

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN



LOWER DOWDS JUNCTION
COMMUNICATIONS SITE MANAGEMENT
PLAN

WHITE RIVER NATIONAL FOREST
HOLY CROSS RANGER DISTRICT
MINTURN, COLORADO

Submitted By: *[Signature]* 6/2/16
District Ranger Date

Reviewed By: *[Signature]* 6/3/16
Forest Supervisor Date

Approved By: *[Signature]* 6/18/16
for Regional Forester Date

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN



**LOWER DOWDS JUNCTION
COMMUNICATIONS SITE MANAGEMENT
PLAN**

**WHITE RIVER NATIONAL FOREST
HOLY CROSS RANGER DISTRICT
MINTURN, COLORADO**

Submitted By: _____
District Ranger

Date

Reviewed By: _____
Forest Supervisor

Date

Approved By: _____
Regional Forester

Date

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

Table of Contents

I.	DEFINITIONS	3
II.	NARRATIVE	4
	A. Site Description.....	4
	B. Existing Site Development.....	5
	C. Objectives.....	5
III.	AUTHORITY AND JURISDICTION	6
	A. Authority.....	6
	B. Jurisdiction.....	7
IV.	RIGHTS AND RESPONSIBILITIES.....	7
	A. The Forest Service	7
	B. Facility Owners and Facility Managers	7
	C. Tenants and Customers	9
V.	USE OF THE SITE.....	9
	A. Multiple-Use Facilities.....	9
VI.	RENTAL FEES.....	9
VII.	CONDITIONS FOR NEW CONSTRUCTION AND MODIFICATION OR EXPANSION OF A FACILITY	10
	A. New Construction, Modification, and Expansion Responsibilities	10
	B. Construction Methods and Resource Protection.....	11
	C. Construction Inspection	12
	D. New or Remodeled or Expanded Buildings.....	13
	E. New or Remodeled/Expanded Towers	14
VIII.	GENERAL OPERATION AND MAINTENANCE	15
	A. Special Environmental and/or Biological Considerations	15
	B. Wiring and Grounding	15
	C. Communications Equipment.....	16
	D. Cables and Transmission Lines	18
	E. Radiation.....	19
	F. Utilities.....	20
	G. Sanitary Facilities.....	20
	H. Security and Law Enforcement.....	20
	I. Site Maintenance.....	21
	J. Inspections	22
	K. Fire Prevention and Hazard Reduction Requirements.....	22
	L. Access	23
IX.	SITE ASSOCIATION AND ADVISORY GROUP	24
X.	APPENDICIES	25
	APPENDIX A – Location Map	25
	Site Map.....	26
	APPENDIX B – Authorized Facilities	27
	APPENDIX C – Facility Photographs.....	28
	APPENDIX D – Inspection Checklist	32

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN**I. DEFINITIONS**

Authorization Holder. An individual, business, organization, or an agency that has been issued a Communications Use Lease or Special Use Permit which allows occupancy, use, rights, or privileges of National Forest System (NFS) land.

Authorized Officer. The Forest Service employee with the delegated authority to issue and manage communications uses. The authorized officer is usually the District Ranger or Forest Supervisor of the unit on which the communications site is located.

Co-location. Installation of telecommunications equipment in or on an existing communications facility or other structure.

Communications Site. An area of NFS lands designated as an electronic site through the Forest Land and Resource Management planning process for telecommunications uses. A communications site may be limited to a single communications facility, but most often encompasses more than one. Each site is identified by name, usually denoting a local prominent landmark, such as Bald Mountain Communications Site.

Customer. An individual, business, organization, or an agency that operates telecommunication equipment within a facility, but does not broadcast or resell communications services to others.

Facility. A building, tower, or other physical improvement (buildings and towers do not have to be combined to be considered a facility) that is built or installed to house and support authorized communications equipment.

Facility Manager. The holder of a Forest Service communications use authorization who (1) owns a communications facility on NFS lands, (2) rents space in or on their facility to other communications users, but (3) does not own or operate their own communications equipment and they do not directly provide communications services to third parties. Persons or entities that manage or administer a communications facility on NFS lands for a facility owner or a facility manager are not facility managers for purposes of this Communications Site Management Plan.

Facility Owner. The holder of a Forest Service communications use authorization who (1) owns a communications facility on NFS lands, (2) may or may not be renting space or equipment to other communications users in or on their facility, and (3) owns and operates their own communications equipment in their facility.

Multiple-Use Facility. A communications site facility that has multiple communications uses operated directly by the facility owner or has customers or tenants in or on that facility.

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

Ranally Metro Area. Geographic areas in the United States identified by Rand McNally in its Commercial Atlas and Marketing Guide that define population centers of 50,000 or more. There are approximately 450 Ranally Metro Areas (RMAs) in the United States.

Senior Use. A communications use that predates another communications use. The most senior use or uses form the basis for the communications site designation.

Single-Use Facility. A communications site facility that contains only the single communications use of the facility owner and no tenants or customers in or on the facility.

Tenant. An individual, business, organization, or an agency that operates telecommunication equipment within a facility, for the purpose of broadcasting or reselling communications services to others.

II. NARRATIVE

A. Site Description

Lower Dowds Junction Communications Site is located on the Holy Cross Ranger District, White River National Forest, Eagle County, State of Colorado, in Section 15, T. 5 S., R. 81 W., 6th Principal, at approximately Latitude 39° 36' 58" North, Longitude 106° 26' 58" West. The elevation at Lower Dowds Junction Communications Site is approximately 8927 feet above mean sea level (msl). The area for development is approximately 2.0 acres in size. Lower Dowds Junction Communications Site is road accessible via a road which is closed to public use.

This site does not serve a Ranally Metro Area (RMA). The population is currently less than 25,000 and is therefore Zone 9. The population identified for this Zone is updated annually by the Forest Service, Washington Office, Director of Lands, and is used to determine the annual rental fee due the Forest Service.

The most senior use at this site is cable TV and the site is designated as Low Power. This designation was established in the White River National Forest Land and Resource Management Plan and EIS which was approved in 2002. The maximum power output for the Lower Dowds Junction Communications Site is based on the maximum output allowed for two-way radio under the Federal Communications Commission's rules at Title 47, Code of Federal Regulations, Part 90.

This plan supersedes the Lower Dowds Junction Communications Site Management Plan approved November 4, 2008.

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN**B. Existing Site Development**

This site was originally developed during 1969 under a BLM easement. In 1983, jurisdiction was transferred to the Forest Service and a Special Use Permit was issued to Cablevision Association VI. This facility was transferred to NRC Broadcasting, then Mauna Towers in 2006, then Global Towers in 2010, and currently American Tower, HOL 560203, in 2014.

Colorado High County was issued an authorization for the second facility in 1994. This facility was transferred to New Cingular dba as AT&T in 2002. In 2014, this facility was transferred to Crown Castle, HOL118.

The third facility was authorized in 1998 to Qwest for a cellular use. This facility was transferred to Nextel, now Sprint Spectrum, in 2005, and then SBA Communications Corp., HOL 432901, in 2012. In 2014, Verizon Wireless, built their own equipment building and rent space for their antenna on the Crown Castle tower. A communications use lease to Verizon Wireless is currently in development.

Space in existing facilities is available in current buildings, but tower space is limited. Any new facilities must be submitted according to the direction in this plan and be evaluated according to this plan, be consistent with the White River National Forest Land and Resource Management Plan and EIS, and appropriate NEPA analysis. All future facilities must be coordinated and designed so as not to materially interfere with senior uses.

See Appendix B for a current list of authorized facilities.

C. Objectives

The primary objectives of the Lower Dowds Junction Communications Site Management Plan are to:

1. Document site management policy, procedures and standards, which are not already specified in the standard communications use authorization.
2. Manage for low power communications uses only. The maximum power output expressed as Effective Radiated Power (ERP) is typically based on height above average terrain (HAAT) to set the maximum radiated power levels allowed for two-way radio under the Federal Communications Commission's rules at Title 47, Code of Federal Regulations, Part 90. As of the 2003 regulation, Part 90 levels are limited to 500 watts ERP. Each use must operate at or below the power level authorized by their respective FCC license as long as it does not exceed the site limitation of 500 watts ERP. Cellular Mobile Data Service is exempt from this site ERP limitation as long as the use does not exceed the ERP limitations as described in the applicable FCC regulations at Title 47, Code of Federal Regulations, Part 22, Subpart H or Part 27, Subpart C. In addition, point

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

to point microwave (FCC Part 101) is exempt from this site ERP limitation as long as non-occupational human radiation exposure levels are not exceeded by FCC regulation. Continuously transmitting use (other than FCC Part 101) shall be limited to 500 watts ERP.

3. All uses must be designed, operated and maintained so as not to physically or electronically interfere with the senior uses. If new uses deteriorate the receiving/transmitting operation of existing uses, the new uses may be required to institute at their expense; additional studies, equipment upgrades, frequency isolation, or physically separate themselves from the existing uses.
4. Present a program for operation within the site.
5. Help fulfill the public need for adequate communications sites.
6. Protect the interests of authorization holders and site users by preserving a safe and an electronically "clean" environment.
7. Encourage the efficient development and use of space and facilities within the designated site, subject to the USFS goal to provide the best possible public service at a reasonable cost.
8. Authorize new Tenant and/or Customer uses that can physically and electronically be accommodated within existing buildings and/or towers.
9. Maintain visual resource objectives by requiring design standards that are unobtrusive and by utilizing earth tone colors and non-reflective surface material consistent with the standards in the Land and Resource Management Plan.
10. Amend this Communications Site Management Plan as necessary to be consistent with future Forest Land and Resource Management Plans. The Forest Service will provide authorization holders with proposed amendments to this plan and will allow a reasonable period of time for the holders to review and comment on the proposed changes.

III. AUTHORITY AND JURISDICTION

A. Authority

Forest Service authority to authorize and manage communications uses on National Forest System lands derives from the Federal Land Policy and Management Act of 1976 (43 U.S. C. 1761-1771); Title 36, Code of Federal Regulations, part 251, subpart B (36 CFR 251, subpart B); Forest Service Manual (FSM) 2700; and Forest Service Handbook (FSH) 2709.11, chapter 90.

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN**B. Jurisdiction**

The Forest Service has jurisdiction over the use and occupancy of National Forest System (NFS) lands for communications purposes under the National Forest Management Act (NFMA) of 1976 (16 U.S.C. 1600 et seq.); the Federal Land Policy and Management Act (FLPMA) of 1976 (43 U.S.C. 1701 et seq.), and Title 36, Code of Federal Regulations, part 251, Subpart B (36 CFR part 251, subpart B).

The Federal Communications Commission (FCC) has jurisdiction over the use of non-Federal channels of radio and television transmission under licenses granted by the FCC. The National Telecommunications and Information Administration (NTIA) has jurisdiction over the use of Federal channels of radio transmission under authorizations granted by the NTIA.

The issuance of an FCC license or NTIA authorization does not authorize the use and occupancy of NFS lands. A Forest Service special use authorization is required for the use and occupancy of NFS lands for communications purposes.

The Forest Service has jurisdiction over resolution of conflicts associated with the use and occupancy of NFS lands, such as those involving location and re-radiation. The FCC and NTIA are not responsible for resolving occupancy conflicts associated with the use and occupancy of NFS lands or the resolution of other conflicts when entities are operating within the limits of their FCC license or NTIA authorization. However, the FCC or the NTIA may be useful in assisting in the resolution of interference problems or other frequency conflicts.

IV. RIGHTS AND RESPONSIBILITIES**A. The Forest Service**

The Forest Service retains the responsibility for issuing and amending authorizing instruments to Facility Owners and Facility Managers for the authorized improvements. The issuance of a FCC license (authorization), or frequency assignment, does not authorize occupancy of National Forest System lands. Granting occupancy and use of National Forest System lands rest exclusively with the Forest Service. This includes:

1. Amend or modify this site plan as deemed appropriate.
2. Approve new facilities, including those constructed within an authorization holder's authorized area.
3. Approve assignment of a communications use lease.

B. Facility Owners and Facility Managers Are Responsible for:

1. Complying with the terms and conditions of their communications use authorization and this site plan.

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

2. Ensuring that all new facilities, expansions, or improvements are consistent with the White River National Forests Land and Resource Management Plan, environmental documentation and decisions affecting the use of this site, and the provisions of this site plan.
3. May rent building and tower space to tenants and customers without prior written approval from the Forest Service, as long as that tenant or customer use is an approved communications use as designated in this Communications Site Management Plan and does not interfere with other existing uses at the site. Form FS-2700-10, Technical Data for Communication Type Land Use, or equivalent information from prospective tenants or customers seeking to co-locate in an existing communications facility may be required prior to co-location.
4. May not place any unreasonable restrictions on potential or existing tenants and customers.
5. Ensuring that facilities and equipment not complying with Federal, State, and local laws, regulations, and ordinances will be removed or modified within one year of approval of this site plan. Modifications require the pre-approval of the authorized officer.
6. Keeping all facilities within the established limits of their authorized area. The Facility owner or manager may not, for itself or for any customer or tenant, authorize construction of any equipment shelter or tower, or manipulation of the site or vegetation in any way, without specific authorization from the Forest Service (See sec. VII).
7. Providing the authorized officer the name, address, and telephone number of a local contact. The facility owner or the facility manager and the local contact person may be the same individual. The local contact shall be available for emergencies and shall have the authority to make decisions about construction issues, facility maintenance, and all equipment within the facility.
8. Ensuring that all communications facilities and equipment are properly installed, operated, and maintained in accordance with industry standards such as Motorola R-56. These standards may be waived by the Forest Service authorized officer when recommended by a site user association or similar technical committee or upon request of a facility owner/manager when equivalent measures would achieve similar results.
9. Providing to the authorized officer by October 15th of each year, a certified statement listing their type or types of communications uses they provide and the business names of all occupants and their type of communications use in the facility on September 30th of that year.

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

10. Treat and control noxious weeds on and adjacent to their permitted area, access, and parking areas. Treatment requirements and standards must be according to applicable regulations. Standards and application procedures may be obtained from the Forest Office.

C. Tenants and Customers:

May co-locate in an existing facility when their communications use is an approved use in the site plan. Co-location in a non-Federal communications facility does not require a Forest Service authorization. Tenants and customers who co-locate in a Federal facility shall first be issued a special use permit from the authorized officer before locating in that Federal facility.

V. USE OF THE SITE**A. Multiple-Use Facilities**

Co-location, when practical, shall be required. Site applicants shall take the lead in this area and shall design their proposals to accommodate multiple uses of facilities and improvements. This includes the multiple-use of buildings, towers, solar generating systems, back-up generators, grounding systems, fuel containers, access ways, and parking areas.

Due to the limited development space at the site, new facilities or major modifications to existing facilities shall be designed to accommodate additional users even if other users are, or could be, competitors.

Facility owners and facility managers are not required to lease facility space to others if they can demonstrate to the authorized officer that:

1. Space is not available;
2. The use is incompatible with the existing communications uses at the site. For example, the proposed use is not compatible with other uses as provided for in FSH 2709.11, section 97, exhibit 05;
3. Additional space is needed by the facility owner or the facility manager; or
4. Additional users would compromise security of the facility or communications systems located in that facility.

VI. RENTAL FEES

Unless specified differently in the communications use authorization, the Forest Service shall charge facility owners and facility managers of non-Federal facilities and tenants and customers in Federal facilities an annual rental fee based on the fee schedule for communications uses on National Forest System lands contained in FSH 2709.11, section

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

95. The rental rates shall be adjusted annually using the Consumer Price Index-Urban (CPI-U), and the population figures are adjusted annually based on the most recent Rand McNally Commercial Atlas and Marking Guide (for RMAs) and Rand McNally Road Atlas for non-RMA communities.

Rental fees that facility owners and facility managers may charge their tenants and customers shall be:

1. Reasonable and commensurate with the use and occupancy of the facilities and services provide to tenants and customers; and
2. Consistent with other fees charged for similar facilities.

VII. CONDITIONS FOR NEW CONSTRUCTION AND MODIFICATION OR EXPANSION OF A FACILITY**A. New Construction, Modification, and Expansion Responsibilities**

Construction space at the site is extremely limited and future additional facilities are unlikely. If new facilities are proposed, or if existing facilities need modification, the following guidelines shall apply.

In addition to the responsibilities listed in Section IV, applicants, facility owners, and facility managers seeking to construct a new facility or modify or expand an existing facility are responsible for:

1. Submitting a complete application to the authorized officer prior to any new construction, modification, or expansion of a facility. The application shall include:
 - a. A copy of the approved site plan base map showing all of the proposed new, modified, or expanded facilities, including structures, towers, and auxiliary equipment;
 - b. Completed drawings or plans prepared by a professional engineer or architect;
 - c. Identification of any proposed point-to-point microwave paths, a plot of their azimuth, and their proposed elevation on the tower; and
 - d. Documentation showing that the proposed facilities will not obstruct or interfere with any existing uses, including fixed point-to-point antennas, omni-directional broadcast antennas, or point-to-point microwave paths.
2. Demonstrating that the new facility will make the most efficient use of the limited amount of space at the site and will provide for future uses without additional construction.

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

3. Providing engineering and geotechnical investigations for development of specific foundation designs and grading plans.
4. Providing an erosion control plan prior to construction. At a minimum, the erosion control plan shall include sediment control; stipulations that cut and fill slopes will be graded and contoured to prevent erosion and excessive runoff, and recommendations for temporary erosion control measures, such as netting, silt fences, swales, sediment collection areas, and so forth.
5. Coordinating with other Federal and local governments and securing all pertinent permits and approvals from those agencies.
6. Providing 30 days' notice to all facility owners and facility managers at the site, as well as the Forest Service, of all new frequencies, either for themselves or their tenants and customers, proposed for the site. A completed FS-2700-10 shall be sent with the 30 day notice to allow for comment of potential interference. If there is a reply to the request for comments that suggests that there may be physical interference, electronic incompatibility, or potential radio frequency interference to existing uses, the Facility Owner or Facility Manager must address those concerns with a sufficiently detailed response that the existing use will withdraw its objections to the new use or special terms and conditions must be created to address those concerns. Copies of any response under this paragraph, positive or negative, must be provided to the Forest Service.

B. Construction Methods and Resource Protection

Plans submitted by a proponent, facility owner, or a facility manager for construction, modification, or expansion of a facility shall provide for soil rehabilitation measures, including soil replacement and stabilization and proper handling of runoff from buildings, parking areas, access roads, and undeveloped common areas. The authorized officer must approve all cutting or trimming of vegetation.

During construction, modification, or expansion of facilities, facility owners and facility managers shall:

1. Identify, avoid, and protect sensitive resource areas identified by the Forest Service.
2. Comply with the erosion control plan.
3. Notify the Forest Service authorized officer prior to commencing any approved ground-disturbing activities.
4. During construction and/or maintenance, paintbrushes will not be cleaned off on rocks. No marks of any kind, including survey marks, will be permitted on rocks.

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

5. Minimize, to the greatest extent possible, ground disturbance and vegetation removal.
6. Re-vegetate extensive cut and fill slopes with native vegetation as soon as possible after construction. All re-vegetation must have prior written approval of the authorized officer.
7. Not cast off grading material. Excess soil can be used as fill material for roads, buildings and towers.
8. Obtain prior written approval of the authorized officer for temporary, on-site storage of construction materials.
9. Not leave hazardous materials, including fuels, oils, and lubricants unattended at the site at any time. Hazardous materials shall be removed from the site at the end of each workday or temporarily stored inside a locked and posted building until the following workday. Construction materials and supplies other than hazardous materials may be left unattended at the construction site at the end of each workday at the owner's risk.
10. Remove surplus construction materials and waste debris from the site no later than 30 days after construction has been completed.
11. To prevent the spread of noxious weeds into the area, power wash off any earth-moving or heavy equipment, such as dozers, graders, cranes, backhoes, and so forth before it is brought onto National Forest System lands.

C. Construction Inspection

1. All new construction, modification, and expansion of facilities shall conform to established technical standards and accepted engineering practices, such as the Uniform Building Code, Occupational Safety & Health Administration (OSHA), National Fire Protection Association (NFPA), National Electrical Code (NEC), Electronic Industries Alliance/Telecommunication Industries Association (EIA/TIA) codes and standards, and state regulations.
2. Any construction inspections required by other agencies are the responsibility of the holder. Copies of completed inspections shall be provided to the Authorized Officer, either as they occur or as part of the final as-built plan. Inspection information shall become a permanent part of the holder's special-use file.
3. Corrective work required as a result of Forest Service or other agency inspections shall be completed by the date specified in the inspection report to the satisfaction of the inspecting official.

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

4. A final set of as-built plans shall be submitted to the Authorized Officer within 90 days of acceptance of a structure (if the construction was contracted) or of its completion date (if the construction was not contracted).

D. New or Remodeled or Expanded Buildings

1. Any new buildings shall be designed to accommodate multiple users and shall be consistent with a site-specific environmental analysis conducted at the time of the proposal.
2. Building height will be restricted to a single story unless specifically authorized for two stories or with a snow vestibule. The roof shall be non-reflective metal or other non-reflective fire resistant material approved by the Forest Service. Roofs can be equipped with antenna support structures, such as poles and railings that can extend up to 25 feet above ground level.
3. Facility owners and facility managers are encouraged to construct the interior of their buildings in a modular fashion, so that they can:
 - a. Sublease sections to others;
 - b. Provide tenants and customers with internal separation and security;
 - c. Reduce physical interference; and
 - d. Increase management effectiveness.
4. The following materials are approved for construction of new buildings:
 - a. Floors: Concrete slab with drainage or as part of a non-flammable pre-fabricated structure.
 - b. Walls: Concrete block, metal, or pre-fabricated concrete.
 - c. Roofs: Concrete, corrosion resistant metal (if painted to eliminate shiny surfaces), or other fireproof material approved by the Forest Service. Proposals for wooden roofs will not be approved.
 - d. Partitions: Fire resistant material, such as reinforced concrete or properly grounded expanded metal.
 - e. Color: Color used on all exterior building surfaces must have prior written approval of the authorized officer. The goal of color selection is to make buildings as inconspicuous as possible when viewed from a distance. The intent is to reduce or eliminate glare from reflective and/or illuminated surfaces such as windowpanes, sheeting and reflective paints. Non-reflective, Federal Standard color 20059 or its equivalent shall be used on equipment buildings.

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

- f. Building entry lights must:
- i. Only light the immediate area in the vicinity of the door;
 - ii. Be motion-activated and have a limited time duration of 3 to 5 minutes; and
 - iii. Have a shielded beam that is pointed at the building door.

Requests for all-night (dusk-to-dawn) lighting or entry lighting that would be visible from outside the site will not be approved.

E. New or Remodeled/Expanded Towers

1. All construction, modification, and expansion of towers shall have the prior written approval of the authorized officer.
2. It is the applicant and holder's responsibility to ensure that new, modified, or expanded towers will not unduly interfere electronically or physically with any existing equipment at the site. Towers shall be spaced so as to prevent ground level radiation and interference problems. Compliance with these requirements shall be demonstrated in writing to the authorized officer prior to issuance of a lease, permit, or amendment.
3. All new or reconstructed towers shall comply with current structural and safety specifications and design standards, including safety-climbing devices. Towers should be as narrow and "open" as safety and structural integrity allow. New towers should be designed using maximum wind, snow, and tower loading anticipated for the site.
4. All new or reconstructed towers shall not exceed the current height of 80 feet or 20' above the adjacent tree canopy whichever is less without specific approval resulting from the NEPA process. The analysis will require the applicant to demonstrate an alternative which achieves the telecommunication goals with the minimum tower height.
5. To avoid possible impacts to birds or bats, structures under this section must comply with the most current version of the U.S. Fish & Wildlife Service's Interim Guidelines on the Siting, Construction, Operation and Decommissioning of Communication Towers (available at <http://www.fws.gov/habitatconservation/communicationtowers.html>).
6. All towers shall be left unpainted if they are made of dull, galvanized steel. Paint is required only if the tower has a shiny or reflective surface. Non-reflective, Forest Service approved dark gray to green colors meeting the Munsell reflectivity of 4.5 or less will be approved unless the FAA requires red and white tower striping.

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

7. No lights, beacons, signs or strobes shall be allowed on new towers unless specifically required by the FCC/FAA.

VIII. GENERAL OPERATION AND MAINTENANCE**A. Special Environmental and/or Biological Considerations**

Scenic resource quality objectives as seen from Avon, Interstate 70 from the west and Highway 24 in Minturn are of special concern. Standards in this plan are designed to help reduce or minimize the visual impacts. There are no other currently identified special resource coordination considerations with on-site or adjacent resource values. Should additional special conditions arise through the revision process of the land use plan or other situations, this site plan will be amended accordingly. Compliance with colors of buildings or antenna and tower heights shall be achieved when maintenance or replacement is necessary, when modifications are proposed by the lease holder, or prior to a new authorization when the current term has expired.

B. Wiring and Grounding

1. All equipment shall be installed in metal cabinets or open frame equipment racks that are grounded and shielded. Grounding is to be installed in accordance with manufacturer's recommendations and accepted industry standards.
2. All building electrical wiring and grounding shall meet the NEC and applicable state and local codes. All permanent wiring shall be installed in metallic conduit and shall include a separate safety ground conductor. Electrical metallic tubing (EMT) raceway in and of itself shall not be used as a ground return. Exception: If galvanized rigid conduit (GRC) is employed, it shall be acceptable for use as a ground return.
3. Every effort shall be made to protect the equipment from lightning damage. Lightning protectors should be used on all coaxial cable connections to equipment enclosures. Inert gas gap or metal oxide varistor (MOV), silicon avalanche diode (SAD), or transient voltage surge protectors (TVSS) should be used on all control, audio, and power lines. Failsafe modes shall be employed in the TVSS to protect wiring and shelter from fire damage. All TVSS equipment shall be UL1449 listed or approved.
4. All new building and/or tower structures shall have its own separate station ground mat system for all users in that site and solidly bonded (such as exothermic weld, not brazing) to the electrical service entrance grounding conductor or grounding electrode. Wherever practical, interconnection of individual station ground mats and/or the simultaneous placement of large sized copper ground wire with any new grounding systems that are buried on the site shall be encouraged.

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

5. Grounding shall be installed in accordance with accepted practices and standards, such as but not limited to, Motorola, Inc. "Standards and Guidelines for Communications Sites R-56 Issue B", and NEC Articles 250, 810, and 820. Ground enhancement materials using bentonite clay is currently the only approved method for chemical grounding. Other types of chemical grounding shall require completion of NEPA documentation by the applicant prior to consideration for approval by the authorized officer.

C. Communications Equipment

1. Equipment Ownership

All equipment shall be labeled with:

- a. The owner's name;
- b. Applicable transmitter frequencies;
- c. The applicable FCC license or NTIA authorization;
- d. Transmitting power outputs; and
- e. A current 24-hour telephone contact number.

2. Transmitting Equipment

All transmitters shall have protective devices built into them or externally installed to prevent interference with other uses. All transmitters shall meet FCC/NTIA requirements and be FCC type accepted for use in the licensed (or license exempt) application.

The re-radiation of intercepted signals from any unprotected transmitter and its associated antenna system shall be prevented by the use of appropriate filters, typically bandpass filters, circulators (isolators), and/or 2nd harmonic filters.

The direct radiation of out-of-band emissions (noise or spurious harmonics) shall be reduced to a level such that it may not be identified as a source of interference as defined in FCC Regulations (47 CFR 90.209(e)). If site noise (electromagnetic noise) becomes an issue, noise threshold limits shall be established, and amended into the Site Plan.

All transmitters not in immediate use and not specifically designated as standby equipment shall be removed. Loads connected to circulators shall be capable of dissipating the total power output of the transmitter.

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

Where duplexing is used, a notch-type filter device by itself shall be avoided. In situations where a notch-type device is used, a bandpass filter shall be used on both the receiver and transmitter. Transmitter multi-channel hybrid combining equipment should be avoided unless additional protection is provided to ensure hybrid balance and minimize the chance for intermodulation products being produced. A post combining bandpass or lowpass filter is required after the basic hybrid combiner to block undesired 2nd harmonics from being radiated.

3. Receiving Equipment

A bandpass device, such as a cavity or crystal filter, is recommended at the input of all receiving devices. Cavity filters or other protective devices may be used at receiver inputs to reduce interference.

Where duplexing is used, a notch-type device should be avoided. In situations where a notch-type device is used, a bandpass filter shall be used on both the receiver and transmitter.

4. Antennas

- a. Tower-mounted microwave (drum) antennas shall not exceed four (4) feet in diameter, and ground-mounted satellite dishes shall not exceed 10 feet in diameter, unless specifically authorized to meet path performance and reliability criteria.
- b. All antennas shall meet all OSHA safety standards. If an antenna is operating in excess of the Federal Communications Commission (FCC) public or occupations standards, steps will be taken, such as fencing, posting of signs, relocation, lowering power levels, within 24 hours to bring it into compliance. Ground measurements of Radio Frequency Radiation (RFR) levels will be taken before mitigation measures are implemented.
- c. Colors for dish antennas or covers shall be pre-approved by the authorized officer. White dish antennas and covers will not be approved. Existing white dishes and covers shall be repainted or replaced as repairs or replacement become necessary.
- d. Antennas shall be treated to reduce or eliminate reflected glare.
- e. Low-powered transmit and receive antennas may be located low on the tower or on the ground.

5. Interference

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

The responsibility for correcting interference problems lies with the holder of the communications use authorization for the facility, the user causing the interference, and the affected parties. Generally, the first users at a site have seniority with respect to resolution of interference complaints. Senior users have an obligation to maintain their equipment to current industry standards, to operate their systems in accordance with the terms of both the FCC license and the NTIA/Interdepartment Radio Advisory Committee (IRAC) frequency authorization, and to comply with the Forest Service communications use authorization. New users at a site shall correct, at their expense, interference problems that they create. If it can be demonstrated that the senior user's equipment is at fault because of poor technical performance (does not meet, for instance, current Association of Public-Safety Communications Officials (APCO) or EIA/TIA technical standards for receiver performance), it will be necessary for the senior user to bring the poor performing receiving equipment up to current standards. The new user, in any event, shall cease operation of the suspect equipment until the problem is corrected, or as in the case of a poorly performing senior user receiver, the senior user must formulate an action plan for correcting the deficiency as soon as possible and be acceptable to both parties. If interference problems cannot be resolved or corrected within a reasonable time, the new use that is causing the interference may be terminated and the equipment removed.

If a Site Users Association is formed, all users shall cooperate with the Forest Service in the identification and correction of any interference. The Forest Service does not have any responsibility for correcting interference problems, but can act as a mediator to help all affected parties. Interference problems, whether theoretical, calculated, or measured (before and after licenses are granted) should be coordinated and resolved with the FCC or NTIA, as appropriate.

Interference with Public Safety, Critical Infrastructure, and any other emergency communications facility shall be corrected immediately. Operation of equipment covered by this site plan shall not interfere with Federal Government radio or electronic operations already in existence on NFS lands within two miles of the Lower Dowds Junction Communications Site. The user causing this interference shall at their own expense take all actions necessary to prevent or eliminate the interference. If they do not eliminate the interference within ten (10) days after receipt of notice from the Forest Service to do so, their use will be terminated.

If electromagnetic noise becomes an issue, noise thresholds shall be established and incorporated as an amendment to this site plan. The cost of such analysis is the responsibility of the authorization holders.

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN**D. Cables and Transmission Lines**

All new outdoor cabling shall be jacketed and 100 percent shielded and shall either be flexible or semi-rigid. Cables shall be properly installed, strapped, and fastened down. Cable runs should be consistent with applicable engineering standards when attaching cables onto a tower.

All transmission lines (including wave guide) shall be supported in accordance with manufacturer's specifications. Unjacketed transmission lines or unjacketed cables of any type are prohibited. No transmission lines shall be left unterminated. Lightning protection ground down conductors on towers shall be insulated from the tower steel and considered no different than transmission lines. Bonding of this down conductor to tower steel shall be done with NEC approved connectors that are also galvanically compatible (bronzed or tin plated) with the structural galvanized steel of the tower.

Double-shielded braided (98 percent or better) or solid-shielded cable shall be used inside of buildings. No RG-8 or RG-58 type class of cable is permitted. No connector-type adapters shall be used on transmission lines. Only correct connectors that will mate to connected devices may be used.

Conduits shall be shared as allowed for under the NEC when they service common areas and shall be buried where possible.

Existing cables and transmission lines that do not meet the above requirements shall be upgraded as repairs or replacement become necessary.

E. Radiation

All communications uses shall meet FCC, NTIA, and OSHA regulations, policy, guidelines, and standards concerning radiation limitations.

All antenna radiation zones shall meet all OSHA safety standards. If an antenna radiation zone is operating in excess of FCC public or occupational standards, steps will be taken, such as fencing, posting of signs, relocation, lowering of power levels, etc. within 24 hours to bring the zone into compliance. Ground measurements of RFR levels will be taken before mitigation measures are implemented. It is recommended that each Facility Owner or Manager, in accordance with FCC regulations 47 CFR sections 1.1307(b), 1.1310, and 2.1093, properly monitor Maximum Permissible Exposure (MPE) to electromagnetic fields for their site.

Monitoring radiation levels at the site is the responsibility of all site users and shall occur at intervals to comply with FCC regulations and guidelines. A copy of the monitoring report shall be provided to the Forest Service within 30 days of its completion.

Security fences with RFR notice signs are required around areas that exceed public use levels. All fencing location and design shall be pre-approved by the Forest Service.

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

Warning signs shall comply with American National Standards Institute (ANSI) C95.2 color, symbol, and content conventions. Contact information, including name and telephone number will also be included on warning signs.

Any identified RFR radiation problems that are, or could be, a public health hazard must be corrected within 24 hours after measurement tests have been completed or be removed from the site by the site user(s). If the proposed corrective action involves any new ground disturbance, it must be pre-approved by the Forest Service.

F. Utilities

Site users shall pay for the cost to install and maintain utilities, including any resource surveys and reports needed for environmental compliance. For visual reasons, new overhead utility poles are not authorized.

1. Commercial Electrical Power

Commercial power is provided by Holy Cross Energy.

2. Telephone Service

Commercial telephone lines do not service this site.

3. Fuel Storage

Fuel storage facilities on this site must be designed, installed and maintained according to applicable NFPA standards, federal, State and local laws and ordinances. All fuel storage tanks shall be grounded to the station ground mat.

If additional service is ever deemed necessary, a separate authorization will be issued to the owner of the service following the appropriate NEPA analysis and decision. The applicant must pay the cost of necessary resource surveys, and reports and construction costs including appropriate mitigation. For visual reasons, overhead utility lines may not be authorized.

G. Sanitary Facilities

No sanitation facilities exist at this site. If needed, any new sanitary facilities shall be pre-approved by the Forest Service. If it is determined by the authorized officer that the user needs such facilities, they will be provided by the applicant/holder in a manner and location satisfactory to the authorized officer and requirements of the local health department.

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN**H. Security and Law Enforcement**

The Colorado State Patrol and Eagle County Sheriff's Department are the principal law enforcement agencies for the area in which the Lower Dowds Junction Communications Site is located. Generally, the State Patrol and County Sheriff are responsible for civil and criminal law enforcement. Generally, the Forest Service is responsible for enforcing Federal laws applicable to NFS lands, such as resource protection. Patrol and policing for security purposes is the holder's responsibility.

Several of the facilities at Lower Dowds Junction Communications Site are fenced. If additional fencing is ever deemed necessary for security purposes at other facilities on the site, it must meet the following criteria:

1. All fences must meet health and safety requirements.
2. All fence locations and design require Forest Service pre-approval.
3. The standard fencing type will be chain-link (i.e. cyclone).
4. The standard fence height will be eight (8) feet.
5. Fencing will be designed, maintained, and of a type to minimize interference issues. All fencing materials shall be hot-dip galvanized coated to minimize corrosion and dissimilar metal contacts.
6. Fencing shall be grounded at regular intervals not to exceed 20 feet to the station ground mat. The purpose of this requirement is to lower its conductivity to RF signals and shunt those RF signals to ground and prevent re-radiation.
7. Fences will be signed with RFR notices if RFR is above public levels.

Buildings shall be posted with a 24-hour contact phone number(s) on the main door(s) into the building where appropriate.

I. Site Maintenance

The objectives of site maintenance are to present a clean, neat, and orderly appearance at the site and to have all the authorized improvements at the site be safe for workers and the public. All users are responsible for maintaining the overall appearance of the site.

Miscellaneous debris remaining after any construction or installation, removal or modification of equipment is not only a hazard but can cause interference or intermodulation problems. All loose debris must be removed from the site within 30 days after completing construction, reconstruction, or other activities. In particular, all loose wire or metal objects shall be removed from the site. The users of the site shall remove graffiti within ten working days of finding it. If graffiti is on natural features,

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

such as rocks and trees, site users will remove graffiti using a method approved by the authorized officer.

Holders may not leave or dispose of trash, garbage, or cut brush on NFS lands. No outside trash or litter containers are allowed. Site users shall remove all trash and litter from the site as it is produced. Policing of litter in common areas, such as the areas between buildings and developed sites, is the shared responsibility of those holders bordering these areas.

Peeling paint on buildings and towers shall be re-painted within thirty days of discovery or as soon as possible as allowed by weather conditions.

J. Inspections

Unless waived in writing by the authorized officer, the holder shall have conducted annually a certified inspection of the facilities and equipment covered by the authorization. The inspection shall include a technical review that should ensure that all authorized equipment is operating in accordance with requirement of this site plan, the applicable FCC license or NTIA authorization, ANSI standards, and the manufacturer's specifications. In addition, the inspection should ensure that the authorized equipment is secure, free of rust, properly grounded, and otherwise properly operated and maintained. A copy of the inspection report, certified by a telecommunication specialist, shall be provided to the authorized officer within 30 days of completion of the inspection. The Forest Service may also conduct periodic reviews to monitor for authorization compliance.

K. Fire Prevention and Hazard Reduction Requirements

Facility owners and facility managers will be required to control vegetation within the fenced or immediate area around their facilities. Gravel/mineral soil (i.e. bare ground or mowed vegetation) must be maintained to a minimum of thirty (30) feet clearance around buildings and a minimum of thirty (30) feet clearance around any propane tank. Identified threatened, endangered, or sensitive plant species must remain within the minimum clearance areas.

Smoking is prohibited in flammable vegetation areas.

Roof structures shall be kept reasonably clear of debris at all times.

No explosives will be stored at this site. Flammable materials shall be stored in conformance with the requirements of local fire regulations. Flammables will be placed in closed containers and stored away from sources of ignition and combustible materials. If flammables are stored within a building, the building will be locked, properly signed and well ventilated.

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

Approved spark arresters will be required and maintained on all internal combustion engines.

At least one (1) U.L. rated 20 lb. A:B:C dry chemical fire extinguisher is required inside each building. Prior to each June, fire extinguisher(s) shall be inspected by holders and refilled, if necessary.

Any fire will be immediately reported to “911”, the nearest Forest Service office and/or Eagle County Sheriff’s Office.

Forest Service Officers may make periodic fire prevention inspections. They will call to the holder’s attention any lack of compliance with the above regulations, plus any other existing hazards. Compliance with these inspections is required within the time limits specified in the inspection report.

All fire protection standards must be accomplished by the beginning of fire season unless otherwise agreed to, and then maintained throughout the fire season.

For new construction, the Forest Service will provide the Holder with a separate Construction Fire Plan which will be prepared at that time as applicable. State and local laws/regulations must be followed for the diesel tank installation.

To avoid possible impacts to birds or bats, structures under this section must comply with the most current version of the U.S. Fish & Wildlife Service’s Guidelines on the Siting, Construction, Operation and Decommissioning of Communication Towers (available at <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/communication-towers-gd.php>).

L. Access**1. Road**

Holders who damage the access road, or any of its associated improvements, such as ditches, culverts, roadside vegetation, signs, and underground utilities and facilities, shall be required to repair the road to conditions equal to or superior to those prior to any damage or disturbance. Holders are also responsible for any damage done by their customers and tenants.

2. Access to Lower Dowds Junction Communications Site is from I-70 at exit #173 in Vail, Colorado then west on the north Frontage Road for approximately 0.23 miles then right on Chamonix Lane. Travel upslope 0.14 miles to the intersection with Arosa Drive and then west to the intersection with Davos Trail then right onto Cortina Lane. The pavement ends just beyond the homes. At this point there is a locked gate. Continue west on this road for approximately 2.7 miles and then take the left fork and continue south

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

to the top of the ridge and the Lower Dowds Junction Communications Site at approximately 0.32 miles.

3. From the locked gate, the road is closed to public vehicle travel and serves the communications site and private land, Upper Dowds communications uses. Maintenance on this portion of the road is the collective responsibility of all lease holders and the private land holder. This can be accomplished by creating a Site User's Association with a Road Use permit issued to the Association or individual Road Use permits.
4. Internal Roads and Parking Areas

Internal roads and parking areas within the communications site are the responsibility of the site users. Interior roads and parking areas shall be planned and approved by the authorized officer in conjunction with establishment of new facilities. Interior roads shall be maintained so as to allow only one entrance to the site. The intent is to discourage off-road vehicle use in and around the site.

3. Road Closures

Forest Service roads are subject to periodic closures to entry during periods of extreme fire danger, inclement weather, or wetness. Site users may access the site during these closures if they have prior, written approval from the authorized officer.

IX. SITE ASSOCIATION (OR PARTNERSHIP) AND ADVISORY GROUP

A Site Users' Association or Partnership is recommended at this site and is currently in development. All lease holders are encouraged to join the association/partnership. The goal of the association/partnership would be to maximize the effective use of the site, and coordinate access and maintenance needs. Such an arrangement is highly advisable due to the access road's status as a "special use only" road, for which the Forest Service performs no maintenance.

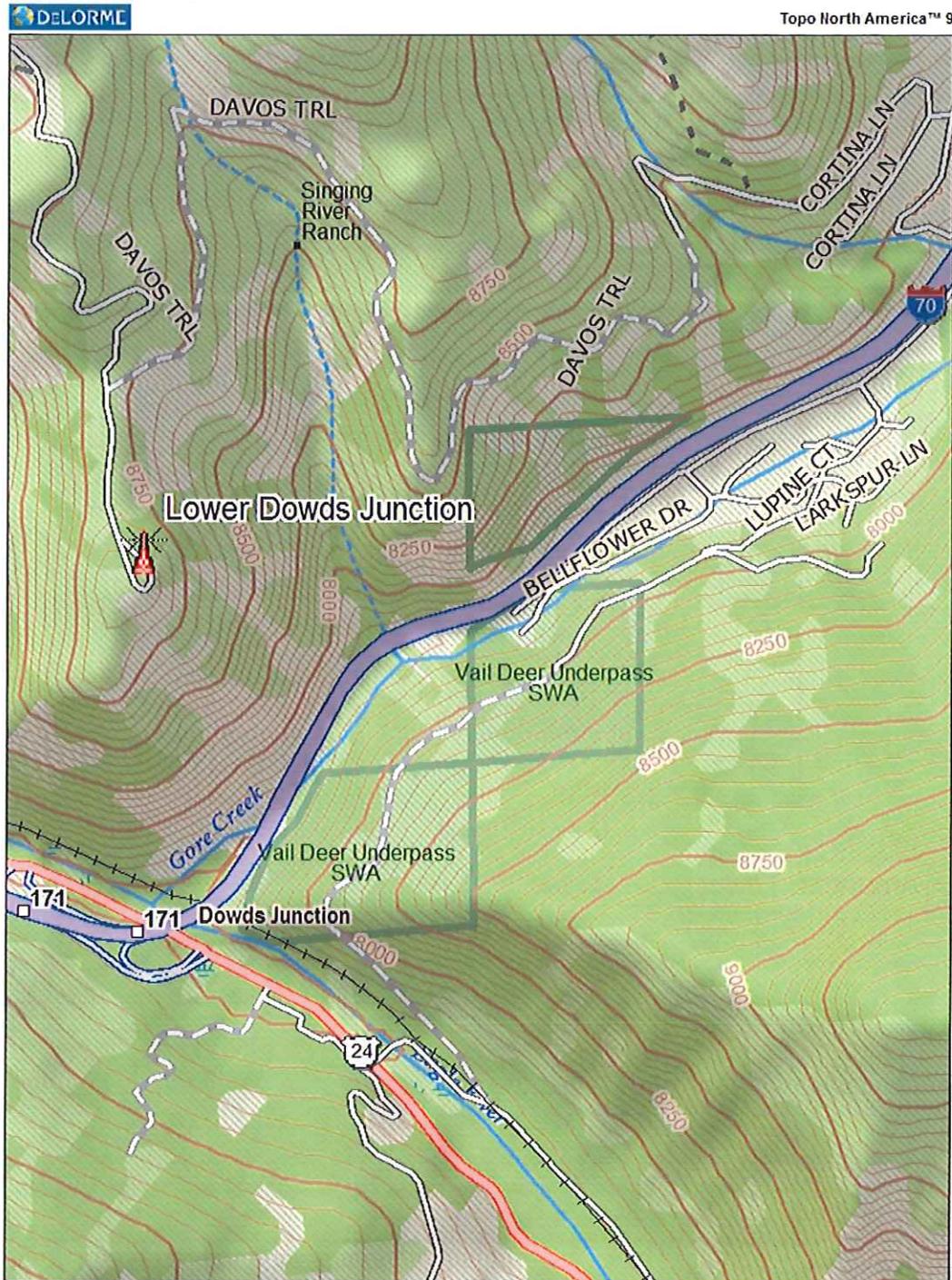
A sanctioned association/partnership allows for coordinated, collective representation of all site users when communicating with the Forest Service on matters relating to the site administration. The association/partnership can identify problems and make recommendations to the Forest Service for changes in management strategies at the site. (Although such recommendations would not be binding on the Forest Service.) The Forest Service may be a member of such an entity and could help jointly develop the charter.

In accordance with Forest Service regulations and policy, the association/partnership must provide a certified copy of the partnership agreement establishing the entity, or a certificate of good standing under the laws of the state where the entity was established. [36 CFR 251.54(d)(2)(ii)(E); FSH 2709.11 – Chapter 10 Sec 12.11a(2)(e)]

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

X. APPENDICES

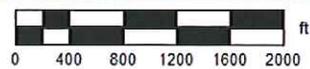
APPENDIX A – Location Map



Data use subject to license.

© DeLorme. Topo North America™ 9.

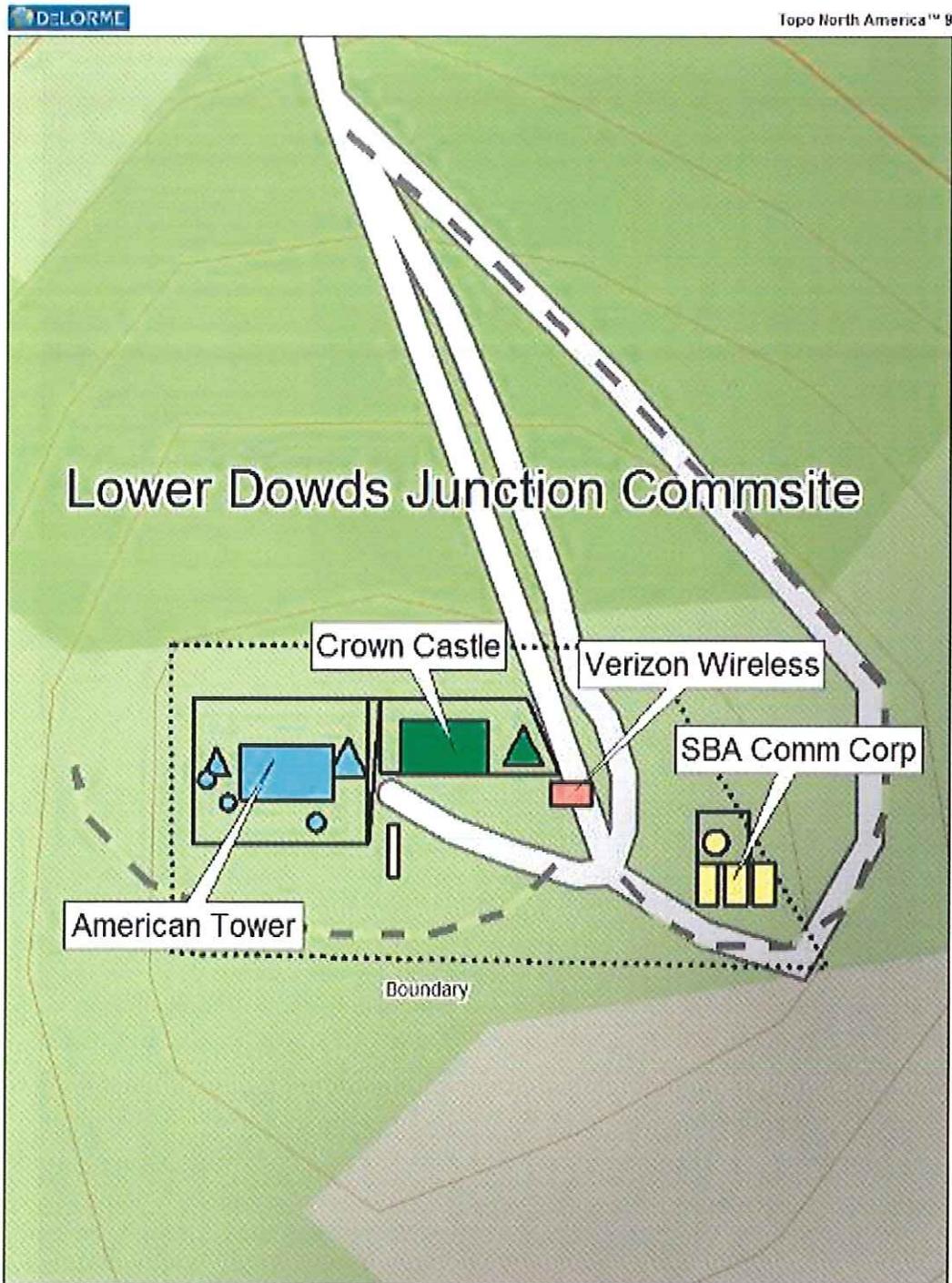
www.delorme.com



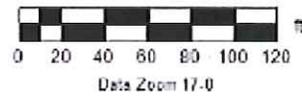
Data Zoom 13-0

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

Site Map



Data use subject to license.
© Delorme, Topo North America™ 9
www.delorme.com



LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

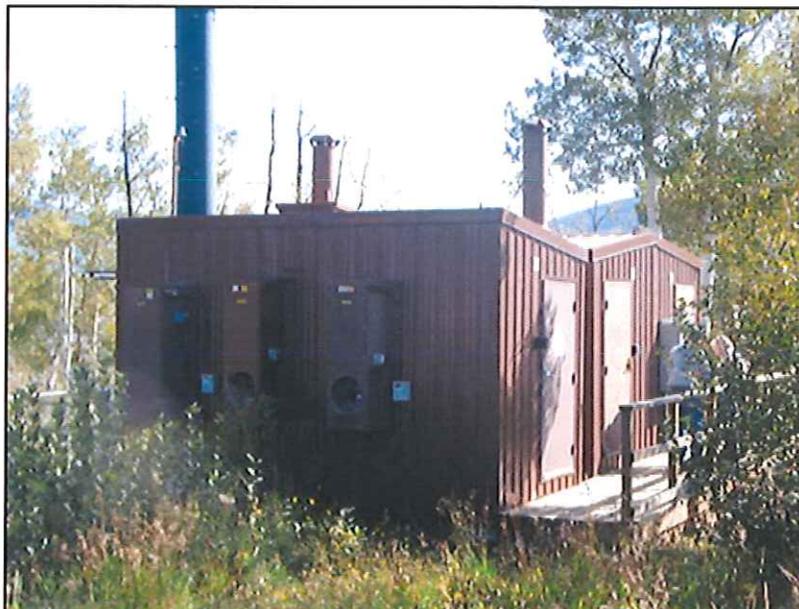
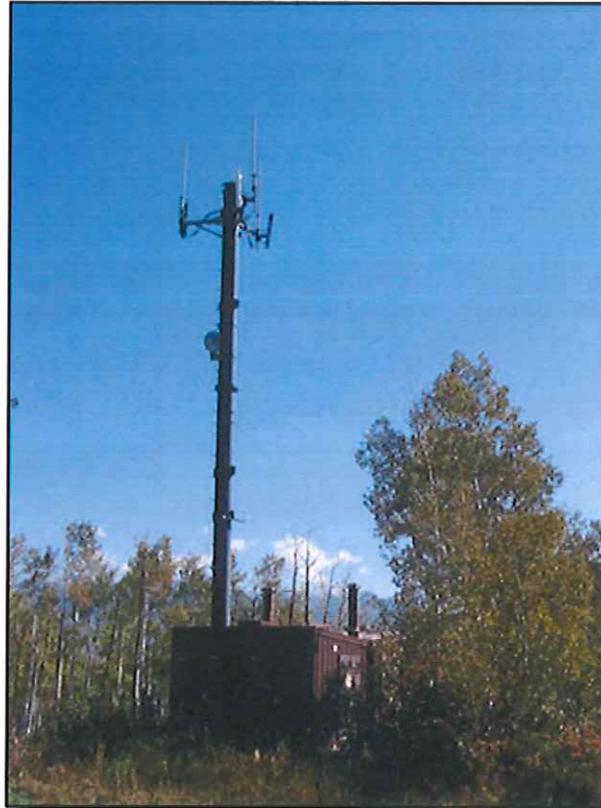
APPENDIX B – Authorized Facilities

Facility	Auth ID	Use	Building	Tower	Other
Facility #1 SBA Comm. Corp.	HOL 432901	FAM	3 – 8'x 16' metal	65' monopole	12'x 12' fence around tower
Facility #2 Crown Castle	HOL 118	FAM	20' x 40' metal siding	80' lattice	500 gal propane tank, generator inside bldg 30'x 50' fence
Facility #2a Verizon Wireless	(lease in development)	CEL	12'x 30 metal sided pitch roof	On Crown Castle Tower	
Facility #3 American Tower Corp	HOL 560203	FAM	12'x 24' metal	20' lattice 30' lattice 3 – receiving dish masts	40'x 60' fence

LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

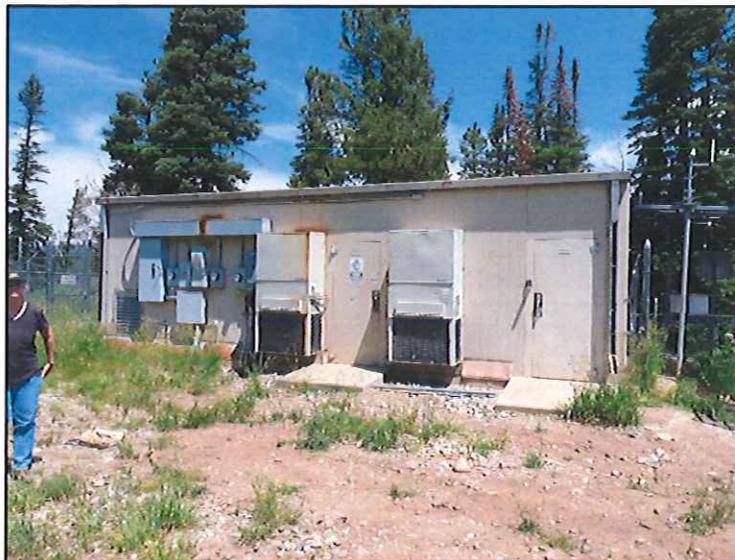
APPENDIX C – Facility Photographs

Facility #1 – SBA Comm. Corp.



LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

Facility #2 – Crown Castle



LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

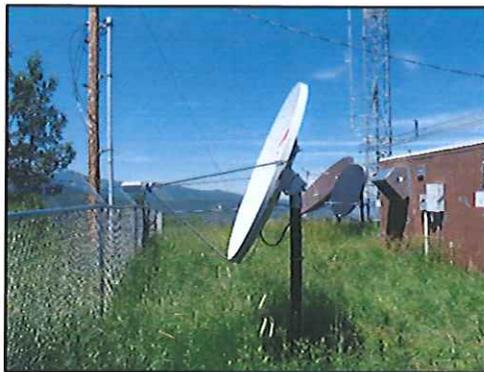
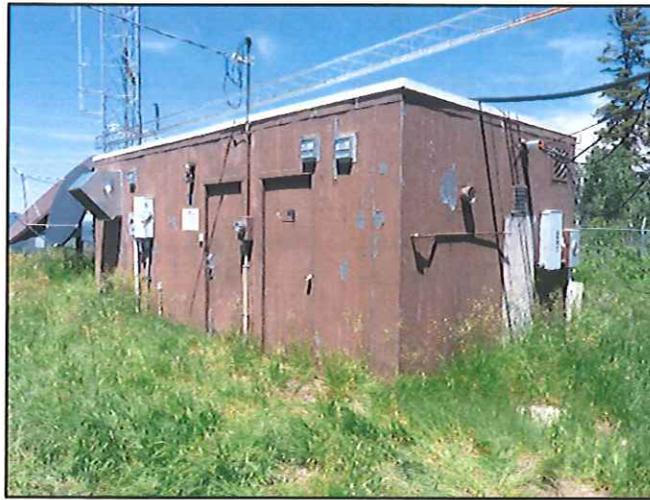


Facility #2a – Verizon



LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

Facility #3 – American Tower



LOWER DOWDS JUNCTION COMMUNICATIONS SITE MANAGEMENT PLAN

APPENDIX D – Inspection Checklist

“Lower Dowds Junction Annual Technical Inspection”

Date Inspected: _____ Time Inspection: _____

Authorization Holder: _____ Authorization # _____

Site Technician: _____ Phone # _____

Number of Transmitters _____ License Posted _____

Please mark the following Items as Acceptable (A) or Unacceptable (U).

Electrical Wiring ----- (A) (U) Grounding ----- (A) (U)

Equipment Installation ----- (A) (U) Housekeeping ----- (A) (U)

Building Repair ----- (A) (U) Tower Repair ----- (A) (U)

Please mark the following Items as Yes (Y) or NO (N) or (NA)

Isolators ----- (Y) (N) (NA) Circulators ----- (Y) (N) (NA)

Cavities ----- (Y) (N) (NA) Terminators ----- (Y) (N) (NA)

Filters ----- (Y) (N) (NA) Lightning Protection ----- (Y) (N) (NA)

Comments:

Recommended Corrective Action:

Required Corrective Action To Be Taken:

Committee Representatives:

Forest Service Representatives:

Please make the required corrective action within the next 120 days.
Please make a written report of corrective action taken and submit to the FS. If you should have any questions, please call the Forest Service office.