



STATE OF NEW HAMPSHIRE
DEPARTMENT of NATURAL and CULTURAL RESOURCES
DIVISION OF FORESTS AND LANDS

172 Pembroke Road Concord, New Hampshire 03301
Phone: 603-271-2214 Fax: 603-271-6488 www.nhdfi.org

June 2, 2020

His Excellency, Governor Christopher T. Sununu
and the Honorable Executive Council
State House
Concord, New Hampshire 03301

REQUESTED ACTION

1. Pursuant to RSA 227-H:9, authorize the Department of Natural and Cultural Resources, Division of Forests and Lands (DNCR) to enter into a **retroactive** Memorandum of Agreement (MOA) with the Department of Safety, Division of Emergency Services for equipment and antenna space in designated areas at Mount Washington in Mount Washington State Park effective upon Governor and Executive Council approval for the period July 1, 2018 through June 30, 2023.
2. Further authorize DNCR to accept annual rental payment revenue.

Revenue will be posted to 03-35-35-351510-37420000-402040 "Mt Washington Commission", as follows:

Contract Year	Class-Account	Class- Account Title	Annual Rent Amount
Fiscal Year 2019	003-402040	Revolving Fund - Mt Washington Commission	\$36,166.08
Fiscal Year 2020	003-402040	Revolving Fund - Mt Washington Commission	\$39,661.04
Fiscal Year 2021	003-402040	Revolving Fund - Mt Washington Commission	\$43,154.56
Fiscal Year 2022	003-402040	Revolving Fund - Mt Washington Commission	\$46,646.96
Fiscal Year 2023	003-402040	Revolving Fund - Mt Washington Commission	\$50,137.76
		Total:	\$215,766.40

EXPLANATION

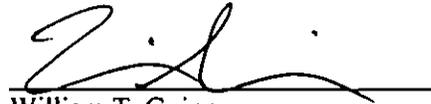
In 2015 DNCR commissioned an appraisal of the Mt. Washington communications lease rent structure. This appraisal resulted in adjusted rental rates for all tenants on Mt. Washington based on equipment present. This resulted in a significant rental increase from previous MOA's and is being phased in over the five-year period. This request is **retroactive** due to the length of time needed to effectively renegotiate this agreement and due to organizational changes and staff turnover.

The Department of Safety, Division of Emergency Services and Communication currently occupies space in and on the Yankee Building for structures and equipment associated with the State Police Statewide Radio System for the purpose of public safety and emergency response communications.

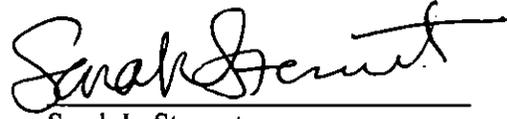
The Attorney General's office has reviewed and approved the MOA as to form, substance, and execution.

Respectfully submitted,

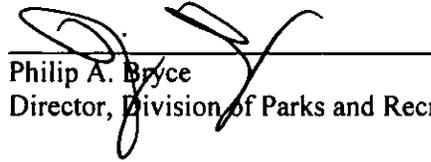
Concurred,



William T. Guinn
Acting Director, Division of Forests and Lands



Sarah L. Stewart
Commissioner



Philip A. Bryce
Director, Division of Parks and Recreation

MEMORANDUM OF AGREEMENT
between the
DEPARTMENT OF NATURAL AND CULTURAL RESOURCES
and the
DEPARTMENT OF SAFETY - DIVISION OF EMERGENCY SERVICES AND
COMMUNICATIONS

<u>CRITICAL DATES / TERM / RENT</u> (for DNCR use only)	
DEFINITION	DATE
Term Effective Date: Governor and Council approval	
Term & Initial Annual Rent: 5 years subject to Governor & Council approval starting with a \$36,166.08 annual rent and a transition pricing amount of \$3,517.68 added to each of the next 5 years of this Agreement.	

This Memorandum of Agreement ("Agreement") is entered into between the New Hampshire Department of Natural and Cultural Resources (DNCR), 172 Pembroke Road, Concord, New Hampshire 03301, and the DEPARTMENT OF SAFETY - DIVISION OF EMERGENCY SERVICES AND COMMUNICATIONS (DOS-DESC), 110 Smokey Bear BLVD, Concord, NH 03305

WHEREAS Mount Washington State Park, located at the Summit of Mount Washington in Sargent's Purchase, New Hampshire, is owned by the State of New Hampshire and managed by DNCR through the Division of Parks and Recreation;

WHEREAS DOS-DESC currently occupies space in and on the Yankee Building on the summit of Mount Washington for equipment associated with its statewide radio system for the purpose of agency and public safety communications;

NOW THEREFORE, DNCR and DOS-DESC agree to the following terms:

1. **Occupied Space.** Pursuant to the equipment list which is hereto attached as Exhibit A, DOS-DESC shall have the right to occupy designated space on the second floor of the Yankee Building and designated space on the roof and side of the Yankee Building (the Premises). DOS-DESC shall also have the right to common areas necessary for access to lavatories. DNCR is responsible for maintaining the Yankee Building in its entirety, the generator, and paying for all fuel and utilities.

2. **Term.** The Agreement shall be in effect from the date of Governor and Executive Council approval until June 30, 2023.
3. **Beneficial Services.** For each year of this MOA, DOS-DESC will provide the technical assistance of two communications technicians, for two standard work days, to assist with DNCR radio communications projects at Mount Washington.
4. **Funding.** All obligations hereunder are contingent upon the availability and continued appropriation of funds. The agencies shall not be required to transfer funds from any other account in the event that funds are reduced or unavailable. Payment shall be provided from DOS-DESC accounting unit 4001.
5. **Rent.** DNCR has accepted a market rent appraisal for Mount Washington. This resulted in a significant annual rent increase for DOS-DESC. Annual rent will be transitioned to the new rent over the 5 year period of this Agreement. For Fiscal Years 2019 and 2020, DOS-DESC shall pay DNCR annual rent upon approval of the Agreement by Governor and Executive Council. Thereafter, DOS-DESC shall pay DNCR rent annually on July 1st, and in accordance with the table below:

Year	Annual Rent	Beneficial Services Credit	Adjusted Annual Rent
Fiscal Year 2019	\$36,689.28	\$523.20	\$36,166.08
Fiscal Year 2020	\$40,206.96	\$545.92	\$39,661.04
Fiscal Year 2021	\$43,724.64	\$570.08	\$43,154.56
Fiscal Year 2022	\$47,242.32	\$595.36	\$46,646.96
Fiscal Year 2023	\$50,760.00	\$622.24	\$50,137.76
Total	\$218,623.20	\$2,856.80	\$215,766.40

6. **Access.** At DNCR's sole discretion, DNCR may provide transportation free of charge for DOS-DESC to access the Premises on scheduled DNCR transportation times; otherwise, DOS-DESC's access to the Premises shall be at DOS-DESC's expense. During the summer season, DOS-DESC shall, if possible, schedule non-emergency access at dates and times that cause the least amount of interruption to the public's recreational use of the property.

DNCR shall be notified forty eight (48) hours before the start of work, or planned maintenance, at the site during normal business hours, Monday thru Friday between 8 a.m. and 4 p.m., however; unexpected/emergency repairs may be made immediately, with notice of such actions being made to DNCR within twenty four (24) hours.

Access Notifications should be made via phone, text message, or email to:

Division of Forests and Lands

172 Pembroke Rd
Concord NH 03301
Office: (O) 603-271-2654

DOS-DESC agrees that the Director, Division of Forests and Lands, or any of his duly authorized agents, at any time may examine and inspect any and all property located and situated on and in the Communication Site.

7. **Technical Requirements** Equipment installation shall conform to the State of New Hampshire, Department of Natural and Cultural Resources Technical Requirements for use of Communication Sites adopted June 30, 1995 and last revised in July 2017 which is attached hereto as Exhibit B.
8. **Assignment.** DOS-DESC shall not assign its rights under the Agreement to any other third party without DNCR's prior written consent.
9. **Opt-Out.** Either DNCR or DOS-DESC may terminate this agreement in its entirety by providing the other party with a 90 day written notice. Such notice shall be deemed properly given upon the posting in the United States mail.

Following notice of termination, DOS-DESC shall remove all equipment, personal property, fixtures and appurtenances associated with the MOA, and repair any damage caused by its use of the Communications Site or from the removal of the equipment, personal property, fixtures and appurtenances. If such removal or repairs are not completed in 90 days after the date of notification of the termination, DNCR reserves the right, at the expense of DOS-DESC to complete the removal and repairs as necessary to the satisfaction of DNCR.

10. **Obligations.** The Parties agree that the obligations, agreements and promises made under this Agreement are not intended to be legally binding on the Parties and are not legally enforceable.
11. **Disputes.** Disputes arising under this Agreement which cannot be resolved between the Parties shall be referred to the New Hampshire Department of Justice for review and resolution.
12. **Sovereign Immunity.** Nothing herein shall be construed as a waiver of sovereign immunity, such immunity being hereby specifically preserved.
13. **Notices** All notices, demands, requests and other communications required by the Agreement shall be in writing and shall be delivered to:
 - (a) DNCR:
The State of New Hampshire

Department of Natural and Cultural Resources

172 Pembroke Road

Concord, New Hampshire 03301

Attention: Sarah L. Stewart, Commissioner (or duly appointed successor)
or at such other address of DNCR from time to time may have designated by
written notice to DOS-DESC. Such notice shall be deemed properly given upon
the posting in the United States mail.

(b) DOS-DESC:

Department of Safety - Division of Emergency Services and Communications

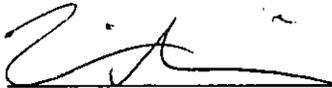
110 Smokey Bear BLVD

Concord, NH 03305

Attention: Mark Doyle, Director (or duly appointed successor)
or at such other address as the DOS-DESC from time to time may have
designated by written notice to the DNCR. Such notice shall be deemed properly
given upon the posting in the United States mail.

(This section is intentionally left blank, signature page follows)

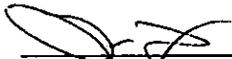
STATE OF NEW HAMPSHIRE
DEPARTMENT OF NATURAL AND CULTURAL RESOURCES

 6/6/20

William T. Guinn Date
Acting Director
Division of Forests and Lands

 6/10/20

Sarah L. Stewart Date
Commissioner

 6/8/20

Philip A. Bryce Date
Director
Division of Parks and Recreation

**STATE OF NEW HAMPSHIRE
DEPARTMENT OF SAFETY - DIVISION OF EMERGENCY SERVICES AND
COMMUNICATIONS**

Concur:

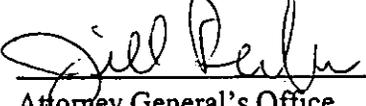


Mark E. Doyle 4/29/2020
Director Date
Department of Safety
Division of Emergency Services and Communications



Robert Quinn 4/29/2020
Commissioner Date
Department of Safety

Approved to Form, Substance and Execution,



Attorney General's Office 6/11/2020
Date
New Hampshire Department of Justice

Governor and Executive Council Approved: Date _____ Item No. _____

DMS#	ID#	Serial#	Item	brand	model	date recd	cost	Comments	Description
IT	S0032003	FHK0927Y0BL	COMPUTER RELATED EQUIPT.	CISCO	C2950T, SWITCHE	07/21/2005	\$1,475.00	10-2012 GLEN P	MT. WASHINGTON SARGENTS PURCHASE
SP	G0001234	SG808NVOOF	COMPUTER RELATED EQUIPT.	HEWLETT PACKARD	PROCURVE2524, SWITCH	03/31/2008	\$562.69	INV 6-11-08. INV 10-09 5-2010	MT. WASHINGTON SARGENTS PURCHASE
SP	G0004113		RACK	MOTOROLA	7THN1012	10/17/2011	\$845.00	PSIC 1J4 GRANT ITEM NEED TO BE MARKED WITH EQ #	MT. WASHINGTON SARGENTS PURCHASE
SP	G0004142	113743100398	POWER SUPPLY EQUIPMENT UPS	ELTEK SMART PACK DC	FP2-483008DLD28T	10/17/2011	\$4,398.30	PSIC 1J4 GRANT ITEM NEEDS TO BE MARKED WITH EQ #	MT. WASHINGTON SARGENTS PURCHASE
SP	G0004539	1135003866	MICROWAVE SITE EQUIPMENT	MOTOROLA	RRDN7309A	01/10/2012	\$7,168.90	IP MUX UNIT	MT. WASHINGTON SARGENTS PURCHASE
SP	G0004540	218JMQ0178	MICROWAVE SITE EQUIPMENT	MOTOROLA	WB3480AA	01/10/2012	\$1,834.76	PTP800 MODEM	MT. WASHINGTON SARGENTS PURCHASE
SP	G0004762		RACK	CPI	7 RADIO RACK	08/12/2015	\$281.36		MT. WASHINGTON SARGENTS PURCHASE
SP	G0004763	F35101428	AMPLIFIER	CERAGON	15HPA-1RRFU6L	08/12/2015	\$1,276.00		MT. WASHINGTON SARGENTS PURCHASE
SP	G0004764	F35101431	AMPLIFIER	CERAGON	15HPA-1RRFU6L	08/12/2015	\$1,276.00		MT. WASHINGTON SARGENTS PURCHASE
SP	G0004765		RADIO	CERAGON		08/17/2015	\$15,435.50	NEED SERIAL NUMBER	MT. WASHINGTON SARGENTS PURCHASE
SP	G0004767		RADIO	CERAGON		08/17/2015	\$15,435.50	NEED SERIAL NUMBER	MT. WASHINGTON SARGENTS PURCHASE

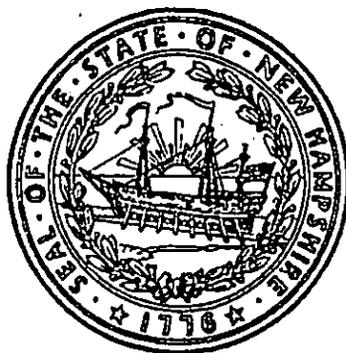
Divis	ID#	Serial#	Item	brand	model	date recd	cost	Comments	Description
SP	G0004768		RADIO	CERAGON		08/17/2015	\$15,435.50	NEED SERIAL NUMBER	MT. WASHINGTON SARGENTS PURCHASE
SP	G0004769		RADIO	CERAGON		08/17/2015	\$15,435.50	NEED SERIAL NUMBER	MT. WASHINGTON SARGENTS PURCHASE
SP	G0004770		RADIO	CERAGON		08/17/2015	\$15,435.50	NEED SERIAL NUMBER	MT. WASHINGTON SARGENTS PURCHASE
SP	G0004771	257118300008	RADIO EQUIPMENT	TELECT PORT		08/12/2015	\$1,100.00		MT. WASHINGTON SARGENTS PURCHASE
SP	G0004819		MICROWAVE RADIO DISH	RADIO FREQUENCY	8' MICROWAVE DISH	08/17/2015	\$8,947.00	ON TOWER	MT. WASHINGTON SARGENTS PURCHASE
SP	G0004824		MICROWAVE RADIO DISH	RADIO FREQUENCY	6' MICRO WAVE DISH	08/17/2015	\$5,410.62	ON TOWER	MT. WASHINGTON SARGENTS PURCHASE
SP	G0004825		MICROWAVE RADIO DISH	RADIO FREQUENCY	6' MICRO WAVE DISH	08/17/2015	\$5,410.62	ON TOWER	MT. WASHINGTON SARGENTS PURCHASE
SP	G0004826		DEHYDRATOR	ANDREW	MOJAVE 1A	08/17/2015	\$3,700.00		MT. WASHINGTON SARGENTS PURCHASE
SP	G0004859		RACK	CPI 7' RADIO RACK		08/12/2015	\$261.36		MT. WASHINGTON SARGENTS PURCHASE
SP	G0004881	F35101426	AMPLIFIER	CERAGON	15HPA-1RRFU6L	08/12/2015	\$1,276.00		MT. WASHINGTON SARGENTS PURCHASE
SP	G0004876		RADIO	CERAGON		08/17/2015	\$15,435.50	NEED SERIAL NUMBER	MT. WASHINGTON SARGENTS PURCHASE
SP	G0004879	F35101427	AMPLIFIER	CERAGON	15HPA-1RRFU6L	08/12/2015	\$1,276.00		MT. WASHINGTON SARGENTS PURCHASE

Div	ID#	Serial#	Item	brand	model	date recd	cost	Comments	Description
SP	G0004880	F35101430	AMPLIFIER	CERAGON	15HPA-1RRFU6L	08/12/2015	\$1,278.00		MT. WASHINGTON SARGENTS PURCHASE
SP	G0004900		POWER SUPPLY EQUIPMENT UPS	CD TECHNOLOGIES	POWER SUPPLY RACK	08/17/2015	\$8,704.77		MT. WASHINGTON SARGENTS PURCHASE
SP	G0004918	F33100761	AMPLIFIER	CERAGON	15HPA 1R 11W	08/17/2015	\$1,278.00		MT. WASHINGTON SARGENTS PURCHASE
SP	G0004919	F33100762	AMPLIFIER	CERAGON	15HPA 1R 11W	08/17/2015	\$1,278.00		MT. WASHINGTON SARGENTS PURCHASE
SP	G0004920		RACK	CDI	7 RADIO RACK	08/17/2015	\$261.38		MT. WASHINGTON SARGENTS PURCHASE
SP	G0004921	28298530029	RADIO EQUIPMENT	TELECT	DSX PANEL	08/17/2015	\$1,100.00		MT. WASHINGTON SARGENTS PURCHASE
SP	G0008336		MICROWAVE RADIO DISH	RADIOWAVE	8' DISH	05/14/2014	\$5,040.00		MT. WASHINGTON SARGENTS PURCHASE
SP	G0008367	1211006071	MICROWAVE SITE EQUIPMENT	MOTOROLA	IPMUX	10/26/2012	\$8,345.43		MT. WASHINGTON SARGENTS PURCHASE
SP	G0007158	F0C181825VL	ROUTER	CISCO	ME3800X-24FS-M	08/12/2015	\$8,571.00		MT. WASHINGTON SARGENTS PURCHASE
SP	S0017260	509CAH0070	RADIO	QUANTAR/VHF	BASE STATION UNIT	05/16/2000	\$17,431.87	X350 CONFIG,X806,CONFIG,X580RELAY,X889WIRELINE,X180CABINET,X182 DUPLEXER,X269 SPECTRA BRX4025A COAX	MT. WASHINGTON SARGENTS PURCHASE
SP	S0028662	743CEP0006	MICROWAVE SITE EQUIPMENT	MOTOROLA	T5589A, ASTRO TAC	09/17/2004	\$4,755.75	INV 5-2010	MT. WASHINGTON SARGENTS PURCHASE
SP	S0032450	19325217A	MICROWAVE SITE EQUIPMENT	PREMYSIS	IMAC800	10/12/2005	\$8,081.00	LOCATED IN YANKEE BLDG INV 09/13	MT. WASHINGTON SARGENTS PURCHASE

Divis	ID#	Serial#	Item	brand	model	date recd	cost	Comments	
SP	S0032452	509CXP0123	MICROWAVE SITE EQUIPMENT	MOTOROLA	T5365A	10/12/2005	\$14,788.00	LOCATED IN YANKEE RADIO BLDG 2-FL INV 10-09 5-2010	MT. WASHINGTON SARGENTS PURCHASE
SP	S0034094	585CFR2902	RADIO	MOTOROLA	XTL5000	11/17/2005	\$3,238.30	PACK MANADNOCK	MT. WASHINGTON SARGENTS PURCHASE
SP	S0034144	585CFR2805	RADIO	MOTOROLA	XTL5000	11/17/2005	\$3,238.30	TP B	MT. WASHINGTON SARGENTS PURCHASE
SP	S0034177	B16472	RADIO EQUIPMENT	RAYTHEON	ACU-1000	11/17/2005	\$29,809.55	FIXED UNIT. INCLUDES: PSM-1A, HSP-2, CPM-4, DSP-2, PSTN-1 MODULES. INV 10-09 5-2010 INV BY RADIO MAINT 08/28/14	MT. WASHINGTON SARGENTS PURCHASE
SP	S0035799	ATP141006	SERVER	HARRIS	HW-CSOC	05/25/2006	\$36,463.85	CUSTOM INTERFACE CONSOLE SERVER WITH GRAPHIC HW- CSDC, RTU, ETHERMET HUB, SNMP. HARRIS CORP. INV 8-08. INV 10-09	MT. WASHINGTON SARGENTS PURCHASE
SP	S0036082	197669	COMPUTER RELATED EQUIPT.	WESTRONIC	1800	06/20/2006	\$2,500.00	REMOTE INTERFACE UNIT WESTRONIC 1800, RTU, ETHERNET HUB, SNMP, HARRIS CORP. INV 10-09 5-2010	MT. WASHINGTON SARGENTS PURCHASE
SP	S0038132	387392-075	MICROWAVE SITE EQUIPMENT	CELLWAVE	0185417U02	06/11/2008	\$3,500.00	YANKEE RADIO BLDG 2ND FLOOR INV 10-09 5-2010	MT. WASHINGTON SARGENTS PURCHASE
SP	S0039133	421476-421	MICROWAVE SITE EQUIPMENT	CELLWAVE	0185417U02	06/11/2008	\$3,500.00	YANKEE RADIO BLDG 2 ND FLOOR NOT IN USE INV 10-09 5-2010	MT. WASHINGTON SARGENTS PURCHASE
SP	S0040788	671936	ANTENNA /TUNER	MOTOROLA ANTENNA	DSBA1010-1	12/20/2007	\$1,037.00	4 ZONE SIMULCAST EQUIPMENT MTD TO TOWER INV 10-09	MT. WASHINGTON SARGENTS PURCHASE
SP	S0043513	FTX1102AOFU	ROUTER	CISCO ROUTER	2811	09/23/2008	\$2,200.02	8-2013 inside S0051591 CABINET	MT. WASHINGTON SARGENTS PURCHASE
SP	S0054254	2113050205	ANTENNA /TUNER	TELEWAVE	ANT150	10/06/2014	\$704.00		MT. WASHINGTON SARGENTS PURCHASE
SP	S0057122	1201769703574 6-2629	ANTENNA /TUNER	MOTOROLA	RFS BA1010- 2/154	12/13/2016	\$1,290.38	MOTOROLA	MT. WASHINGTON SARGENTS PURCHASE

DMs	ID#	Serial#	Item	brand	model	date recd	cost	Comments	Description
SP	S0057124	1Z01769703561 9-6571	ANTENNA /TUNER	MOTOROLA	RFS BA1010- 2/154	12/13/2016	\$1,290.38	MOTOROLA	MT. WASHINGTON SARGENTS PURCHASE

STATE OF NEW HAMPSHIRE
DEPARTMENT OF NATURAL AND CULTURAL RESOURCES



**TECHNICAL REQUIREMENTS
FOR USE OF COMMUNICATION SITES**

Adopted June 30, 1995
Reviewed April 27, 2005
Revised February , 2014
Formatting/Name Revised July 24, 2017

Jeffrey J. Rose, Commissioner
172 Pembroke Road
Concord, N.H. 03301

State of New Hampshire
Department of Natural and Cultural Resources
Technical Requirements
For Use of Communication Sites

Introduction

The following outlines technical requirements for installation, operation and maintenance of communication equipment and appurtenances at Department of Natural and Cultural Resources (DNCR) communication sites as required by Item III.H.6 of the DNCR "Policy On Use and Management of Mountaintops for Communication Facilities". As stated in the policy, all requests for new communication equipment installations or modifications of existing equipment require review by the Communication Site Advisory Committee and approval by the Commissioner.

The Commissioner, with counsel from the Communication Site Advisory Committee, shall be the final authority in resolution of any conflicts between site users or in interpretation of these technical requirements and may require testing of user's equipment to determine compliance or to investigate possible sources of interference.

These requirements are in addition to any standards or conditions contained in the lease/use agreement.

These requirements shall apply to all new communications facilities and to existing facilities that are upgraded or expanded. The requirements may be waived or modified by the DNCR Site Manager for facilities and/or users in existence at the date of adoption, as communication site conditions warrant.

Transmitters and Associated Equipment

- A. Transmitters shall be equipped with isolators to provide the following minimum isolation to reduce the possibility of intermodulation interference.
 - 25 db (70 MHz to 220 MHz)
 - 50 db (220 MHz to 1000 MHz)
 - 75 db (1000 MHz to 76 GHz)
- B. A Bandpass cavity shall be used between each antenna and associated transmitter or combiner. A combiner, or duplexer will satisfy this requirement.
- C. R.F. Devices including duplexers, isolators, cavities, switches, etc. shall be located inside grounded cabinets where physically possible. Open racks may be permitted on a site by site basis to fit specific needs.
- D. Grounding to each cabinet and device shall be installed and comply with current Standards and Guidelines for Communication Sites (R56), NFPA 780: Standard for the Installation of Lightning Protection Systems, and NFPA 70: National Electrical Code® when applicable.
- E. Transmission lines entering enclosed equipment cabinets shall do so via bulkhead connectors. Type "N" bulkhead connectors shall be used above 54 MHz.
- F. Power, telephone, network, or control lines shall be protected by grommets where they enter enclosed radio cabinets. Where high R.F. fields exist, telephone lines and control lines shall enter radio cabinets via RFI filtration devices.

- G. The use of RG\8, RG\58, braided shield, single shield coax cable or aluminum shielded cable is not permitted. This includes cables located within cabinets or racks. PTP, Microwave, or GPS systems whose manufacturer requires the use of LMR-400 or similar cable will be exempt providing the manufacturer's documentation is submitted to the DNCR site manager prior to installation. Double shielded RG\58 (Belden 8268, etc.) may be used in external frequency reference and I PPS launch timing applications.
- H. Ethernet cable (CAT5e, CAT6, etc.) shall be routed to not interfere or receive interference from RF equipment.
- I. Ethernet cable (CAT5e, CAT6, etc.) shall be plenum rated for in shelter use and shielded/ outdoor rated when used outside of the shelter or on the tower.
- J. Ethernet cable (CAT5e, CAT6, etc.), and telephone lines shall be grounded upon entry into the shelter from an outside source (tower mounted equipment, or telco lines) using a UL listed surge suppressor and shall be installed in accordance with current Standards and Guidelines for Communication Sites (R56), NFPA 780: Standard for the Installation of Lightning Protection Systems, and NFPA 70: National Electrical Code® when applicable.
- K. Microwave or PTP transceivers shall be secured to an open rack or mounted within an enclosed cabinet. Unsecured devices will not be permitted.
- L. At no time will any equipment be mounted to an ice bridge or its support structure.
- M. Microwave or PTP ODU (Outdoor Units) should be mounted as close to the antenna as possible.

Antenna System Requirements

- A. Antenna systems must be approved by the DNCR Site Manager prior to the commencement of installation work. The cost of any changes to the existing tower including structural work, tower painting, tower lighting, etc. will be paid for by the site user. Rearrangements of existing antennas will not be considered except under unusual circumstances.
- B. The design of each proposed antenna systems shall take into account the following:
 - *Antenna location will be assigned by the DNCR Site Manager based on available space, required radiation pattern, transmitter power and frequency, antenna type, mounting restrictions and interference considerations.
 - *Only antennas which provide a direct dc path to ground may be utilized.
 - *Antennas shall be equipped with coaxial lightning protectors meeting ANSI standard 62.1. Lightning protectors shall be connected to site ground system in accordance with current Standards and Guidelines for Communication Sites (R56) and NFPA 780: Standard for the Installation of Lightning Protection Systems.
 - *R.F. link antennas, control antennas, and Microwave Antennas will be assigned mounting positions as low on the tower as possible.

*Metal antenna mounting hardware and falling ice protection hardware will be hot dipped galvanized or stainless steel.

*Only solid copper jacketed coax cable will be permitted for antenna cable runs. PTP, Microwave, or GPS systems whose manufacturer requires the use of LMR-400 or similar cable will be exempt providing the manufacturer's documentation is submitted to the DNCR site manager prior to installation.

*Coax cable shall be individually attached to the tower legs or waveguide hangers. The location of coax cable runs will be assigned by the DNCR Site Manager.

*Attachment of coax cable will be by stainless steel clamps or hangers spaced a maximum of three feet apart.

*The use of plastic "tie wraps" to support coax cable in any location is not permitted. The use of coating products that emit acetic acid are not permitted. Use of ultra-violet protected "tie wraps" are allowed on a temporary basis during construction or for temporary installations.

*Grounding kits with solid copper straps and mechanical compression shall be installed at top of tower, at point where coax cable departs the tower, and at the building entrance point. These clamps will be properly sealed to prevent corrosion at the coax cable connection. Stainless steel connectors will be used from the grounding kit to the tower. Grounding kits and procedures must comply with current Standards and Guidelines for Communication Sites (R56).

*Horizontal runs of coax cable shall be protected by ice shields and supported every three feet with stainless steel clamps or hangers.

*Coax cable shall enter buildings via weatherproof cable entrance ports or cable mounting plates. Positions will be assigned by the DNCR Site Manager. Ground Clamps will be used on both sides of this connection and will be connected to the site ground system.

*Coax cable runs located inside buildings will utilize existing cable racks or will be supported overhead by hangers.

Power Requirements:

- A. Each site user will be responsible for the cost of installation of separately metered electrical service when such metering is required unless otherwise specified in the lease/use agreement.
- B. The provisions of backup power by DNCR will require approval of the DNCR Site Manager.
- C. Emergency generating equipment or battery backup units shall not be installed without approval of the DNCR Site Manager.
- D. Each new transmitter and equipment cabinet will be connected to a separately fused AC outlet in accordance with current Standards and Guidelines for Communication Sites (R56), NFPA 70: National Electrical Code®, and State Electrical codes.
- E. Under no circumstances will one station be plugged into the accessory outlet of another cabinet.

- F. All electrical installation work shall be in full compliance with current Standards and Guidelines for Communication Sites (R56), NFPA 70: National Electrical Code®, and State Electrical codes.

Administrative Items

- A. A frequency compatibility study must be performed prior to installation; it shall be done by an independent consulting firm, which has been approved by DNCR. The cost of this study is the responsibility of the site user. A subsequent study may be required each time the site user proposes an additional frequency at the site.
- B. The site user shall immediately cease operation if notified by the DNCR that they are causing harmful interference.
- C. The DNCR Site Manager shall be provided with copies of all FCC license applications, current FCC licenses and equipment specifications.
- D. The site user shall make no changes after the initial installation without prior written approval from the DNCR Site Manager.
- E. Equipment shall be maintained in such a manner as to prevent it from becoming a source of interference or a safety hazard.
- F. Equipment shall have an ID tag attached, which shows licensee's name, address, call sign, frequency, tone squelch frequency and telephone number of person or organization responsible for maintenance work. Radio station licenses shall be posted for each transmitting station as required by FCC rules.
- G. Speakers will be turned off except during periods of maintenance work.
- H. Areas in and around the site user's equipment shall be kept clean and neat at all times. In addition, exterior areas including access roads, trails, and parking area shall be kept clean. Trash and unused materials shall be immediately removed from the site and not stored on the premises in any manner.
- I. Smoking, open flame, or welding will not be permitted inside buildings.
- J. Should the site user cause discharge of any Fire Protection System, they will be responsible for all costs associated with recharging the system, cleaning the building and repairing damaged equipment.
- K. If the building has an alarm system installed, the site user will notify designated Alarm Center when entering or leaving building in accordance with posted instructions.
- L. Site access shall be as designated in and subject to restrictions as described in the lease/use agreement. The DNCR will not be responsible for plowing of access roads or trail entrances to the site unless specified in lease/use agreement.
- M. Prior to the signing of any lease, a joint visit of the site will be made by the proposed site user and the DNCR Site Manager. Any additional special technical requirements not covered in this document will be determined at this meeting.

- N. When a lease is terminated for any reason, the site user will remove all equipment including antennas and feed lines within thirty days and will be responsible for any work necessary to return site to its previously existing condition. Should the site user fail to do so, then DNCR will arrange to have work completed and will bill the site user for this work.