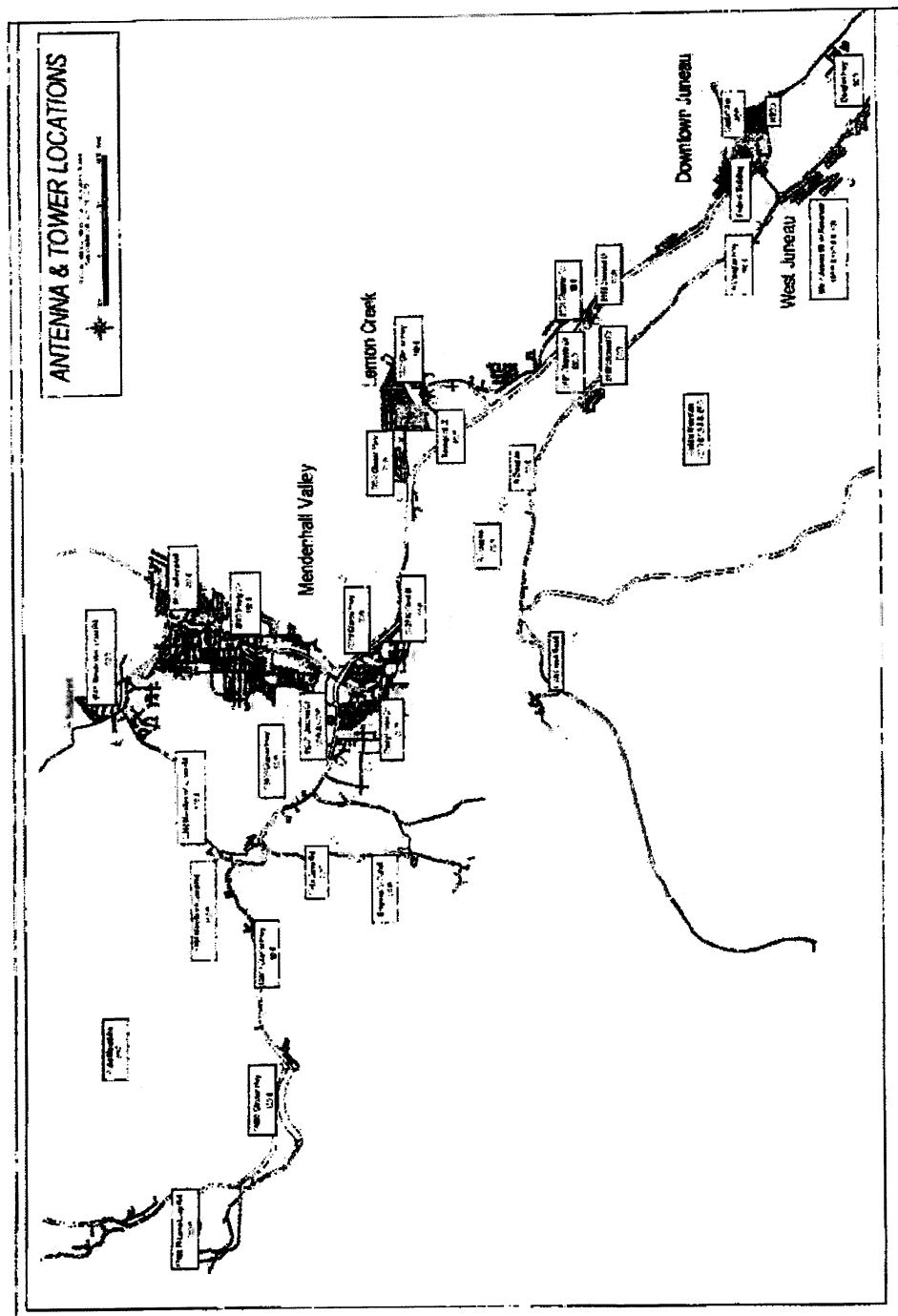


FIGURE 6 - ANTENNA AND TOWER LOCATIONS

INTERVIEWS WITH MARKET PARTICIPANTS

Juneau Residential Real Estate Appraisers' Feedback

We've interviewed a significant number of brokers and residential real estate appraisers who work within the Juneau market and regularly communicate with buyers and sellers. Eight appraisers with over 100 years of experience and over 10,000 residential appraisals were asked if they had ever used a discount or adjustment for a property's locational influence relative to cell towers in the residential settings similar to the subject. The answer was no. Further inquiry was made as to what types of negative neighborhood influences might require consideration of market adjustments. Examples included proximity to Lemon Creek Correctional Center, the garbage dump, substation noise, avalanche zone or slide areas, residential views over industrial parks or old mobile home parks. It is important to note that many of these negative influences are relative to comparables taken from other areas and are not necessarily negative for comparables from the similarly situated area.

Juneau Residential Realtors' Feedback

Similar to the question proposed to appraisers, Realtors were interviewed to ascertain if they had detected any influence of cell towers in their experience with buyers and sellers. Four Realtors interviewed represented involvement of approximately 1,400 transactions, with over 30 years' experience within the Juneau market. Their responses were generally that there was no significant influence and, oftentimes, if cell towers were disguised, they were overlooked. There was an acknowledgment that if cell towers interfered significantly with the view shed, such as a large, direct, obstruction, which obstructed an otherwise scenic view, it may be an issue. However, there were no specific situations noted in this regard. One realtor commented that if there were a large tower developed immediately adjacent to the property it might have some influence, but it depended on the degree and how well screened the tower would be. In several cases, Realtors commented that they were never discussed or not known to have existed in areas where they were present. In some cases, cell tower installations were confused with electrical installations.

When asked if there were health concerns related to cell towers within the market that impacted value, the answer was no. One comment was that there may have been some health concerns with proximity to electrical substations, and they would expect that concerns of cell towers might be similar; however, there was no known adjustment for price based on these situations.

The Realtors were asked what kind of negative influences in the market they would consider substantial or measurable due to locational elements. Waste water treatment plant, a gas company, downwind from the dump and proximity to the jail and avalanche areas were all mentioned. Properties that had persistent noise or odor, significant view obstruction or known

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hazards such as avalanche may be considered significant within the market. When queried about less significant negative influences that may not be substantial, the indication was that if the degree of influences were moderate or subtle, they would not be significant market determinacies.

ANECDOTAL DATA

The presence of cell towers in many instances is unnoticed. There are comments from Realtors who sold houses adjacent to cell towers that they were not even aware the cell towers were there. One realtor handled two separate transactions within the last few years, literally across the street from the 100' tall cell tower at Valley Boulevard and Mendenhall Loop Road (8503 Valley Boulevard) and indicated the cell tower had no apparent influence on the transaction. A comment was made that the congested intersection and traffic along Mendenhall Loop Road would have more of an impact on price consideration.

A renter at 12280 Mendenhall Loop Road, Darrell West, indicated the nearby cell tower made no negative difference to him or his roommates. In fact they appreciated that they had very good reception for their 3G Android cell phones.

The former City and Borough of Juneau Assessor related an incident where as Assessor he had made a downward adjustment for a cell tower on North Douglas. Within a year of making a substantial downward adjustment, he reported the property sold for \$200,000 over the adjusted value. There seems to be an acknowledgment in the market that a large tower blocking a scenic view could have an influence on value but this would be a rare case. There was no anecdotal data related to the Mendenhall Valley residential areas that would indicate well-situated, disguised cell towers would have a negative impact on surrounding property values.

PRICE COMPARISON

The scope of this study did not include an analysis of pricing of properties directly in the influence of cell towers that would be comparable to the subject situation. The appraiser has reviewed various cell tower locations in the area. The most competitive towers would be those located at 12260 and 12364 Mendenhall Loop Road, at the Valley Chapel at 9741 Mendenhall Loop Road, 8503 Valley Boulevard, and 8748 Trinity Drive. Figure 6 indicates the potential similar study areas that would likely mimic the impact, if any, in the proposed area.

Further study could be done to suggest a radius of influence for these towers and identify sales, which have occurred since their installation. The compared sales analysis would attempt to identify properties similarly situated of similar characteristics in similar market conditions (time) and determine if there were significant price differences between the sales explainable by the influence of the cell tower. It is not certain how many sales and paired similar properties

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would fulfill these criteria. Based on the research done so far and the interviews with knowledgeable market observers, it does not appear likely that the most competitive similarly situated cell towers would produce a negative influence on market values discernible by this paired sales technique. However, we stand ready to pursue this type of study if so desired.

CONCLUSION

I have reviewed competing potentially similar neighborhood areas. I have found a lack of documented discounts or negative market reactions towards the presence of cell towers in these residential settings. This is confirmed by interviews with local knowledgeable market observers. It is therefore my opinion there would be no substantial decrease of value due to the presence of the proposed cell tower to the surrounding neighboring properties. It is further my opinion that if a more in-depth study was completed through market price comparisons, it is highly probable it would not change this conclusion.

QUALIFICATIONS OF CHARLES E. HORAN, MAI

State Certification

Bachelor of Science Degree

MAI, Member Appraisal Institute, No. 6534

State of Alaska General Appraiser Certification, No. AA41

University of San Francisco, B.S., 1973, Major: Business Administration

Employment History

August 2004 Owner, HORAN & COMPANY, LLC

03/87-07/04 Partner, HORAN, CORAK AND COMPANY

1980-02/87 Partner, The PD Appraisal Group, managing partner since November 1984
(formerly POMTIER, DUVERNAY & HORAN)

1976-80 Partner/Appraiser. POMTIER, DUVERNAY & COMPANY, INC., Juneau and Sitka, Alaska

1975-76 Real Estate Appraiser, H. Pomtier & Associates, Ketchikan, AK

1973-75 Jr. Appraiser, Ketchikan Gateway Borough, Ketchikan, AK

Lectures and Educational Presentations

1998. "Easement Valuation Seminar," Alaska Chapter Appraisal Institute, Anchorage, AK

1998, "Easement Valuation Seminar," Seal Trust, Juneau, Alaska

1997, "Sitka Housing Market," Sitka Chamber of Commerce

1997, developed and taught commercial real estate investment seminar for Shee Atika, Inc.

1994. developed and taught seminar "Introduction to Real Estate Appraising," University of Alaska/S.E., Sitka Campus

1985. Speaker at Sitka Chamber of Commerce, "What is an Appraisal? How to Read the Appraisal"

1984. Southeast Alaska Realtor's Mini Convention, Juneau, Alaska

Day 1: Introduction of Appraising, Cost and Market Data Approaches

Day 2: Income Approach, Types of Appraisals, AIREA Accredited Course

1983, "The State of Southeast Alaska's Real Estate Market"

1982, "What is an Appraisal?"

Types of Property Appraised

Commercial - Retail shops, enclosed mall, shopping centers, medical buildings, restaurants, service stations, office buildings, auto body shops, schools, remote retail stores, liquor stores, supermarkets, funeral home, mobile home parks, camper courts. Appraised various businesses with real estate for value as a going concern with or without fixtures such as hotels, motels, bowling alleys, marinas, restaurants, lounges.

Industrial - Warehouse, mini-warehouse, hangars, docks barge loading facilities, industrial acreage, industrial sites, bulk plant sites, and fish processing facility. Appraised tank farms, bulk terminal sites, and a variety of waterfront port sites.

Special Land - Partial Interest and Leasehold Valuation - Remote acreage, tidelands with estimates of annual market rent. Large acreage land exchanges for federal, state, municipal governments and Alaska Native Corporations; retail lot valuations and absorption studies of large subdivisions; gravel and rock royalty value estimates; easements, partial interests, conservation easements; title limitations, permit fee evaluations. Appraised various properties under lease to determine leasehold and leased fee interests. Value easements and complex partial interests.

Special Projects - Special consultation for Federal land exchanges. Developed Land Evaluation Module (LEM) to describe and evaluate 290,000 acres of remote lands. Renovation feasibilities, residential lot absorption studies, commercial and office building absorption studies. Contract review appraiser for private individuals, municipalities and lenders. Restaurant feasibility studies, Housing demand studies and overall market projections. Estimated impact of nuisances on property values. Historic appreciation / market change studies. Historic barren material royalty valuations, subsurface mineral and timber valuation in conjunction with resource experts. Mass appraisal valuations for Municipality of Skagway, City of Craig, Ketchikan Gateway Borough and other Alaska communities. Developed electronic/digital assessment record system for municipalities. Developed extensive state-wide market data record system which identified sales in all geographic areas.

Expert Witness Experience and Testimony

2009 Expert at mediation - Talbot's Inc vs State of Alaska, et al. IKE-07-168CI

2008 Albright vs Albright, IKE-07-265CI, settled

2006 State of Alaska vs Homestead Alaska, et al, 1JU-06-572, settled

2006 State of Alaska vs Heaton, et al, 1JU-06-570CI, settled

2006 State of Alaska vs Jean Gain Estate, 1JU-06-571, settled

2004 Assessment Appeal, Board of Equalization, Franklin Dock vs City and Borough of Juneau

2000 Alaska Pulp Corporation vs National Surety - Deposition

U.S. Senate, Natural Resources Committee

U.S. House of Representatives, Resource Committee

Superior Court, State of Alaska, Trial Court and Bankruptcy Courts

Board of Equalization Hearings testified on behalf of these municipalities: Ketchikan Gateway Borough, City of Skagway, City of Pelican, City and Borough of Haines, Alaska

Witness at binding arbitration hearings, appointed Master for property partitionment by superior state court, selected expert as final appraiser in multi parties suit with settlements of real estate land value issues

Partial List of ClientsFederal Agencies

Bureau of Indian Affairs
Bureau of Land Mngmnt
Coast Guard
Dept. Of Agriculture
Dept. Of Interior
Dept. Of Transportation
Federal Deposit Ins Corp
Federal Highway Admin.
Fish & Wildlife Service
Forest Service
General Service Agency
National Park Service
USDA Rural Develop.
Veterans Administration

Lending Institutions

Alaska Growth Capital
Alaska Pacific Bank
Alaska Ind. Dev. Auth.
ALPS FCU
First Bank
First National Bank AK
Key Bank
Met Life Captial Corp.
National Bank of AK
Rainier National Bank
SeaFirst Bank
True North Credit Union
Wells Fargo
Wells Fargo RETECHS

ANCSA Corporations

Cape Fox, Inc.
Doyon Corporation
Eyak Corporation
Goldbelt
Haida Corporation
Huna Totem
Kake Tribal Corporation
Klawock-Heenya Corp.
Khukwan, Inc.
Kootznoowoo, Inc.
Sealaska Corporation
Shaan Seet, Inc.
Shee Atika Corporation
TDX Corporation
The Tatitlek Corporation
Yak-Tat Kwan

Companies

AK Electric Light & Power
AK Lumber & Pulp Co.
AK Power & Telephone
Allen Marine
Arrowhead Transfer
AT&T Alskom
Coeur Alaska
Delta Western
Gulf Oil of Canada
Hames Corporation
HDR Alaska, Inc.
Holland America
Home Depot
Kennecott Greens Creek
Kennedy & Associates
Madsen Construction, Inc.
Service Transfer
Standard Oil of CA
The Conservation Fund
Union Oil
Ward Cove Paking
White Pass & Yukon RR
Yutana Barge Lines

Municipalities

City & Borough of Haines
City & Borough of Juneau
City & Borough of Sitka
City of Akutan
City of Coffman Cove
City of Craig
City of Hoonah
City of Ketchikan
City of Klawock
City of Pelican
City of Petersburg
City of Thorne Bay
City of Wrangell
Ketchikan Gateway Borg.
Municipality of Skagway

Other Organizations

Baranof Island Housing
Authority (BIHA)
Central Council for Tlingit
& Haida Indian Tribes
of Alaska (CCTHITA)
Diocese of Juneau
Elks Lodge
Hoonah Indian Assoc.
LDS Church
Moose Lodge
SE AK Land Trust (SEAL)
SE AK Reg Health
Consortium (SEARHC)
Sitka Tribe of Alaska
The Nature Conservancy

State of Alaska Agencies

Alaska State Building
Authority (formerly
ASHA)
Attorney General
Dept. of Fish & Game
Dept. of Natural Service,
Div. of Lands
Dept. of Public Safety
Dept. of Transportation &
Public Facilities
(DOT&PF)
Mental Health Land Trust
Superior Court
University of Alaska

Education

Uniform Standards of Professional Appraisal Practice - 2011 Update, Juneau, AK; June 2011
Current Issues & Regulatory Updates Affecting Appraisers #10066; William King & Associates, Inc., Juneau, AK; June 2011
Loss Prevention Program for Real Estate Appraisers; LIA Administrators & Insurance Services; Juneau, AK; June 2011
Uniform Appraisal Standards for Federal Land Acquisitions (UASFLA), Rockville, MD, Oct 2010
Business Practices and Ethics, Seattle, WA, Apr 2010
Fall Real Estate Conference, Seattle, WA, Dec 2009
7-hour National USPAP Update Course, Seattle, WA, May 2009
Fall Real Estate Conference, Seattle, WA, Nov 2008
Attacking and Defending an Appraisal in Litigation, Kent, WA, Sep 2008
Sustainable Mixed-Use N.I.M., Seattle, WA, Feb 2008
Appraising 2-4 Unit Properties, Bellevue, WA, Sep 2007
Business Practices and Ethics, Seattle, WA, Jun 2007
7-hour National USPAP Update Course, Seattle, WA, Jun 2007
Residential Market Analysis and Highest and Best Use, Seattle, WA, Apr 2007
Basic Appraisal Procedures, Seattle, WA, Feb 2007
USPAP Update Course, Anchorage, AK, Feb 2005
Rates & Ratios: Making Sense of GIMs, OARs, and DCF, Anchorage, AK, Feb 2005
Best Practices for Residential Appraisal Report Writing, Juneau, AK, Apr 2005
Scope of Work - Expanding Your Range of Services, Anchorage, AK May 2003
Litigation Appraising - Specialized Topics and Applications, Dublin, CA, Oct 2002
UASFLA: Practical Applications for Fee Appraisers, Jim Eaton, Washington, D.C., May 2002
USPAP, Part A, Burr Ridge, IL, Jun 2001
Partial Interest Valuation - Undivided, Anchorage, AK, May 2001
Partial Interest Valuation - Divided, Anchorage, AK, May 2001
Easement Valuation, San Diego, CA, Dec 1997
USPAP, Seattle, WA, Apr 1997
The Appraiser as Expert Witness, Anchorage, AK, May 1995

Appraisal Practices for Litigation, Anchorage, AK, May 1995
Forestry Appraisal Practices, Atterbury Consultants, Beaverton, OR, Apr 1995
Advanced Sales Comparison & Cost Approaches, Univ. of Colorado, Boulder, CO, Jun 1993
Computer Assisted Investment Analysis, University of Maryland, MD, Jul 1991
USPAP, Anchorage, AK, Apr 1991
General State Certification Review Seminar, Anchorage, AK, Apr 1991
State Certification Review Seminar, Dean Potter, Anchorage, AK, Apr 1991
Highest and Best Use and Market Analysis, Baltimore, MA, Mar 1991
Financial Institution Reform, Recovery & Enforcement Act of 1989, Doreen Fair Westfall, Appraisal Analyst, OTS, Juneau, AK, Jul 1990
Real Estate Appraisal Reform, Gregory Hoefer, MAI, OTS, Juneau, AK, Jul 1990
Standards of Professional Practice, Anchorage, AK, Oct 1987
Federal Home Loan Bank Board Memorandum R41C Seminar, Catherine Gearhearth, MAI, FHLBB District Appraiser, Juneau, AK, Mar 1987
Market Analysis, Boulder, CO, Jun 1986
Federal Home Loan Bank Board Regulation 41b, Instructor Bob Foreman, MAI, Seattle, WA, Sep 1985
Litigation Valuation, Chapel Hill, North CA, Aug 1984
Standards of Professional Practices, Bloomington, IN, Jan 1982
Course 2B, Valuation Analysis & Report Writing, Stanford, CA, Aug 1980
Course 6, Introduction to Real Estate Investment Analysis, Aug 1980
Course 1B, Capitalization Techniques, San Francisco, CA, Aug 1976
Course 2A, Case Studies in Real Estate Valuation, Aug 1976
Course 1A, Real Estate Principles and Valuation, San Francisco, CA, Aug 1974



2550 Denali Street, Suite 1000, Anchorage Alaska 99503

FCC RF Exposure Limits & Issues

According to the Federal Communications Commission OET Bulletin 65, Edition 97-01: "...out of an abundance of caution, the FCC requires that tower-mounted installations be evaluated if antennas are mounted lower than 10 meters above ground and the total power of all channels being used is over 1000 Watts effective radiated power..."

"For antennas mounted higher than 10 meters, measurement data for cellular facilities have indicated that ground-level power densities are typically hundreds to thousands of times below the new MPE (Maximum Permissible Exposure) limits."

<http://www.naic.edu/~phil/hardware/rfmonitor/fccGuidelines.pdf>

The following paragraphs are excerpts from the most recent FCC guidelines publication that explain the FCC's rationale in determining the MPE limits for general public exposure and for occupational/controlled exposure:

"In reaching its decision on adopting new guidelines, the Commission carefully considered the large number of comments submitted in its rule-making proceeding, and particularly those submitted by the U.S. Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), and other federal health and safety agencies. The new guidelines are based substantially on the recommendations of those agencies, and it is the Commission's belief that they represent a consensus view of the federal agencies responsible for matters relating to public safety and health."

"The FCC's limits, and the NCRP and ANSI/IEEE limits on which they are based are derived from criteria quantified in terms of specific absorption rate (SAR). The basis for these limits is a whole-body averaged SAR threshold level of 4 Watts per kilogram (4 W/kg), as averaged over the entire mass of the body, above which expert organizations have determined that potentially hazardous exposures may occur. The new MPE limits are derived by incorporating safety factors that lead, in some cases, to limits that are more conservative than the limits originally adopted by the FCC in 1985. Where more conservative limits exist they do not arise from a fundamental change in the RF safety criteria for whole-body averaged SAR, but from a precautionary desire to protect subgroups of the general population who, potentially, may be more at risk."

“The new FCC exposure limits are also based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. As indicated by Table 1 {shown on page 3}, the most restrictive limits occur in the frequency range of 30-300 MHz where whole body absorption of RF energy by human beings is most efficient. At other frequencies whole-body absorption is less efficient, and, consequently, the MPE limits are less restrictive.

Note that if both of the criteria in the first paragraph are not met (i.e. antenna height less than 10 meters and the total power of all channels used is over 1000 Watts), a detailed engineering evaluation of the RF field strengths at or near the site is not required. All wireless facilities to be installed by GCI will be in compliance with the above criteria as well as the MPE limits for the general public in areas for which the general population has access (i.e. behind site fences or gates). In addition, GCI will comply with all FCC requirements for signage which serves to both identify the site (FCC licensing) and the presence of RF radiation at the site.

**Mark Schott
RF Engineer
GCI Wireless**

Table 1. LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

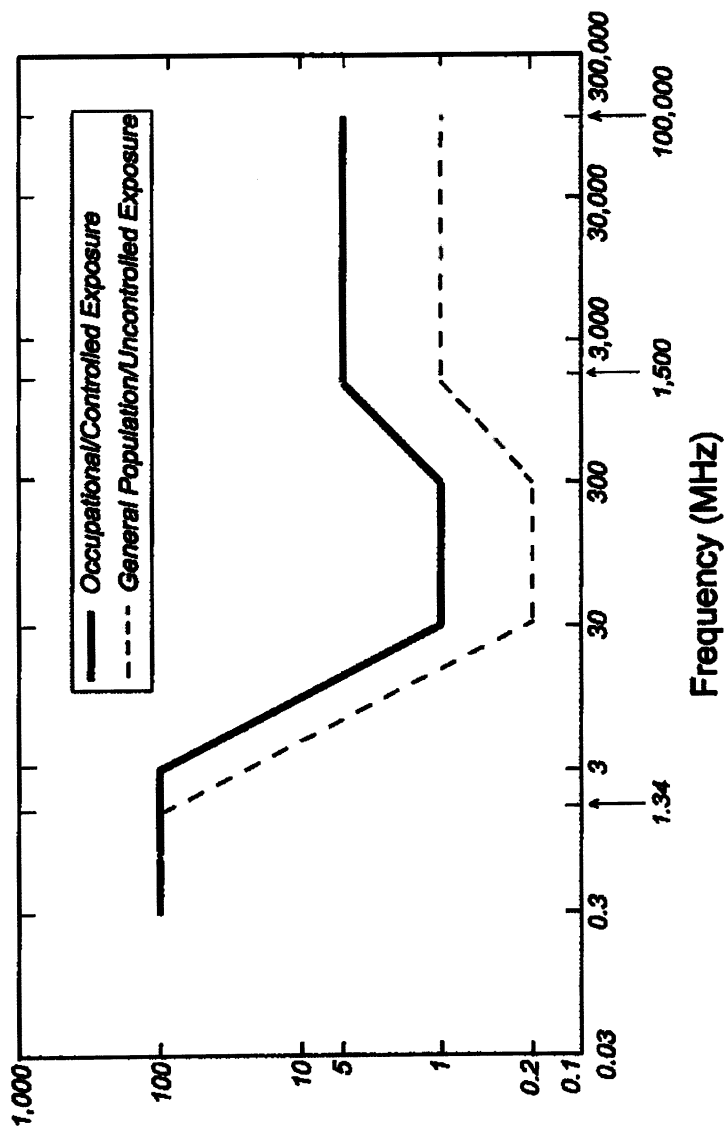
f = frequency in MHz

*Plane-wave equivalent power density

NOTE 1: *Occupational/controlled* limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2: *General population/uncontrolled* exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)
Plane-wave Equivalent Power Density





2550 Denali Street, Suite 1000, Anchorage Alaska 99503

GCI is the largest telecommunications company in Alaska. GCI's cable plant, which provides voice, video, and broadband data services, passes 90 percent of Alaska households. GCI operates Alaska's most extensive terrestrial/subsea fiber optic network which connects not only Anchorage but also Fairbanks and Juneau/Southeast Alaska to the lower 48 states with a diversely routed, protected fiber network. GCI's satellite network provides communications services to small towns and communities throughout rural Alaska. GCI's statewide mobile wireless network seamlessly links urban and rural Alaska for the first time in the state's history.

A pioneer in bundled services, GCI is the top provider of voice, data, and video services to Alaska consumers with a 70 percent share of the consumer broadband market. GCI is also the leading provider of communications services to enterprise customers, particularly large enterprise customers with complex data networking needs. More information about GCI can be found at www.gci.com.

Or, such other address or to the attention of such other person as the recipient party shall have specified by prior written notice to the sending party. Such notice shall be effective as of the date of its receipt. Unless specified otherwise in writing, the primary contacts for Landlord and GCI shall be:

Landlord Contact:

Lloyd Coogan, Owner
PO 34489
Juneau, AK 99803
Telephone: (907) 780-8000
Cell: (907) 723-7631
Email: mail@cooganaleaska.com

GCI Contact:

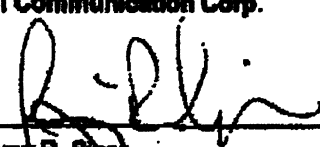
David Baker, Site Acquisition Manager
3127 Commercial Drive
Anchorage, AK 99501
Telephone: 907.222.9215
Cell: 907.227.8009
Email: dbaker@gci.com

26. **Inspection.** Landlord reserves the right to enter any part of the Premises, including buildings, for the purpose of inspection at any reasonable time. Except in the case of an emergency, all inspections will be coordinated with Tenant in advance, in order to minimize interference with Tenant's activities.

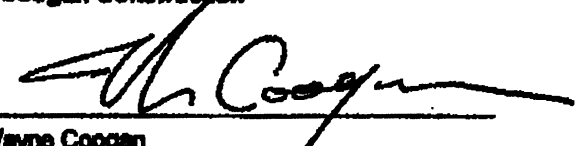
27. **Quiet Enjoyment; Access.** So long as Tenant is not in breach of this Lease, it shall have the right of quiet enjoyment of the Premises for the Term and all Extensions thereof, regardless of any sale, transfer, assignment or foreclosure of the Premises. This Lease shall be binding on each party's successors and assigns. Under no circumstances shall Tenant be prevented from accessing its equipment during the Term and all Extensions.

28. **Binding Agreement.** This Lease shall be binding upon each party's heirs, representatives, executors, successors and assigns. This Lease may only be amended in writing, and such amendment shall be signed by authorized representatives of both parties.

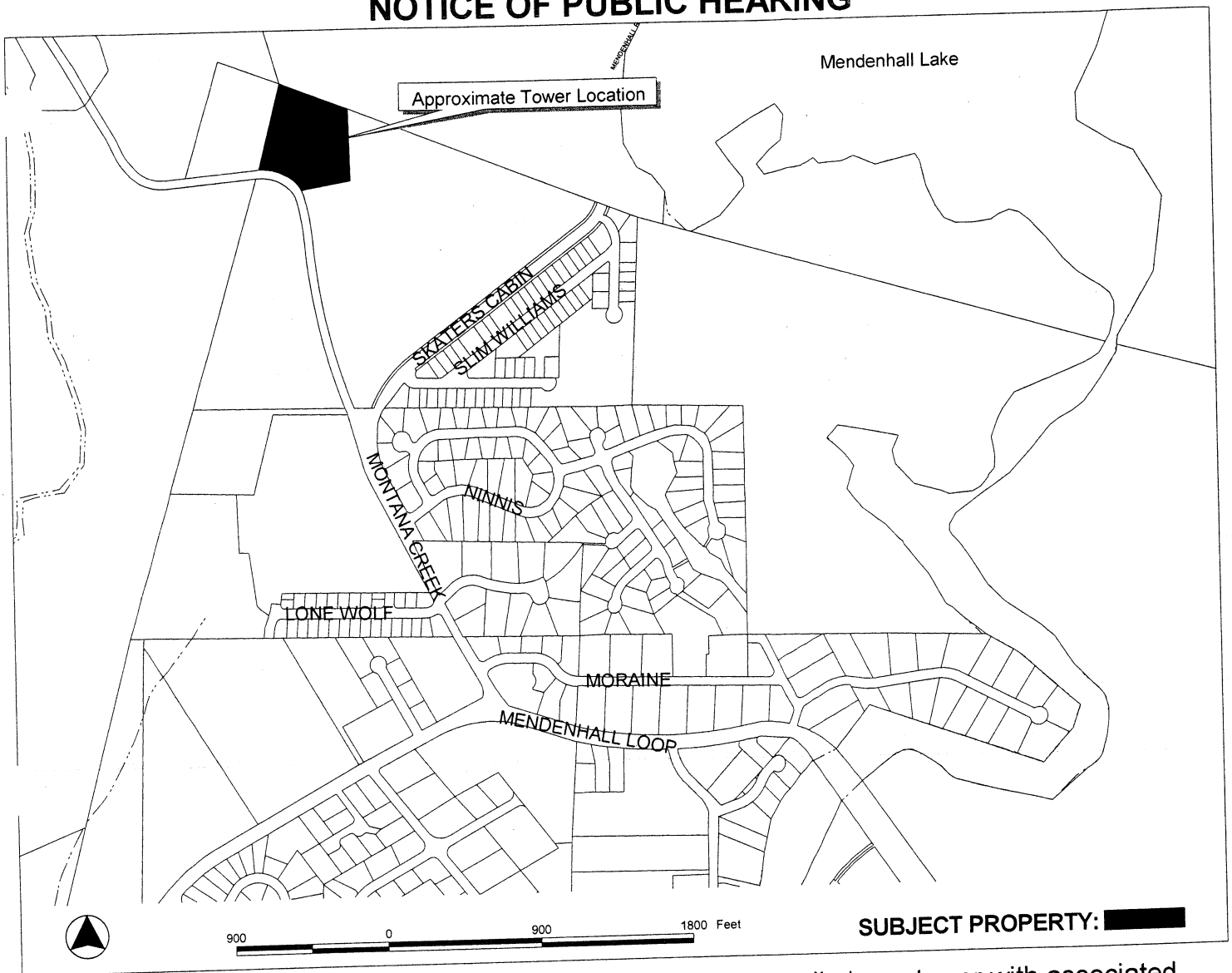
Tenant: GCI Communication Corp.

By: 
Name: Jimmy R. Sipes
Title: VP Network Services & Chief Engineer
Date: 3-20-2012

Landlord: Coogan Construction

By: 
Name: Wayne Coogan
Title: Member
Date: 2012-MAR-19 2012-MAR-21
4h

NOTICE OF PUBLIC HEARING



PROPOSAL: A Conditional Use permit for a 100' monopole cell phone tower with associated service equipment

FILE NO: USE20120009	APPLICANT: COOGAN GENERAL LLC
TO: Adjacent Property Owners	Property PCN: 4B2901150060
HEARING DATE: Aug 14, 2012	Owner(s): COOGAN GENERAL LLC
HEARING TIME: 7:00 PM	Size: 5.78 acres
PLACE: ASSEMBLY CHAMBERS Municipal Building 155 South Seward St Juneau, Alaska 99801	Zoned: D1
	Site Address: 5600 MONTANA CREEK RD
	Accessed via: MONTANA CREEK RD

PROPERTY OWNERS PLEASE NOTE:

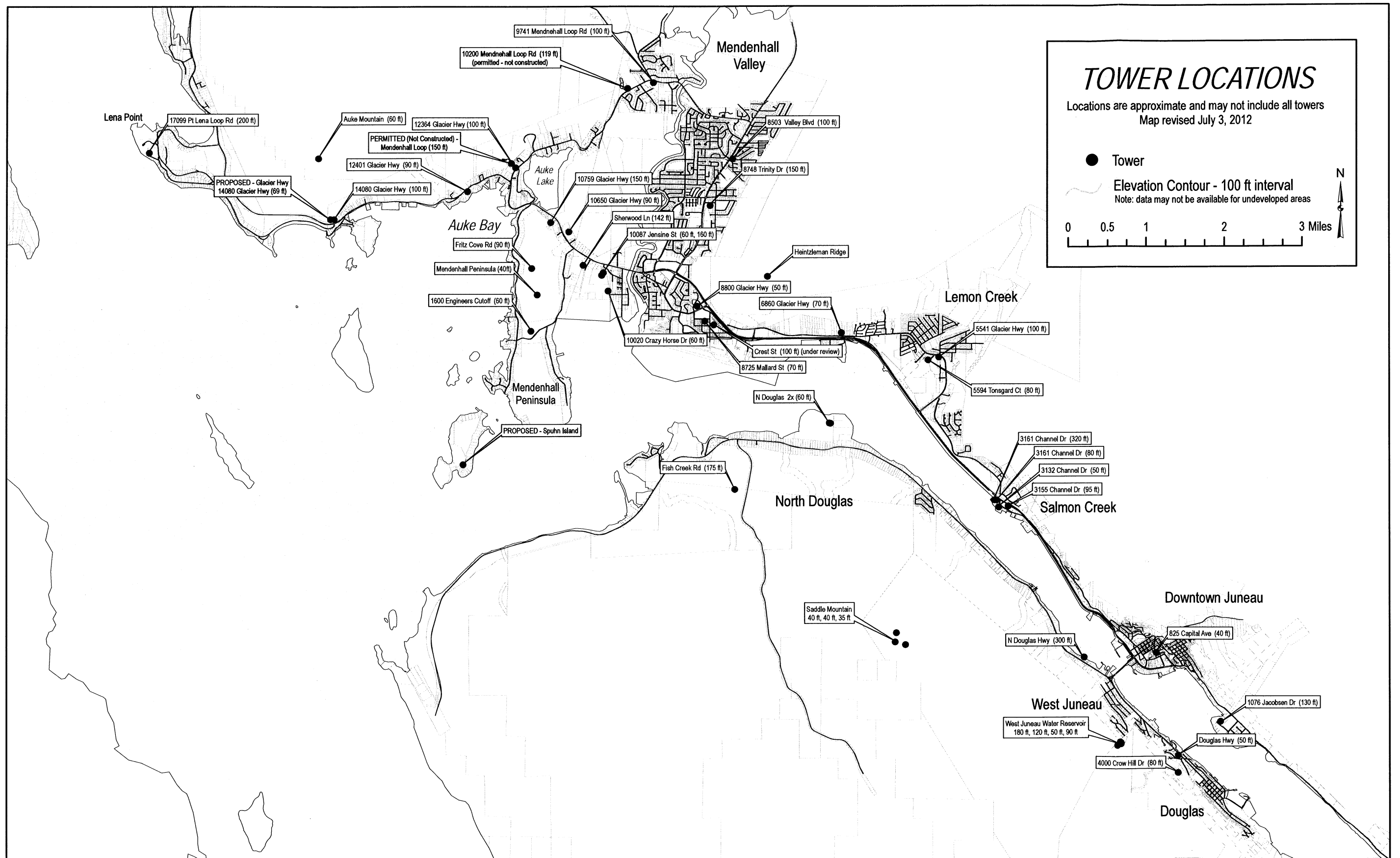
You are invited to attend this Public Hearing and present oral testimony. The Planning Commission will also consider written testimony. You are encouraged to submit written material to the Community Development Department no later than 8:30 A.M. on the Wednesday preceding the Public Hearing. Materials received by this deadline are included in the information packet given to the Planning Commission a few days before the Public Hearing. Written material received after the deadline will be provided to the Planning Commission at the Public Hearing.

If you have questions, please contact at 586-0753 or email: laura_boyce@ci.juneau.ak.us

ATTACHMENT F

Planning Commission Agendas, Staff Reports and Meeting Results can be viewed at www.juneau.org/plancomm.

Date notice was printed: August 1, 2012



Disclaimer: This map was created from the best available sources. The City & Borough of Juneau assumes no responsibility for errors or omissions that occur on this map. GPS and/or survey equipment was NOT used to collect tower locations. The locations are approximate.

Laura Boyce

From: Vicki [vj@gci.net]
Sent: Tuesday, August 07, 2012 9:49 PM
To: Laura Boyce
Subject: Re: File No. USE20120009

Thank you very much.

Jon

On 8/7/2012 9:48 AM, Laura Boyce wrote:

Mr. Torrella:

Attached please find information regarding the cell tower application located on Montana Creek Road. If you have additional comments or questions, please let me know. I can be reached directly at 586-0753.

Thank you,

Laura

Laura A. Boyce, AICP
Planner II, Community Development
City & Borough of Juneau
155 S. Seward Street
Juneau, AK 99801
907-586-0753
fax: 907-586-3365

From: Vicki [mailto:vj@gci.net]
Sent: Monday, August 06, 2012 5:18 PM
To: Laura Boyce
Subject: File No. USE20120009

Good afternoon,

I am looking for application documentation on the proposed cell tower referenced above. Please direct me where I may obtain these documents online so that I may review before the 8:30 AM Wednesday deadline. If not online please email to me.

Thank you in advance,
Jon Torrella
1007 Arctic Circle

ATTACHMENT H

8/8/2012

Laura Boyce

From: Patricia OBrien [patriciaobrien@gci.net]

Sent: Tuesday, August 07, 2012 9:58 PM

To: PC_Comments

Cc: Laura Boyce

Subject: A Conditional Use Permit for a 100' monopole cell phone tower with associated service equipment. Use 20120009

A Conditional Use Permit for a 100' monopole cell phone tower with associated service equipment. Use 20120009

Dear Planning Commission Members,

More than three years have passed since this neighborhood fought the 180 foot proposed cell phone tower proposed at the fork in Montana Creek Road. 100 feet is better but will still tower well above the trees estimated at 70 to 80 feet. No other details are available this evening (No staff report or access to the application) and the deadline for comments to be placed in Planning Commissioner's packets in 8:30 tomorrow morning. So be it.

I am incensed that three years have passed since several in our neighborhood teamed together to appeal the 150 foot tower planned for the Loop road on church property near Mendenhall Blvd. We were concerned about the precedent it would set. Though we did not prevail, that tower was never built. The Assembly complimented us on the work and research put into the appeal. That research included information about model cell phone ordinances in more enlightened cities. We pleaded for planning to meet a comprehensive need for wireless service rather than haphazardly permitting one structure at a time. We citizens need the protection of a better ordinance. Under the current ordinance providers can use their oldest and ugliest equipment. Tower owners can rent the top out to other users and create an absurd visage above the trees not only for locals to put up with, but for the many tourists that value this magnificent recreational area.

Without an adequate ordinance there is little reason to fight the installation of this proposed tower. The existing ordinance gives many rights to the applicant and does very little to protect citizens. Several months ago I inquired about the status of a Juneau ordinance specifically designed to meet wireless needs and was informed that there was indeed a draft ordinance. It was awaiting review from the Department of Law. Three years and several months! What does it take? The pin cushioning of the lower 48 has clearly arrived in Juneau.

Tim Strand, a neighbor who formerly lived here wrote a letter that I am including below. He also recommended the following website. Worth your time to take a look: **MailScanner has detected a possible fraud attempt from "..." claiming to be www.planwireless.com**

Thank you for taking the time to consider my comments, rant, and suggestions.

Patricia O'Brien
789-9405

Tim Strand's letter:

Dear Planning Commission Members and Eric Feldt,

Please do not approve the application for either wireless tower site at your July 8, 2008 session. There are far too many uncertainties and gaps in the Juneau City regulations to start approving the construction of towers about town. These issues are complex with far reaching consequences and I fear

the city is already well behind the curve. The City of Juneau needs an overall radio frequency infrastructure plan for this rapidly changing technology. Towers will lead the city to an unregulated jungle of ugly high rise structures. With the proper planning and zoning, the city can have a steady stream of revenue, proper registration of potentially hazardous sites and state of the art services for it's citizens. Some important points that need addressing:

1. It not about "towers" but rather "personal wireless service facilities". There is a huge difference. The future of wireless is not only voice but data transmission. Data transmission requires incredible bandwidth that overwhelms voice call needs. That bandwidth expansion needs smaller, numerous cells at lower heights to avoid overlapping signals. Towers are not required nor are they desirable with newer technology. In California today, over half of the personal wireless service facilities are less than 50 feet above the ground. Remember, a cell site is not a tower.

2. Multiple, smaller and lower elevation personal wireless service facilities means more cells for greater capacity for voice and data transmission. The key is capacity, not coverage. Personal wireless service facilities can be small box sized and can be mounted on government owned property such as street lights, water tanks or two and three story buildings. By registering each site, the city generates revenue, maintains a data base of locations and vendors, allows for fire and hazard risk assessment and controls visual blight. The ubiquitous nature of street lamps puts the cell sites in the neighborhoods where the demand exists. Low height cells are the least intrusive means of providing service.

3. If you approve a tower the city loses control. Towers are privately held and additional permitting for add-on's is likely not required. How do you know what type of device gets put on the tower? Each device needs a power source, are power generators part of the tower variance? Does the fire department know of associated hazardous materials? What are the power outputs of additional devices? Guide wires, blinking lights, rusting and visual blight, wind fall accidents, migratory bird collisions, all are tower related problems that can be avoided with current alternatives.

This is a huge, huge issue. Please start the process on the right pathway. An excellent web site to generate the proper questions is: www.planwireless.com. I strongly urge the planning commission members to delay any and all variance requests until the city has developed intelligent and enlightened guidelines for this important technology.

Sincerely yours,
Tim Strand

Laura Boyce

From: Bob Loiselle [bob@rgloiselle.com]
Sent: Wednesday, August 08, 2012 7:57 PM
To: Laura Boyce
Subject: CUP for Cell Tower

Laura,

I am writing in support of the CUP for the 100 foot monopole cell tower in the Montana Creek area (Applicant Coogan Construction).

This tower is badly needed. Cell coverage in the area is very poor, to the point of being intermittent. Those of us who depend on cell signal for both voice and data are at a significant disadvantage. In an era where many people are going cell phone only, this area requires a land line for dependable communication.

There is no downside to permitting this installation and it will be greatly appreciated by those of us needing this service.

Thanks.

Bob Loiselle
9801 Lone Wolf Dr.
Juneau, AK 99801

8/9/2012