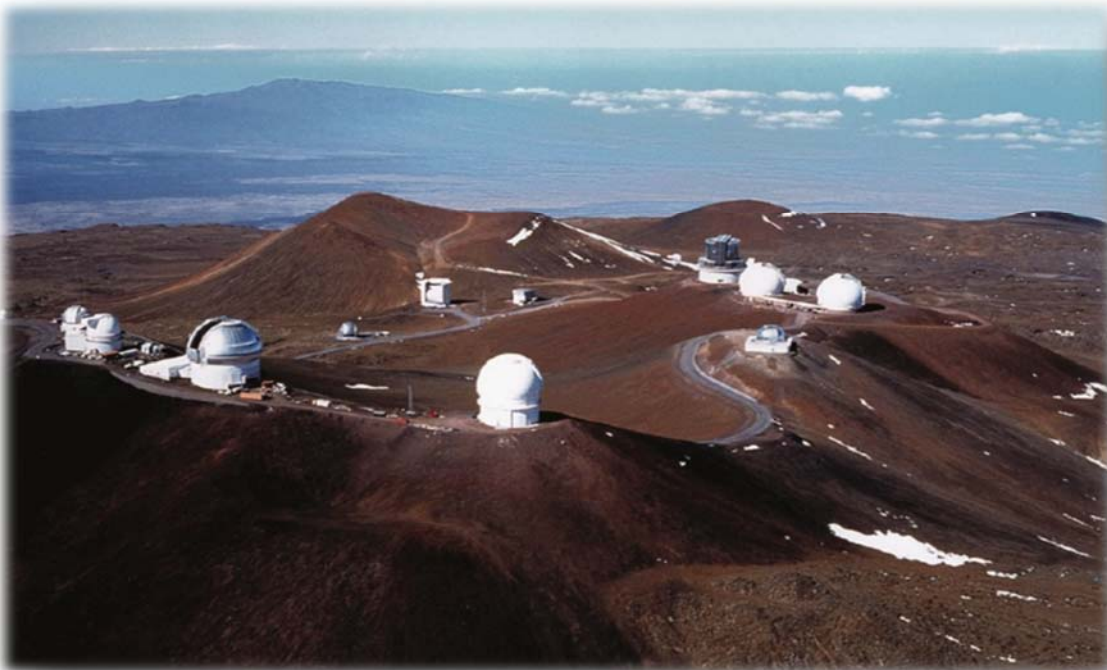




VISITOR/CONTRACTOR GUIDE

Gemini Northern Operations



January 2017

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Welcome to the BIG ISLAND

Included in this documentation is pertinent information in preparation for your visit to the summit of Mauna Kea. It is imperative that you review the contents as it will guide you in understanding the risks of working/visiting the summit of Mauna Kea.

Enjoy your visit!

Aloha and welcome to Hilo on the Big Island of Hawaii!

PERSONAL PROTECTIVE EQUIPMENT: Visitors are required to wear, closed-toe, sturdy (leather preferred) shoes at all times in the summit facility. Visitors working on the telescope facility or instruments must use safety shoes or slip-on steel toe caps.

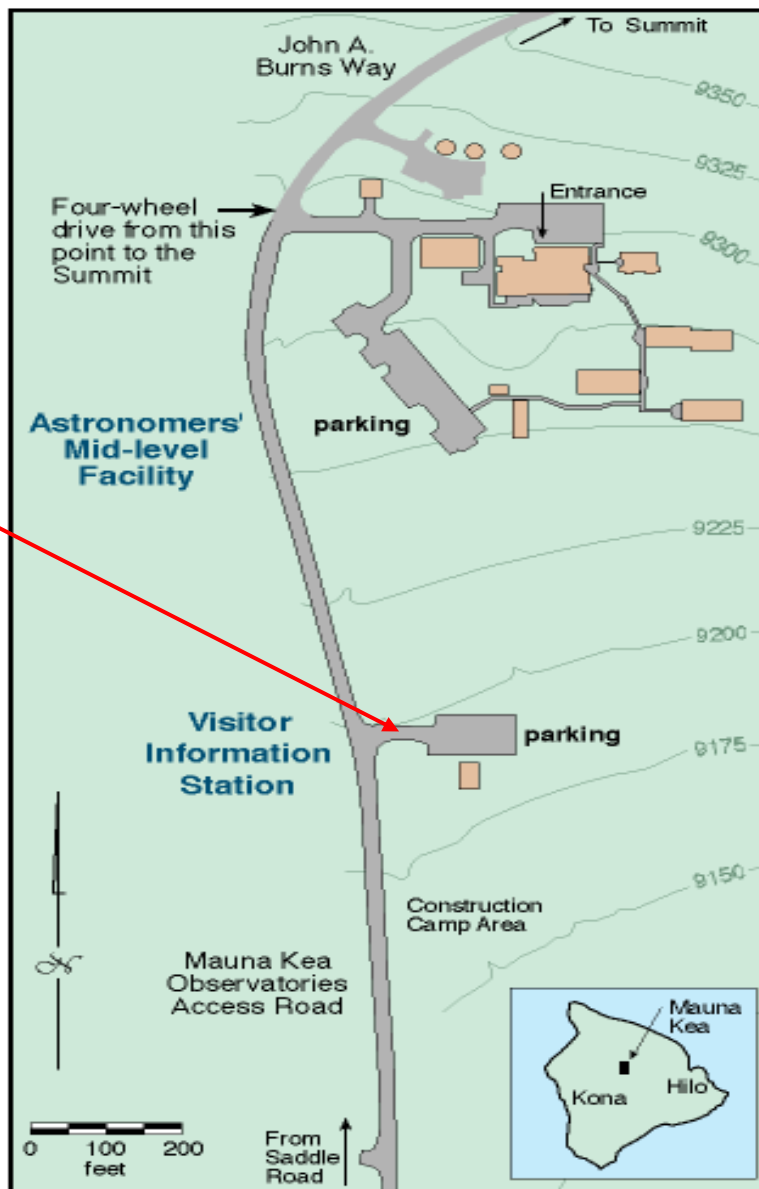
Required Documentation: All visitors to the summit facility are required to read *very carefully* and *acknowledge* the Maunakea Observatories Visitors Guide/Waiver Form. The waiver form must be received by Gemini *prior to your arrival*.



Meeting Area – Visitor Information Center

From **Hilo**, take the *Puainako Extension* (Hwy 200) which merges with *Saddle Road* (Hwy 200). Just before the 28 mile marker, there is a road to the right and a street sign that says *Mauna Kea Access Road*. Make the right turn. Hale Pohaku is about 6 miles up the road on the right side of the road. The drive takes approximately 1 hour.

From the **Kona** side of the island, take Highway 190 heading North toward Waimea. Just before the 6 mile marker, there is a turnoff on the right for *Saddle Road* (Hwy 200). Take *Saddle Road* until just after the 28 mile marker. Turn left onto the *Mauna Kea Access Road*. Hale Pohaku is about 6 miles up the road on the right side of the road. From Waimea, the trip takes about 1 hour, from Waikoloa, the trip takes about 1 1/2 hours, and from Kona, the trip takes about 2 hours.



Parking/Meeting area for Pre-Bid Mtg



DRIVING TO THE SUMMIT

The summit access road is winding, steep and dangerous. Weather can deteriorate rapidly and ice, snow, wind, or fog are factors that require special attention. Speed limits are for passenger and vehicle safety and must be obeyed. There are grades up to 17% on the access road, and brakes will overheat if lower gears are not used on the descent. Always downshift to keep engine rpms between 3000 and 4000, and never in the “red zone”.

Driving at high altitude carries many risks. Lower oxygen can impair judgment and create fatigue. Blinding snow or white-out conditions can lead to severe vertigo. Extreme cold and wind chill can lead to serious hypothermia and frostbite. Do not take chances!



Preparing for the SUMMIT of Mauna Kea

Be prepared for the altitude and the cold at the summit of Mauna Kea. At the altitude of 13,800 feet, weather at the Mauna Kea summit can be severe, especially during the winter months. Conditions can change radically in a very short period of time. We suggest that you prepare for weather conditions to deteriorate to 20 degrees F, with 70 mph winds possibly blowing snow. Wind chill and high altitude can make it seem much colder

The altitude may also aggravate pre-existing disease, particularly cardio-vascular and respiratory diseases. Individuals with these conditions are advised to bring the above information to the attention of his/her medical practitioner and to seek medical advice and clearance before visiting the summit. It is recommended for any visitor to Mauna Kea to seek medical advice and clearance before visiting the summit.

Under NO circumstances will Gemini allow visitors under the age of sixteen (16) to visit the Gemini site.

AURA/GEMINI DOES NOT ACCEPT ANY LIABILITY FOR VISITORS TO MAUNA KEA WITH RESPECT TO THE POTENTIAL ADVERSE EFFECTS OF ALTITUDE. IF YOU INTEND TO VISIT THE TELESCOPE SITE, YOU ARE REQUIRED TO SIGN A DECLARATION AND WAIVER. YOU THEREFORE ASSUME ALL RISK



GUIDELINES FOR MINIMIZING RISK AT THE MAUNA KEA SUMMIT

DRINK WATER...the human body shifts large volumes of body water and to help with short-term adjustments to altitude. Give your body water to work with and to cope with losses into the very dry air. If you start to get a pounding, hang-over type headache, drink three or four cups of plain water; it often works in 4-5 minutes.

LEARN HOW TO BREATHE...take slow, even breaths.

MOVE SLOWLY...always pace yourself at the summit. Sit down. Don't stand for long periods.

STAY RESTED...avoid exhausting tasks/parties and short sleep the day before you are scheduled for a trip to the summit. This provides more cardio-respiratory reserves for adjustment to altitude stress.

AVOID ALCOHOL...for at least 10 hours prior to ascent. This avoids dehydration and irritation of the arteries of the brain that will be forced to adjust to hypoxia.

AVOID MARIJUANA...it stays with an individual for 5-6 days and can be an unpredictable, extremely potent constrictive agent for the coronary arteries.

AVOID TOBACCO SMOKING...nicotine constricts arteries and further inhibits adjustments to the need for increased blood flow. Stop smoking 48 hours before ascent to allow carbon monoxide in your bloodstream to dissipate.

AVOID HEAVY MEALS...before ascent to the summit, since this tends to tie up a significant part of the available blood flow for longer than light meals (of high carbohydrate items such as pasta, rice, or other starch). Avoid skipping meals or eating or drinking nothing but sugared snacks or drinks; sharp changes in blood sugar can trigger increased altitude stress.

AVOID UNPROTECTED EYE EXPOSURE...to glare and bright sunlight by wearing dark lenses, preferably UV-coated lenses. This reduces fatigue and will prevent the loss of 50% of night vision for up to two nights after glare exposure of only 1 hour. It also blocks out the significantly greater ultraviolet exposure that Hawaii's ideal astronomical conditions permit, possibly leading to early cataracts. You may wish to wear sunscreen, as the sun can burn even in cold temperatures

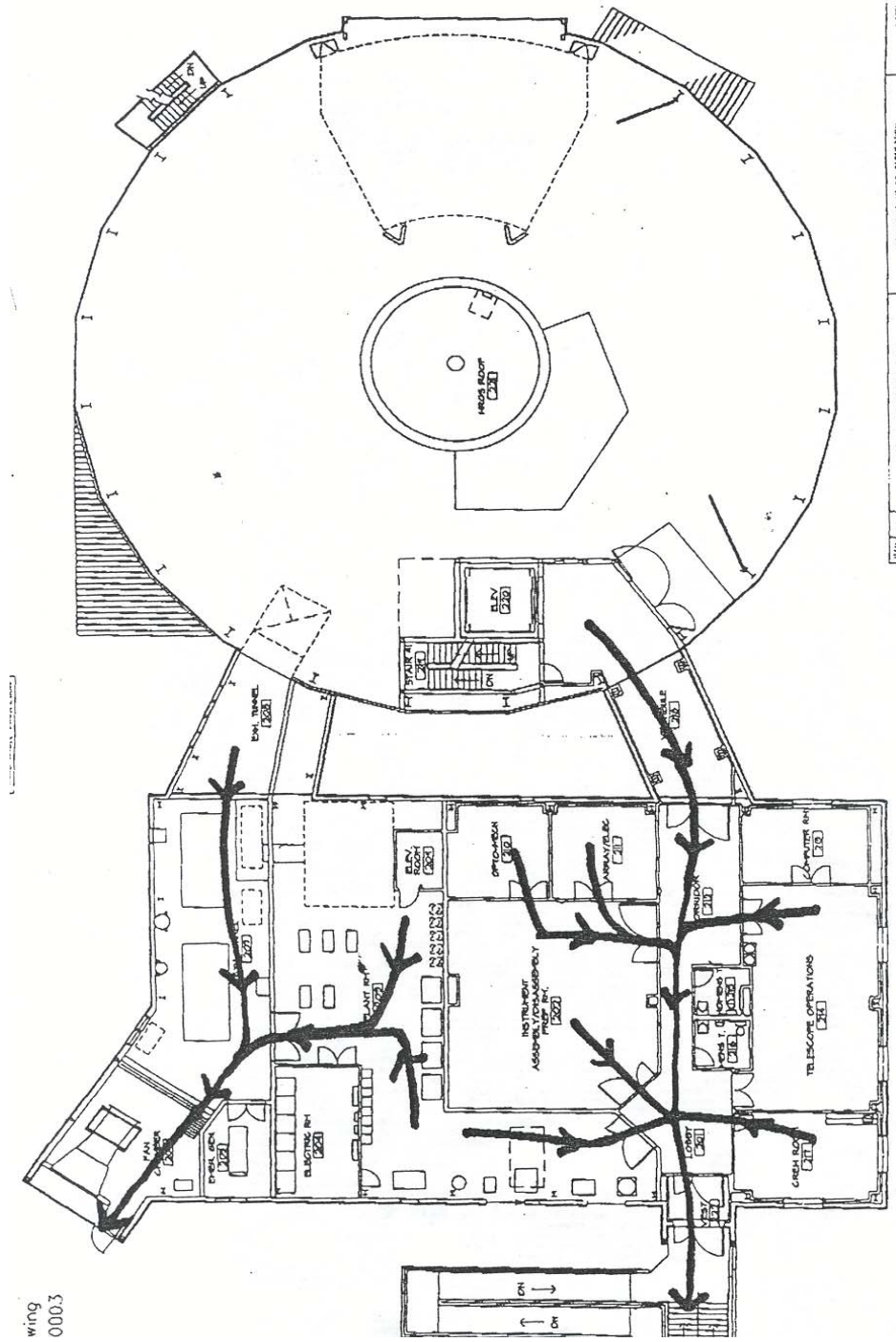
Excerpted from:

"High Altitude Safety Protocol" by Mountain Medical Services.

Safety and Health are paramount at our AURA/Gemini facilities. While we work diligently to maintain a safe and healthy environment for workers, the site may still pose safety hazards. As a result, it is imperative that you proceed with caution at all times.

If you feel the onset of any unusual feelings or symptom, let someone know immediately.

LEVEL 2 ESCAPE ROUTES



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LEVEL 5 ESCAPE ROUTES

