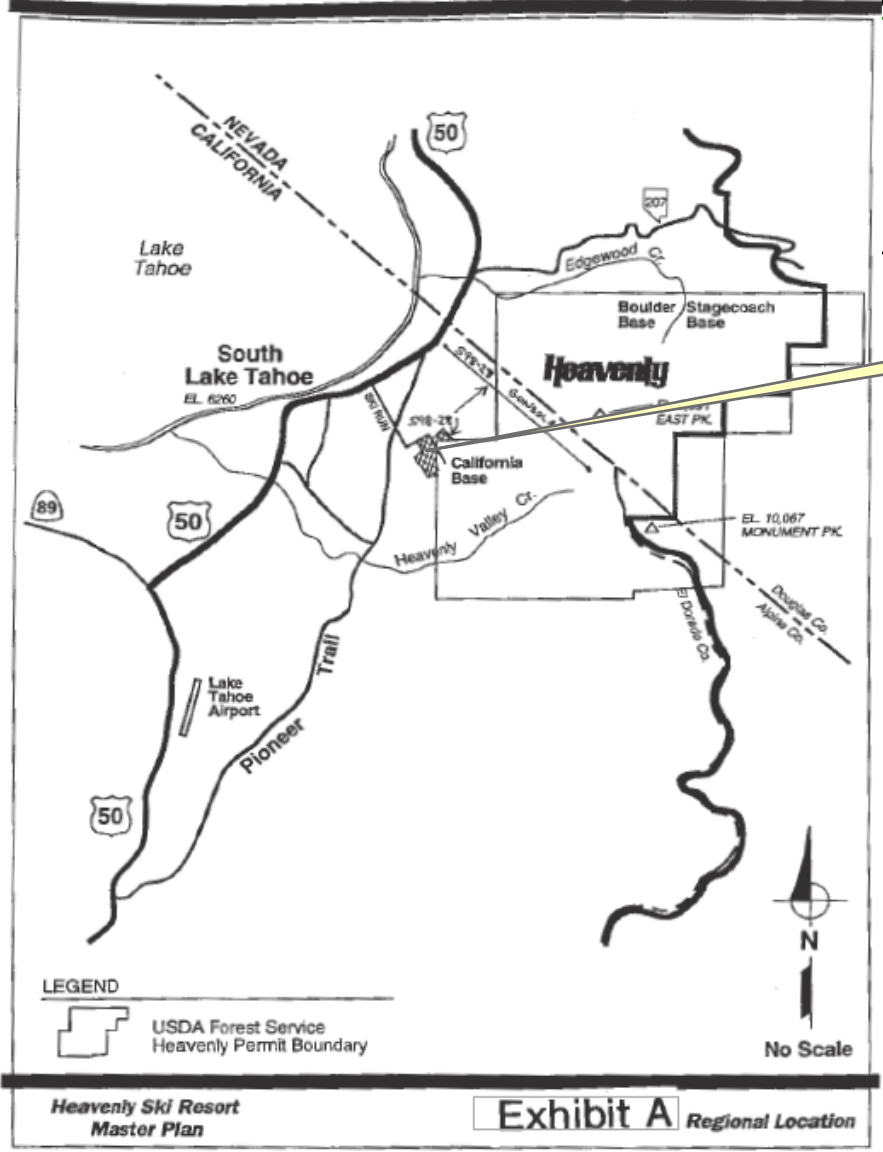
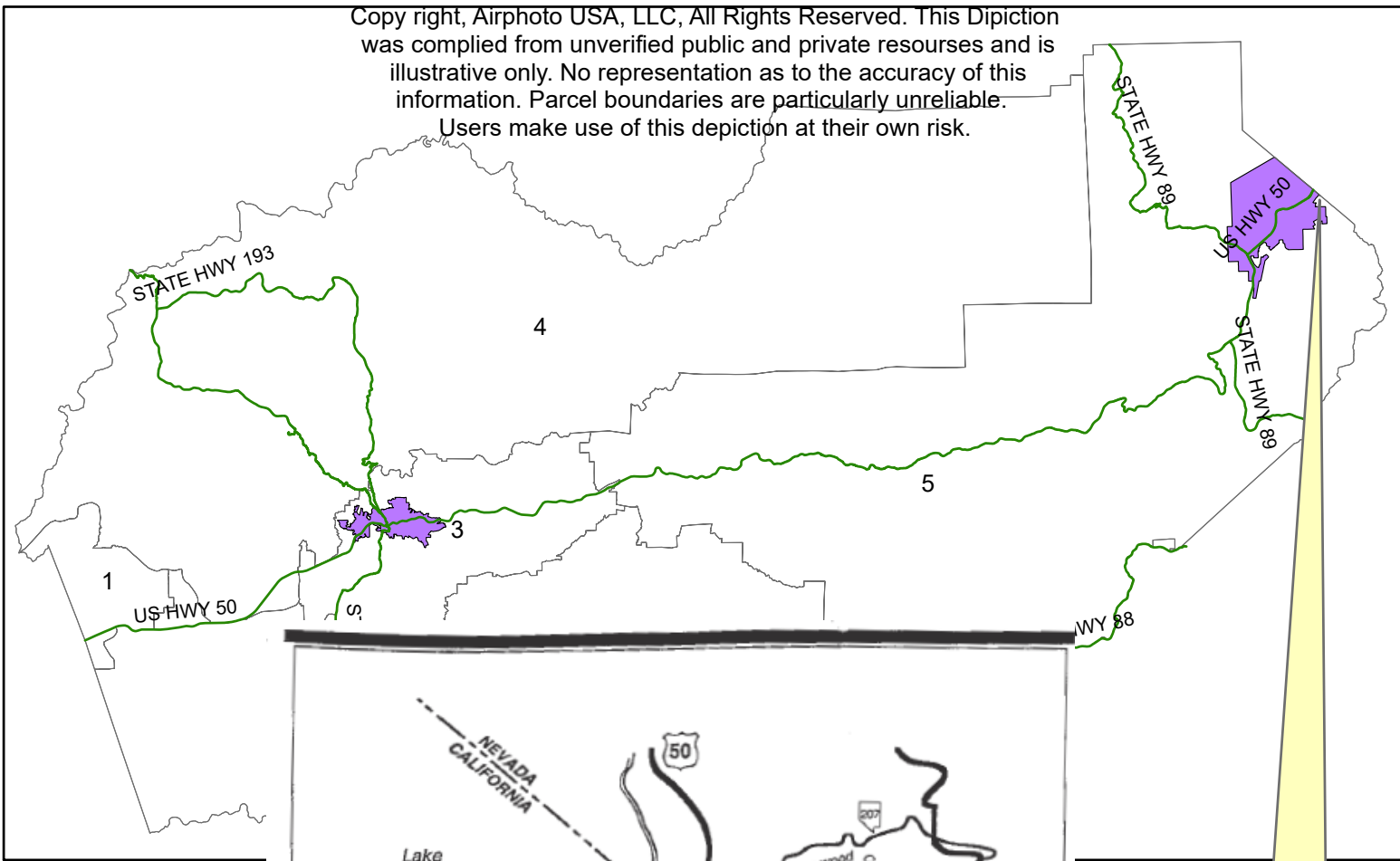


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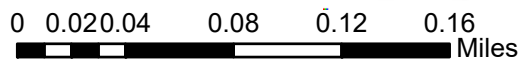
LEGEND  
 USDA Forest Service  
 Heavenly Permit Boundary



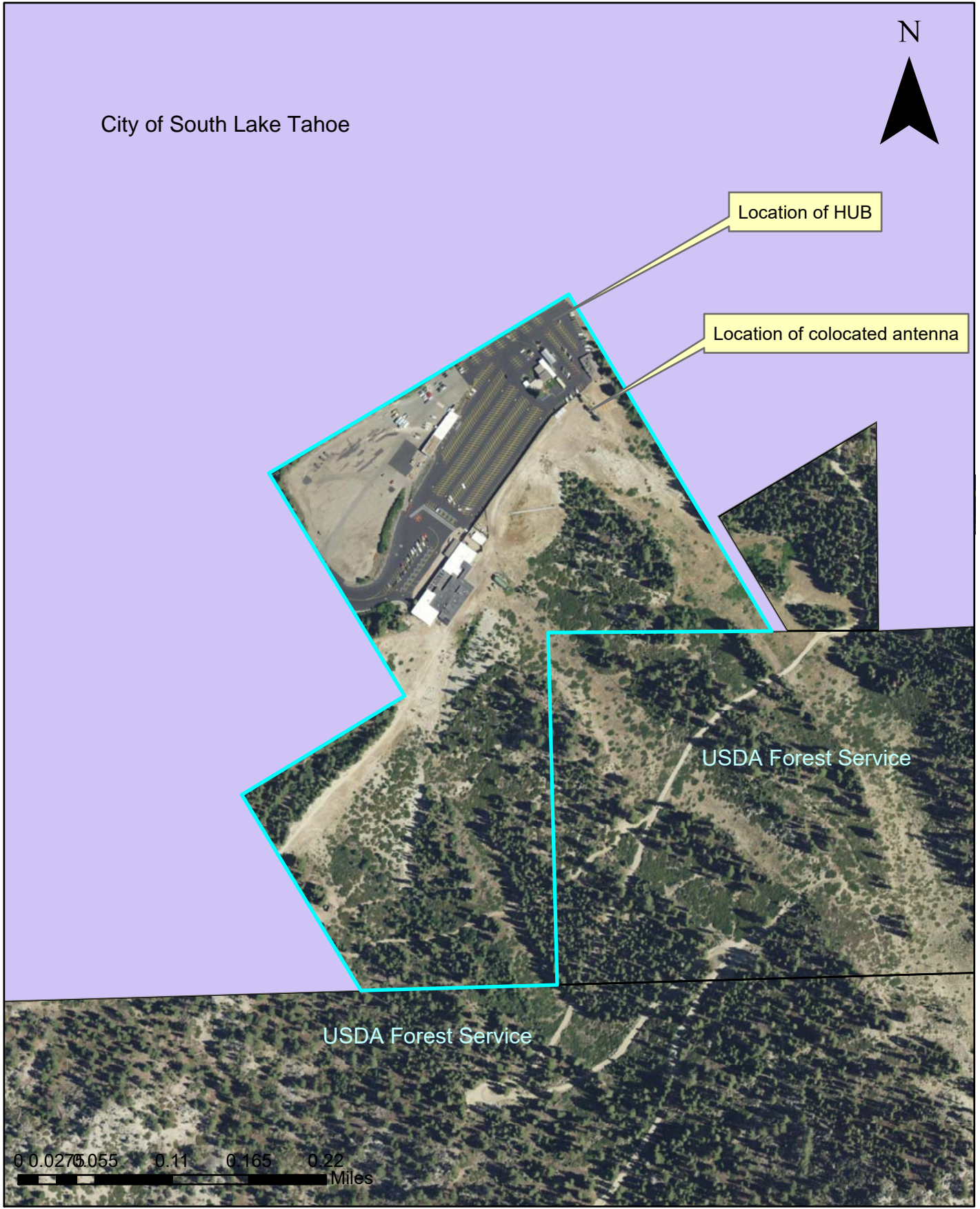
No Scale

Heavenly Ski Resort  
Master Plan

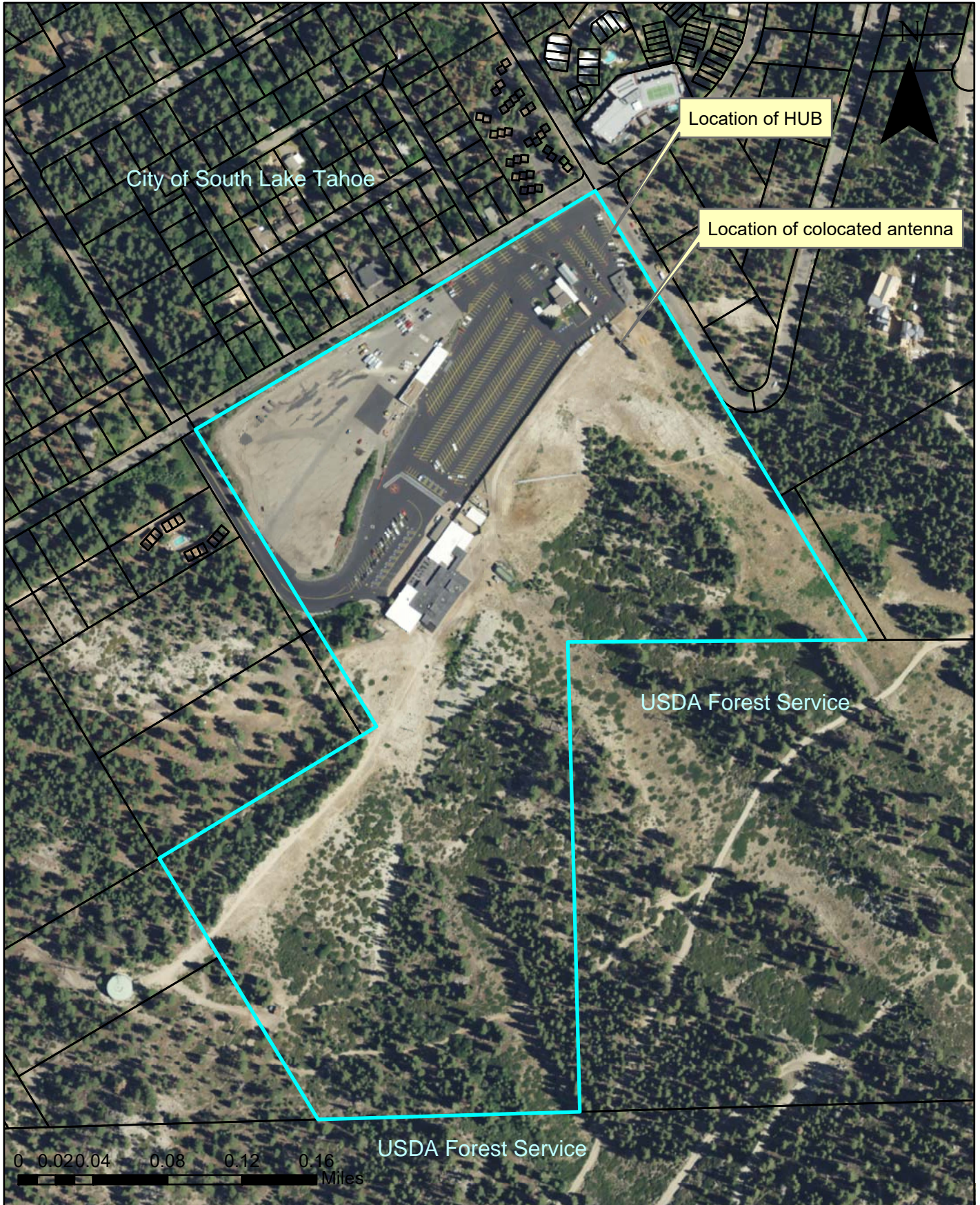
Exhibit A Regional Location

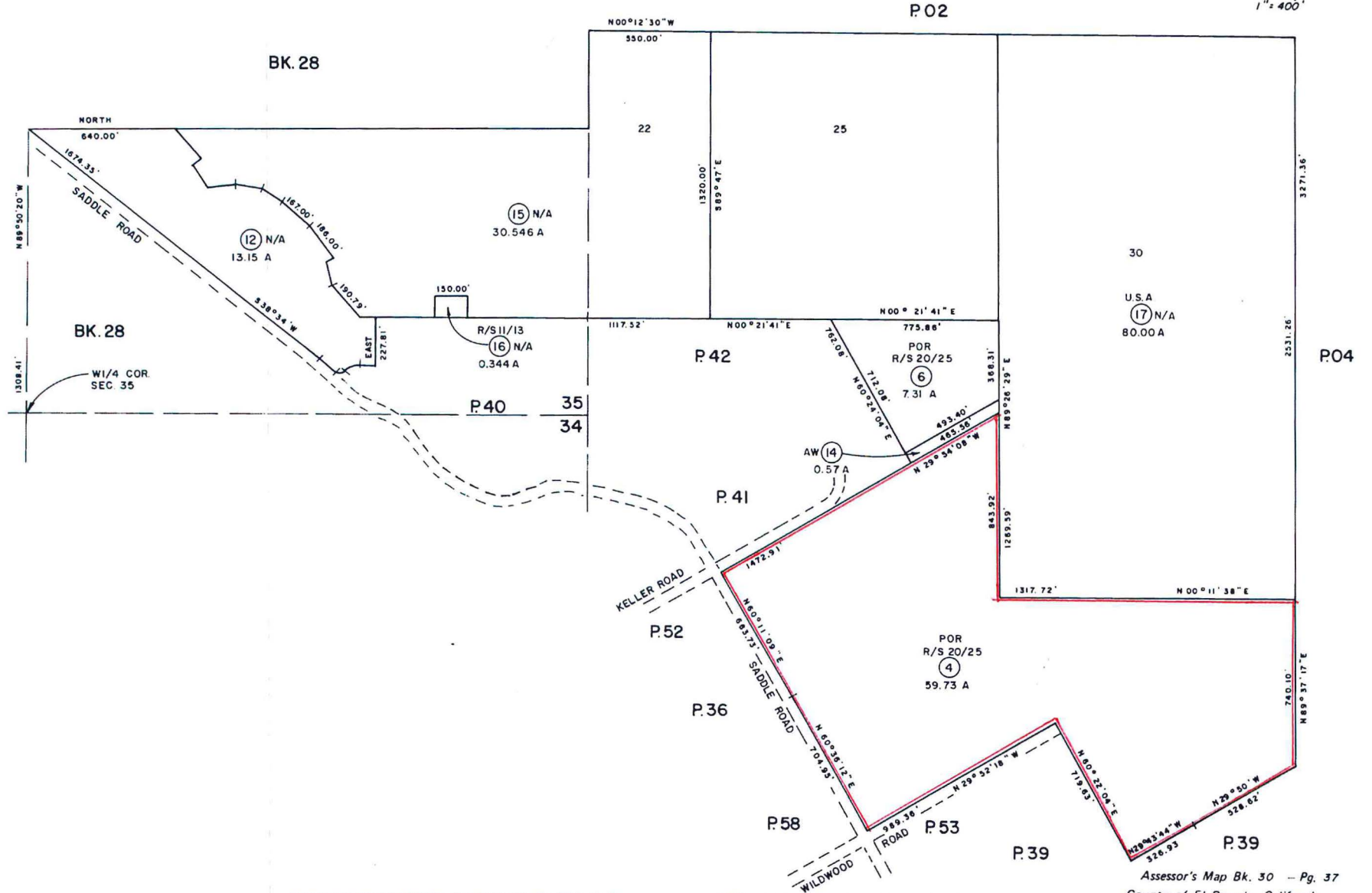


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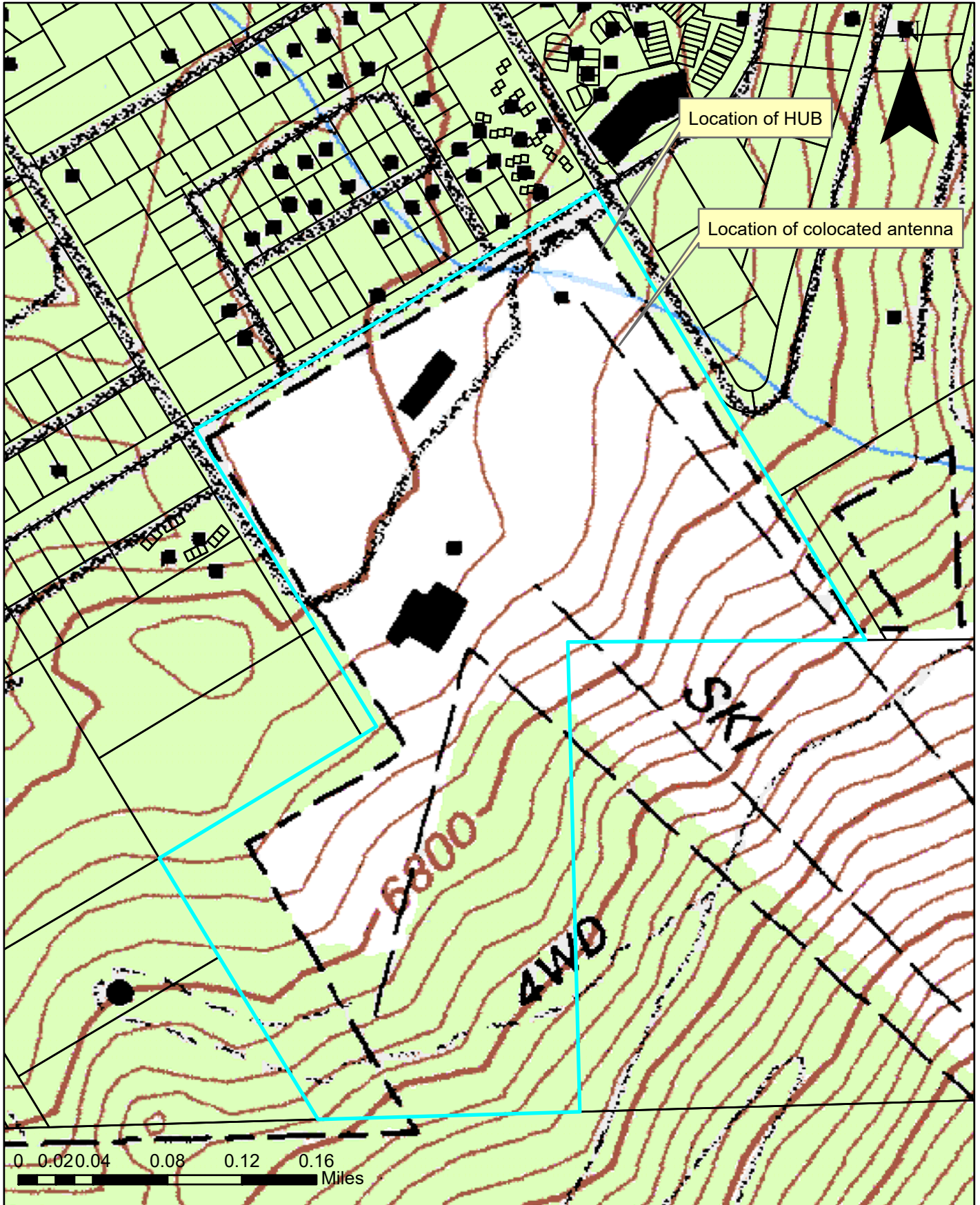
THIS MAP IS NOT A SURVEY, It is prepared by the El Dorado Co. Assessor's office for assessment purposes only.

NOTE - Assessor's Block Numbers Shown in Ellipses  
Assessor's Parcel Numbers Shown in Circles

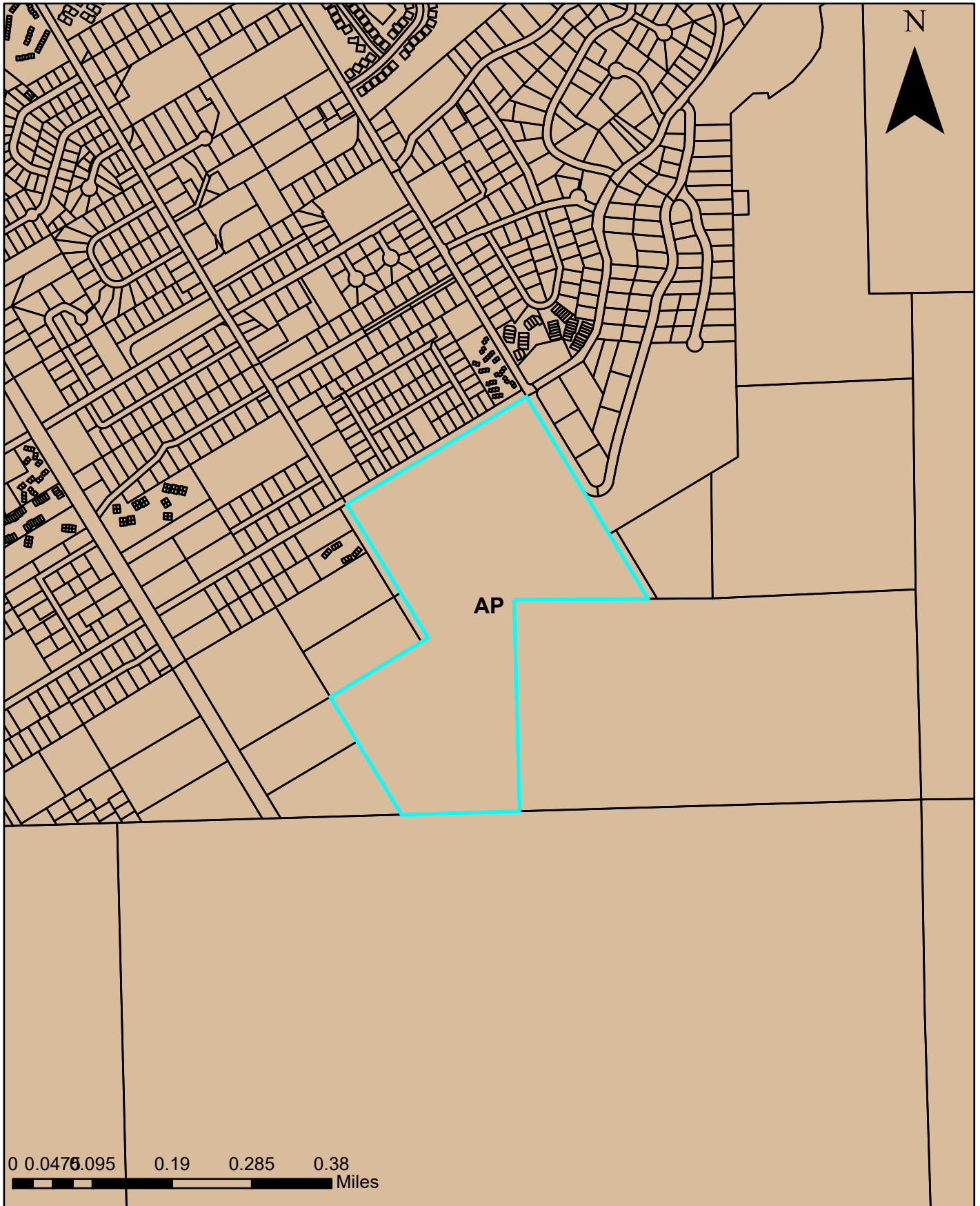
Assessor's Map Bk. 30 - Pg. 37  
County of El Dorado, California

# Exhibit D-Assessor's Parcel Map

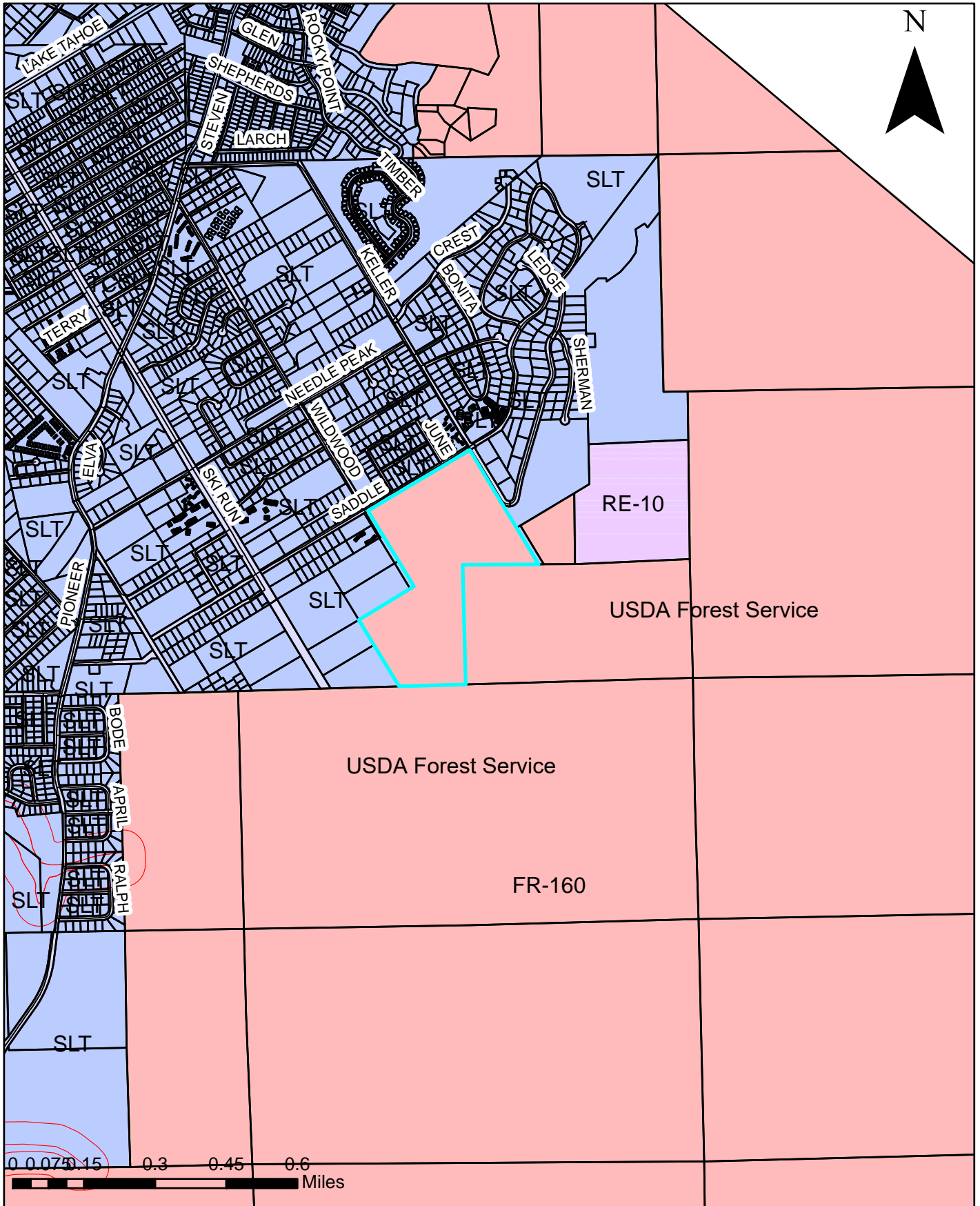
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PROJECT INFORMATION:

HEAVENLY RESORT  
HUB PACKAGE  
SITE #: 347208

CURRENT ISSUE DATE:

12/02/2018

ISSUED FOR:

APPROVALS

REV.: DATE: ISSUED FOR: BY:

REV.	DATE	ISSUED FOR	BY
0	06/08/18	APPROVALS	WO
1	12/02/18	APPROVALS	WO

PLANS PREPARED BY:



NKE Engineering, LLC  
8122 Southpark Lane Suite 211  
Littleton, CO 80120  
(970) 445-8810

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DRAWN BY: CHK: APV:

AA	DC	WO
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LICENSURE:

SHEET TITLE:

HEAVENLY MOUNTAIN HUB SITE PLAN

SHEET NUMBER: REVISION:

C1 1

NOTES:

- FOR ALL USE OF THE STAGING AREA WHEN SNOW COVER IS NOT PRESENT, CONTRACTOR SHALL HAVE ALL TEMPORARY EROSION CONTROL MEASURES IN PLACE AND APPROVED BY TRPA. CONTRACTOR SHALL INCORPORATE ADEQUATE DRAINAGE PROCEDURES DURING THE CONSTRUCTION PROCESS TO ELIMINATE EXCESSIVE PONDING AND/OR EROSION. AFTER A RAINSTORM IN WHICH RUNOFF OCCURRED, ALL SILT AND DEBRIS MUST BE REMOVED FROM TEMPORARY EROSION CONTROL MEASURES, AND ANY DAMAGED EROSION CONTROL MEASURES MUST BE REPAIRED.
- AN ONSITE INSPECTION BY TRPA STAFF IS REQUIRED PRIOR TO ANY CONSTRUCTION OR GRADING ACTIVITY. TRPA STAFF SHALL DETERMINE IF THE ONSITE CONSTRUCTION TEMPORARY EROSION CONTROL MEASURES HAVE BEEN PROPERLY INSTALLED. NO GRADING OR CONSTRUCTION SHALL COMMENCE UNTIL TRPA PRE-GRADE CONDITIONS OF APPROVAL ARE MET.
- CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL AND MAINTAIN ALL TEMPORARY EROSION CONTROL MEASURES TO ENSURE PROPER WORKING CONDITIONS. ROADS USED DURING CONSTRUCTION WILL BE INSPECTED DAILY BY CONTRACTOR FOR DRAINAGE AND GRADING. RUTS WILL BE REPAIRED IMMEDIATELY. WATERBARS, CULVERTS, AND DITCHES (DRAINAGE STRUCTURES) WILL BE MAINTAINED ON A DAILY BASIS DURING CONSTRUCTION.
- SEDIMENT BARRIERS AND CONSTRUCTION LIMIT FENCING WILL BE INSPECTED DAILY DURING CONSTRUCTION BY CONTRACTOR FOR DAMAGE AND APPROPRIATE PLACEMENT. SEDIMENT BARRIERS SHALL BE REPAIRED AND/OR RELOCATED AS NEEDED ON A DAILY BASIS.
- EXCAVATION SHALL NOT EXCEED 5- FEET BELOW GROUND SURFACE.
- DISTURBED AREAS, ROADWAYS, AND STAGING AREAS USED DURING CONSTRUCTION SHALL BE SWEEPED (IF PAVED) AND PROVIDED WITH DUST ABATEMENT SUCH AS A WATER TRUCK AS NEEDED.
- FOR ALL NATIVE TREES TO REMAIN, TEMPORARY CONSTRUCTION FENCE SHALL BE INSTALLED AROUND THE DRIPLINE OF ALL TREES ADJACENT TO THE WORK AREAS, WHERE FEASIBLE, OR OTHER MEASURES DEEMED APPROPRIATE BY THE TRPA INSPECTOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SITE IN A NEAT AND ORDERLY MANNER THROUGHOUT THE CONSTRUCTION PROCESS.
- TURNING OR MANEUVERING OF BACKHOE, EXCAVATOR OR OTHER EQUIPMENT OUTSIDE OF ROADWAYS WILL BE MINIMIZED TO REDUCE SOIL DISTURBANCE.
- CONTRACTOR WILL REFERENCE THE HEAVENLY MASTER DEVELOPMENT PLAN CONSTRUCTION EROSION REDUCTION PLAN SPECIFICATIONS (CERP) FOR SPECIFIC REQUIREMENTS WHILE WORKING ON THE SITE.

REVEGETATION SPECIFICATION

ALL AREAS DISTURBED DURING CONSTRUCTION, INCLUDING ACCESS CORRIDORS, STORAGE AREAS, STAGING AREAS, AND CONSTRUCTION AREAS SHALL BE STABILIZED ACCORDING TO THESE SPECIFICATIONS. REVEGETATION TREATMENTS PERFORMED BY AN OUTSIDE CONTRACTOR SHALL NOT BE INITIATED WITHOUT THE APPROVAL OF HEAVENLY PERSONNEL. THE CONTRACTOR SHALL NOTIFY HEAVENLY AT LEAST FIVE WORKING DAYS PRIOR TO PLANTING TO SCHEDULE THE REQUIRED INSPECTION.

STABILIZATION TREATMENTS SHALL BE INSTALLED AS PER THESE SPECIFICATIONS AND THE PLAN SHEETS AND SHALL CONSIST OF 20% WOOD CHIP INCORPORATION INTO THE TOP 12 INCHES OF SOIL, SEEDING, AND 10% PINE NEEDLE/WOOD CHIP MULCH APPLICATION TO A LOOSE DEPTH OF 2 INCHES.

SEED MIXTURES ARE SHOWN IN TABLE 1.

SEED SHALL BE CLEAN NEW CROP SEED, PURCHASED PREMIXED ON A PURE LIVE SEED (PLS) BASIS AND APPROVED BY THE USFS LTBMU BEFORE PURCHASE. SEED SHALL BE DELIVERED TO THE SITE IN ORIGINAL UNOPENED CONTAINERS BEARING THE DEALER'S GUARANTEED ANALYSIS AND GERMINATION PERCENTAGE, AND SHALL MEET THE STATE OF NEVADA FREEDOM FROM NOXIOUS WEED REQUIREMENTS FOR AREAS TO BE REVEGETATED WITHIN NEVADA. NO SUBSTITUTIONS IN THE SEED MIXTURE WILL BE ACCEPTED WITHOUT WRITTEN APPROVAL FROM HEAVENLY.

SEED LABELS SHALL BE REMOVED FROM THE SEED SACKS AND PROVIDED TO HEAVENLY PERSONNEL AT THE TIME OF SEEDING. SEED LABELS WILL INCLUDE DOCUMENTATION FOR EACH TYPE OF SEED CERTIFYING THAT A RECOGNIZED LABORATORY TESTED THE SEED WITHIN 6 MONTHS OF THE DATE OF DELIVERY.

ALL AREAS TO BE SEEDED SHALL BE LOOSENEED TO A DEPTH OF AT LEAST 12 INCHES TO ALLEVIATE COMPACTION AND TO INCORPORATE MULCH TO IMPROVE WATER INFILTRATION AND WATER HOLDING CAPACITY. A UNIFORM 3-INCH LAYER OF MULCH SHALL BE SPREAD ACROSS THE SURFACE OF THE TREATMENT AREAS. MULCH SHALL BE INCORPORATED INTO THE TOP 12 INCHES OF SOIL BY AN APPROVED LOOSENING METHOD. AREAS SHALL BE RAKED SMOOTH FOLLOWING MULCH INCORPORATION.

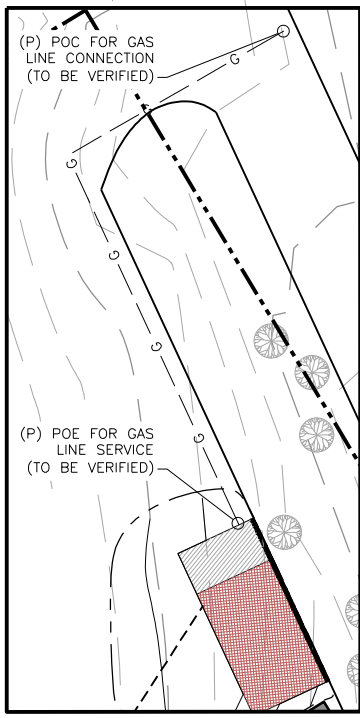
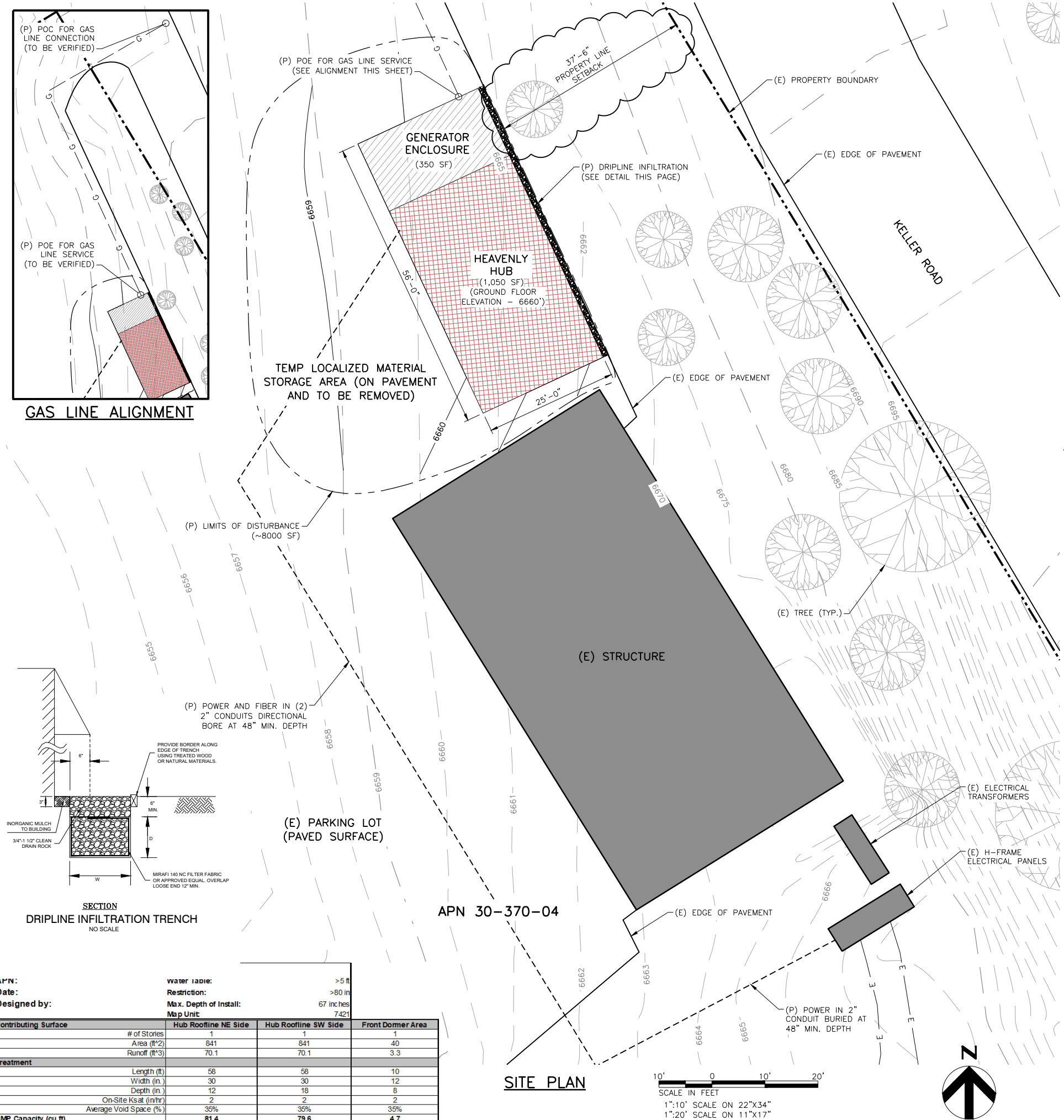
AREAS DESIGNATED FOR SEEDING SHALL BE UNIFORMLY BROADCAST SEEDED WITH HAND OPERATED BROADCAST SEEDERS. THE CONTRACTOR SHALL PROVIDE HEAVENLY A WRITTEN STATEMENT OR SITE DEMONSTRATION TO VERIFY THAT THE SEEDING BROADCAST EQUIPMENT HAS BEEN CALIBRATED TO THE SPECIFIED APPLICATION RATES. SEEDING SHALL NOT OCCUR UNDER CONDITIONS THAT WOULD ALLOW SEED TO BECOME WIND BORN. SEED SHALL NOT BE INCORPORATED AND APPLIED WITH HYDROMULCH. IMMEDIATELY FOLLOWING BROADCASTING, THE SEEDED AREAS SHALL BE LIGHTLY HAND-RAKED TO PLACE THE SEED AT DEPTH OF 1/4 TO 1/2 INCH INTO THE SOIL. NO FURTHER VEHICULAR ACCESS WILL BE ALLOWED ON TREATMENT AREAS UPON COMPLETION OF SEEDING. SEEDINGS SHALL NOT BE LEFT OVERNIGHT WITHOUT RECEIVING MULCH TREATMENT.

ALL SEEDED AREAS SHALL BE MULCHED WITH PINE NEEDLES OR WOOD CHIPS. PINE NEEDLE MULCH SHALL BE SPREAD ACROSS SEEDED AREAS IN A LOOSE 2" LAYER TO ACHIEVE A MINIMUM OF 90 PERCENT COVER.

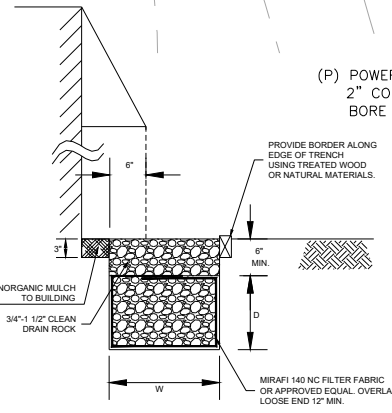
Exhibit H-Preliminary Site Plan

TABLE 1:

DESCRIPTION	SEEDING RATE PURE LIVE SEED (POUNDS PER ACRE)
MANZANITA GREENLEAF	0.5
BROME CALIFORNIA SIERRA	12
WHEATGRASS SLENDER REVENUE	13
WHEATGRASS THICKSPIKE CRITANA	5
FESCUE IDAHO	3
SQUIRRELTAIL	6.5
BLUEGRASS BIG SHERMAN	1
NEEDLEGRASS WESTERN	0.5
WILDFLOWER HEAVENLY CUSTOM MIX	2
SAGEBRUSH BIG MOUNTAIN	1
BITTERBRUSH	1
TOTAL PLS POUNDS PER ACRE RATE	45.5



GAS LINE ALIGNMENT



SECTION DRIPLINE INFILTRATION TRENCH NO SCALE

APN: APN 30-370-04

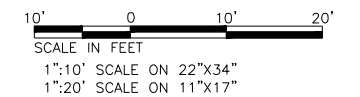
Date: > 5 ft

Restriction: > 80 in

Designed by: Max. Depth of Install: 67 inches

Map Unit: 7421

Contributing Surface	Hub Roofline NE Side	Hub Roofline SW Side	Front Dormer Area
# of Stories	1	1	1
Area (ft <sup>2</sup> )	841	841	40
Runoff (ft <sup>3</sup> )	70.1	70.1	3.3
Treatment			
Length (ft)	58	58	10
Width (in)	30	30	12
Depth (in)	12	18	8
On-Site Ksat (in/hr)	2	2	2
Average Void Space (%)	35%	35%	35%
BMP Capacity (cu.ft)	81.4	79.6	4.7



SITE PLAN





PROJECT INFORMATION:  
**HEAVENLY RESORT**  
 FIBER AND NODE PACKAGE  
 SITE #: 347208

CURRENT ISSUE DATE:  
**12/02/2018**

ISSUED FOR:  
**APPROVALS**

REV. NO.	DATE	ISSUED FOR	BY
0	06/08/18	APPROVALS	WO
2	12/02/18	REV 2	WO

PLANS PREPARED BY:  
  
 NKE Engineering, LLC  
 8122 Southpark Lane Suite 211  
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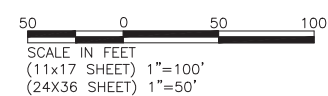
LICENSURE:  
 SHEET TITLE:  
**HEAVENLY RESORT FIBER ALIGNMENT PLAN (SHEET 1 OF 12)**

SHEET NUMBER: \_\_\_\_\_ REVISION: \_\_\_\_\_  
**C4** 2



**LEGEND**

- HUB LOCATION
- PROPOSED HANDHOLE
- EXISTING HANDHOLE
- PROPOSED AERIAL FIBER PATH
- PROPOSED DIRECTIONAL BORE FIBER PATH
- PROPOSED BURIED FIBER PATH
- EXISTING POWER POLE
- PROPOSED BURIED POWER
- PROPOSED SPLICE LOCATION
- PROPOSED NODE
- PROPOSED SLACK-LOOP
- PROPOSED BURIED LATERAL PATH



**Exhibit I-Preliminary Grading Sheet C4**

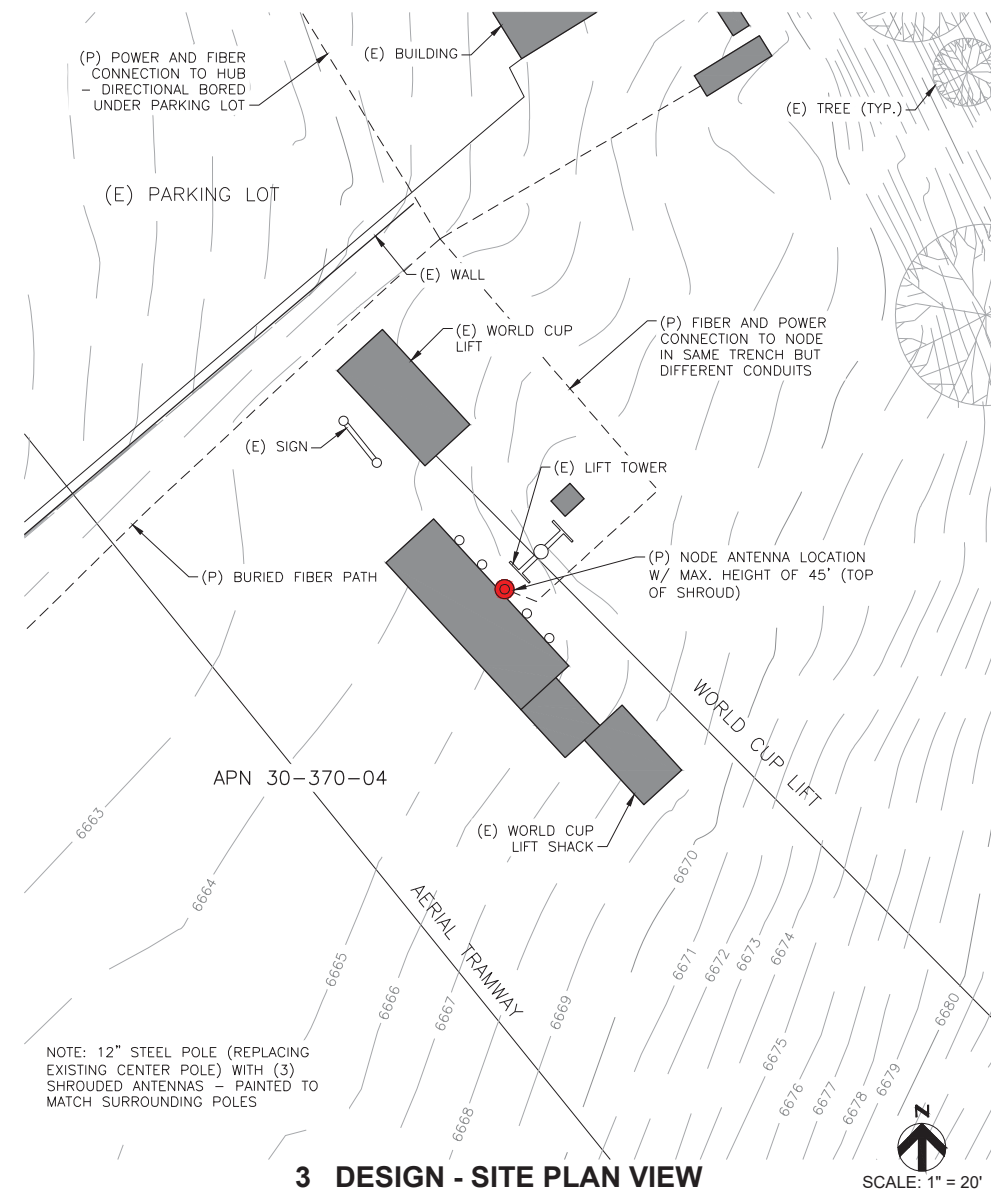
FILE NAME: N:\PROJECTS\ATC\T00009 - HEAVENLY\9.00 CAD\DELIVERABLES\FINAL SUBMISSION (120218)\ATC-HEAVENLY-FIBER-ALIGNMENT-12-02-18.DWG  
 PLOT DATE/TIME: 12/11/2018 10:24 AM



1 - PHOTO EXISTING CONDITION OF STRUCTURE



2 - PHOTO SIMULATION OF NODE ON STRUCTURE



3 DESIGN - SITE PLAN VIEW

SCALE: 1" = 20'

**GENERAL CONSTRUCTION NOTES:**

1. CONTRACTOR SHALL VERIFY UTILITY LOCATES BEFORE PROCEEDING WITH ANY EXCAVATION, SITE WORK OR CONSTRUCTION.
2. CONTRACTOR SHALL INSTALL STORMWATER BMPs PRIOR TO INITIATING ANY GROUND DISTURBANCE IN ACCORDANCE WITH THE SWMP ESTABLISHED AND ADMINISTERED BY VAIL RESORTS. AREA OF DISTURBANCE SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICE (AS SHOWN ON 3 DESIGN - SITE PLAN VIEW) AND ALL DISTURBED AREAS SHALL BE PROTECTED BY INSTALLED STORMWATER BMPs PRIOR TO DISTURBANCE.
3. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
4. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
5. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, USING THE BEST SKILLS AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT INCLUDING CONTACT AND COORDINATION WITH THE ATC SITE REPRESENTATIVE AND WITH VAIL RESORT'S AUTHORIZED REPRESENTATIVE.
6. CONTRACTOR SHALL PROVIDE THIRD PARTY INSPECTIONS OF INSTALLED FOUNDATIONS AND PROVIDE PROFESSIONAL ENGINEERED STAMPED AS-BUILTS FOR ATC, VAIL RESORTS AND GOVERNING AGENCY.
7. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
8. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS AND UPON COMPLETION OF WORK REPAIR ANY DAMAGE THAT OCCURRED DURING CONSTRUCTION TO THE SATISFACTION OF VAIL RESORTS. FINAL CONTOURS OUTSIDE OF THE INSTALLED FOUNDATIONS SHALL BE RETURNED TO PRE-DEVELOPMENT CONTOURS AT THE COMPLETION OF CONSTRUCTION.
9. ALL DISTURBED AREAS SHALL BE RE-VEGETATED IN ACCORDANCE WITH THE SWMP ESTABLISHED AND ADMINISTERED BY VAIL RESORTS AND STANDARDS AND REQUIREMENTS OF THE GOVERNING AGENCY WERE SUCH MAY EXCEED BUT NO CONFLICT WITH SWMP.
10. KEEP GENERAL AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST OR SMUDGES OF ANY NATURE.
11. CONTRACTOR WILL REFERENCE THE HEAVENLY MASTER DEVELOPMENT PLAN CONSTRUCTION EROSION REDUCTION PLAN SPECIFICATIONS (CERP) FOR SPECIFIC REQUIREMENTS WHILE WORKING ON THE SITE.



PROJECT INFORMATION:

HEAVENLY RESORT

FIBER AND NODE PACKAGE

SITE #: 347208

CURRENT ISSUE DATE:

12/02/2018

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REV.: DATE: ISSUED FOR: BY:

REV.	DATE	ISSUED FOR	BY
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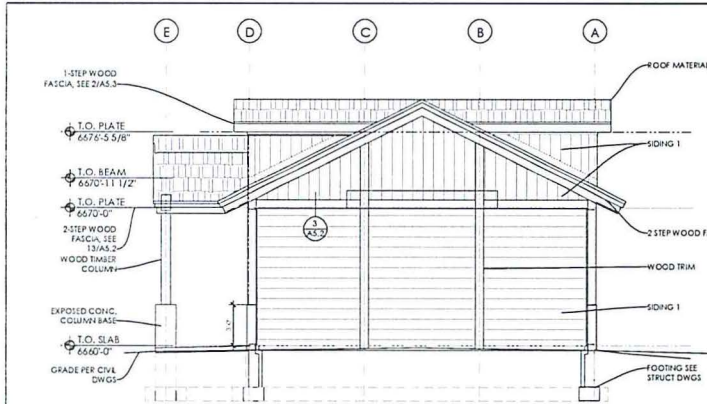
LICENSURE:

SHEET TITLE:

HEAVENLY RESORT  
HUB (CALIFORNIA LODGE)  
NODE PLAN

SHEET NUMBER: REVISION:

C21 2



East Elevation  
 1/4"=12"



South Elevation  
 1/4"=12"

FENESTRATION SCHEDULE

NO.	LOCATION	TYPE	SIZE	FINISH	REMARKS
1	EAST WALL	WINDOW	3'-0" x 2'-0"	WOOD	WOOD FRAME, UNPAINTED, NO V. GLASS REQUIRED
2	EAST WALL	WINDOW	3'-0" x 2'-0"	WOOD	WOOD FRAME, UNPAINTED, NO V. GLASS REQUIRED
3	EAST WALL	WINDOW	3'-0" x 2'-0"	WOOD	WOOD FRAME, UNPAINTED, NO V. GLASS REQUIRED
4	EAST WALL	WINDOW	3'-0" x 2'-0"	WOOD	WOOD FRAME, UNPAINTED, NO V. GLASS REQUIRED

- DO NOT ORDER DOORS OR WINDOWS FROM THIS SCHEDULE. VERIFY WITH DON PURCHASE ORDER WITH PROJECT & OWNER.
- FOR ALL WINDOW OPERATIONS SEE THE PROJECT MANUAL.
- CONSIDER ALL WINDOW TYPES IN A FRAME AS BEING OF THE SAME TYPE.
- SEE THE ELEVATION FOR WINDOW SIZES AND FINISHES.

**TRPA HEIGHT STANDARD FOR BUILDINGS:**  
 PERCENT SLOPE RETAINED ACROSS BUILDING SITE = 4%  
 PROPOSED ROOF PITCH = 6:12  
 MAXIMUM HEIGHT (PER TABLE A IN TRPA DESIGN REVIEW GUIDELINES) = 32'-0"  
 LOWEST NATURAL GRADE = 6659.5'  
 TOP OF SLAB = 6660.0'  
 HIGHEST ELEVATION OF PITCHED ROOF ON BUILDING = 6678.0'  
 MAXIMUM HEIGHT OF PROPOSED STRUCTURE = 18'-0"

DOOR SCHEDULE

MARK	WIDTH	HEIGHT	THICK	GLASS	CONST	FINISH	MARK	TYPE	FINISH	LOCATION	REMARKS
1	3'-0"	7'-0"	1 1/2"	0	WOOD	WOOD	1	WOOD	WOOD	EAST WALL	SEE 1/AS.2

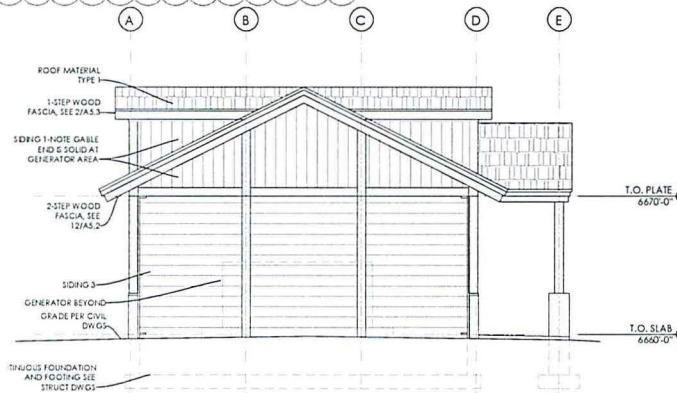
- DO NOT ORDER DOORS FROM THIS SCHEDULE. VERIFY WITH DON PURCHASE ORDER WITH PROJECT & OWNER.
- CONSIDER ALL WINDOW TYPES IN A FRAME AS BEING OF THE SAME TYPE.
- SEE THE ELEVATION FOR WINDOW SIZES AND FINISHES.

HARDWARE SCHEDULE

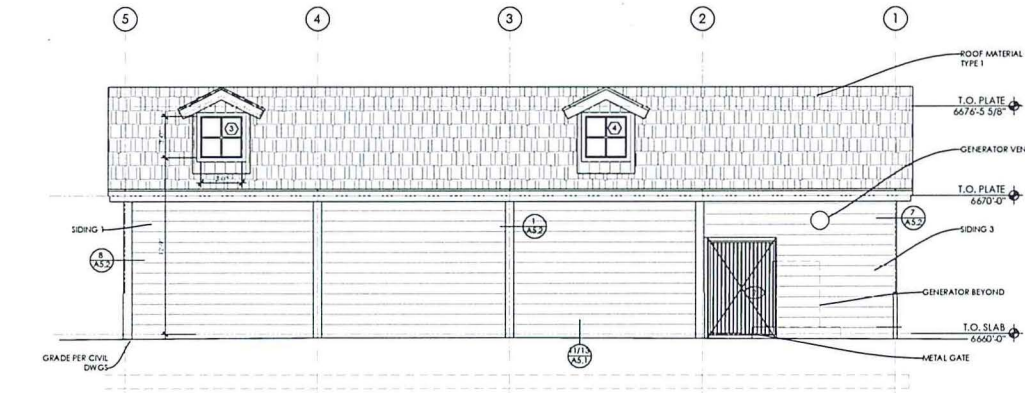
HARDWARE SET #1	QTY	MFR	PRODUCT	FINISH	REMARKS
HINGES	6	STANLEY	FBB88	US32D430	BALL BEARING, FIVE-KNUCKLE, FULL MORTISE, HEAVY DUTY, 4-1/2"x4-1/2"
SURFACE CLOSER	2	DOHMA	TS9315 5TH	US32D430	ADA, PUSH SIDE, DOOR MOUNT, CUSHION STOP
LOCK SET	2	BEST ACCESS	3/4" TUBULAR LEVER	US32D430	"STOREROOM" FUNCTION, 14 LEVER, D ROSE, STANDARD STRIKE
AUTO FLUSH BOLTS	1	ROCKWOOD	2942	US32D430	PROVIDE 1/2" DUST PROOF STRIKE AT SILL BOLT
COORDINATOR	1	ROCKWOOD	2963 SERIES	SILVER	POWDER COAT
THRESHOLD	1	PEMCO	2564AFG	MILL AL	12" WIDE MIN. LENGTH TO MATCH DOOR JAMB
DOOR GASKET	1	PEMCO	588	BLACK	WEATHERSTRIPPING AT HEAD AND JAMB
PROTECTION PLATE	2	ROCKWOOD	8400, 20" HIGH ARMOR PLATE	US32D430	BEVELED FOUR EDGES, COUNTERSUNK

MATERIAL LEGEND

- SIDING 1:** ROUGH SAWN CEDAR, 1X8 CHANNEL RUSTIC SIDING WITH 1" REVEAL, STAINED WITH "RUSTIQUE AF 275"
- SIDING 3:** ROUGH SAWN CEDAR, 1X8 SIDING WITH 1" OPEN REVEAL FOR GENERATOR VENTILATION, STAINED WITH "RUSTIQUE AF 275"
- WOOD TRIM AND FASCIA:** ROUGH SAWN CEDAR TRIM IN SIZES INDICATED IN DETAILS, STAINED WITH "RUSTIQUE AF 275"
- ROOF 1:** COMPOSITE SHINGLE, COLOR "BURNT SIENNA"
- PIF METAL DOOR:** HOLLOW METAL DOOR AND FRAME AND METAL GATE PAINTED "FOREST GREEN"
- MTL FLASHING:** ALUMINUM SHEET, PAINTED "FOREST GREEN"
- GLASS:** TINTED
- WOOD POSTS:** PAINTED "RUSTIQUE AF 275"
- NOTE:** THERE WILL BE NO REFLECTIVE OR SHINY METAL SURFACES FROM THE EXTERIOR MECHANICAL EQUIPMENT.



West Elevation  
 1/4"=12"



North Elevation  
 1/4"=12"

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**HEAVENLY Mountain Hub**  
 Heavenly Mountain  
 South Lake Tahoe, CA 96150

Program Print Date:  
 12.11.2018

File:  
 A3.1 - Heavenly Mountain Hub - Architectural Sheets - 12/03/18

ELEVATIONS  
 A3.1

File: A3.1 - Heavenly Mountain Hub - Architectural Sheets - 12/03/18 Print Date: Tuesday, December 11, 2018 10:54:44 AM



8618 Westwood Center Drive, Suite 315, Vienna, VA 22182  
703.276.1100 • 703.276.1169 fax  
info@sitesafe.com • www.sitesafe.com

# **American Tower Site ID – 347208 Site Name – Heavenly Resort Site Compliance Report**

**3860 Saddle Rd.  
S. Lake Tahoe, CA 96150**

Latitude: N38-56-12.00  
Longitude: W119-56-18.20  
Structure Type: Monotree

Report generated date: June 19, 2019  
Report by: Zyotty Thamsil  
Customer Contact: Prasan Gurung

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**American Tower will be compliant upon  
completion of the remediation identified in  
Section 3.2.**

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# American Tower Heavenly Resort - 347208 Radio Frequency (RF) Site Compliance Report



**3860 Saddle Rd., S. Lake Tahoe, CA 96150**



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## 1 Executive Summary

American Tower has contracted with Site Safe, LLC (Sitesafe), an independent Radio Frequency (RF) regulatory and engineering consulting firm, to determine whether the proposed communications site, 347208 - Heavenly Resort, located at 3860 Saddle Rd., S. Lake Tahoe, CA, is in compliance with Federal Communication Commission (FCC) Rules and Regulations for RF emissions.

This report contains a detailed summary of the RF environment at the site including:

- ) Diagram of the site
- ) Inventory of the make / model of all antennas
- ) Theoretical MPE based on modeling

This report addresses exposure to radio frequency electromagnetic fields in accordance with the FCC Rules and Regulations for all individuals, classified in two groups, "Occupational or Controlled" and "General Public or Uncontrolled."

**American Tower will be compliant** with the FCC rules and regulations, as described in OET Bulletin 65 **upon implementation of the proposed remediation.** The corrective actions needed to make this site compliant are located in Section 3.2.

American Tower proposes to build a new wireless site. The proposed antennas are noted as "proposed" in the antenna table under section 6.

This document and the conclusions herein are based on the information provided by American Tower.

If you have any questions regarding RF safety and regulatory compliance, please do not hesitate to contact Sitesafe's Customer Support Department at (703) 276-1100.

## 2 Regulatory Basis

### 2.1 FCC Rules and Regulations

In 1996, the Federal Communications Commission (FCC) adopted regulations for evaluating the effects of RF emissions in 47 CFR § 1.1307 and 1.1310. The guideline from the FCC Office of Engineering and Technology is Bulletin 65 (“OET Bulletin 65”), *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields*, Edition 97-01, published August 1997. Since 1996 the FCC periodically reviews these rules and regulations as per their congressional mandate.

FCC regulations define two separate tiers of exposure limits: Occupational or “Controlled environment” and General Public or “Uncontrolled environment”. The General Public limits are generally five times more conservative or restrictive than the Occupational limit. These limits apply to accessible areas where workers or the general public may be exposed to Radio Frequency (RF) electromagnetic fields.

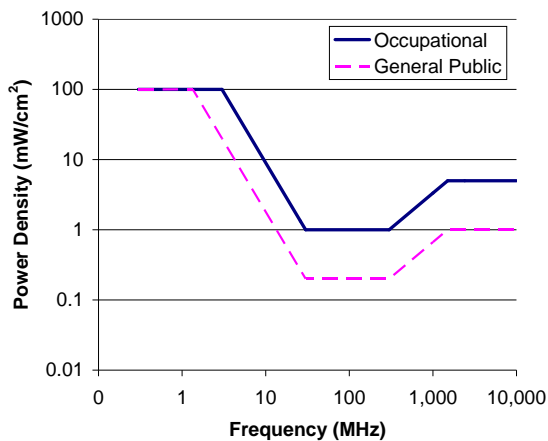
Occupational or Controlled limits apply in situations in which persons are exposed as a consequence of their employment and where those persons exposed have been made fully aware of the potential for exposure and can exercise control over their exposure.

An area is considered a Controlled environment when access is limited to these aware personnel. Typical criteria are restricted access (i.e. locked or alarmed doors, barriers, etc.) to the areas where antennas are located coupled with proper RF warning signage. A site with Controlled environments is evaluated with Occupational limits.

All other areas are considered Uncontrolled environments. If a site has no access controls or no RF warning signage it is evaluated with General Public limits.

The theoretical modeling of the RF electromagnetic fields has been performed in accordance with OET Bulletin 65. The Maximum Permissible Exposure (MPE) limits utilized in this analysis are outlined in the following diagram:

**FCC Limits for Maximum Permissible Exposure (MPE)**  
Plane-wave Equivalent Power Density





**Limits for Occupational/Controlled Exposure (MPE)**

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

**Limits for General Population/Uncontrolled Exposure (MPE)**

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	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

## 2.2 OSHA Statement

The General Duty clause of the OSHA Act (Section 5) outlines the occupational safety and health responsibilities of the employer and employee. The General Duty clause in Section 5 states:

(a) Each employer –

- (1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;
- (2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

OSHA has defined Radiofrequency and Microwave Radiation safety standards for workers who may enter hazardous RF areas. Regulation Standards 29 CFR § 1910.147 identify a generic lockout/tagout procedure aimed to control the unexpected energization or startup of machines when maintenance or service is being performed.



### 3 Site Compliance

#### 3.1 Site Compliance Statement

Upon evaluation of the cumulative RF emission levels from all operators at this site, Sitesafe has determined that:

**American Tower will be compliant** with the FCC rules and regulations, as described in OET Bulletin 65 **upon implementation of the proposed remediation**. The corrective actions needed to make this site compliant are located in Section 3.2.

The compliance determination is based on theoretical modeling, RF signage placement recommendations, proposed antenna inventory and the level of restricted access to the antennas at the site. Any deviation from the American Tower's proposed deployment plan could result in the site being rendered non-compliant.

#### 3.2 Actions for Site Compliance

Based on common industry practice and our understanding of FCC and OSHA requirements, this section provides a statement of recommendations for site compliance. RF alert signage recommendations have been proposed based on theoretical analysis of MPE levels. Where applicable, barriers can consist of locked doors, fencing, railing, rope, chain, paint striping or tape, combined with RF alert signage.

The site will be made compliant if the following changes are implemented:

##### **Pole Access Location**

Ensure that a Warning sign is installed 5' below the bottom tip of the antennas.

Ensure that a NOC sign is installed 5' below the bottom tip of the antennas.

**Note:** The construction drawing used to create this report may not have shown all or any of the pole access points. A Warning sign and a NOC sign will be required at every access point in order for the site to be in compliance.

## 4 Safety Plan and Procedures

The following items are general safety recommendations that should be administered on a site by site basis as needed by the carrier.

**General Maintenance Work:** Any maintenance personnel required to work immediately in front of antennas and / or in areas indicated as above 100% of the Occupational MPE limits should coordinate with the wireless operators to disable transmitters during their work activities.

**Training and Qualification Verification:** All personnel accessing areas indicated as exceeding the General Population MPE limits should have a basic understanding of EME awareness and RF Safety procedures when working around transmitting antennas. Awareness training increases a worker's understanding to potential RF exposure scenarios. Awareness can be achieved in a number of ways (e.g. videos, formal classroom lecture or internet-based courses).

**Physical Access Control:** Access restrictions to transmitting antennas locations is the primary element in a site safety plan. Examples of access restrictions are as follows:

- ) Locked door or gate
- ) Alarmed door
- ) Locked ladder access
- ) Restrictive Barrier at antenna (e.g. Chain link with posted RF Sign)

**RF Signage:** Everyone should obey all posted signs at all times. RF signs play an important role in properly warning a worker prior to entering into a potential RF Exposure area.

**Assume all antennas are active:** Due to the nature of telecommunications transmissions, an antenna transmits intermittently. Always assume an antenna is transmitting. Never stop in front of an antenna. If you have to pass by an antenna, move through as quickly and safely as possible thereby reducing any exposure to a minimum.

**Maintain a 3-foot clearance from all antennas:** There is a direct correlation between the strength of an EME field and the distance from the transmitting antenna. The further away from an antenna, the lower the corresponding EME field is.

**Site RF Emissions Diagram:** Section 5 of this report contains an RF Diagram that outlines various theoretical Maximum Permissible Exposure (MPE) areas at the site. The modeling is a worst-case scenario assuming a duty cycle of 100% for each transmitting antenna at full power. This analysis is based on one of two access control criteria: General Public criteria means the access to the site is uncontrolled and anyone can gain access. Occupational criteria means the access is restricted and only properly trained individuals can gain access to the antenna locations.

## 5 Analysis

### 5.1 RF Emissions Diagram

The RF diagram(s) below display theoretical spatially averaged percentage of the Maximum Permissible Exposure for all systems at the site unless otherwise noted. These diagrams use modeling as prescribed in OET Bulletin 65 and assumptions detailed in Appendix B.

The key at the bottom of each diagram indicates if percentages displayed are referenced to FCC **General Public** Maximum Permissible Exposure (MPE) limits. Color coding on the diagram is as follows:

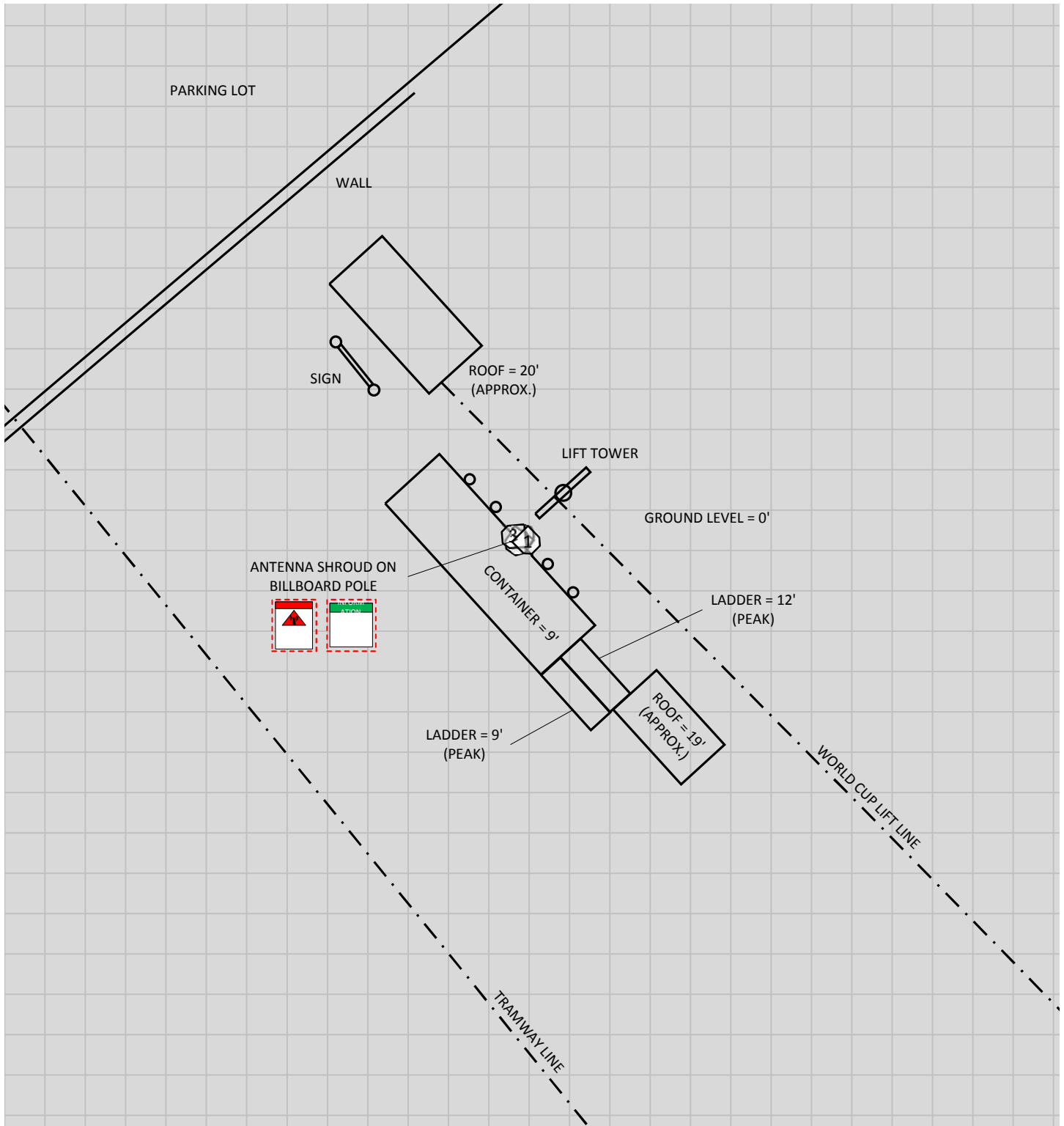


This table displays the maximum theoretical percentage of the FCC's General Public MPE limits:

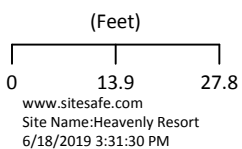
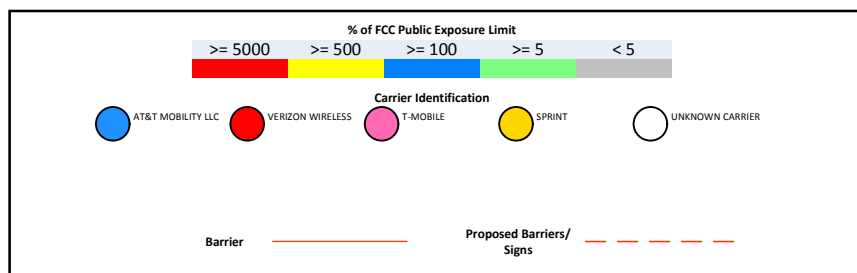
	<b>General Public Levels:</b>	
<b>Exposure Type:</b>	<b>Maximum</b>	<b>Spatial Average</b>
<b>Reference Level:</b>	<b>Antenna</b>	<b>Ground</b>
<b>American Tower:</b>	11,833.4%	<1%
<b>Composite:</b>	11,833.4%	<1%

Note: On the diagrams shown below, each level is marked with a height. For all diagrams that are marked as *Spatial average 0' – 6'*, the modeling program will spatially average the emissions within the area six feet above each set level. This provides an accurate spatial average of the percentage of the FCC's MPE limits within an accessible area.

# RF Exposure Simulation For: Heavenly Resort

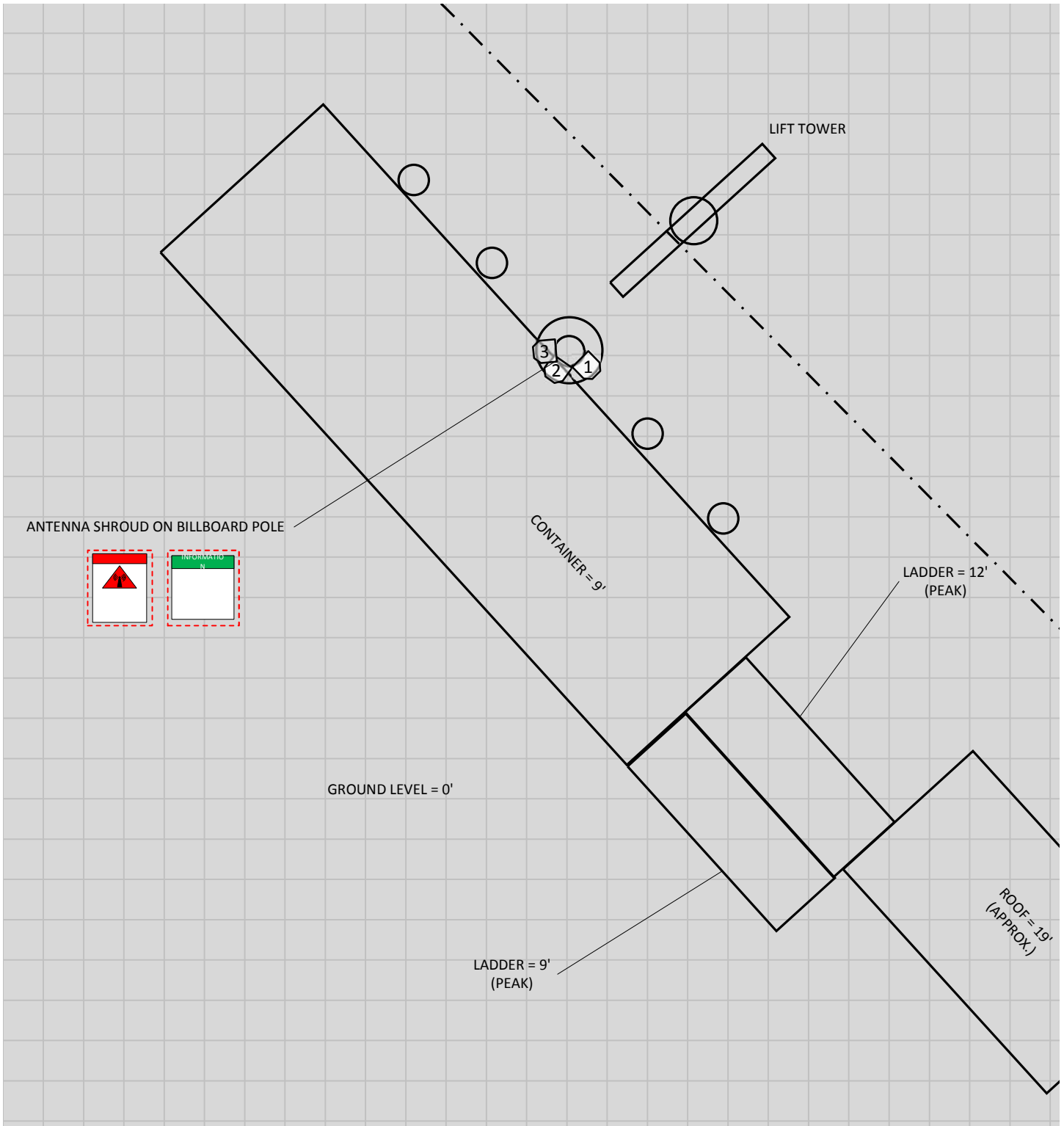


% of FCC Public Exposure Limit  
Spatial average 0' - 6'

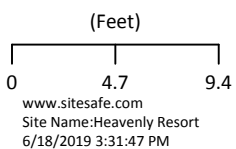
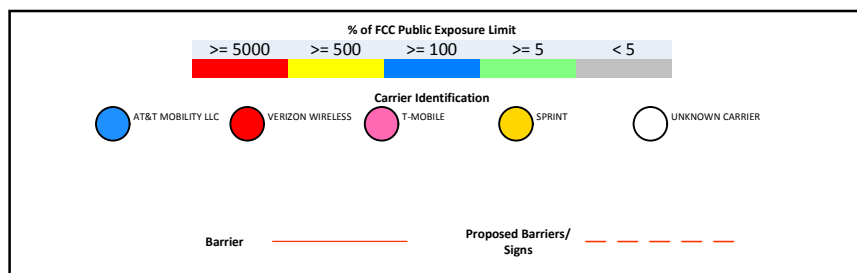


Sitesafe OET-65 Model  
Near Field Boundary:  
1.5 \* Aperture  
Reflection Factor: 1  
Spatially Averaged

# RF Exposure Simulation For: Heavenly Resort All Sector Detailed View

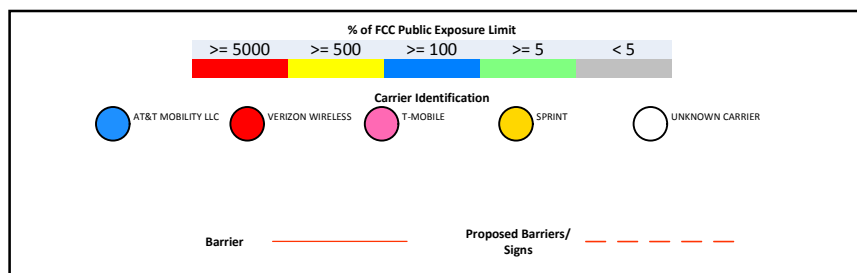
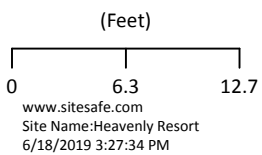
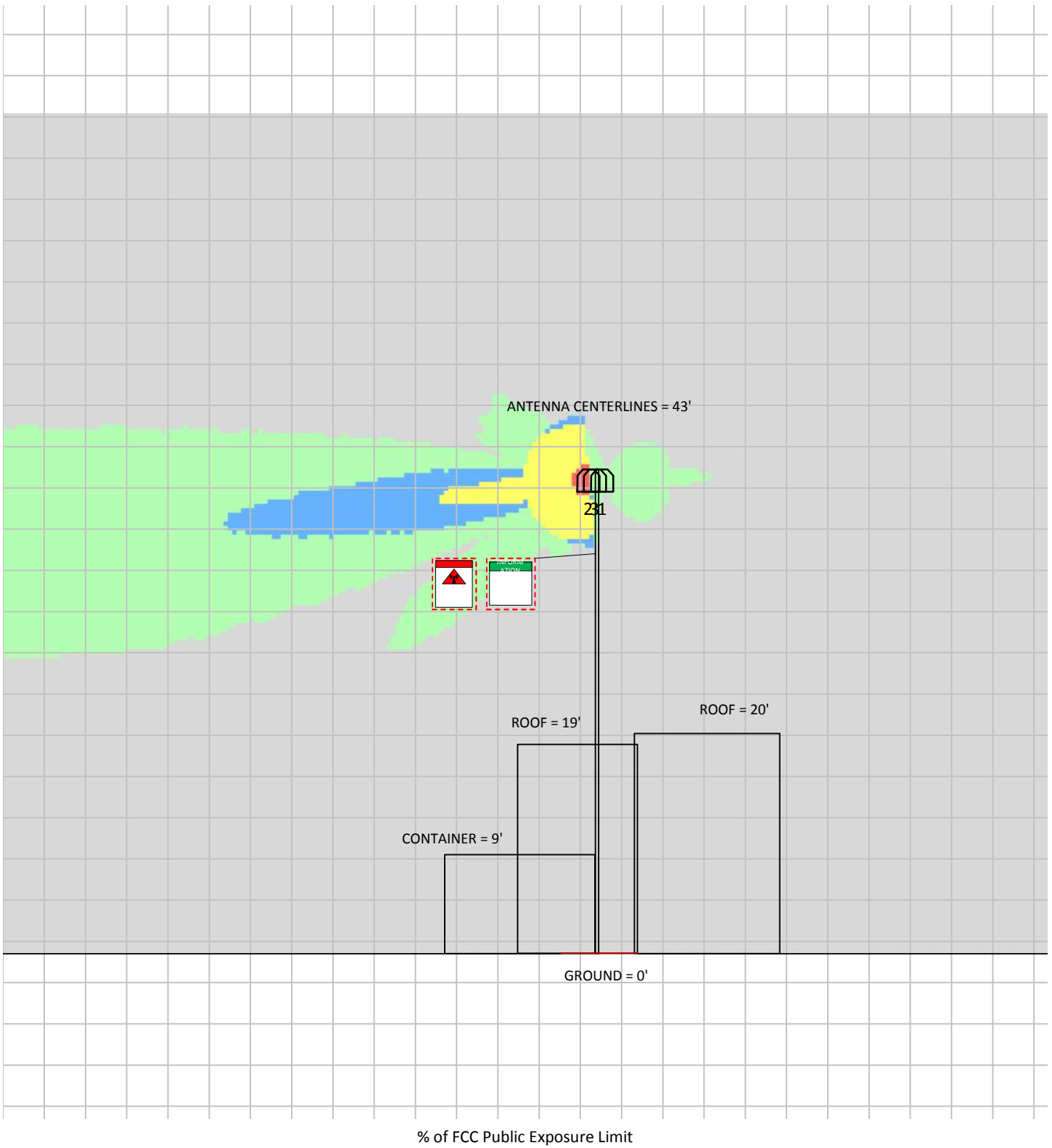


% of FCC Public Exposure Limit  
Spatial average 0' - 6'



Sitesafe OET-65 Model  
Near Field Boundary:  
1.5 \* Aperture  
Reflection Factor: 1  
Spatially Averaged

# RF Exposure Simulation For: Heavenly Resort Elevation View



Sitesafe OET-65 Model  
Near Field Boundary:  
1.5 \* Aperture  
Reflection Factor: 1  
Single Level (0)



## 6 Antenna Inventory

The Antenna Inventory shows all transmitting antennas at the site. This inventory was provided by the customer and was utilized by Sitesafe to perform theoretical modeling of RF emissions. The inventory coincides with the site diagrams in this report, identifying each antenna's location at 347208 - Heavenly Resort. The antenna information collected includes the following information:

- ) Licensee or wireless operator name
- ) Frequency or frequency band
- ) Transmitter power – Transmitter Power Output (“TPO”), Effective Radiated Power (“ERP”), or Equivalent Isotropic Radiated Power (“EIRP”)
- ) Antenna manufacturer make, model, and gain

For other carriers at this site, the use of “Generic” as an antenna model, or “Unknown” for an operator means the information with regard to carrier, their FCC license and/or antenna information was not available nor could it be secured while on site. Equipment, antenna models and nominal transmit power were used for modeling, based on past experience with radio service providers.





The following antenna inventory was provided by the customer and was utilized to create the site model diagrams:

Antenna Inventory																	
Ant #	Operated By	Antenna Model	Ant Type	Len (ft)	TX Freq (MHz)	Tech	Az (Deg)	Antenna Gain (dBd)	Horizontal Half Power Beamwidth (Deg)	Power	Power Type	Power Units	# of Trans	ERP (Watts)	Z (ft) (AGL)	MDT	EDT
1	UNKNOWN CARRIER (PROPOSED)	Jma Wireless XGU-465-I	Panel	4.2	700		135	11.76	71	61	EIRP	dBmW	1	767.1	43	6	0
1	UNKNOWN CARRIER (PROPOSED)	Jma Wireless XGU-465-I	Panel	4.2	850		135	13.36	69	61	EIRP	dBmW	1	767.1	43	6	0
1	UNKNOWN CARRIER (PROPOSED)	Jma Wireless XGU-465-I	Panel	4.2	1900		135	15.16	58	64	EIRP	dBmW	1	1531.1	43	6	0
1	UNKNOWN CARRIER (PROPOSED)	Jma Wireless XGU-465-I	Panel	4.2	2100		135	15.16	58	64	EIRP	dBmW	1	1531.1	43	6	0
2	UNKNOWN CARRIER (PROPOSED)	Commscope NHH-45A-R2B	Panel	4	700		215	13.35	48	62	EIRP	dBmW	1	965.9	43	6	0
2	UNKNOWN CARRIER (PROPOSED)	Commscope NHH-45A-R2B	Panel	4	850		215	14.05	44	61	EIRP	dBmW	1	767.1	43	6	0
2	UNKNOWN CARRIER (PROPOSED)	Commscope NHH-45A-R2B	Panel	4	1900		215	16.85	44	65	EIRP	dBmW	1	1928	43	6	0
2	UNKNOWN CARRIER (PROPOSED)	Commscope NHH-45A-R2B	Panel	4	2100		215	17.05	43	65	EIRP	dBmW	1	1928	43	6	0
3	UNKNOWN CARRIER (PROPOSED)	Jma Wireless XGU-465-I	Panel	4.2	700		265	11.76	71	61	EIRP	dBmW	1	767.1	43	6	0
3	UNKNOWN CARRIER (PROPOSED)	Jma Wireless XGU-465-I	Panel	4.2	850		265	13.36	69	61	EIRP	dBmW	1	767.1	43	6	0
3	UNKNOWN CARRIER (PROPOSED)	Jma Wireless XGU-465-I	Panel	4.2	1900		265	15.16	58	64	EIRP	dBmW	1	1531.1	43	6	0
3	UNKNOWN CARRIER (PROPOSED)	Jma Wireless XGU-465-I	Panel	4.2	2100		265	15.16	58	64	EIRP	dBmW	1	1531.1	43	6	0

Note: The Z reference indicates antenna height above the main site level unless otherwise indicated. ERP values provided by the client and used in the modeling may be greater than are currently deployed. For additional modeling information, refer to Appendix B. Proposed equipment is tagged as (Proposed) under Operated By or Antenna Make and Model.



## 7 Engineer Certification

The professional engineer whose seal appears on the cover of this document hereby certifies and affirms:

That I, Michael A McGuire, am currently and actively licensed to provide (in this state/jurisdiction as indicated within the professional electrical engineering seal on the cover of this document) professional electrical engineering services, as an employee of Hurricane Hill Development Company, PLLC , a duly authorized/registered engineering firm (in this state, as applicable) on behalf of SiteSafe, LLC; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission (FCC) as well as the regulations of the Occupational Safety and Health Administration (OSHA), both in general and specifically as they apply to the FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields; and

That I have thoroughly reviewed this Site Compliance Report and believe it to be true and accurate to the best of my knowledge as assembled by and attested to by Zyotty Thamsil.

June 19, 2019



## Appendix A – Statement of Limiting Conditions

Sitesafe will not be responsible for matters of a legal nature that affect the site or property.

Due to the complexity of some wireless sites, Sitesafe performed this analysis and created this report utilizing best industry practices and due diligence. Sitesafe cannot be held accountable or responsible for anomalies or discrepancies due to actual site conditions (i.e., mislabeling of antennas or equipment, inaccessible cable runs, inaccessible antennas or equipment, etc.) or information or data supplied by American Tower, the site manager, or their affiliates, subcontractors or assigns.

Sitesafe has provided computer generated model(s) in this Site Compliance Report to show approximate dimensions of the site, and the model is included to assist the reader of the compliance report to visualize the site area, and to provide supporting documentation for Sitesafe's recommendations.

Sitesafe may note in the Site Compliance Report any adverse physical conditions, such as needed repairs, observed during the survey of the subject property or that Sitesafe became aware of during the normal research involved in performing this survey. Sitesafe will not be responsible for any such conditions that do exist or for any engineering or testing that might be required to discover whether such conditions exist. Because Sitesafe is not an expert in the field of mechanical engineering or building maintenance, the Site Compliance Report must not be considered a structural or physical engineering report.

Sitesafe obtained information used in this Site Compliance Report from sources that Sitesafe considers reliable and believes them to be true and correct. Sitesafe does not assume any responsibility for the accuracy of such items that were furnished by other parties. When conflicts in information occur between data provided by a second party and physical data collected by Sitesafe, the physical data will be used.



## Appendix B – Assumptions and Definitions

### General Model Assumptions

In this site compliance report, it is assumed that all antennas are operating at **full power at all times**. Software modeling was performed for all transmitting antennas located on the site. Sitesafe has further assumed a 100% duty cycle and maximum radiated power.

The site has been modeled with these assumptions to show the maximum RF energy density. Sitesafe believes this to be a *worst-case* analysis, based on best available data. Areas modeled to predict emissions greater than 100% of the applicable MPE level may not actually occur but are shown as a *worst-case* prediction that could be realized real time. Sitesafe believes these areas to be safe for entry by occupationally trained personnel utilizing appropriate personal protective equipment (in most cases, a personal monitor).

Thus, at any time, if power density measurements were made, we believe the real-time measurements would indicate levels below those depicted in the RF emission diagram(s) in this report. By modeling in this way, Sitesafe has conservatively shown exclusion areas – areas that should not be entered without the use of a personal monitor, carriers reducing power, or performing real-time measurements to indicate real-time exposure levels.

### Use of Generic Antennas

For the purposes of this report, the use of “Generic” as an antenna model, or “Unknown” for an operator means the information about a carrier, their FCC license and/or antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use our industry specific knowledge of equipment, antenna models, and transmit power to model the site. If more specific information can be obtained for the unknown measurement criteria, Sitesafe recommends remodeling of the site utilizing the more complete and accurate data. Information about similar facilities is used when the service is identified and associated with a particular antenna. If no information is available regarding the transmitting service associated with an unidentified antenna, using the antenna manufacturer's published data regarding the antenna's physical characteristics makes more conservative assumptions.

Where the frequency is unknown, Sitesafe uses the closest frequency in the antenna's range that corresponds to the highest MPE, resulting in a conservative analysis.

## Definitions

**5% Rule** – The rules adopted by the FCC specify that, in general, at multiple transmitter sites actions necessary to bring the area into compliance with the guidelines are the shared responsibility of all licensees whose transmitters produce field strengths or power density levels at the area in question in excess of 5% of the exposure limits. In other words, any wireless operator that contributes 5% or greater of the MPE limit in an area that is identified to be greater than 100% of the MPE limit is responsible for taking corrective actions to bring the site into compliance.

**Compliance** – The determination of whether a site complies with FCC standards with regards to Human Exposure to Radio Frequency Electromagnetic Fields from transmitting antennas.

**Decibel (dB)** – A unit for measuring power or strength of a signal.

**Duty Cycle** – The percent of pulse duration to the pulse period of a periodic pulse train. Also, may be a measure of the temporal transmission characteristic of an intermittently transmitting RF source such as a paging antenna by dividing average transmission duration by the average period for transmission. A duty cycle of 100% corresponds to continuous operation.

**Effective (or Equivalent) Isotropic Radiated Power (EIRP)** – The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

**Effective Radiated Power (ERP)** – The product of the power supplied to the antenna and the antenna gain in a given direction relative to a half-wave dipole antenna.

**Gain (of an antenna)** – The ratio, usually expressed in decibels, of the power required at the input of a loss-free reference antenna to the power supplied to the input of the given antenna to produce, in a given direction, the same field strength or the same power density at the same distance. When not specified otherwise, the gain refers to the direction of maximum radiation. Gain may be considered for a specified polarization. Gain may be referenced to an isotropic antenna (dBi) or a half-wave dipole (dBd) antenna.

**General Population/Uncontrolled Environment** – Defined by the FCC as an area where RF exposure may occur to persons who are *unaware* of the potential for exposure and who have no control over their exposure. General Population is also referenced as General Public.

**Generic Antenna** – For the purposes of this report, the use of “Generic” as an antenna model means the antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use its industry specific knowledge of antenna models to select a worst-case scenario antenna to model the site.

**Isotropic Antenna** – An antenna that is completely non-directional. In other words, an antenna that radiates energy equally in all directions.



**Maximum Measurement** – This measurement represents the single largest measurement recorded when performing a spatial average measurement.

**Maximum Permissible Exposure (MPE)** – The rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with acceptable safety factor.

**Occupational/Controlled Environment** – Defined by the FCC as an area where RF exposure may occur to persons who are **aware** of the potential for exposure as a condition of employment or specific activity and can exercise control over their exposure.

**OET Bulletin 65** – Technical guideline developed by the FCC's Office of Engineering and Technology to determine the impact of RF exposure on humans. The guideline was published in August 1997.

**OSHA (Occupational Safety and Health Administration)** – Under the Occupational Safety and Health Act of 1970, employers are responsible for providing a safe and healthy workplace for their employees. OSHA's role is to promote the safety and health of America's working men and women by setting and enforcing standards; providing training, outreach and education; establishing partnerships; and encouraging continual process improvement in workplace safety and health. For more information, visit [www.osha.gov](http://www.osha.gov).

**Radio Frequency Exposure or Electromagnetic Fields** – Electromagnetic waves that are propagated from antennas through space.

**Spatial Average Measurement** – A technique used to average a minimum of ten (10) measurements taken in a ten (10) second interval from zero (0) to six (6) feet. This measurement is intended to model the average energy a 6-foot tall human body will absorb while present in an electromagnetic field of energy.

**Transmitter Power Output (TPO)** – The radio frequency output power of a transmitter's final radio frequency stage as measured at the output terminal while connected to a load.



## Appendix C – Rules & Regulations

### Explanation of Applicable Rules and Regulations

The FCC has set forth guidelines in OET Bulletin 65 for human exposure to radio frequency electromagnetic fields. Specific regulations regarding this topic are listed in Part 1, Subpart I, of Title 47 in the Code of Federal Regulations. Currently, there are two different levels of MPE - General Public MPE and Occupational MPE. An individual classified as Occupational can be defined as an individual who has received appropriate RF training and meets the conditions outlined below. General Public is defined as anyone who does not meet the conditions of being Occupational. FCC and OSHA Rules and Regulations define compliance in terms of total exposure to total RF energy, regardless of location of or proximity to the sources of energy.

It is the responsibility of all licensees to ensure these guidelines are maintained at all times. It is the ongoing responsibility of all licensees composing the site to maintain ongoing compliance with FCC rules and regulations. Individual licensees that contribute less than 5% MPE to any total area out of compliance are not responsible for corrective actions.

OSHA has adopted and enforces the FCC's exposure guidelines. A building owner or site manager can use this report as part of an overall RF Health and Safety Policy. It is important for building owners/site managers to identify areas in excess of the General Population MPE and ensure that only persons qualified as Occupational are granted access to those areas.

### Occupational Environment Explained

The FCC definition of Occupational exposure limits apply to persons who:

- J are exposed to RF energy as a consequence of their employment;
- J have been made aware of the possibility of exposure; and
- J can exercise control over their exposure.

OSHA guidelines go further to state that persons must complete RF Safety Awareness training and must be trained in the use of appropriate personal protective equipment.

In order to consider this site an Occupational Environment, the site must be controlled to prevent access by any individuals classified as the General Public. Compliance is also maintained when any non-occupational individuals (the General Public) are prevented from accessing areas indicated as Red or Yellow in the attached RF Emissions diagram. In addition, a person must be aware of the RF environment into which they are entering. This can be accomplished by an RF Safety Awareness class, and by appropriate written documentation such as this Site Compliance Report.

All American Tower employees who require access to this site must complete RF Safety Awareness training and must be trained in the use of appropriate personal protective equipment.

## Appendix D – General Safety Recommendations

The following are *general recommendations* appropriate for any site with accessible areas in excess of 100% General Public MPE. These recommendations are not specific to this site. These are safety recommendations appropriate for typical site management, building management, and other tenant operations.

1. All individuals needing access to the main site (or the area indicated to be in excess of General Public MPE) should wear a personal protective monitor (PPM), successfully complete proper RF Safety Awareness training, and have and be trained in the use of appropriate personal protective equipment.

2. All individuals needing access to the main site should be instructed to read and obey all posted placards and signs.

3. The site should be routinely inspected and this or similar report updated with the addition of any antennas or upon any changes to the RF environment including:

- ) adding new antennas that may have been located on the site
- ) removing of any existing antennas
- ) changes in the radiating power or number of RF emitters

4. Post the appropriate **NOTICE**, **CAUTION**, or **WARNING** sign at the main site access point(s) and other locations as required. Note: Please refer to RF Exposure Diagrams in Appendix B, to inform everyone who has access to this site that beyond posted signs there may be levels in excess of the limits prescribed by the FCC. In addition to RF Advisory Signage, a RF Guideline Signage is recommended to be posted at the main site access point(s). The signs below are examples of signs meeting FCC guidelines.



5. Ensure that the site door remains locked (or appropriately controlled) to deny access to the general public if deemed as policy by the building/site owner.

6. For a General Public environment the five color levels identified in this analysis can be interpreted in the following manner:

- ) Gray represents areas predicted to be at 5% or less of the General Public MPE limits. *The General Public can access these areas with no restrictions.*





- J Green represents areas predicted to be between 5% and 100% of the General Public MPE limits. *The General Public can access these areas with no restrictions.*
- J Blue represents areas predicted to be between 100% and 500% of the General Public MPE limits. *The General Public should be restricted from accessing these areas.*
- J Yellow represents areas predicted to be between 500% and 5000% of the General Public MPE limits. *The General Public should be restricted from accessing these areas.*
- J Red represents areas predicted to be greater than 5000% of the General Public MPE limits. *The General Public should be restricted from accessing these areas.*

7. For an Occupational environment the five color levels identified in this analysis can be interpreted in the following manner:

- J Gray represents areas predicted to be at 1% or less of the Occupational MPE limits. *Workers can access these areas with no restrictions.*
- J Green represents areas predicted to be between 1% and 20% of the Occupational MPE limits. *Workers can access these areas with no restrictions.*
- J Blue represents areas predicted to be between 20% and 100% of the Occupational MPE limits. *Workers can access these areas assuming they have basic understanding of EME awareness and RF safety procedures and understand how to limit their exposure.*
- J Yellow represents areas predicted to be between 100% and 1000% of the Occupational MPE limits. *Workers can access these areas assuming they have basic understanding of EME awareness and RF safety procedures and understand how to limit their exposure. Transmitter power reduction and/or time-averaging may be required.*
- J Red represents areas predicted to be greater than 1000% of the Occupational MPE limits. *These areas are not safe for workers to be in for prolonged periods of time. Special procedures must be adhered to, such as lockout/tagout or transmitter power reduction, to minimize worker exposure to EME.*

8. Use of a Personal Protective Monitor (PPM): When working around antennas, Sitesafe strongly recommends the use of a personal protective monitor. Wearing a PPM will properly forewarn the individual prior to entering an RF exposure area.

Keep a copy of this report available for all persons who must access the site. They should read this report and be aware of the potential hazards with regards to RF and MPE limits.

### **Additional Information**

Additional RF information is available at the following sites:

<https://www.fcc.gov/general/radio-frequency-safety-0>

<https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety>

OSHA has additional information available at:

<https://www.osha.gov/SLTC/radiofrequencyradiation/index.html>



PROJECT INFORMATION:

HEAVENLY RESORT  
 FIBER AND NODE PACKAGE  
 SITE #: 347208

CURRENT ISSUE DATE:

12/02/2018

ISSUED FOR:

APPROVALS

REV.: DATE: ISSUED FOR: BY:

REV.	DATE	ISSUED FOR	BY
0	06/08/18	APPROVALS	WO
1	12/02/18	APPROVALS	WO

PLANS PREPARED BY:



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DRAWN BY: CHK.: APV.:

AA	DC	WO
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LICENSURE:

SHEET TITLE:

HEAVENLY RESORT  
 FIBER LAYOUT

SHEET NUMBER: REVISION:

C2 2

**LEGEND**

- PROPOSED NODE
- PROPOSED HUB LOCATION
- PROPOSED AERIAL FIBER PATH
- PROPOSED BURIED FIBER PATH
- PROPOSED BURIED LATERAL PATH
- PROPOSED DIRECTIONAL BORE FIBER PATH
- CALIFORNIA PRIVATE PROPERTY BOUNDARY
- US FOREST SERVICE BOUNDARY
- STATE LINE

**NEW CONDUIT AND NODE INSTALLATION**

1. HUB TO AERIAL PATH - SEGMENT 1 - 1,760.50'
2. AERIAL PATH SEGMENT - 1 TO END OF AERIAL PATH - SEGMENT 2 - 3,366.27'
3. AERIAL PATH - SEGMENT 3 - 4,623.98'
4. START OF BURIED PATH TO EAST PEAK LODGE - 17,841.59'
5. LATERAL TO NODES - 4,128.57'
6. NODES LOCATED WITHIN USFS BOUNDARY:

- LAKEVIEW LODGE - MONOPINE
- SKY DECK - MONOPINE
- TAMARACK LODGE - ON STRUCTURE
- TAMARACK LODGE - MONOPINE
- EAST PEAK LODGE - MONOPINE
- 7. NODE LOCATED ON PRIVATE PROPERTY:
- EAST PEAK LODGE - MONOPINE

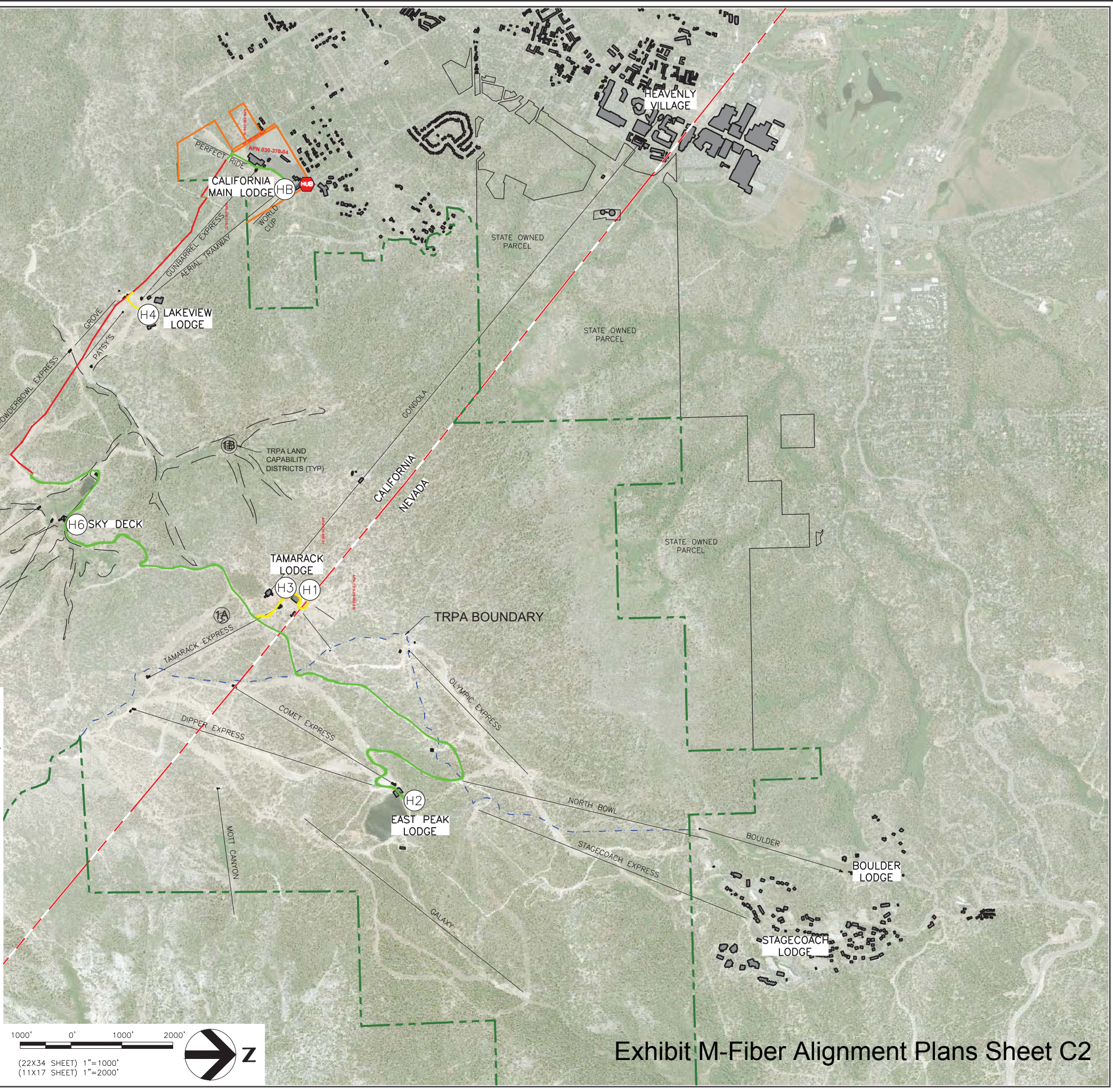
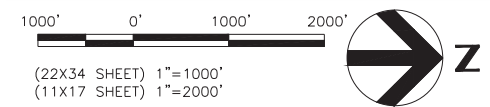


Exhibit M-Fiber Alignment Plans Sheet C2