MAUNAKEA

Master Transfer Plan

PLAN FOR THE TRANSFER OF CERTAIN ASSETS AND LIABILITIES OF THE UNIVERSITY OF HAWAI'I RELATING TO MAUNAKEA TO THE MAUNA KEA STEWARDSHIP AND OVERSIGHT AUTHORITY

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PLAN FOR THE TRANSFER OF CERTAIN ASSETS AND LIABILITIES OF THE UNIVERSITY OF HAWAI'I RELATING TO MAUNAKEA TO THE MAUNA KEA STEWARDSHIP AND OVERSIGHT AUTHORITY

This Plan for the Transfer of Certain Assets and Liabilities of the University of Hawai'i Relating to Maunakea to the Mauna Kea Stewardship and Oversight Authority (the "Plan") was prepared by the Long-Term Transition Working Group (the "Working Group") formed to review the leases, permits, agreements and other property owned by the University of Hawai'i (the "University") which relate to Maunakea (collectively, the "Maunakea Assets").[1] This Plan describes and summarizes the Maunakea Assets reviewed by the Working Group, and recommends certain actions to confirm, memorialize and implement the transfer of the Maunakea Assets to the Mauna Kea Stewardship and Oversight Authority ("MKSOA") as required by Act 255 (July 1, 2022) and Act 53 (May 27, 2026) (collectively, the "Act"). With respect to certain assets, however, the members of the Working Group did not agree on the actions to be taken. In those cases, this Plan summarizes the different positions of the members and recommends the formation of one or more permitted interaction groups pursuant to Haw. Rev. Stat. section 92-25 or other structures (each individually, a "PIG") to facilitate further discussion regarding the unresolved issues.

Introduction

To appreciate this Plan fully, the reader must first recognize both what it represents *and* what it does not. This Plan represents the culmination of the work performed by the Working Group which is summarized in Article 2. The Working Group was tasked with evaluating documents and other information related to the University's interests, rights, duties, and obligations on Maunakea. Based upon that evaluation, the Working Group developed recommendations for specific actions to memorialize and implement the transfer of the Maunakea Assets to MKSOA. These recommendations, however, are necessarily limited to what has been disclosed or otherwise made available to the Working Group by the University.

Although it represents the culmination of the work performed by the Working Group, this Plan is merely a starting point, as opposed to a finish line, for the transition of management responsibility and control over Maunakea from the University to MKSOA. Because it is intended to be a starting point, the Working Group focused on the most significant instruments, entitlements, agreements and other assets held by the University in connection with Maunakea. The Working Group was not charged and did not attempt to delve into every detail of the University's systems and practices related to Maunakea, nor would it have been practical to do so.

Accordingly, this Plan does not represent and is not intended to be an exhaustive guide covering every potential action which the University or MKSOA may need to undertake to transition management of Maunakea from the former to the latter. The University and in particular its Center for Maunakea Stewardship ("CMS") has been critical of this Plan's limited focus. Indeed, in reviewing an earlier draft of this Plan CMS expressed the concern that it failed to describe more specific actions, requirements, roles and responsibilities necessary to effectively transition management from the University to MKSOA. Those details, while necessary, are

[1] McCorriston Miller Mukai MacKinnon LLP ("M4"), special counsel for the Mauna Kea Stewardship and Oversight Authority, assisted with the drafting of this Plan.

outside the scope of the Working Group's charge and will need to be worked out between the University and MKSOA as both continue to manage Maunakea jointly during the transition period of seventy-seven (77) months contemplated by the Act.

The University has managed and stewarded Maunakea for decades. In that time, it has developed assets, systems and resources which serve overlapping functions: land management on the one hand, and education, research and support for the science of astronomy on the other. According to the University itself, these functions and the assets, systems and resources utilized by the University to fulfill them, are "intricately tied" to one another. Therefore, it is not realistic, and the reader should not expect, that the Working Group, merely as a result of having reviewed the documents made available by the University, could possibly be able to outline in step-by-step fashion, every detail necessary to unwind and decouple the University's dual roles from one another. To the contrary, additional actions not described in this Plan will be necessary. For example, MKSOA must prepare and adopt a management plan for Maunakea, the terms of which are outside the scope of this Plan. Matters of finance and human resources are also outside the scope of this Plan. The foregoing issues are just a few examples of myriad details which are not covered by this Plan but nevertheless will need to be identified and addressed by the University and MKSOA to carry out what the Legislature has required of both in the Act.

Finally, any statements or positions attributed to MKSOA, the University, or the Department of Land and Natural Resources ("DLNR") in this Plan do not necessarily reflect the official positions of the governing boards of such entities, but simply the information communicated by the representative(s) of such entities to the Working Group.

Organization

This Plan is organized into the following Articles.

- Article 1 provides background information about Maunakea, MKSOA and the Act, the enabling law which established MKSOA.

- Article 2 explains the purpose and objective of the Working Group and summarizes the work it performed.

- Article 3 addresses the State Leases and roadway easement held by the University relating to Maunakea.

- Article 4 analyzes the major agreements relating to the various observatories located on Maunakea.

- Article 5 addresses the disposition of the major land use entitlements issued by the State for various uses atop Maunakea.

- Article 6 addresses the computer and information technology systems and infrastructure operated and maintained by the University in connection with management of Maunakea.

- Article 7 addresses other Maunakea Assets not specifically addressed in Articles 1 through 6.

- Article 8 contains concluding remarks and summarizes the significant actions recommended by this Plan.

ARTICLE 1
BACKGROUND

Section 1.1 Maunakea

The summit of Maunakea (the "Summit Area") is uniquely well-suited for astronomy. The high altitude, atmospheric stability, minimal cloud cover, low humidity, scarce atmospheric pollutants, and transparency of the atmosphere to infrared radiation make Maunakea an unparalleled location for astronomy. In 1968 the State of Hawai'i established and leased the Maunakea Science Reserve to the University for purposes of operating a scientific complex to establish astronomy in Hawai'i. As a result of the University's efforts since then, the Summit Area has become the premier site on Earth for ground-based astronomy, and the University has grown into a leading educational and research institution in the same field.

In addition to its great scientific value, Maunakea is also an important cultural and genealogical site to the people of Hawai'i and particularly to Native Hawaiians. The Summit Area is a spiritual and special place of significance that is home to cultural landscapes, fragile habitats, and historical and archaeological artifacts. As a result, Maunakea has come to symbolize a rigid dichotomy between culture and science, often leading to polarization between stakeholders on Maunakea and local communities.

Section 1.2 MKSOA

MKSOA was established by the Legislature as a means to bridge the dichotomy between culture and science, and to steward the mountain with the objective of facilitating a harmonious coexistence of uses. Specifically, MKSOA is a body corporate and public instrumentality of the State of Hawai'i established by Act 255 "to protect Maunakea for future generations and manage the land contained therein for the purpose of fostering a mutual stewardship paradigm in which ecology, the environment, natural resources, cultural practices, education, and science are in balance and synergy." Hawai'i Revised Statutes ("HRS") § 195H-1.

Section 1.3 Assumptions

In preparing this Plan, the Working Group relied upon the following assumptions.

(a) The Automatic Transfer

It is assumed that all provisions of the Act are valid and enforceable for all purposes, including the decree that all rights, powers, functions, and duties of the University relating to MKSOA's powers and responsibilities *will be* transferred to MKSOA on December 1, 2029 (the "Automatic Transfer"). *See* 2022 Haw. Sess. Laws Act 255, Part II, § 7 at 723, as amended by Act 53, § 6 at 9. ("On December 1, 2029, all rights, powers, functions, and duties of the university of

Hawaii relating to the powers and responsibilities granted to the Mauna Kea stewardship and oversight authority under part I of this Act are transferred to the Mauna Kea stewardship and oversight authority.") The Automatic Transfer applies only to those rights, powers, functions and duties held by the University which relate to protection and management of Maunakea, MKSOA's core function. *See* HRS § 195H-1 ("the legislature has established the Mauna Kea stewardship and oversight authority . . . to protect Mauna Kea for future generations and manage the lands contained therein . . ."); *see also* § 195H-7(a) (all departments and agencies of the State shall be subject to the oversight of [MKSOA] with regard to control and management of Mauna Kea lands). The University, however, will retain independent rights, power, authority and obligations in the areas of research and education, including astronomy, under its constitutionally and statutorily mandated mission. *See* Haw. Const. art. X, § 5 (declaring the University shall have title to all real and personal property conveyed to it). In other words, those rights, powers, functions and duties held by the University which relate purely to science, research, educational instruction, or other functions unrelated to land management are not covered by the Automatic Transfer. Finally, the Automatic Transfer is mandatory, unconditional, and self-effectuating. *See* Act 53, § 6 at 9 ("On December 1, 2098, all rights . . . of the university of Hawaii *are transferred* to [MKSOA].") (emphasis added).

(b) Transfer of Authority from the BLNR and LUC

In addition to the automatic transfer of certain of the University's rights, powers, functions and duties, the Act also provides that certain powers and duties of the Board of Land and Natural Resources ("BLNR") and the Land Use Commission will transfer to MKSOA upon expiration of the transition period. *See* HRS § 195H-7(b) ("Notwithstanding any law to the contrary, all powers and duties of the board of land and natural resources pursuant to chapter 171, and the land use commission pursuant to chapter 205, concerning permits, dispositions, land use approvals, and any other approvals pertaining to the Mauna Kea lands are transferred to the authority upon the expiration of the transition period;").

(c) Maunakea Shared Services

It is assumed that all functions and duties of Maunakea Shared Services ("MKSS") will be shouldered by MKSOA after the Automatic Transfer, notwithstanding that some of the support and logistical services provided by MKSS may not fall squarely within the scope of MKSOA's mission as defined by the Legislature.[2]

(d) Transition Period

Notwithstanding the Automatic Transfer, the Legislature recognized that many details relating to the transition of authority over Maunakea from the University to MKSOA would need

[2] Indeed, the provision of support services to or for the benefit of existing or future observatories is not among MKSOA's specifically enumerated powers and responsibilities. *See* HRS § 195H-5. Nevertheless, the Legislature appeared to recognize that some level of support for scientific endeavors including astronomy is an implied component of MKSOA's land management function. *See id.* at § 195H-1 (declaring that MKSOA's core purpose is "to protect Mauna Kea for future generations and manage the lands contained therein for the purpose of fostering a mutual stewardship paradigm in which ecology, the environment, natural resources, cultural practices, education, and science are in balance and synergy.")

to be worked out. *See* HRS § 195H-1 ("The legislature also recognizes that the enactment of this chapter is a pivot point that will require a transition, *during which many principles and details will yet need to be ascertained*.") (emphasis added). The Legislature also anticipated that close coordination among the University, MKSOA and DLNR would be necessary to resolve issues which may arise, and to determine the specific actions required to effectuate a practical transition of the Maunakea Assets to MKSOA. Toward this end, the Act contemplates a transition period from July 1, 2023, to December 1, 2029, during which MKSOA will jointly manage Maunakea with the University and "take any actions necessary to prepare for the assumption of total authority over Mauna Kea lands at the end of the transition period." *Id.* § 6. Accordingly, it is assumed that as the actions outlined in this Plan are implemented, new details and information may surface which may justify revisions to this Plan or course corrections.

ARTICLE 2
THE WORKING GROUP

The Working Group was formed by MKSOA in collaboration with the University and DLNR in furtherance of the foregoing directive. The Working Group's primary task was to ascertain the details and actions necessary to facilitate an effective, responsible and practical transition of the Maunakea Assets from the University to MKSOA and to prepare for the assumption of authority by MKSOA over the Summit Area with respect to land management and planning. In particular, and as discussed more fully below, the Working Group reviewed and analyzed the Maunakea Assets to distinguish those covered by the Automatic Transfer from those which should be retained by the University, and developed recommendations to confirm, memorialize and implement the transfer of the assets subject to the Automatic Transfer to MKSOA.

Section 2.1 Composition

Current and former members of the Working Group and the organization with which each is affiliated are listed below.

Current Members

Ben Kudo (Chair), Member, UH Board of Regents designee to MKSOA and former Regent, UH Board of Regents
John De Fries, Executive Director, MKSOA
William Stormont, Project Director, MKSOA
Linda Chow, Deputy Attorney General, Department of the Attorney General
Greg Chun, Ph.D., Executive Director, UH Hilo Center for Maunakea Stewardship
Nahua Guilloz, Director of Stewardship Programs, UH Hilo Center for Maunakea Stewardship
Michael Miyahira, Regent, UH Board of Regents
Douglas Simons, Ph.D., Director, Institute for Astronomy, University of Hawaii
David Lonborg, Ph.D., Associate Director, Institute of Astronomy, University of Hawaii
Carrie Okinaga, University General Counsel and Vice President for Legal Affairs, University of Hawaii
Erika Strawn, Deputy General Counsel, UH Office of the General Counsel
Michael Cain, Department of Land and Natural Resources - Office of Conservation and Coastal Lands

Lauren Yasaka, Department of Land and Natural Resources - Land Division
Ryan Kanaka'ole, First Deputy Director, Department of Land and Natural Resources
Candace Martin, Department of Land and Natural Resources

Former Members
Lloyd Unebasami, Administrative Services Officer, MKSOA
Russel Tsuji, Department of Land and Natural Resources - Land Division
Ian Hirokawa, Department of Land and Natural Resources - Land Division
Gary Takeuchi, Deputy General Counsel, UH Office of the General Counsel
Jesse Souki, Associate General Counsel, UH Office of the General Counsel
Justin Luney, Associate General Counsel, UH Office of the General Counsel
Jordan Ching, Deputy Attorney General, Department of the Attorney General
Paul Horner, Member, MKSOA

Section 2.2 Objectives

The Working Group's specific objectives were as follows.

(a) To review and analyze the documents and other information made available to the Working Group by the University and relating to the real and personal property held by the University in connection with its management of Maunakea;

(b) To identify the assets subject to the Automatic Transfer which should be transferred to MKSOA pursuant to the Act;

(c) To develop recommendations for confirming and implementing the transfer to MKSOA of those assets which should be transferred pursuant to the Act, and for confirming the retention by the University of those assets which should be retained; and

(d) To prepare a plan to facilitate and implement the transfer of such assets and management functions to MKSOA pursuant to the Act.

Section 2.3 Work Performed

The University provided the Working Group with access to an electronic data room (the "Data Room") containing electronic copies of the leases, permits, agreements, reports, and other documents held and maintained by the University in connection with its management of Maunakea. The University also supplemented the Data Room with additional documents in response to questions posed by the Working Group in the course of its work as described below. The Working Group created a manifest of all electronic folders, files and documents provided by the University (the "Manifest"). A copy of the Manifest is attached to this Plan as Exhibit A.

From December 10 - 11, 2024, some members of the Working Group visited Maunakea and attended in person meetings with personnel from the University of Hawai'i at Hilo, Center for Maunakea Stewardship ("CMS"). The purpose of the site visit and meetings was to help the Working Group develop a more complete understanding of the Maunakea Assets and the actions, duties and responsibilities associated with managing them.

Over the course of several months, the Working Group reviewed all of the folders, files and documents (collectively, the "Documents") in the Data Room in tranches. The Working Group's review focused on the following issues (collectively, the "Focus Issues"): (i) whether the University's interest is assignable; (ii) whether there are any conditions to the assignment of the University's interest; (iii) whether there are any penalties associated with the assignment of the University's interest; and (iv) what is the timeframe for effectuating an assignment of the University's interest to MKSOA.

The Working Group convened regularly to discuss findings and conclusions, and to discuss drafts of this Plan. Meetings of the Working Group occurred on the following dates:

Working Group Meetings
4/19/24
10/25/24
11/15/24
12/10/24-12/11/24 (Site Visit)
12/20/24
01/17/25
02/21/25
05/16/25
06/13/25
07/18/25
08/22/25
10/17/25
03/06/26
04/07/26
06/17/26
07/16/26

Certain members of the Working Group also met outside of regular meetings on numerous occasions. For example, Chair Kudo and Deputy Attorney General Chow met with M4 on a regular basis ahead of every regular Working Group meeting to discuss the progress of the review of the Documents and the preparation of this Plan. In addition, Chair Kudo organized and attended numerous meetings with Dr. Chun and representatives of the University's Office of the General Counsel to discuss issues relating to the transfer of the Maunakea Assets.

The Working Group summarized its answers to the Focus Issues for each Document into a matrix (the "Document Review Matrix") a copy of which is attached to this Plan as Exhibit B. After completing its review of the Documents, the Working Group proceeded to prepare this Plan which builds upon the foundational analysis of the Focus Issues summarized in the Document Review Matrix.

ARTICLE 3
GENERAL LEASES AND ROADWAY EASEMENT

The University does not own any Maunakea lands in fee simple. Instead, the University leases the Summit Area and related premises and facilities from the State. In particular, the

University is the lessee under two State leases (collectively, the "General Leases"): (i) General Lease No. S-4191 dated June 21, 1968, as amended, which covers the Mauna Kea Science Reserve ("General Lease S-4191"); and (ii) General Lease No. S-5529 dated September 21, 1999, which covers the Hale Pohaku Mid-Level Facilities ("General Lease S-5529"). In addition, the University is the grantee under Grant of Easement S-4697 dated September 8, 1981 (the "Roadway Easement") which provides roadway access to the Summit Area from the Hale Pohaku Mid-Level Facilities. In order to carry out its function as the steward of the mountain, MKSOA will need to assume the University's rights and responsibilities under the General Leases and Roadway Easement.

Section 3.1 Transfer of University's Interest

As discussed in Section 1.3(a) above, all rights, powers, functions, and duties of the University relating to the protection and management of Maunakea will be automatically transferred to MKSOA on December 1, 2029, pursuant to the Act. The Working Group finds that the University's rights and responsibilities under the General Leases and Roadway Easement relate to the protection and management of Maunakea and therefore are subject to the Automatic Transfer. Accordingly, on December 1, 2029, the University's rights and responsibilities under the General Leases and Roadway Easement will be automatically transferred to MKSOA pursuant to the Act.

The Working Group recognizes that the General Leases and Roadway Easement each provide that an assignment by the University requires the prior approval of the BLNR. The Working Group has been unable to reach a consensus regarding the effect of the Automatic Transfer on that requirement. Based on the advice of counsel, MKSOA's representatives to the Working Group believe that the BLNR's prior approval of the transfer of the University's interests in the General Leases and Roadway Easement will not be necessary if the transfer is effectuated by the Automatic Transfer. DLNR disagrees and believes that supplemental legislation is needed to clarify the issue. The Working Group therefore recommends that the BLNR, MKSOA, and the University form a PIG to facilitate further analysis of this issue with the goal of developing recommendations for follow-up action.

The University has expressed concern that the Automatic Transfer may conflict with Article X, Section 5, of the Hawai'i Constitution which provides that the University "shall have title to all the real and personal property now or hereafter set aside or conveyed to it, which shall be held in public trust for its purposes, to be administered and disposed of as provided by law." The Working Group recommends that the University and MKSOA enter into an assignment and assumption instrument to confirm, clarify, and memorialize the transfer of the University's rights and responsibilities under the General Leases and Roadway Easement to MKSOA. Such an instrument would confirm that all of the University's estate, right, title, and interest in and to each General Lease and the Roadway Easement have been transferred to MKSOA, and that MKSOA has assumed the same and agreed to observe and perform all duties and obligations of the lessee or grantee accruing from and after December 1, 2029. The sole purposes of the assignment and assumption instrument would be to confirm and memorialize the transfer and would not purport to create rights inconsistent with the Act.

Section 3.2 Extensions

The Act provides that the General Leases will remain in full force and effect until their respective expiration dates unless otherwise amended by agreement. 2022 Haw. Sess. Laws Act 255, § 7 as amended by 2026 Haw. Sess. Laws Act 53, § 6. General Lease S-4191 covers the portion of the summit area where all of the observatories are located and is scheduled to expire on December 31, 2033. During the 2026 Legislative Session, public testimony from the University, community groups, and observatory operators expressed concern about the rapidly approaching expiration date and the impact on the observatories resulting from the relatively short remaining term of General Lease S-4191. In apparent response to this concern, the Legislature amended Act 255 to authorize MKSOA to extend the existing General Leases and subleases during the transition period (i.e. prior to December 1, 2029). *See* HRS § 195H-7(b) (all powers and duties of the BLNR pertaining to Maunakea are transferred to MKSOA upon the expiration of the transition period; provided that MKSOA "may extend existing leases and subleases before the transfer for up to an additional ten-year term; provided further that the authority shall have all necessary powers and authorities to consider and grant lease extensions, before the transition period expires, without the approval of the board of land and natural resources and the land use commission, and any extensions granted during the transition period under this section shall be exempt from chapter 343, term restrictions in section 171-36, or sections 171-36.5 and 171-95.1[.]").

The University has proposed assigning its interests in the General Leases to MKSOA before the effective date of the Automatic Transfer to facilitate and expedite MKSOA's ability to consider extending the term of the General Leases. Based on advice from counsel, however, MKSOA's representatives to the Working Group do not believe that MKSOA needs to hold the University's interest in the General Leases to approve an extension of the term. MKSOA has proposed that a PIG be formed to facilitate further discussion of the University's proposal to advance the assignment of its interests in the General Leases before the effective date of the Automatic Transfer.

Section 3.3 Improvements Made by the University

It should be noted that the University's interest under each General Lease includes ownership of all improvements constructed by the University on the demised premises with the approval of the lessor. *See* General Lease S-4191 at 4 (improvements shall be and remain the property the Lessee); General Lease S-5529 at 4 (Lessee shall own improvements until the expiration or termination of the Lease). Accordingly, MKSOA's representatives to the Working Group believe that unless preempted by applicable law, the improvements constructed by the University pursuant to the General Leases will be transferred to MKSOA in accordance with the Act together with the automatic transfer of the University's interest in the General Leases themselves. DLNR, however, has expressed reservations and has suggested that "the legal effect of the Automatic Transfer of the University’s ownership interest in improvements pursuant to the General Leases should be evaluated pursuant to the Act, the terms of the General lease, and any applicable law." Nevertheless, consistent with customary commercial real estate practice in Hawai'i, the Working Group recommends that each assignment and assumption instrument should expressly confirm that the University's rights and responsibilities in each General Lease will be assigned to MKSOA together with all rights therein granted to possess and use the buildings,

improvements, rights, easements, privileges and appurtenances thereunto belonging or appertaining or held and enjoyed in connection therewith.

The University has informed the Working Group that some improvements may have been constructed, in whole or in part, with federal grant funds or through other federal programs and therefore may not be transferred without the consent of the United States. In other words, federal law may preempt the Automatic Transfer with respect to any improvements whose construction was funded, in whole or in part, with federal funds. The Working Group therefore recommends that a PIG be established to inventory the improvements covered by the Automatic Transfer, to analyze, on a case-by-case basis, whether any were constructed using federal funds, and if necessary to determine the appropriate process for obtaining the consent of the United States to the transfer of the particular asset to MKSOA.

ARTICLE 4
OBSERVATORIES

As of the date of this Plan, there are ten (10) existing astronomical observatories located in the Summit Area. Construction of an eleventh observatory, the Thirty Meter Telescope ("TMT"), was approved by the University and the BLNR in 2017. The observatories are collectively referred to in this Plan as the "Mauna Kea Observatories" or "MKOs."

This Plan categorizes the MKOs into three (3) types: (1) MKOs owned and operated by third parties; (2) MKOs owned and operated by the University; and (3) MKOs involving shared ownership or operation between the University and third parties.

Section 4.1 Third Party MKOs

The following MKOs are owned and operated by third parties (the "Third Party MKOs").

	MKO	Owner
1.	Caltech Submillimeter Observatory ("CSO")[3]	California Institute of Technology
2.	W. M. Keck Observatory ("Keck")	California Institute of Technology
3.	Very Long Baseline Array ("VLBA")	Associated Universities, Inc. / National Radio Astronomy Observatory
4.	Subaru Telescope ("Subaru")	National Astronomical Observatory of Japan
5.	Gemini Observatory ("Gemini")	National Science Foundation
6.	Smithsonian Submillimeter Array ("SMA")	Smithsonian Institution
7.	Thirty Meter Telescope ("TMT")	TMT International Observatory LLC

[3] As of the date of this Plan, the California Institute of Technology has completed the decommissioning of CSO, and the University has advised that its sublease will be terminated.

With respect to each Third Party MKO, the University entered into a sublease with the owner for the portion of the Summit Area used and occupied by the Third Party MKO ("Third Party MKO Sublease"), and an "Operating and Site Development Agreement" or "OSDA" ("Third Party MKO OSDA"). The Third Party MKO Subleases and Third Party MKO OSDAs are listed in the table below.

NO.	THIRD PARTY MKO	THIRD PARTY MKO SUBLEASE	THIRD PARTY MKO OSDA
1.	CSO (Decommissioned)	Sublease Agreement dated 12/20/83 between the University of Hawai'i and California Institute of Technology Expires: 12/31/33	Operating and Site Development Agreement dated 12/20/83 between California Institute of Technology and the University of Hawai'i Expires: Generally co-terminus with Sublease
2.	Keck	Sublease and Non-Exclusive Easement Agreement dated 10/30/85 between the University of Hawai'i and California Institute of Technology Expires: 12/31/33	Renegotiated Operating and Site Development Agreement dated 6/29/92 by and between California Institute of Technology, The Regents of the University of California, and the University of Hawai'i Expires: Generally co-terminus with Sublease
3.	VLBA	Sublease and Non-Exclusive Easement Agreement dated 9/28/90 between the University of Hawai'i and Associated Universities, Inc./National Radio Astronomy Observatory Expires: 12/31/33	Operating and Site Development Agreement dated 9/28/90 between Associated Universities, Inc./National Radio Astronomy Observatory and the University of Hawai'i Expires: Generally co-terminus with Sublease
4.	Subaru	Sublease and Non-Exclusive Easement Agreement dated 6/5/92 between the University of Hawai'i and National Astronomical Observatory of Japan Expires: 12/31/33	Operating and Site Development Agreement dated 6/5/92 between National Astronomical Observatory of Japan and the University of Hawai'i Expires: Generally co-terminus with Sublease
5.	Gemini	Sublease Agreement dated 9/26/94 between the University of Hawai'i and National Science Foundation Expires: 12/31/33	Operating and Site Development Agreement dated 8/9/94 between National Science Foundation and the University of Hawai'i Expires: Generally co-terminus with Sublease

NO.	THIRD PARTY MKO	THIRD PARTY MKO SUBLEASE	THIRD PARTY MKO OSDA
6.	SMA	Sublease and Non-Exclusive Easement Agreement dated 5/15/95 between the University of Hawai'i and Smithsonian Institution Expires: 12/31/33	Operating and Site Development Agreement dated 5/15/95 between Smithsonian Institution and the University of Hawai'i Expires: Generally co-terminus with Sublease
7.	TMT	Sublease and Non-Exclusive Easement Agreement dated 7/28/14 between the University of Hawai'i and TMT International Observatory LLC Expires: 12/31/33	Scientific Cooperation Agreement dated 7/28/14 between the University of Hawai'i and TMT International Observatory LLC Expires: Generally co-terminus with Sublease

(a) Subleases

The University's interest in each Third Party MKO Sublease will be automatically assigned to and assumed by MKSOA on December 1, 2029, by virtue of the Automatic Transfer. Notwithstanding the Automatic Transfer, the Working Group recommends that the University and MKSOA memorialize the transfer of the University's interest in each Third Party MKO Sublease by entering into an assignment and assumption instrument effective December 1, 2029, with respect to each such sublease. In addition, the Working Group recommends that MKSOA endeavor to obtain an estoppel certificate from the University and each sublessee of a Third Party MKO Sublease confirming the status of such party's compliance with its respective duties and obligations under the Third Party MKO Sublease, and other customary information, as of a date proximate to December 1, 2029. Under the circumstances, the Working Group recommends that estoppel certificates be dated within ninety (90) calendar days prior to December 1, 2029.

(b) OSDAs

Each Third Party MKO OSDA addresses matters relating to: (i) site development, site management, and operational support services provided by the University to the Third Party MKO; and (ii) scientific cooperation between the University and the owner of the Third Party MKO. As discussed above, pursuant to the Automatic Transfer, all rights, powers, functions, and duties of the University relating to the protection and management of Maunakea will be transferred to MKSOA on December 1, 2029. The duties and obligations of the University under the Third Party MKO OSDAs which relate to site development, site management, and operational support services for the Third Party MKOs are covered by the Automatic Transfer and therefore will be automatically transferred to MKSOA on December 1, 2029. The rights, duties and obligations under the OSDAs relating to the conduct of the science of astronomy, however, are outside the scope of the Automatic Transfer and therefore will not be transferred to MKSOA. For purposes of this Plan, the Working Group interprets the Act as distinguishing the rights, duties and obligations of the University under the Third Party OSDAs into two separate buckets: those that will be transferred to MKSOA as of December 1, 2029 (i.e., rights, duties and obligations relating to site development, management and operational support), and those that will be retained by the University (i.e., rights, duties and obligations relating to scientific cooperation and coordination).

In order to carry out the Legislature's intent of facilitating the harmonious coexistence of science and culture atop Maunakea, to facilitate the responsible management and efficient operation of the Third Party MKOs going forward, and to avoid ambiguity, the rights, duties and obligations of the University under the Third Party MKO OSDAs should be formally allocated between the University and MKSOA. Unfortunately, Working Group members from the University and MKSOA do not completely agree on the method of accomplishing such an allocation. MKSOA's representatives to Working Group favor an approach whereby the University and MKSOA would enter into an "Allocation of Responsibility Agreement," effective as of December 1, 2029, substantially in form attached as Exhibit C with respect to each Third Party MKO OSDA. The purpose of each Allocation of Responsibility Agreement would be to confirm and memorialize the allocation between the University and MKSOA of the rights, duties and obligations set forth in a Third Party MKO OSDA by identifying the specific provisions and obligations transferred to and assumed by MKSOA, and the specific provisions and obligations retained by the University. This would of course require that the University and MKSOA work to agree on the division of the rights and responsibilities between them during the transition period.

The University agrees in part with MKSOA's approach, writing in response to a prior version of this Plan, "[w]e recommend that the parties commence work now to identify and categorize the rights and responsibilities under the OSDAs that relate to MKSOA's land management obligations versus UH's scientific research and educational mission." Memorandum dated June 16, 2026, from CMS (Greg Chun) to MKSOA (Ben Kudo) (the "6/16/26 CMS Memo") at 2, § 4. Instead of an Allocation of Responsibility Agreement, however, the University believes that MKSOA should incorporate site development, management and operational support duties into new subleases with the Third Party MKOs. MKSOA's representatives to the Working Group have expressed reservations about the University's approach because it would require discussions with the Third Party MKOs about new or amended subleases to occur during the transition period when MKSOA's efforts should instead be focused on implementing the transfer itself and the handover of management responsibility.

Given the lack of complete alignment between MKSOA and the University, the Working Group recommends that the question of how to allocate duties and obligations under the Third Party MKO OSDAs be referred to a PIG for further discussion.

Section 4.2 University MKOs

The following MKOs are owned and operated by the University (the "University MKOs"):

Hoku Ke'a Observatory ("Hoku Ke'a")[4]
UH 88 Telescope ("UH 88")
United Kingdom Infrared Telescope ("UKIRT")[5]

[4] As of the date of this Plan, the University has completed the decommissioning of Hoku Ke'a.
[5] As of the date of this Plan, the University has announced that UKIRT will be decommissioned.

(a) Buildings, Improvements and Personal Property

The University's ownership rights in and to the buildings, improvements, equipment, and other personal property comprising the University MKOs are not covered by the Automatic Transfer and therefore will be retained by the University after December 1, 2029. Nevertheless, to avoid ambiguity and to ensure that the University remains vested with title to the buildings, improvements, equipment, and other personal property comprising the University MKOs following the Automatic Transfer, the Working Group recommends that MKSOA quitclaim its interests, if any, in such property to the University after December 1, 2029.

(b) Subleases

Because the University MKOs are owned and operated by the University itself and not by third parties, there are no subleases for these facilities. Since the University's right to use and occupy the Summit Area and mid-level facilities pursuant to the General Leases will be transferred to MKSOA on December 1, 2029, the University will need to obtain a new sublease from MKSOA for UH 88 for the period after December 1, 2029. The Working Group therefore recommends that the University and MKSOA enter into a new sublease for UH 88 to be effective after December 1, 2029.

As of the date of this Plan, the University has completed the decommissioning of Hoku Ke'a. In addition, on July 1, 2026, the University announced that science operations at UKIRT will cease on September 15, 2026, and that the observatory will be decommissioned by 2030. If the decommissioning of Hoku Ke'a and UKIRT has been completed by December 1, 2029, the University may not require new subleases for those facilities. If, however, the decommissioning of either observatory has not been completed by December 1, 2029, the University may need access to the respective site to complete the decommissioning process. In that case, the University and MKSOA should enter into a new sublease or license agreement for that limited purpose.

Since the University MKOs are owned and operated by the University, none of them have an associated OSDA. In effect, the University has been providing site management and operational support services to itself for each of the University MKOs. After December 1, 2029, however, MKSOA will be responsible for site management and operational support for all MKOs including the University MKOs. Accordingly, the new sublease for UH 88 should contain appropriate provisions relating to site management and operational support necessary to allow the University to continue to operate this facility after December 1, 2029.

Section 4.3 Hybrid MKOs

The Canada-France-Hawaii Telescope ("CFHT"), the NASA Infrared Telescope Facility ("IRTF"), and the James Clerk Maxwell Telescope ("JCMT") involve shared ownership or operation between the University and third parties.

(a) CFHT

The University entered into a sublease with the owner of CFHT (the "CFHT Sublease"), the Canada-France-Hawaii Telescope Corporation ("CFHT Corp."), but not an OSDA. CFHT Corp. is a nonprofit corporation comprised of the University, the National Research Council of

Canada ("NRC"), and the Centre National de la Recherche Scientifique of France ("CNRS"). The duties and obligations of CFHT Corp.'s members (including the University) to one another are set forth in that certain Tripartite Agreement by and among the University, NRC and CNRS dated June 1974, as amended (the "Tripartite Agreement"). The Tripartite Agreement addresses various topics including (i) the design, construction and operation of CFHT, (ii) governance of CFHT Corp., (iii) financial obligations of the members of CFHT Corp., and (iv) the provision of support services and facilities by the University to CFHT. In other words, it is the University's duty as a member of CFHT Corp. to provide site management and support services to CFHT.

As with the Third Party MKO Subleases, the University's interest in the CFHT Sublease will be automatically transferred to MKSOA on December 1, 2029, by virtue of the Automatic Transfer. Nevertheless, the Working Group recommends that the University and MKSOA memorialize the transfer of the University's interest in the CFHT Sublease by entering into an assignment and assumption instrument effective December 1, 2029, with respect to such sublease. The Working Group also recommends that MKSOA endeavor to obtain an estoppel certificate from the University and CFHT Corp. confirming the status of each party's compliance with its respective duties and obligations under the sublease, and other customary information, as of a date proximate to December 1, 2029.

Since there is no OSDA for CFHT, the Working Group recommends that MKSOA and CFHT Corp. work to amend the CFHT Sublease after December 1, 2029, to include appropriate provisions addressing site management and operational support.

(b) IRTF

IRTF is owned by the National Aeronautics and Space Administration ("NASA"). Accordingly, the University entered into a sublease with NASA (the "IRTF Sublease"), the University's interest in which will be automatically transferred to MKSOA on December 1, 2029, by virtue of the Automatic Transfer. Nevertheless, the Working Group recommends that the University and MKSOA memorialize the transfer of the University's interest in the IRTF Sublease by entering into an assignment and assumption instrument effective December 1, 2029, with respect to such sublease. As with the Third Party MKO Subleases, the Working Group also recommends that MKSOA endeavor to obtain an estoppel certificate from the University and NASA confirming the status of each party's compliance with its respective duties and obligations under the sublease, and other customary information, as of a date proximate to December 1, 2029.

The University has not, however, entered into an OSDA with NASA for IRTF. This is because the University itself operates IRTF for NASA pursuant to a federal contract which addresses scientific, engineering, technical and operational matters (the "IRTF Contract"). Although some of the University's duties and obligations under the IRTF Contract may arguably fall within the scope of the Automatic Transfer, federal law prohibits the assignment of a federal contract making it doubtful that the Automatic Transfer applies to the IRTF Contract. *See* 41 USCA § 6305(a) ("The party to whom the Federal Government gives a contract or order may not transfer the contract or order, or any interest in the contract or order, to another party. A purported transfer in violation of this subsection annuls the contract or order so far as the Federal Government is concerned, except that all rights of action for breach of contract are reserved to the Federal

Government."). More fundamentally, however, the operation of an observatory is outside the scope of MKSOA's mission and purpose.

Accordingly, the University should retain all of its existing rights, duties and obligations under the IRTF Contract. To the extent there is any doubt as to whether any of the University's rights, duties and obligations under the IRTF Contract may have been affected by Automatic Transfer, MKSOA and the University could enter into an agreement after December 1, 2029, confirming that the University has retained all such rights, duties and obligations. Furthermore, since there is no OSDA for IRTF, the Working Group recommends that MKSOA and NASA work to amend the IRTF Sublease after December 1, 2029 to include appropriate provisions addressing site management and operational support.

(c) JCMT

JCMT is owned by the University but managed and operated by the East Asian Observatory ("EAO") pursuant to a Scientific Cooperation Agreement between the University and EAO dated March 1, 2015. The Working Group's analysis and recommendations for JCMT mirror the University MKOs. In particular, the University's ownership rights in and to the buildings, improvements, equipment, and other personal property comprising JCMT are not covered by the Automatic Transfer and therefore will be retained by the University after December 1, 2029. Nevertheless, to avoid ambiguity and to ensure that the University remains vested with title to the buildings, improvements, equipment, and other personal property comprising JCMT following the Automatic Transfer, the Working Group recommends that MKSOA quitclaim its interests, if any, in such property to the University after December 1, 2029.

As is the case for the University MKOs, JCMT does not have a sublease or OSDA. As it did for the University MKOs, the Working Group recommends that MKSOA and the University enter into a new sublease for JCMT to be effective after December 1, 2029. The new sublease should also contain appropriate provisions relating to site management and operational support.

ARTICLE 5
LAND USE PERMITS

Over the years, many conservation district use permits (each, a "CDUP") and site plan approvals (each, a "SPA") have been issued by the BLNR/DLNR to the University for various uses atop Maunakea including roads, utilities and other infrastructure, Hale Pohaku and the Visitor Information Station (the "VIS"). In addition, the University is the permittee under all CDUPs and SPAs issued for the MKOs notwithstanding that many MKOs are owned and operated by third parties.

The Working Group understands that the CDUPs and SPAs "run with the land." Thus, all CDUPs and SPAs held by the University relating to Maunakea will continue to apply to the authorized land uses and to those entities exercising control and management over the applicable lands following the Automatic Transfer. MKSOA's representatives to the Working Group recognize that the CDUPs and SPAs to be transferred to MKSOA will include the CDUPs and SPAs held by the University relating to the construction and use of the MKOs notwithstanding that the operation of astronomical observatories is clearly outside the scope of the Automatic Transfer.

MKSOA's representatives to the Working Group also recognize that some CDUPs impose responsibilities and obligations on the University that MKSOA would not be suited to fulfilling. For example, the CDUP issued for the construction of TMT requires the University to develop and maintain programs for research and education which may be impractical for MKSOA to fulfill and more appropriate for the University to retain. Accordingly, Working Group members representing MKSOA and the University have proposed that review and analysis of the CDUPs and SPAs be referred to a PIG to identify and recommend how to address those obligations which may require the University's involvement after the transition period. CMS has suggested and MKSOA's representatives to the Working Group agree that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, the University, and the BLNR.

DLNR, however, has expressed concern with the approach described in the previous paragraph. In particular, DLNR's representatives have observed that (a) whether MKSOA is better suited to perform a permit condition is distinct from whether the obligation continues to exist or who is legally responsible for satisfying it, and (b) the intended purpose and legal effect of the proposed MOA is unclear.

ARTICLE 6
MAUNAKEA COMMUNICATIONS NETWORK

The University operates and maintains a statewide data network which provides access to the MKOs and other facilities in the Summit Area to the commodity internet and global research and education network. The portion of this statewide communication network which serves Maunakea is referred to in this Plan as the "Maunakea Communications Network."

The Maunakea Communications Network is utilized by the University and the MKOs to communicate with each other and the outside world and comprises specialized and purpose-built equipment and facilities needed by the MKOs to process and exchange large amounts of scientific data quickly, reliably and securely.

The University provided the following description of the Maunakea Communications Network.

UH/IfA Maunakea Communications Network

> The University of Hawaii maintains a statewide data network that connects all 10 UH campuses, education centers and key research facilities on all 6 major Hawaiian Islands.
>
> The UH Network provides access to two separate global networks - the "commodity" Internet and the global Research & Education network.
>
> The commodity Internet is the "Internet" that everyone uses and routinely refers to. This is where Amazon, NetFlix, Google searches and everything else resides. UH pays for access to the commodity Internet to provide general Internet connectivity to its users.

The global Research & Education (R&E) network is a separate, purpose-built network that has been built, paid for and maintained by institutions of higher education and research facilities across the world. Typically, each country has their own R&E network, or National Research & Education Network (NREN). In the US, this is Internet2. Australia has the Australian Advanced Research Network (AARNet), New Zealand has the Research and Education Network of New Zealand (REANNZ), and so forth. These NRENs connect the higher education institutions and research facilities within each country and then the NRENs connect to each other to form the global R&E network fabric.

UH is in a unique position due to its geographical location where UH connects not only to Internet2 (the US NREN), but directly to NRENs in the Asia Pacific region. Most higher education institutions must go through their NRENs. UH has direct access to NRENs in the Asia Pacific region including Australia, New Zealand, Japan and Singapore, and bypasses Internet2 to connect to them.

The R&E networks are purpose built to support very high-speed connections to support high speed data transfers across vast distances. The network bandwidth within and between NRENs ranges from 100Gbps to 800Gbps. Most higher education institutions connect at 100Gbps to the NREN. UH has multiple 100G connections to Internet2 as well as to the other NRENs in the Asia Pacific region. These connections are 100x faster than any commodity service that businesses can typically purchase. The data transfers that are performed across the R&E networks transfer petabytes of data and 10's of Gbps across oceans, continents and around the world - for prolonged periods of time. These R&E networks are designed and built to support these large and long duration data transfers that enable modern scientific research.

The commodity Internet cannot support the required transfer rate as the commodity Internet is designed for many smaller transfers (think of hundreds of residents streaming video or browsing the web). A smaller number of extremely high-capacity data flows will not work over the commodity Internet network as it is not designed to support this type of data transfers.

It is critical to note that only institutions of higher learning or research entities sponsored by such institutions can connect to the R&E network. Access to the R&E network requires an institution of higher education (i.e. UH) who operates the R&E network for the local geographic area. Institutions of higher education act as the gatekeepers to the R&E network to ensure the network is only used for its intended purpose.

The University maintains a 24x7 operational team and information security (InfoSec) team that continuously monitors the network and proactively responds to outages, issues and security incidents or alerts. The UH InfoSec team is a member of the Research and Education Networks Information Sharing and Analysis Center (REN-

ISAC) providing UH security services that include the Security Event System (SES) for threat intelligence, the Computer Security Incident Response Team (CSIRT), and other automated data collection and sharing tools that enable informed decisions about threats and events. Specific to the astronomy community at Maunakea, the IfA sponsors the Astro-InfoSec working group. This group of observatory IT professionals meets quarterly to exchange threat information, discuss best practices and enable a stronger security posture among Maunakea observatories to protect their critical research infrastructure. The IfA actively collaborates with the UH College of Engineering and MITRE Corporation on cybersecurity initiatives in order to make the IfA research networks more secure.

IfA management of the MKO network has addressed two other critical factors important to science operations. These are path diversity and high availability. The network has a 99.8% availability measured over the last decade. This is extraordinarily high and is enabled by having multiple paths, dynamic routing protocols and backup power at each routing hop. There are currently 3 separate UPS systems at the summit, HP and IfA Hilo that keep the network operating during a power outage. Multiple fiber paths and a radio path provide different routes for data in case of any single point of failure.

UH and IfA have collaborated to deploy 4 100G data transfer nodes (DTN) one on Oahu, one in Hilo, one in Tokyo and one in Baltimore. Each DTN has >100TB of storage and has been engineered to support high throughput data transfers at rates > 1GB/sec. These DTNs are used by astronomers to rapidly transfer very large data files over long distances. The DTN in Tokyo was placed specifically to support NAOJ and Subaru projects at Maunakea and Hilo.

Some examples of network operations that are uniquely supported by the UH network and R&E network peering are described below. None of the following network use cases can be supported on commercial off the shelf networks from telecom providers.

- Subaru: The SCExAO instrument generates terabytes of data in minutes which is sent to an advanced computing center for processing in near real time. The UH 100G network makes the data transfer possible. The PFS instrument will also generate large data files.

- VLBA: The VLBA transmits 100s of gigabytes of data each day to New Mexico. This utilizes the 10G link on the UH network. Future use of 100G will greatly improve the science capabilities of VLBA.

- CFHT/Gemini/Keck/Subaru: THe OHANA2.0 project will require the Precision Time Protocol (PTP) 2.1 (IEEE 1588-2019) High Accuracy (HA) on a 100G network link. The UH network can support PTP 2.1 and this project.: The Event Horizon Telescope images black holes in a ground breaking technical accomplishment involving the JCMT and SMA telescopes. EHT is evaluating the use of network data transfers in near real

time to support instrument configuration and validation prior to obtaining science data. This requires low latency, high bandwidth R&E connections to e.g. MIT in Massachusetts.

- UH88: UH88 is implementing a new automated control system that will send control and science data over the network back to UH Manoa on Oahu. A fast, real time and highly reliable network is crucial for this project.

Despite good faith discussions about the matter, Working Group members from the University and MKSOA disagree about the effect of the Act on the Maunakea Communications Network and how it should be managed going forward after the transition period. MKSOA's representatives believe that the scope of the Automatic Transfer encompasses the equipment, facilities and other improvements which comprise the Maunakea Communications Network (collectively, the "Maunakea Communications Network Equipment"). The Automatic Transfer applies to "all rights, power, functions, and duties of the university . . . relating to the powers and responsibilities granted to [MKSOA]." Act 53, § 6 at 9. Among the powers and responsibilities granted to MKSOA is the power and responsibility to provide "technical assistance . . . to any person . . . to carry out the purposes of [HRS Ch. 195H]." HRS § 195H-5(a)(6). One of MKSOA's purposes, as provided in HRS Ch. 195H, is to foster science in balance with the interests of ecology, the environment, natural resources, cultural practices and education. *Id.* at § 195H-1 ("To commence the resolution of these issues to protect Mauna Kea and bring about a more harmonious coexistence of uses atop the mountain, the legislature has established the Mauna Kea stewardship and oversight authority and the governance structure contained in this chapter to protect Mauna Kea for future generations and manage the lands contained therein for the purpose of fostering a mutual stewardship paradigm in which ecology, the environment, natural resources, cultural practices, education, and science are in balance and synergy."). MKSOA's representatives therefore believe that the operation and maintenance of a communication network which allows the University and the MKOs to communicate and to share and exchange scientific data is consistent with MKSOA's duty to provide technical assistance to foster science. Accordingly, MKSOA's representatives believe that the scope of the Automatic Transfer encompasses the Maunakea Communications Network Equipment.[6]

In contrast, the University contends that the transfer of its rights to the Maunakea Communications Network is impermissible. With respect to the ownership and management of the network, the University has declared the following:

> "UH has unique responsibilities in this role that can only be performed by UH. We disagree that the communications network and UH's rights and responsibilities in and to the network fall withing the scope of the automatic transfer under any theory. Rather, this is an example of a unique public trust UH asset and a responsibility that

[6] It should be noted that the Maunakea Communications Network Equipment is located not only on Maunakea or even on Hawai'i island, but also in other locations around the world. For example, the University's description of the Maunakea Communications Network indicates that the University has deployed 100G data transfer nodes (DTN) in four different locations: Hilo, Oahu, Baltimore and Tokyo. These DTNs are used by the MKOs to transfer very large data files rapidly over long distances. Accordingly, by virtue of the Automatic Transfer, MKSOA will own equipment and facilities in various locations around the world.

falls squarely within UH's independent and constitutionally-mandated obligation as the State's only public institution of higher education."

6/16/26 CMS Memo at 2, § 8.

Whether the Automatic Transfer applies or not, the Working Group recognizes that it seems highly unlikely that MKSOA will be capable of operating and maintaining the Maunakea Communications Network by December 1, 2029. Further, the acquisition and operation of the Mauna Kea Communications Network was and continues to be funded by federal grant(s).[7] Federal law prohibits a transfer of the equipment without express written consent from the federal agency. 2 C.F.R. § 200.313(a)(2) ("While the equipment is being used for the originally-authorized purpose, the recipient or subrecipient [of the federal grant] must not dispose of or encumber its title or other interests without the approval of the Federal agency or pass-through entity.") Accordingly, the Working Group recommends that the disposition of the Maunakea Communications Network be referred to a PIG for deeper analysis and development of recommendations.

ARTICLE 7
OTHER ASSETS

Section 7.1 Permits and Licenses

The University holds various governmental permits for boilers, tanks, a food establishment, wells, and other fixtures and facilities used in connection with the mid-level and Summit Area facilities. *See* Document Review Matrix at Rows 48 – 61. Most of these permits are within the scope of the Automatic Transfer, but it is unclear whether all of them will in fact be automatically transferred to MKSOA on December 1, 2029, due to conflicting other law. For example, the food establishment permit held by the University (*see id.* at Row 56) is not transferable. *See* Hawai'i Administrative Rules ("HAR") § 11-50-4(c) ("For changes of ownership of food establishments, the director may issue a permit to a new owner of an existing establishment . . ."). Instead, a new owner of a food establishment must apply for a new permit. *Id.* Other permits may be transferable subject to the satisfaction of specific requirements. For example, the permit held by the University for an underground storage tank on Maunakea (*see* Document Review Matrix at Row 58) is only transferable upon approval by the Hawai'i Department of Health. *See* HAR § 11-280.1-331 ("No permit to install, own, or operate an UST or tank system shall be transferable unless approved by the department.")

To avoid ambiguity as to whether any governmental permit held by the University in connection with the operation of the mid-level facilities or any other facility or element of infrastructure maintained by MKSS, the Working Group recommends that the University and MKSOA comply with all requirements and conditions for the transfer of such permits to MKSOA, or if transfer is not permitted then for the issuance of a new permit in favor of MKSOA, notwithstanding the Automatic Transfer.

[7] One such federal grant awarded by the U.S. National Science Foundation currently funds on-going equipment upgrades to the Maunakea Communications Network. Information on this grant may be accessed from the following link: http://nsf.gov/awardsearch/show-award/?AWD_ID=2029312.

The permit described in row 60 of the Document Review Matrix relates to an individual wastewater system for JCMT. Accordingly, it is outside the scope of the Automatic Transfer and should be retained by the University.

Section 7.2 Miscellaneous Agreements

(a) Operational Agreements

The University provided the Working Group with copies of various miscellaneous agreements relating to services provided by third parties in support of the University's operations on Maunakea. *See* Document Review Matrix at Rows 30 – 38. Although administrative and perhaps even menial nature, these contracts are essential to the existing uses and operations on Maunakea. For example, one of the agreements relates to the provision and servicing of portable toilets. *See id.* at Row 33.

To the extent that the University itself is a party to these agreements, the University's interests will transfer to MKSOA pursuant to the Act. Nevertheless, to evidence the transfer of the University's interest in these agreements, the Working Group recommends that the University and MKSOA enter into an assignment and assumption of contracts to which would be attached a schedule of the agreements assigned to and assumed by MKSOA.

Several of the agreements, however, were made by The Research Corporation of Hawai'i ("RCUH") for the benefit of the University, instead of by the University itself. *See, e.g., id.* at Rows 31, 33 – 35. Although administratively attached to the University, RCUH is a distinct and separate legal entity. *See* HRS § 304A-3001(a) ("There is established as a body corporate, the research corporation of the University of Hawaii. The research corporation shall be a public instrumentality and shall be a part of the University of Hawaii for administrative purposes pursuant to section 26-35."). It is doubtful, therefore, that the interests of RCUH in and to the agreements made by it for the benefit of the University and relating to Maunakea are covered by the Automatic Transfer. Accordingly, MKSOA and the University should coordinate with RCUH to obtain written assignments in favor of MKSOA of the agreements made by RCUH.

(b) Tour Agreements

The University is a party to several contracts with various third parties who provide tour activities on Maunakea. *See* Document Review Matrix at Rows 39 – 45. The University's interest in these contracts will be automatically assigned to MKSOA by virtue of the Automatic Transfer. Nevertheless, to evidence the transfer of the University's interest in these agreements, the Working Group recommends including them on the schedule of agreements to be attached to the assignment and assumption of contracts described in Section 7.2(a) above.

(c) Image Licenses

The University has obtained limited use licenses from artists Sean Goebel and Herbert K. Kane, LLC, to display images owned by the respective artist in the VIS. The licenses are non-transferable. It is not clear whether the University's limited rights to use and display the images in

question are covered by the Automatic Transfer. Accordingly, the Working Group recommends that MKSOA enter into new license agreements with each artist after December 1, 2029.

(d) Power Purchase Agreement

The University is a party to a Power Purchase Agreement dated August 18, 2016, as amended, with UHA Energy, LLC (the "PPA"). *See id.* at Row 36. The PPA relates to the installation, maintenance and operation of a photovoltaic (PV) system at Hale Pohaku by UH Energy (the "Provider" therein), and for the sale of electricity generated from that PV system by the Provider to the University. The PPA provides that the University can assign its interest in the PPA only with the consent of the Provider and that any assignment not in compliance with that requirement will be null and void. *See* PPA at § 15.3. Furthermore, the University has reported that the Provider objects to the assignment of the University's interest in the PPA to MKSOA.

The University's interest in the PPA will be automatically assigned to MKSOA by virtue of the Automatic Transfer notwithstanding the Provider's objection thereto. Nevertheless, the Working Group recommends that the University and MKSOA work with the Provider to allay its concerns and to obtain its consent to the assignment prior to December 1, 2029. The Working Group also recommends that the University and MKSOA enter into an assignment and assumption agreement to evidence the transfer of the University's interest in the PPA to MKSOA.

Section 7.3 Files, Reports and Documents

The University provided the Working Group with various environmental and other reports, plans, studies and other documents prepared by or on behalf of the University or other parties and relating to various projects on Maunakea over the years. *See id.* at Rows 103 – 190. These documents appear relevant to MKSOA's land management function. Accordingly, the University's interest in these documents will be automatically transferred to MKSOA as of December 1, 2029, by virtue of the Automatic Transfer. No further action is necessary.

Section 7.4 Equipment, Supplies, Inventory and Other Personal Property

Although not reviewed in detail by the Working Group, the University's interests in all inventory, equipment, supplies, tools, vehicles and other personal property owned by the University in connection with its operation of Hale Pohaku, the VIS, and MKSS are within the scope of the Automatic Transfer. However, University has advised that the purchase of some, if not all, of the inventory, equipment, supplies, tools, vehicles and other personal property may have been funded in full or in part by various federal grant(s), and that it may not be practicable or possible to distinguish such assets from those purchased with other, non-federal funds. Accordingly, the Working Group recommends that review and analysis of the disposition of such assets be referred to a PIG.

To the extent that the University is able to identify any assets that were not purchased with federal funds, and notwithstanding the Automatic Transfer, the Working Group recommends that the University and MKSOA enter into a bill of sale to which would be attached schedules of all such personal property to memorialize the transfer of these assets. In addition, the Working Group recommends that the University and MKSOA comply with any other requirements imposed under other applicable law with respect to the transfer of personal property. For example, with respect

to any vehicles transferred to MKSOA, certificates of title should be properly endorsed, and transfers of vehicle registrations should be processed with the appropriate governmental agency notwithstanding the Automatic Transfer.

ARTICLE 8
CONCLUDING REMARKS

This Plan sets forth proposed implementation actions recommended by the Working Group to effectuate the transfer of specified Maunakea-related assets, rights, powers, duties, and obligations from the University to MKSOA pursuant to the Act. It identifies those interests the Working Group interprets to be subject to the Automatic Transfer as of December 1, 2029, delineates those interests appropriately retained by the University, and recommends ancillary agreements and instruments to memorialize, clarify, and implement the transition.

This Plan also recommends that the following matters be referred to a PIG:

(i) to consider the University's proposal for early assignment of the General Leases, and to develop a recommendation for a response thereto;

(ii) to identify, inventory, and assess the improvements constructed and other property acquired by the University with federal funds; to analyze whether consent from the United States is necessary to transfer such improvements or assets; and to develop a strategy and recommendation for securing such consent;

(iii) to analyze the duties and obligations of the University under the Third Party MKO OSDAs, and to develop a recommendation for confirming the allocation of such duties and obligations between the University and MKSOA;

(iv) to identify those duties, responsibilities and other obligations under the CDUPs and SPAs which may require the University's involvement after the effective date of the Automatic Transfer, and to develop a recommendation for confirming how such duties, responsibilities and other obligations will be fulfilled; and

(v) to develop a recommendation as to the disposition of the Maunakea Communications Network.

DLNR's representatives to the Working Group have observed that additional legislation might be helpful to clarify the BLNR's role, authority, and duties with respect to Maunakea. In particular, DLNR suggested that additional legislation is needed to clarify the effect of the Automatic Transfer and other provisions of the Act on the explicit provision in both General Leases that an assignment of the University's interest is subject to prior consent by the BLNR. In addition, DLNR has expressed the following concern:

> "Although the Plan explains that the University's interests will transfer automatically on December 1, 2029, and that certain BLNR Chapter 171 powers and duties will also transfer to MKSOA on that date, it does not explain why those statutory transfers eliminate or supersede the contractual requirement in the General

> Leases and Roadway Easement that BLNR approve an assignment. For example, the Plan does not analyze whether the Automatic Transfer occurs by operation of law rather than by assignment, whether the Act expressly or impliedly supersedes the lease consent provisions, or how the transfer of BLNR's statutory authority affects the continuing legal effect of those contractual provisions. Because the Act does not expressly address these issues, the Plan appears to resolve them through legal interpretation. If that is the intended result, additional statutory clarification may provide a more definitive basis for that conclusion."

The Working Group recommends the formation of a PIG to consider the foregoing concerns raised by DLNR, and if warranted to develop a recommendation for supplemental legislation to address DLNR's concerns.

Taken together, this Plan is intended to facilitate the transfer of stewardship authority and to support the uninterrupted management and permitted uses on Maunakea at the conclusion of the transition period contemplated by the Act. But the transition will not be easy, notwithstanding this Plan. During the transition period from July 1, 2023, through December 1, 2029, the University and MKSOA must coordinate closely with respect to the management of Maunakea while undertaking the preparatory actions contemplated by this Plan. These actions include coordination with third parties (e.g., the MKOs) and governmental agencies (e.g., DLNR), and the negotiation and preparation of the agreements and other instruments described in this Plan. In addition, some assets may serve multiple roles and may not be easily categorized within the scope of the Automatic Transfer or not and may be subject to transfer restrictions imposed by contract or under federal, other state or county law. Finally, the University has expressed concern that the transfer of certain assets may have or result in financial, accounting or other unspecified consequences which the University believes will need to be addressed. The purpose of this Plan is not to resolve every minute detail or issue stemming from the Legislature's mandate to transfer the Maunakea Assets to MKSOA. It is the duty of MKSOA and the University collectively to work through those details during the transition period and one or more PIGs may facilitate the cooperation which will be necessary.

The following table summarizes the actions recommended by this Plan for the various Maunakea Assets.

Maunakea Asset	Recommended Action
General Leases and Roadway Easement	University's rights and responsibilities under the General Leases and Roadway Easement will be automatically transferred to MKSOA, and MKSOA will succeed to such rights and responsibilities pursuant to the Act. Establish PIG to facilitate further discussion of (i) whether the BLNR's prior approval of the transfer of the University's rights and responsibilities to MKSOA is necessary notwithstanding the Automatic Transfer, and (ii) University's proposal for earlier assignment. University and MKSOA to enter into an assignment and assumption instrument to confirm and memorialize the transfer of the University's rights and responsibilities under the General Leases and Roadway Easement to MKSOA.
University's Leasehold Improvements	University's rights and responsibilities under the General Leases including rights to any leasehold improvements will be automatically transferred to MKSOA, and MKSOA will succeed to such rights and responsibilities pursuant to the Act. University and MKSOA to enter into an assignment and assumption instrument to confirm and memorialize the transfer of the University's rights and responsibilities related to leasehold improvements. Issues of federal preemption to be referred to a PIG for further analysis and discussion.

Maunakea Asset	Recommended Action
Third Party MKOs	Subleases: Transfer to MKSOA will be automatic by virtue of Automatic Transfer. Nevertheless, University and MKSOA should enter into assignment and assumption instrument. In addition, MKSOA should obtain estoppel certificate from University and MKO. OSDAs: Allocation of duties and responsibilities referred to a PIG.
University MKOs	Improvements: Not covered by Automatic Transfer. For clarity, MKSOA should quitclaim interests, if any, to University after December 1, 2029. New Subleases: MKSOA and University should enter into new sublease for UH 88. New subleases for Hoku Ke'a and UKIRT will not be necessary due to decommissioning.
CFHT	Sublease: Transfer to MKSOA will be automatic by virtue of Automatic Transfer. Nevertheless, University and MKSOA should enter into assignment and assumption instrument. In addition, MKSOA should obtain estoppel certificate from University and CFHT Corp.
IRTF	Sublease: Transfer to MKSOA will be automatic by virtue of Automatic Transfer. Nevertheless, University and MKSOA should enter into assignment and assumption instrument. In addition, MKSOA should obtain estoppel certificate from University and NASA. IRTF Contract: University will retain IRTF Contract which is not covered by Automatic Transfer. For clarity, MKSOA and University should enter into an agreement confirming that University has retained IRTF Contract

Maunakea Asset	Recommended Action
JCMT	Improvements: Not covered by Automatic Transfer. For clarity, MKSOA should quitclaim interests, if any, to University after December 1, 2029. New Sublease: MKSOA and University should enter into new sublease.
CDUPs and SPAs	CDUPs and SPAs "run with the land." All such permits held by the University relating to Maunakea will continue to apply to the authorized land uses and to those entities exercising control and management over the applicable lands following the Automatic Transfer. Establish PIG to perform more in depth evaluation of CDUPs and SPAs and to identify and recommend how to address those obligations which may require the University's involvement going forward after the transition period.
Maunakea Communications Network	Ostensibly included within scope of Automatic Transfer but practicality of operation by MKSOA and issues of federal preemption merit further analysis by a PIG.
Miscellaneous Governmental Permits and Licenses	Transfer to MKSOA will be automatic by virtue of Automatic Transfer. Nevertheless, for clarity MKSOA and University should comply with all requirements and conditions for transfer or issuance of new permit if necessary.
Operational Agreements between University and Third Parties	Transfer to MKSOA will be automatic by virtue of Automatic Transfer. Nevertheless, MKSOA and University should enter into assignment and assumption agreement.
Operational Agreements between RCUH and Third Parties	MKSOA should obtain assignments from RCUH.

Maunakea Asset	Recommended Action
Tour Agreements	Transfer to MKSOA will be automatic by virtue of Automatic Transfer. Nevertheless, MKSOA and University should enter into assignment and assumption agreement.
Image Licenses	MKSOA should obtain new licenses for use of images in VIS.
Power Purchase Agreement	Transfer to MKSOA will be automatic by virtue of Automatic Transfer. Nevertheless, MKSOA and University should work to obtain Provider's consent to assignment and enter into assignment and assumption agreement.
Files, Reports, Documents	No action necessary; transfer to MKSOA will be automatic by virtue of Automatic Transfer.
Equipment, Supplies, Inventory and Other Personal Property	Ostensibly within scope of Automatic Transfer but issues of federal preemption merit further analysis by a PIG. For any assets that were not purchased using federal grant monies, MKSOA and University should enter into bill of sale, and MKSOA should comply with any other applicable requirements to evidence the transfer (e.g., certificates of title for vehicles should be endorsed and transfers of vehicle registrations processed with the appropriate county agency).

~ End ~

Exhibit A

Manifest

(See attached)

- **(ii)** S [empty]
- **b.** MKSS_HWY-H-01-86
  - **(i)** HWY-H-01-86
    1. July 86
    2. Mar 88
    3. Oct 86
  - **(c)** HA-1573_AssociatedPermitsPlansApprovals [empty]
  - **(d)** HA-1573_CDUA
    1. CDUA HA-1573 BLNR staff report [2/10/1984]
    2. MK Plan 1985 CDUA [2/22/1985]
    3. MK Plan 1985 CDUA-2 [2/22/1985]
  - **(e)** HA-1573_Chap343
    1. MK1982CDPv1 [November 1982]
    2. MK1982CDPv2 [November 1982]
    3. MK1983CDP [February 1983]
    4. MK1983FEIS [January 1983]
    5. MK1985CDUA [2/22/1985]
    6. MK1987CDP [February 1983; amended May 1987]
    7. MK1989CDPa [March 1989]
  - **(f)** HA-1573A_ApprovedPlans [empty]
  - **(g)** HA-1573A_AssociatedPermitsPlansApprovals [empty]
  - **(h)** HA-1573A_CDUA [empty]
- **(2)** DOT Documents
  1. 614-1 mar _72
  2. 614-2 mar _72
  3. 614-3 mar _72
  4. 614-4 mar _72
  5. 614-5 mar _72
  6. MAUNA KEA [3/15/2018]
  7. Parcel 1 [4/6/1972]
  8. Parcel 2 [4/5/1972]
  9. Parcel 3 [4/5/1972]
  10. Parcel 4 [4/6/1972]
  11. RoadEasemen`t1981_S-4697-MetesBounds [1/20/1981]
- **(3)** DOT Maps
  1. DOT-HWY-H-02-83 RightOfWayMap 1988 [1/20/1988]
  2. Mauna Kea Access ROW map [3/13/1972]
- **(4)** Maps of Road
  1. Mauna Kea Observatory Access Plan Profile _ Grading [1987]
  2. Mauna Kea Observatory Access Road #HWY-H-01-86 July 86
  3. Mauna Kea Observatory Access Road #HWY-H-01-86 Mar 88 [**file corrupted – could not be opened**]
  4. Mauna Kea Observatory Access Road Ph 1 _ 2 #HWY-H-01-86 [7/16/1990]

5. Phase I- IIA [1987]
6. Phase II
7. R.O.W.Phase IIA [1/20/1988]
8. R.O.W.Phase IIA- [1/20/1988]

(5) MKSS_HWY-H-01-86

1. Mauna Kea Observatory Access Plan Profile _ Grading [1987]
2. Mauna Kea Observatory Access Road Ph 1 _ 2 #HWY-H-01-86 [7/16/1990]

(a) HWY-H-01-86

1. July 86
2. Mar 88[3/21/1988]

(6) Summit Rd Reports

1. 1984 HWY-02-83 MK Access Road Improvements [April 1984]
2. 170504 Final Summit Road Report REVISED 2017 [May 2017]

d) UH General Lease

1. EO3710--OriginalDocument-1997-08-07_MaunaKea [6/191997]
2. GeneralLease1968_S-4191 [6/21/1968]
3. GeneralLease1968_S-4191_MetesBounds [1/20/1967]
4. GL5529--OriginalDocument-1986-02-28 [9/21/1999]
5. Mauna-Kea-Ice-Age-EO-3101 [11/16/1981]
6. ScienceReserve Real Property [2023]

e) UH Halepohaku Lease

1. GeneralLeaseHP1999_S-5529 [9/21/1999]

G. 3.31 Licenses & Permits

a) CDUP

1. List of Previous CDUP_s in TMT CDUA (2010)
2. Maunakea Other Agmts 6-13-22
3. MK Timeline from CDUP-1492-Cal-Tech [12/17/1982]
4. Summary of Board Issued Mauna Kea CDUPs

(1) CDUP for observatories and major infrastructure

1. CDUP 0527 file 1
2. CDUP 0527 file 2
3. CDUP 0653 file 2
4. CDUP 0653 file 3
5. CDUP 0653 file 4
6. CDUP 0653 file 5
7. CDUP 0895 file 1
8. CDUP 0895 file 2
9. CDUP 0954 Air Force 1977
10. CDUP 0954 file 2
11. CDUP 1430 file 1
12. CDUP 1430 file 2
13. CDUP 1430 file 3
14. CDUP 1430 file 4

15. CDUP 1492 Cal Tech 1982
16. CDUP 1492 file 1
17. CDUP 1492 file 2
18. CDUP 1492 file 3
19. CDUP 1515 file 1
20. CDUP 1515 file 2
21. CDUP 1515 James Clark Maxwell 1983
22. CDUP 1646 file 1
23. CDUP 1646 Keck I 1984
24. CDUP 1819 file 2
25. CDUP 2174 file 1
26. CDUP 2174 file 2
27. CDUP 2174 file 3
28. CDUP 2174 Very Long Baseline Array 1989
29. CDUP 2462 file 2
30. CDUP 2462 file 3
31. CDUP 2462 Subaru 1991
32. CDUP 2509 file 1
33. CDUP 2509 Keck 2 1992
34. CDUP 2691 file 1
35. CDUP 2691 Gemini North 1994
36. CDUP 2728 file 1
37. CDUP 2728 Smithosonian Submillimeter Array 1994
38. CDUP 3568 file 1
39. CDUP 3568 Thirty Meter Telescope Decision and Order 2017
40. CDUP 3812 file 1
41. CDUP 3812 Infrastructure improvements at the Maunakea Visitor Center 2018

(2) CDUP removed withdrawn and obsolete

1. CDUP 0442 electric conduit [6/25/1973]
2. CDUP 0528 construction camp [5/21/1974]
3. CDUP 0746 temporary facilities [3/22/1976]
4. CDUP 0789 temporary construction [5/17/1976]
5. CDUP 0804 building renovations [6/26/1976]
6. CDUP 0895 hale pohaku renovations [5/16/1977]
7. CDUP 1009 tsunami warning system [1/16/1978]
8. CDUP 1131 electric system [8/2/1979]
9. CDUP 1210 Physiological research [5/27/1980]
10. CDUP 1284 Educational program [5/20/1981]
11. CDUP 1314 Data collection [6/4/1981]
12. CDUP 1357 Soils testing [9/1/1981]
13. CDUP 3225 Site tesing [4/11/2005]

b) Commercial Tour Operators

1. 100_Arnotts_2008 [6/1/2008]

2. 102_HawaiiForestTrail_2008 [6/1/2008]
3. 103_HawnEyes_2008 [6/1/2008]
4. 104_SuperVacationHawaii_2018_up [12/13/2018]
5. 106_MaunaKeaSummitAdventures_2008 [6/1/2008]
6. 107_RobertsHawaii_2008 [6/1/2008]
7. 108_Taikobo_2008 [6/1/2008]
8. Ltr to DLNR - Transfer of Permits 11-14-2006
9. Notice-of-CTO-permit-extension_2009 [5/18/2009]
10. Rec'd 2025.05.22 Assignment of Permit No CT-104 and Consent to SuperVacationHILLC
11. Rec'd 2025.05.22 Escrow Agreement btw Jack's -UH_2018-12-13
12. Rec'd 2025.05.22 Jack's Tours, Inc. CT-104
13. Rec'd 2025.05.22 Supplement No. 2 to MKCommerical Tour Use Permit No. CT-104_Jack'sTours
14. SUMMARY OF FEES AND PENALTIES FOR OPERATORS [1/1/2007]
15. UH BOR 1-20-05 Minutes - Transfer of CTO to UH [1/20/2005]

c) Other Agreements
1. OMKM Approval of Red Cross Repeater [3/19/2022]
2. Rec'd 2025.05.22 UH County of Hawaii Nonexclusive License UH 88 - executed 04.26.2024 effective 04.25.2024

d) Permits to Operate HP
(1) Boiler_
1. 2024-08-25a, HILO, Mauna Kea Observatory, HHB0042-83
2. 2024-08-25b, HILO, Mauna Kea Observatory, HHB0429-10
3. 2024-08-25c, HILO, Mauna Kea Observatory, HHB0434-13
4. 2024-08-25d, HILO, Mauna Kea Observatory, HPV0042-03
5. 2024-08-25e, HILO, Mauna Kea Observatory, HPV0051-83
6. 2024-08-25f, HILO, Mauna Kea Observatory, HPV0052-83
7. Permit on Wall 2024-01-17_082805 [8/25/2024]
8. Permit on wall 2024-01-17_083024 [8/25/2024]
9. Rec'd 2025.05.22 Permit to Operate Receipt_2025-05-21_123654

(2) Fire Systems
1. mkoss inv [10/30/2023]
2. mkoss kit inv [10/13/2023]
3. mkoss rep P1 3 [10/13/2023]
4. mkoss rep P2 3 [10/13/2023]
5. mkoss rep P3 3 [10/13/2023]

(3) Other permits
1. HP -DOH Food Safety Green Placard [6/16/2023]
2. HP -Elevator Permit-Expired 2017 [expired 8/4/2017]
3. HP- Food Permit-Expires 6-2024 [expired 6/30/2024]
4. Rec'd 2025.05.22 Food Establishment Permit
5. Rec'd 2025.05.22 Food Safety Card

- **H.** 3.32 OSDA
  1. 1985 Keck I OSDA [10/30/1985]
  2. CFHT Tripartite Agreement-Charter of Incorp-Bylaws March 2005
  3. CSO OSDA and Sublease (California Institute of Technology) 12-20-1983
  4. GEMINI OSDA and Sublease (National Science Foundation) 08-09-1994
  5. IRTF-1977.12.06 Management Plan for the Operation of the NASA IRTF
  6. IRTF-1983.06.21 MOA NASA and NSA re Operational Support of the IRTF
  7. JCMT-1984OSDA [2/10/1984]
  8. KECK II OSDA and Sublease (California Institute of Technology) RENEGOTIATED 06-29-1992
  9. SMA OSDA and Sublease (Smithsonian Institution) 05-15-1995
  10. SUBARU OSDA and Sublease (National Astronomical Observatory of Japan) 06-05-1992
  11. TMT-2014-07-28 Scientific Corporation Agreement (TIO and UH)
  12. UKIRT-1978OSDA [7/18/1978]
  13. VLBA OSDA and Sublease (Associated Universities-National Radio Astronomy Observatory) 1990-09-28

- **III.** 5 Financial
  - **A.** 5.21 Capital Exp. Planned
    1. Forecasted Cost Allocation For Feb Mtg-UST Project 02-15-2024
  - **B.** 5.22 Fixed Asset Inventory
    1. .DS Store
    2. Food and Lodging Inventory
    3. Office Furniture Inventory
    4. Ranger Supply Inventory
    5. Utilties Equip Inventory
    6. VIS - Inventory List
    - **a)** Adze Collection
      1. Astronomy Precinct AIS-MKSR-V1
      2. Inventory List - Edited 01-23-2024
    - **b)** Bug Collection
      1. CMS Arthropod Inventory
    - **c)** Library
      1. CMS Library Catalog Instructions
      2. CMS Library Summary
  - **C.** 5.23 Heavy Equipment-Vehicle
    1. CMS Vehicle-Heavy Equipment List February 2024
  - **D.** 5.24 Insurance Policies
    1. 23-24 MKSS Property Policy 194213 (06-01-2023 to 06-01-2024) AB-checked
    2. Rec'd 2025.05.22 24-25 Property Policy AB-checked

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Skimmed for Content as of 8/11/26
On Deck as of 8/11/26

- **IV.** 6 HR
  - **A.** 6.14 Pension_
    1. 3.560-RCUH-Retirement-Plans-010319
    2. Contributory Retirement Information-eff.-6.2022 UHH
  - **B.** 6.19 Headcount
    1. CMS -Listing of all employees 12-12-2023
  - **C.** 6.80 Benefits Summary
    1. Employee Benefits Summary- Rev.-10-27-2023 UH
    2. RCUH-Benefits-At-a-Glance-August-2023

- **V.** 7 Intellectual Property
  1. 7.2 CMS-GO DADDY Domain Name List and Cost 10-23-2023
  - **A.** 7.3 Licensing Agmts Incoming
    1. UHH CMS-SGPhotos 10-31-2023
    2. Andrew Richard Hara Noncash Charitable Contributions Form 8283 (2) 11-10-2023
    3. Hara Email - Photo for VIS wall 12-19-2023
    4. Herb Kane Image License - Mauna Kea Observatories – Poliahu 12-05-2023

- **VI.** 8 IT
  1. 8.20 Summary of CMS Backup IT 01-16-2024
  2. Other IT Information for CMS
  3. RCUH - Waytech Hawaii, LLC Contract 08-01-2017 and Amendments
  - **A.** Mobile Phones
    1. Cell phone listing

- **VII.**9 Environmental & Safety
  - **A.** 9.10 Environmental Reports
    - **a)** Enviro Impact Stmt Library
      1. UH EA Listing 2022
      - **(1)** CSO
        - **(a)** Decommission
          1. CSO2022 Biological Inventory
      - **(2)** GEMINI
        1. GEMINI1992PD 07-1992
        2. GEMINI1993EA 12-1993
      - **(3)** INFRASTRUCTURE
        1. InfrS1963PRWR
        2. InfrS1963PRWR-2
        3. InfrS1970MKAR
        4. InfrS1970MKAR-2
        5. InfrS1973DEIS-2
        6. InfrS1973EISpwrP1
        7. InfrS1973EISpwrP1-2

8. InfrS1974DEISMEF-2
9. InfrS1974FEIS
10. InfrS1974FEIS-2
11. InfrS1975EISpwr
12. InfrS1975EISpwr-2
13. InfrS1978HPEIS
14. InfrS1978HPEIS-2
15. InfrS1981CIH
16. InfrS1981CIH-2
17. InfrS1985CDUAHP
18. InfrS1985CDUAHP-2
19. InfrS1985DSEIS-2
20. InfrS1995GTE
21. InfrS1996SRP
22. InfrS1997SIA
23. InfrS1999CDUP
24. InfrS1999CDUP-2
25. InfrS1999FEISSRI
26. InfrS1999FEISSRI-2
27. InfrS1999FEISSRII
28. InfrS1999FEISSRIII
29. InfrS1999SRC
30. InfrS2002AMP
31. InfrS2009DSEIS
32. InfrS2009DSEISv2
33. InfrS2010FSEIS
34. InfrS2010FSEISv2
35. InfrS2012FEA
36. InfrS2014HEED
37. InfrS2015DEA
38. InfrS2017CDUAHP
39. InfrS2017CDUAHP_1
40. InfrS2017DEAHP
41. InfrS2017FEAHP

(4) IRTF

1. IRTF1975DEIS
2. IRTF1975FEIS

(5) JCMT-UKIRT

1. JCMT1982CDUA
2. JCMT1984OSDA
3. Masumoto_UKNLMW
4. UKIRT1975CDUA
5. UKIRT1975CDUP

6. UKIRT1975DEIS
7. UKIRT1975FEIS
8. UKIRT1978OSDA

(6) Keck -OUTRIGGER

1. OTP-FEIS-Volume-I
2. OTP-FEIS-Volume-II
3. OUTRIG1999DEA
4. OUTRIG2000DEA
5. OUTRIG2000Geology
6. OUTRIG2001CDU
7. OUTRIG2001DEA
8. OUTRIG2001Memo
9. OUTRIG2002DEA
10. OUTRIG2002EAv1
11. OUTRIG2002EAv2
12. OUTRIG2002FEA
13. OUTRIG2004BS
14. OUTRIG2004DEISv1
15. OUTRIG2004DEISv2
16. OUTRIG2005FEISv1
17. OUTRIG2005FEISv2
18. OUTRIG2005ROD
19. ROD

(7) MaunaKeaPlans

1. MKPlan1964SPMK
2. MKPlan1964SPMK-2
3. MKPlan1975MKCP
4. MKPlan1975MKPS
5. MKPlan1975MKPS-2
6. MKPlan1976MKP-2
7. MKPlan1976Plan
8. MKPlan1976Plan-2
9. MKPlan1977MKP
10. MKPlan1977MKP-2
11. MKPlan1979EISHP
12. MKPlan1980AREIS
13. MKPlan1980AREIS2
14. MKPlan1980AREIS-2
15. MKPlan1980CDRHP
16. MKPlan1980CDRHP-2
17. MKPlan1980REISHP
18. MKPlan1980REISHP-2
19. MKPlan1981PS

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20. MKPlan1981PS-2
21. MKPlan1982CDPv1
22. MKPlan1982CDPv1-2
23. MKPlan1982CDPv2
24. MKPlan1982CDPv2-2
25. MKPlan1983CDP
26. MKPlan1983CDP-2
27. MKPlan1985CDUA
28. MKPlan1985CDUA-2
29. MKPlan1985DSEIS
30. MKPlan1985FSEIS
31. MKPlan1985FSEIS-2
32. MKPlan1987CDP
33. MKPlan1995RMP
34. MKPlan1999DEISv2
35. MKPlan1999DEISv2-2
36. MKPlan1999DNo2
37. MKPlan1999DNo2-2
38. MKPlan1999DNo3A
39. MKPlan1999DNo3A-2
40. MKPlan1999DNo4
41. MKPlan1999DNo4-2
42. MKPlan1999FEISv1
43. MKPlan1999FEISv1-2
44. MKPlan1999FEISv2
45. MKPlan1999NofP-2
46. MKPlan1999Testimony
47. MKPlan1999Testimony-2
48. MKPlan1999TPMK
49. MKPlan1999TPMW
50. MKPlan2000ADPv1
51. MKPlan2000ADPv2
52. MKPlan2000v1
53. MKPlan2000v2
54. MKPlan2009DDP
55. MKPlan2009DLNR
56. MKPlan2010ARCMP
57. MKPlan2010FAISHP
58. MKPlan2011ARCMP
59. MKPlan2012ARCMP
60. MKPlan2012DAMR
61. MKPlan2013AISIA
62. MKPlan2013ARCMP

63. MKPlan2013BBS
64. MKPlan2014ARCMP
65. MKPlan2014EISPN
66. MKPlan2015ARCMP
67. MKPlan2015MISMP
68. MKPlan2016ARCMP
69. MKPlan2016LTM
70. MKPlan2016PFDTDEA
71. MKPlan2017ARCMP
72. MKPlan2018ARCMP
73. MKPlan2018EISPN
74. MKPlan2019ARCMP
75. MKPlan2021DMP
76. MKPlan2022CMPSv1
77. MKPlan2022CMPSv2
78. MKPlan2022MPv1

(8) SMA

1. SMA1994DER

(9) TMT

1. NSF2022NoI
2. Phase 1 Notices March 2015
3. TMT2008EISPN
4. TMT2009DEISappD
5. TMT2009DEISappE
6. TMT2009DEISappF
7. TMT2009DEISappG
8. TMT2009DEISappH
9. TMT2009DEISappI
10. TMT2009DEISv1
11. TMT2010CDUPA
12. TMT2010FEISv1
13. TMT2010FEISv2
14. TMT2010FEISv3
15. TMT2010GA
16. TMT2010MP
17. TMT2012AWA
18. TMT2012BZL
19. TMT2012HPMP
20. TMT2013FAMP
21. TMT2013FOF
22. TMT2013GI
23. TMT2014Sublease
24. TMT2017FOFCOL

25. TMT2017PFF
26. TMT-DLNR-CDUPReport
    (a) TMT_Plates
        1. Plate3
        2. Plate6
        3. Plate7
        4. Plate10
b) UH Septic closure
    1. LTR to EPA (w-DOH approval letters for holding tanks) 10-13-2022

B. 9.13 Storage Tanks
a) Injection Wells
    1. Tropical Marine_IW Test Report 07-26-2023
    2. Hale Pohaku 2022 Injection well SR w attach 07-15-2022
    3. Permit No UH-2527 05-13-2019
    4. Rec'd 2025.05.22 20240520_UH2527_Hale Pohaku Mid-Level Facility PRen_CoO (part 1) - signed (002)
    5. UH 2527trans.permit.attach.enc (part 1) – signed 05-13-2019
b) Underground Fuel Storage Tank
    1. Compliance 01-20-2023
    2. Compliance 01-25-2022 & 02-04-2022
    3. EPA Fuel Storage Tank Inspection 08-21-2019
    4. Rec'd 2025.05.22 Permit No. P-2015-045-R1
    5. Statement of Self Reliance 08-14-2019

C. 9.21 Emergency Procedures
a) CMS-MKSS Plans
    1. 4-3-0-2-Earthquake Plan 11-28-2016
    2. 4-3-0-4-Bloodborne Pathogen Awareness
    3. 4-3-0-5-MKSS Alcohol Controlled Substance Testing Program 09-01-2017
    4. 4-3-0-6-Fire Extinguisher Locations 10-28-2015
    5. 4-3-0-8-GHS Training
    6. 4-4-0-1-MKSS Driving Safety Policy (1) 12-16-2019
    7. 2021 Hurricane Emergency Plan 06-04-2021
    8. 2022-MK-Emergency-Proc-WinterWeather 04-21-2023
    9. FY24-Sep 2023 MK Emergency Procedures 09-06-2023
    10. Maunakea Emergency Phone Numbers - 09-06-2023
    11. MKSS-Spill-Plan 09-22-2023
b) MKO Emergency Plans
    1. Gemini-Safety-Manual English 02-2022
    2. JCMT and UKIRT Plans
    3. KECK 11-2023 WMKO Emergency Management Plan 07-18-2022
    (1) CFHT
        1. CFHT - Emergency Response Plans (ERP) & Fire Prevention Plan (C4) 11-30-2023

2. CFHT - Spill Response (D10) 11-30-2023

(2) IRTF & UH88- Using MKSS plan

1. 2022 CMS Hurricane Plan 06-22-2022
2. 2023-2024 MK Winter Weather 04-21-2023
3. FY24-Sep 2023 MK Emergency Procedures 09-06-2023
4. MKSS-Spill-Plan-2023 (1) 9-22-2023
5. UH88 Emergency Plan

(3) SMA

1. EMERGENCY EVACUATION PLAN.docx 11-19-2022
2. FY24-Sep 2023 MK Emergency Procedures 09-06-2023
3. MK Emergency
4. Office.Closures.Emergency.Call.In.docx 10-15-2014
5. SMA Spill Prevention and Response Plan 10-10-2017

(4) Subaru

1. 13.Emergency Plan for the Summit Facility 09-06-2023
2. Appendix 28. CHEMICAL SPILL CHECKLIST
3. Appendix 45 Subaru Telescope Temporary Evacuation and Weather Road Condition Check Policy 04-02-2018
4. Appendix7 Subaru Telescope Emergency Network
5. Appendix 44 The Emergency Plan for Tropical Storm or Hurricane 09-08-2018

(5) VLBA

1. Spill/Leak Containment Guidelines VLBA_11_2023
2. VLBA EAP MAUNAKEA FINAL 12-04-2023

VIII. Additional Documents (e.g. Termination, etc.)

1. 16143 Sublease Termin Agrmt UH & STFC
2. BOR action memo - JCMT sublease termination
3. GL-4191 Partial Withdrawal 032398
4. IRTF Exhibit B
5. JCMT SCA Amendment 2 EXECUTED AND EFFECTIVE 2024.12.31
6. JCMT STFC MOA fully signed 022615
7. JCMT STFC TERMINATION OF SUBLEASE AGREEMENT 022615
8. JCMT-SCA001 (2)
9. SCA Amendment 1 (extension)
10. Science and Technology Facilities Council of the UK Mutual Release Agreement
11. Silversword Enclosure Permit 2025
12. UH Communications & IT Network Summary 2026

A. IRTF Management Agreements

Folder titles appear in red
Document titles appear in black
Reviewed as of 8/11/26
Skimmed for Content as of 8/11/26
On Deck as of 8/11/26

1. ATT A SOW
2. ATT B IDIQ FIXED PRICE RATES MATRIX
3. ATT C GFP
4. ATT D IT SECURITY APPL DOCS LIST
5. ATT E DOL WD2015-5689
6. ATT F CBAs HI PRO & HGEA U-8
7. ATT G S&H PLAN
8. ATT H IT SECURITY MGMT PLAN
9. ATT I SM BUS SUBCONTRACTING PLAN
10. ATT J DEIA PLAN
11. ATT K CONTRACT DATA RQMTS DELIVERABLE LIST
12. ATT L RQMT STMT LIST
13. IRTF 80HQTR24DA010 SF26_B-J_FEXE
14. Kelly Fast IRTF NF1634 FE
15. Memo of authority - IRTF GSA Lease Vehicles_FEXE

B. Additional CDUP Documents

1. 320_HA_23-174_concurrence
2. 2025-8-26 N. Guilloz_CDUP HA-895 dated 1977- Question
3. 2025-8-26 N. Guilloz_Missing CDUP's and JCMT (EAO -UH) Agreement
4. 2025-8-26 N. Guilloz_Shortlist of Facility SPA's currently open
5. 2025-9-9 N. Guilloz_Re_ Shortlist of Facility SPA's currently open
6. 2025-9-15 N. Guilloz_List of OCCL Approved Projects - Archived permit amendments_ correspondence_Concurrence and SPAs
7. CDUP HA 3812 VIS Improvements
8. CDUP-HA-895-HP-Renovation-1977
9. CDUP-HA-3880-Signed
10. DLNR approvals MKSOA
11. Final_signed_CDUP_HA3906_20230418
12. HA-895-DLNR staff report
13. JCMT SCA Amendent 2 EXECUTED AND EFFECTIVE 2024.12.31
14. Signed SPA HA 25-46, issued 20250310

Exhibit B

Document Review Matrix

(See attached)

Maunakea Document Review Matrix

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
General Leases							
1.	General Lease No. S-5529 dated 9/21/99 Parties State (Lessor) UH (Lessee) Description Demises Hale Pohaku Mid-Level Facilities, 19.261 ac. Terminates 2/27/2041 (55 years commencing 2/28/1986). By letter dated August 22, 2013, UH through its Board of Regents requested mutual cancellation of the lease and issuance of a new 65-year lease. To date, BLNR has not acted on UH's request.	Assignable	Prior written approval of BLNR (Sec. 12)	None apparent	Automatic on 12/1/29	Applicable	(1) Sec. 12 expressly requires BLNR approval of an assignment. (2) Application for BLNR approval carries risk. DLNR advises that an application for BLNR approval could be subject to a contested case and the imposition of additional conditions. (3) Consider requesting estoppel cert from Lessor and Lessee. Note, however, that if MKSOA is both lessor and lessee after December 1, 2029, then an estoppel may not be necessary. (4) Abstract prepared.
2.	General Lease No. S-4191 dated 6/21/68 ("Original Lease") Parties State (Lessor) UH (Lessee) Description Original Lease demised Mauna Kea Science Reserve, 13,321.054 ac. Amended by Partial Withdrawal dated 3/23/98 which withdrew 1,889.7 ac. and 143.5 ac. from the original demised premises. The areas withdrawn appear to be a portion of the premises set aside for the Mauna Kea Ice Age Reserve by EO 3101, i.e., a portion of Part 1 and all of Part 2. Terminates 12/31/2033 (65 years from 1/1/1968). By letter dated August 22, 2013, UH through its Board of Regents requested mutual cancellation of the lease and issuance of a new 65-year lease. To date, BLNR has not acted on UH's request.	Assignable	Prior written approval of BLNR (Sec. 5)	None apparent	Automatic on 12/1/29	Applicable	(1) Sec. 5 expressly requires BLNR approval of an assignment. (2) Application for BLNR approval carries risk. DLNR advises that an application for BLNR approval could be subject to a contested case and the imposition of additional conditions. (3) Consider requesting estoppel cert from Lessor and Lessee. Note, however, that if MKSOA is both lessor and lessee after December 1, 2029, then an estoppel may not be necessary. (4) Pair request for consent to assignment (if sought) with request for consent to assignment of sublessor's interest under subleases. (5) Abstract prepared.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
Executive Orders							
3.	Executive Order No. 3101 dated 11/16/81 Party Governor Description Sets aside portions of summit area for Mauna Kea Ice Age Natural Area Reserve (3,750 ac., Part 1, and 143.5 ac., Part 2) to be under the control of DLNR	N/A	N/A	N/A	N/A	N/A	Based on site visit, UH appears to be voluntarily managing areas which are supposed to be under DLNR control since the boundaries between UH and DLNR are not clear to the public.
4.	Executive Order No. 3710 dated 8/7/97 Party Governor Description Withdrew portions of the summit area from the Mauna Kea Forest Reserve. Area withdrawn is 13,321.054 ac. gross, 11,269.554 ac. net. It appears that the area withdrawn by this EO comprises the premises demised under GL S-4191. We note, however, that the POB and certain courses in the legal are different as compared to the legal of GL S-4191.	N/A	N/A	N/A	N/A	N/A	Based on site visit, UH appears to be voluntarily managing areas which are supposed to be under DLNR control since the boundaries between UH and DLNR are not clear to the public.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
Subleases							
5.	Sublease to the National Aeronautics and Space Administration ("NASA") dated 11/29/1974 Common Name: IRTF Parties UH (Sublessor) NASA (Sublessee) Description Sublease of portion of land area leased to UH in General Lease S-4191. General Lease terms control if Sublease terms conflict. Expires December 31, 2033, unless sooner terminated or extended. If General Lease S-4191 is renewed, UH shall negotiate a new Sublease with NASA.	Assignable by default; Sublease is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Related document: *18. Management Plan with NASA dated 12/6/1977.* (2) Consider requesting estoppel certificates from UH and NASA. (3) Abstract prepared.
6.	Sublease to Canada-France-Hawaii Telescope Corporation ("CFHT") dated 12/18/1975 Common Name: Canada France Parties UH (Sublessor) CFHT (Sublessee) Description Demises portion of land area leased to UH in General Lease S-4191. General Lease terms control if Sublease terms conflict. Expires December 31, 2033, unless sooner terminated at convenience of Sublessee by six (6) months written notice to Sublessor. UH shall seek to negotiate a renewal of the General Lease with BLNR or its successor and if the General Lease is renewed, UH shall effect a new sublease with CFHT for the life of the renewal or the life of CFHT, whichever is shorter.	Assignable by default; Sublease is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Related OSDA: *16. Tripartite Agreement ("TA") between the National* Research *Council of Canada ("NRC"), the Centre National de la Recherche Scientifique of France ("CNRS") and UH dated ca. June 1974, amended 7/11/80 and 9/25/1985.* (2) As a party to the Tripartite Agreement, UH has an interest in this observatory. (3) Consider requesting estoppel certificates from UH and CFHT. (4) Abstract prepared.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
7.	Sublease to Science Research Council ("SRC") dated 9/21/1978 Common Name: UKIRT Parties UH (Sublessor) SRC (Sublessee)	N/A; Sublease has been terminated	N/A	N/A	N/A	Inapplicable	(1) Sublease and OSDA terminated and improvements transferred to UH on 10/31/14. Scheduled to be decommissioned by 2030. (2) Related OSDA: *17. Undated Agreement between UH and SRC* (terminated as of 10/31/14) (3) IFA Director confirmed no other agreements entered into by UH re: management of land that was covered by Sublease. (4) Abstract prepared.
8.	Sublease to California Institute of Technology ("CIT") dated 12/20/1983 Common Name: CSO Parties UH (Sublessor) CIT (Sublessee)	Assignable by default; Sublease is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Decommissioned; UH working on terminating Sublease and OSDA. (2) Related OSDA: *21. OSDA to CIT dated 12/20/1983* (3) Abstract prepared.
9.	Sublease to the Science and Engineering Research Council ("SERC") dated 2/10/1984 Common Name: JCMT Parties UH (Sublessor) SERC (Sublessee)	N/A; Sublease has been terminated	N/A	N/A	N/A	Inapplicable	(1) Sublease and OSDA terminated and improvements transferred to UH on 2/28/15. (2) Related agreement: *22. OSDA to SERC dated 2/10/1984* (terminated as of 2/28/15) (3) IFA Director confirmed no other agreement entered into by UH re: land management. (4) Abstract prepared.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
10.	Sublease and Non-Exclusive Easement Agremeent to California Institute of Technology ("CIT") dated 10/30/1985 Common Name: Keck Parties UH (Sublessor) CIT (Sublessee) Description Sublease of portion of land area leased to UH in General Lease S-4191. General Lease terms control if Sublease terms conflict. Expires December 31, 2033, unless sooner terminated or extended. If General Lease S-4191is renewed, UH shall renew or extend the Sublease or negotiate a new Sublease with CIT if desired. UH and the State shall make every effort to ensure renewal, extension, or renegotiation of the General Lease.	Assignable by default; Sublease is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Related OSDA: *24. Renegotiated OSDA to the California Institute of Technology ("CIT") dated 6/29/1992* (2) Consider requesting estoppel certs from UH and CIT. (3) Abstract prepared.
11.	Sublease and Non-Exclusive Easement Agreement to Associated Universities, Inc./National Radio Astronomy Observatory ("AU/NRAO") dated 9/28/1990 Common Name: VLBA Parties UH (Sublessor) AU/NRAO (Sublessee) Description Sublease of portion of land area leased to UH in General Lease S-4191. General Lease terms control if Sublease terms conflict. Expires December 31, 2033, unless sooner terminated or extended If General Lease S-4191 is renewed, UH shall renew or extend the Sublease or negotiate a new Sublease with AU/NRAO if desired. UH shall make every effort to ensure renewal, extension, or renegotiation of the General Lease.	Assignable by default; Sublease is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Related OSDA: *25. OSDA to the Associated Universities, Inc./National Radio Astronomy Observatory ("AU/NRAO") dated 9/28/1990* (2) Consider requesting estoppel certificates from UH and AU/NRAO. (3) Abstract prepared.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
12.	Sublease and Non-Exclusive Easement Agreement to National Astronomical Observatory of Japan ("NAOJ") dated 6/5/1992 Common Name: Subaru Parties UH (Sublessor) NAOJ (Sublessee) Description Sublease of portion of land area leased to UH in General Lease S-4191. General Lease terms control if Sublease terms conflict. Expires December 31, 2033, unless sooner terminated or extended. If General Lease S-4191 is renewed, UH shall renew or extend the Sublease or negotiate a new Sublease with NAOJ if desired. UH shall make every effort to ensure renewal, extension, or renegotiation of the General Lease.	Assignable by default; Sublease is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Related OSDA: *26. OSDA to NAOJ dated 6/5/1992* (2) Consider requesting estoppel certs from UH and NAOJ. (3) Abstract prepared.
13.	Sublease to National Science Foundation ("NSF") dated 9/26/1994 Common Name: Gemini Parties UH (Sublessor) NSF (Sublessee) Description Sublease of portion of land area leased to UH in General Lease S-4191. General Lease terms control if Sublease terms conflict. Expires December 31, 2033, unless sooner terminated or extended. If General Lease S-4191is renewed, UH shall renew or extend the Sublease or negotiate a new Sublease with NSF if desired. UH shall make every effort to ensure renewal, extension, or renegotiation of the General Lease.	Assignable by default; Sublease is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Related OSDA: 27. *OSDA to NSF dated 8/9/1994* (2) Consider requesting estoppel certs from UH and NSF. (3) Abstract prepared.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
14.	Sublease and Non-Exclusive Easement Agreement to Smithsonian Institution ("SAO") dated 5/15/1995 Common Name: SMA or Submillimeter Array Parties UH (Sublessor) SAO (Sublessee) Description Sublease of portion of land area leased to UH in General Lease S-4191. General Lease terms control if Sublease terms conflict. Expires December 31, 2033, unless sooner terminated or extended. If General Lease S-4191is renewed, UH shall renew or extend the Sublease or negotiate a new Sublease with SAO if desired. UH shall make every effort to ensure renewal, extension, or renegotiation of the General Lease.	Assignable by default; Sublease is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Related OSDA: *28. OSDA to SAO dated 5/15/1995* (2) Consider requesting estoppel certs from UH and SAO. (3) Abstract prepared.
15.	Sublease and Non-Exclusive Easement Agreement to TMT International Observatory LLC ("TMT") dated 7/28/2014 Common Name: TMT Parties UH (Sublessor) TMT (Sublessee) Description Sublease of portion of land area leased to UH in General Lease S-4191. General Lease terms control if Sublease terms conflict. Expires December 31, 2033, unless sooner terminated or extended. Sublease contemplates various scenarios pertaining to renewal/extension of term in connection with the execution of a new master lease with a term extending beyond 2033.	Assignable by default; Sublease is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Related OSDA: *29. OSDA to TMT dated 7/28/2014* (2) Consider requesting estoppel certs from UH and TMT. (3) Abstract prepared.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
OSDAs							
16.	Tripartite Agreement ("TA") between the National Research Council of Canada ("NRC"), the Centre National de la Recherche Scientifique of France ("CNRS") and UH dated ca. June 1974, amended 7/11/80 and 9/25/1985 Common Name: Canada France Parties UH NRC CNRS Description Governs the creation of the Canada-France-Hawaii Telescope Corporation ("CFHT") with membership by UH, NRC, and CNRS to design, construct and operate a telescope on Maunakea.	Unassignable	N/A	N/A	N/A	Inapplicable – outside scope of Automatic Transfer	(1) Related Agreement: *6. Sublease dated 12/18/1975 by and between UH and CFHT* (2) The TA addresses not only matters of operation of the Canada France telescope but also covenants and obligations among the members of CFHT. In addition, CFHT Bylaws Section 2-3 provides that Membership in CFHT is not transferable. Wholesale assignment by UH to MKSOA is not practical. Instead, MKSOA should consider entering into a new agreement with CFHT with respect to management/operational issues. (3) Abstract prepared.
17.	Agreement between UH and the Science Research Council ("SRC") – undated Common Name: UKIRT Parties UH SRC	N/A; agreement has been terminated	N/A	N/A	N/A	Inapplicable	(1) Sublease and OSDA terminated and improvements transferred to UH on 10/31/14. Scheduled to be decommissioned by 2030. (2) Related Agreement: *7. Sublease dated 9/21/1978 by and between UH and SRC* (terminated as of 10/31/14) (3) IFA Director confirmed no other agreements entered into by UH re: management of land that was covered by Sublease. (4) Abstract prepared.
18.	Management Plan with National Aeronautics and Space Administration ("NASA") dated 12/6/1977 Common Name: IRTF Parties UH NASA Description Management Plan covering premises subleased to NASA, commonly known as IRTF.	Unclear – see notes to row 19.	N/A	N/A	N/A	Inapplicable – outside scope of Automatic Transfer	(1) Related agreement: *5. Sublease dated 11/29/1974 by and between UH and NASA* (2) Addresses topics which appear to be outside of MKSOA's scope and expertise, e.g., scientific cooperation. (3) No OSDA executed because UH manages and operates the NASA owned telescope and facility. Federal contract between UH and NASA governs UH's management and operation of IRTF. *See 19. Award/Contract dated 7/1/24 issued by NASA to University of Hawaii.* (4) Abstract prepared.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
19.	Award/Contract dated 7/1/24 issued by NASA to University of Hawaii Common Name: IRTF Parties UH NASA Description Contract for operation, maintenance and development of IRTF.	Unclear – see notes	Government's consent (if effectuated by novation – see discussion in notes) Other conditions may apply. Onerous application requirements. *See* 48 C.F.R. 42.1204.	Unclear	Lengthy; exact timeframe unclear	Inapplicable – outside the scope of Automatic Transfer	(1) Federal law prohibits assignment of a federal contract. *See* 41 USCA § 6305. Under certain circumstances, however, the government may recognize a contractor's successor in interest through a novation agreement. *See* 48 C.F.R. 42.1204. (2) The circumstances when the government may recognize a contractor's successor in interest include transactions involving the transfer of the "entire portion of the assets involved in performing the contract." *See* 48 C.F.R. 42.1204(a)(2). Accordingly, it may be possible for UH to obtain the government's approval of a novation agreement in favor of MKSOA. (3) Nevertheless, assignment by any means seems impractical.
20.	Memorandum of Agreement on the Operational Support of IRTF between NSF and NASA Parties NSF NASA Description Describes agreement regarding operational cooperation between NSF and NASA with respect to IRTF.	N/A	N/A	N/A	N/A	Inapplicable – UH not a party	(1) Not reviewed in detail. UH not a party.
21.	OSDA to the California Institute of Technology ("CIT") dated 12/20/1983 Common Name: CSO Parties UH CIT	Not analyzed; termination in progress	Not analyzed; termination in progress	Not analyzed; termination in progress	Not analyzed; termination in progress	Applicable in part to duties and obligations re: site development, site management and operational support	(1) Decommissioned; UH is working on terminating the Sublease and OSDA. (2) Related agreement: *8 Sublease to California Institute of Technology ("CIT") dated 12/20/1983*
22.	OSDA to the Science and Engineering Research Council ("SERC") dated 2/10/1984 Common Name: JCMT Parties UH SERC Description OSDA covering premises subleased to SERC, commonly known as JCMT.	N/A; agreement has been terminated	N/A; agreement has been terminated	N/A; agreement has been terminated	N/A; agreement has been terminated	Inapplicable	(1) Sublease and OSDA terminated and improvements transferred to UH on 2/28/15. (2) Related agreement: *9. Sublease dated 2/10/1984 by and between UH and SERC* (terminated as of 2/28/15) (3) IFA Director confirmed no other agreement entered into by UH re: management of land. UH has, however, entered into that certain Scientific Cooperation Agreement dated 2/26/15 with East Asian Observatory. The SCA was amended twice and currently expires on 2/28/30. (4) Abstract prepared.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
23.	OSDA to the California Institute of Technology ("CIT") dated 10/30/1985 Common Name: Keck Parties UH CIT	--	--	--	--	--	(1) Superseded by *24. Renegotiated OSDA to the California Institute of Technology ("CIT") dated 6/29/1992*
24.	Renegotiated OSDA to the California Institute of Technology ("CIT") dated 6/29/1992 Common Name: Keck Parties UH CIT Description OSDA covering premises subleased to CIT, commonly known as the Keck Observatory. Expires 12/31/2033, unless sooner terminated or extended. If General Lease S-4191 is extended beyond 12/31/2033, UH shall extend the OSDA	Assignable by default; OSDA is silent	None specified	None apparent	Automatic on 12/1/29	Applicable in part to duties and obligations re: site development, site management and operational support	(1) Related Agreement: *10. Sublease to California Institute of Technology ("CIT") dated 10/30/1985* (2) Supersedes *23. OSDA to the California Institute of Technology ("CIT") dated 10/30/1985* (3) Addresses topics which appear to be outside of MKSOA's scope and expertise, e.g., scientific cooperation. Therefore, wholesale assignment by UH to MKSOA is likely not practical. (4) Abstract prepared.
25.	OSDA to the Associated Universities, Inc./National Radio Astronomy Observatory ("AU/NRAO") dated 9/28/1990 Common Name: VLBA Parties UH AU/NRAO Description OSDA covering premises subleased to AU/NRAO, commonly known as VLBA. Expires 12/31/2033, unless sooner terminated or extended. If General Lease S-4191 is extended beyond 12/31/2033, UH shall extend the OSDA.	Assignable by default; OSDA is silent	None specified	None apparent	Automatic on 12/1/29	Applicable in part to duties and obligations re: site development, site management and operational support	(1) Related Agreement: *11. Sublease dated 9/28/1990 by and between UH and AU/NRAO* (2) Addresses topics which appear to be outside of MKSOA's scope and expertise, e.g., scientific cooperation. Therefore, wholesale assignment by UH to MKSOA is likely not practical. (3) Abstract prepared.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
26.	OSDA to the National Astronomical Observatory of Japan ("NAOJ") dated 6/5/1992 Common Name: Subaru Parties UH NAOJ Description OSDA covering premises subleased to NAOJ, commonly known as Subaru. Expires 12/31/2033, unless sooner terminated or extended. If General Lease S-4191 is extended beyond 12/31/2033, UH shall extend the OSDA.	Assignable by default; OSDA is silent	None specified	None apparent	Automatic on 12/1/29	Applicable in part to duties and obligations re: site development, site management and operational support	(1) Related Agreement: *12. Sublease dated 6/5/1992 by and between UH and NAOJ* (2) Addresses topics which appear to be outside of MKSOA's scope and expertise, e.g., scientific cooperation. Therefore, wholesale assignment by UH to MKSOA is likely not practical. (3) Abstract prepared.
27.	OSDA to the National Science Foundation ("NSF") dated 8/9/1994 Common Name: Gemini Parties UH NSF Description OSDA covering premises subleased to NSF, commonly known as Gemini. Expires 12/31/2033, unless sooner terminated or extended. If General Lease S-4191 is extended beyond 12/31/2033, UH shall extend the OSDA.	Assignable by default; OSDA is silent	None specified	None apparent	Automatic on 12/1/29	Applicable in part to duties and obligations re: site development, site management and operational support	(1) Related Agreement: *13. Sublease dated 9/26/94 by and between UH and NSF* (2) Addresses topics which appear to be outside of MKSOA's scope and expertise, e.g., scientific cooperation. Therefore, wholesale assignment by UH to MKSOA is likely not practical. (3) Abstract prepared.
28.	OSDA to the Smithsonian Institution ("SAO") dated 5/15/1995 Common Name: SMA or Submillimeter Array Parties UH SAO Description OSDA covering premises subleased to SAO, commonly known as SMA. Expires 12/31/2033, unless sooner terminated or extended. If General Lease S-4191 is extended beyond 12/31/2033, UH shall extend the OSDA.	Assignable by default; OSDA is silent	None specified	None apparent	Automatic on 12/1/29	Applicable in part to duties and obligations re: site development, site management and operational support	(1) Related Agreement: *14. Sublease dated 5/15/1995 by and between UH and SAO* (2) Addresses topics which appear to be outside of MKSOA's scope and expertise, e.g., scientific cooperation. Therefore, wholesale assignment by UH to MKSOA is likely not practical. Abstract prepared.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
29.	Scientific Cooperation Agreement with TMT International Observatory LLC ("TMT") dated 7/28/2014 Common Name: TMT Parties UH TMT Description OSDA covering premises subleased to TMT, commonly known as TMT. Expires 12/31/2033, unless sooner terminated or extended. See Sublease for specific terms re: extension.	Assignable by default; OSDA is silent	None specified.	None apparent	Automatic on 12/1/29	Applicable in part to duties and obligations re: site development, site management and operational support	(1) Related Agreement: *15. Sublease dated 7/28/2014 by and between UH and TMT* (2) Addresses topics which appear to be outside of MKSOA's scope and expertise, e.g., scientific cooperation. Therefore, wholesale assignment by UH to MKSOA is likely not practical. (3) Abstract prepared.
Other Agreements							
30.	Memorandum of Understanding dated July 1, 2024, between RCUH/UH/Center for Maunakea Stewardship-Maunakea Shared Services and RCUH/Pacific Cooperative Studies Unit/Big Island Invasive Species Committee (BIISC) Description Contract relating to inspection and certification of deliveries to Maunakea to prevent proliferation of invasive species.	Assignable by default; Agt is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Expired on 6/30/25 (2) Intended to satisfy/address requirements of Comprehensive Management Plan 2022 Supplement, 2015 Maunakea Invasive Species Management Plan, and Standard Operating Procedure 02 Inspection of Vehicles, Construction Materials, Scientific Equipment, & Supplies (3) Renewal and assignment to MKSOA recommended (assuming MKSOA intends to adopt and implement similar protocols relating to management of invasive species)
31.	Agreement for Services dated August 1, 2017, between RCUH for the benefit of UH-OMM and WayTech Hawaii, LLC, as amended Description Contract for database system (P.O. Tracking, Ranger Report, and commercial fees databases).	Assignable by default; Agt is silent	None specified	None apparent	Unclear	Inapplicable – UH is not a party	(1) Expired on 6/30/25 (2) Renewal and assignment to MKSOA recommended.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
32.	MKSS Summary of Permits Agreements Contracts FY23 Description Excel file listing various permits and contracts. Includes following categories: Tracking Permits, Construction Contracts, Recurring Agreements, One-Time, Non Recurring Agreements, Operating Expense, Leases, Summit Clearing Agreements, Other Agreements	N/A	N/A	N/A	N/A	Applicable	
33.	Agreement for Services dated July 1, 2023, between RCUH for the benefit of UH-CMS-MKSS and Kona Lua, Inc. Description Contract for provision and servicing of portable toilets.	Assignable by default; Agt is silent	None specified	None apparent	Unclear	Inapplicable – UH not a party	(1) Expired 6/30/26 (2) Renewal and assignment to MKSOA recommended.
34.	Agreement for Services dated August 1, 2023, between RCUH for the benefit of UH-MKSS and Conen's Freight Transport Inc. Description Contract for hauling of potable water to Halepohaku and summit observatories.	Assignable by default; Agt is silent	None specified	None apparent	Unclear	Inapplicable – UH not a party	(1) Expired 6/30/26 (2) Renewal and assignment to MKSOA recommended.
35.	Agreement for Services dated July 1, 2023, between RCUH for the benefit of UH-CMS-MKSS and The Arc of Hilo Description Contract for laundry service.	Assignable by default; Agt is silent	None specified	None apparent	Unclear	Inapplicable – UH not a party	(1) Expired 6/30/24 (2) Renewal and assignment to MKSOA recommended.
36.	Power Purchase Agreement dated August 18, 2016, between Island Pacific Energy LLC (IPE) and University of Hawaii, as amended by First Amendment dated October 28, 2021, and Second Amendment dated March 29, 2023 Description Contract for installation, maintenance and operation of PV system at Hale Pohaku, and for sale of electricity by IPE to UH. By First Amendment, IPE's interest was assigned to UHA Energy, LLC.	Assignable with consent of IPE	Consent of IPE	None apparent	Automatic on 12/1/29	Applicable	(1) Assignment to MKSOA recommended. (2) In Working Group meeting on 4/22/25, Nahua reported that UHA/IPE objects to assignment.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
37.	Use and Occupancy Agreement dated August 18, 2016, between Island Pacific Energy LLC and University of Hawaii, as amended by First Amendment dated October 28, 2021, and Second Amendment dated March 29, 2023 Description Allows IPE to occupy portions of the Site (i.e. Hale Pohaku) for the installation, maintenance and operation of the PV system. By First Amendment, IPE's interest was assigned to UHA Energy, LLC.	Assignable with consent of IPE	Consent of IPE	None apparent	Automatic on 12/1/29	Applicable	(1) Recommend confirming with UH whether BLNR's consent was obtained for this agreement. Pursuant to GL S-5529, subleases are prohibited without prior written approval of BLNR. (2) If BLNR's consent was not obtained, then we recommend getting consent in connection with assignment. (3) Assignment to MKSOA recommended. (4) 4/24/25: UH counsel advised that although UH did not seek consent from BLNR, OCCL (DLNR) was informed and made aware of the project. In addition, OCCL issued site plan approval. (5) 4/29/25: DLNR (K. Moore) confirmed DLNR has no record of BLNR consent to this UOA. In other leasing contexts, BLNR treats agreements to install, maintain and operate PV systems on leased public lands as subleases requiring BLNR consent.
38.	Net Energy Metering and Interconnection Agreement effective March 17, 2017, between MKSS and HELCO Description Allows for connection of PV system to HELCO grid.	Assignable by default; Agt is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Shouldn't this agreement be between IPE (instead of MKSS) and HELCO since pursuant to the PPA (Sec. 5.4) IPE is the owner of the PV system? In addition, pursuant to Sec. 4.5(e) of the PPA, IPE is responsible for entering into the interconnection agreement with HELCO. Clarification of this issue is recommended before making decision as to assignment. 4/24/25: per UH counsel, HELCO wanted UH to be the counter-party to the NEM Agt since UH is the rate payer. Dr. Chun advised that MKSS pays IPE and also HELCO which seems strange. Nevertheless, per B. Kudo M4 may refrain from devoting additional time or resources to the NEM Agt issues. (2) Sec. 12 requires 30-days advance notice to HELCO of proposed change in ownership of Generating Facility. But since IPE is the owner, notice to HELCO would not be necessary upon transfer to MKSOA.
39.	Permit Agreement effective June 1, 2008, between UH and Douglass B. Arnott, dba Arnott's Lodge & Hiking Adventures Description Allows for commercial tour activities on Maunakea	Assignable by default; Agt is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Expired June 3, 2009. 5/16/25: per UH, extended indefinitely by email dated May 18, 2009 from Dawn Pamarang, Secretary at the Office of Maua Kea Management. (2) Abstract prepared. (3) MKSOA will need to adopt rules and regulations governing commercial tour activities as well as other matters.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
40.	Permit Agreement effective June 1, 2008, between UH and Hawaii Forest & Trail, Ltd. Description Allows for commercial tour activities on Maunakea	Assignable by default; Agt is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Expired June 3, 2009. 5/16/25: per UH, extended indefinitely by email dated May 18, 2009 from Dawn Pamarang, Secretary at the Office of Maua Kea Management. (2) Abstract prepared. (3) MKSOA will need to adopt rules and regulations governing commercial tour activities as well as other matters
41.	Permit Agreement effective June 1, 2008, between UH and Hawaiian Haoles, Inc. Description Allows for commercial tour activities on Maunakea	Assignable by default; Agt is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Expired June 3, 2009. 5/16/25: per UH, extended indefinitely by email dated May 18, 2009 from Dawn Pamarang, Secretary at the Office of Maua Kea Management. (2) Abstract prepared. (3) MKSOA will need to adopt rules and regulations governing commercial tour activities as well as other matters
42.	Permit Agreement effective June 1, 2008, between UH and Paradise Safaris, Inc. Description Allows for commercial tour activities on Maunakea	Assignable by default; Agt is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Expired June 3, 2009. 5/16/25: per UH, extended indefinitely by email dated May 18, 2009 from Dawn Pamarang, Secretary at the Office of Maua Kea Management. (2) Abstract prepared. (3) MKSOA will need to adopt rules and regulations governing commercial tour activities as well as other matters
43.	Permit Agreement effective June 1, 2008, between UH and Roberts Tours & Transportation, Inc. Description Allows for commercial tour activities on Maunakea	Assignable by default; Agt is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Expired June 3, 2009. 5/16/25: per UH, extended indefinitely by email dated May 18, 2009 from Dawn Pamarang, Secretary at the Office of Maua Kea Management. (2) Abstract prepared. (3) MKSOA will need to adopt rules and regulations governing commercial tour activities as well as other matters
44.	Permit Agreement effective June 1, 2008, between UH and Taikobo Hawaii, Inc. Description Allows for commercial tour activities on Maunakea	Assignable by default; Agt is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Expired June 3, 2009. 5/16/25: per UH, extended indefinitely by email dated May 18, 2009 from Dawn Pamarang, Secretary at the Office of Maua Kea Management. (2) Abstract prepared. (3) MKSOA will need to adopt rules and regulations governing commercial tour activities as well as other matters

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
45.	Permit Agreement effective June 1, 2008, between UH and Jack's Tours, Inc. Assigned to Super Vacation Hawaii LLC pursuant to that certain Assignment of Mauna Kea Commercial Tour Use Permit No. CT-104 and Consent Agreement effective December 13, 2018, between Jack's Tours, Inc. and Super Vacation Hawaii LLC and consented to by UH. Description Allows for commercial tour activities on Maunakea	Assignable by default; Agt is silent	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) Expired June 3, 2009. 5/16/25: per UH, extended indefinitely by email dated May 18, 2009 from Dawn Pamarang, Secretary at the Office of Maua Kea Management. (2) Missing Supplement No. 1. 6/13/25: per UH, same terms as all other forms of Supplement No. 1 to other permit agreements. (3) Escrow agreement contemplated payment of indemnity obligations under Section 12 of the permit agreement for claims that occurred within 6 months prior to the effective date. 6/13/25: per UH, no applicable claims. (4) MKSOA will need to adopt rules and regulations governing commercial tour activities as well as other matters
46.	Non-Exclusive License Agreement between UH and County of Hawaii for Hawaii County Civil Defense Voice Radio Repeater Description Allows access to the Hawaii County Civil Defense Voice Radio Repeater located in the UH 88 Utility Building near the summit of Maunakea, as well as the non-exclusive right of access over and across the portion of land area leased to UH in General Lease S-4191.	Assignable by default; Agt is silent	None specified	None apparent	With respect to rights, duties and obligations covered by Automatic Transfer, automatic on 12/1/29	Applicable with respect to the right of access over premises leased to UH under General Lease S-4191 Inapplicable with respect to license area in UH owned facility which is outside scope of Automatic Transfer	(1) Expired April 30, 2025. (2) This agreement conveys to the County of Hawaii the right to enter and cross any portion of the License Area (as further defined in the agreement and described in Exhibit B-1 to the agreement). (3) 5/16/25: per UH, this agreement should not be assigned to MKSOA as the License Area is located in a UH owned facility. However, in order to access the License Area, the County of Hawaii must traverse over portions of the land area leased to UH in General Lease S-4191 (to be transferred to MKSOA). Therefore, the County of Hawaii may need a separate non-exclusive license with MKSOA in a manner that would allow the County of Hawaii access to the License Area.
47.	Memorandum of Understanding regarding the USGS Repeater	Assignable by default; Agt is silent	None specified	None apparent	Unclear	Inapplicable – outside scope of Automatic Transfer	(1) 5/16/25: per UH, this agreement should not be assigned to MKSOA as it is located in a UH owned facility.
Permits and Licenses							
48.	Range Hood Service Report	Assignable	None specified	None apparent	Automatic on 12/1/29	Applicable	(1) 5/16/25: UH to determine whether permit or license was issued by the Department of Health separate from the service report issued by Hilo Fire.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
49.	Permit to Operate SMDB Water Heater (Boiler #2) HI NBR: HHB0042-83 NB: 55102 Located at Hale Pohaku, Hale Pohaku	Assignable	See notes	None apparent	Automatic on 12/1/29	Applicable	(2) Valid until 11/21/26. (3) According to the face of the permit, the Boiler and Elevator Inspection Branch of the State of Hawaii, Department of Labor and Industrial Relations ("DLIR") must be notified of any transfer of ownership as required by law. (4) Pursuant to HAR §12-220-31.1, any person responsible for the transfer of ownership, must notify the DLIR in writing within thirty (30) calendar days giving the address, name, and phone number of the purchaser of any pressure retaining item except those exempted by HAR §12-220-15. No exemption appears to apply. "Pressure retaining item" means boiler, pressure vessel, or pressure system. HAR §12-220-1. (5) Representative at DILIR's Boiler and Elevator Branch has confirmed that a notification email should be sent to dlir.hiosh.boiler@hawaii.gov identifying the (i) name and contact information of transferor, (ii) name and contact information of transferee, (iii) serial no. of the boiler or other pressure vessel, and (iv) the date of the transfer (if known). The Boiler and Elevator Branch will pull their file on the vessel and advise whether further information is needed. The use of the notification form is allowed but not required.
50.	Permit to Operate Vertical Firetube HI NBR: HHB0429-10 NB: 131989 Located at Hale Pohaku, Basement	Assignable	See notes	None apparent	Automatic on 12/1/29	Applicable	(1) Expired 08/25/2024. 5/16/25: per UH, renewed. (2) According to the face of the permit, the Boiler and Elevator Inspection Branch of the State of Hawaii, Department of Labor and Industrial Relations ("DLIR") must be notified of any transfer of ownership as required by law. (3) Pursuant to HAR §12-220-31.1, any person responsible for the transfer of ownership, must notify the DLIR in writing within thirty (30) calendar days giving the address, name, and phone number of the purchaser of any pressure retaining item except those exempted by HAR §12-220-15. No exemption appears to apply. "Pressure retaining item" means boiler, pressure vessel, or pressure system. HAR §12-220-1. (4) Representative at DILIR's Boiler and Elevator Branch has confirmed that a notification email should be sent to dlir.hiosh.boiler@hawaii.gov identifying the (i) name and contact information of transferor, (ii) name and contact information of transferee, (iii) serial no. of the boiler or other pressure vessel, and (iv) the date of the transfer (if known). The Boiler and Elevator Branch will pull their file on the vessel and advise whether further information is needed. The use of the notification form is allowed but not required.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
51.	Permit to Operate SMDB Water Heater (Boiler #1) HI NBR: HHB0434-13 NB: 3436 Located at Hale Pohaku, Hale Pohaku	Assignable	See notes	None apparent	Automatic on 12/1/29	Applicable	(1) Valid until 11/21/26. (2) According to the face of the permit, the Boiler and Elevator Inspection Branch of the State of Hawaii, Department of Labor and Industrial Relations ("DLIR") must be notified of any transfer of ownership as required by law. (3) Pursuant to HAR §12-220-31.1, any person responsible for the transfer of ownership, must notify the DLIR in writing within thirty (30) calendar days giving the address, name, and phone number of the purchaser of any pressure retaining item except those exempted by HAR §12-220-15. No exemption appears to apply. "Pressure retaining item" means boiler, pressure vessel, or pressure system. HAR §12-220-1. (4) Representative at DILIR's Boiler and Elevator Branch has confirmed that a notification email should be sent to dlir.hiosh.boiler@hawaii.gov identifying the (i) name and contact information of transferor, (ii) name and contact information of transferee, (iii) serial no. of the boiler or other pressure vessel, and (iv) the date of the transfer (if known). The Boiler and Elevator Branch will pull their file on the vessel and advise whether further information is needed. The use of the notification form is allowed but not required.
52.	Permit to Operate HOR HOT WATER TANK HI NBR: HPV0052-83 NB: 898 Located at Hale Pohaku, Basement	Assignable	See notes	None apparent	Automatic on 12/1/29	Applicable	(1) Expired 08/25/2024. 5/16/25: per UH, renewed. (2) According to the face of the permit, the Boiler and Elevator Inspection Branch of the State of Hawaii, Department of Labor and Industrial Relations ("DLIR") must be notified of any transfer of ownership as required by law. (3) Pursuant to HAR §12-220-31.1, any person responsible for the transfer of ownership, must notify the DLIR in writing within thirty (30) calendar days giving the address, name, and phone number of the purchaser of any pressure retaining item except those exempted by HAR §12-220-15. No exemption appears to apply. "Pressure retaining item" means boiler, pressure vessel, or pressure system. HAR §12-220-1. (4) Representative at DILIR's Boiler and Elevator Branch has confirmed that a notification email should be sent to dlir.hiosh.boiler@hawaii.gov identifying the (i) name and contact information of transferor, (ii) name and contact information of transferee, (iii) serial no. of the boiler or other pressure vessel, and (iv) the date of the transfer (if known). The Boiler and Elevator Branch will pull their file on the vessel and advise whether further information is needed. The use of the notification form is allowed but not required.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
53.	Permit to Operate VERTICAL AIR TANK HI NBR: HPV0042-03 NB: 321893 Located at Hale Pohaku, Shop	Assignable	See note	None apparent	Automatic on 12/1/29	Applicable	(1) Valid until 11/21/26. (2) According to the face of the permit, the Boiler and Elevator Inspection Branch of the State of Hawaii, Department of Labor and Industrial Relations ("DLIR") must be notified of any transfer of ownership as required by law. (3) Pursuant to HAR §12-220-31.1, any person responsible for the transfer of ownership, must notify the DLIR in writing within thirty (30) calendar days giving the address, name, and phone number of the purchaser of any pressure retaining item except those exempted by HAR §12-220-15. No exemption appears to apply. "Pressure retaining item" means boiler, pressure vessel, or pressure system. HAR §12-220-1. (4) Representative at DILIR's Boiler and Elevator Branch has confirmed that a notification email should be sent to dlir.hiosh.boiler@hawaii.gov identifying the (i) name and contact information of transferor, (ii) name and contact information of transferee, (iii) serial no. of the boiler or other pressure vessel, and (iv) the date of the transfer (if known). The Boiler and Elevator Branch will pull their file on the vessel and advise whether further information is needed. The use of the notification form is allowed but not required.
54.	Permit to Operate HOR HOT WATER TANK HI NBR: HPV0051-83 NB: 897 Located at Hale Pohaku, Basement	Assignable	See notes	None apparent	Automatic on 12/1/29	Applicable	(1) Valid until 11/21/26. (2) According to the face of the permit, the Boiler and Elevator Inspection Branch of the State of Hawaii, Department of Labor and Industrial Relations ("DLIR") must be notified of any transfer of ownership as required by law. (3) Pursuant to HAR §12-220-31.1, any person responsible for the transfer of ownership, must notify the DLIR in writing within thirty (30) calendar days giving the address, name, and phone number of the purchaser of any pressure retaining item except those exempted by HAR §12-220-15. No exemption appears to apply. "Pressure retaining item" means boiler, pressure vessel, or pressure system. HAR §12-220-1. (4) Representative at DILIR's Boiler and Elevator Branch has confirmed that a notification email should be sent to dlir.hiosh.boiler@hawaii.gov identifying the (i) name and contact information of transferor, (ii) name and contact information of transferee, (iii) serial no. of the boiler or other pressure vessel, and (iv) the date of the transfer (if known). The Boiler and Elevator Branch will pull their file on the vessel and advise whether further information is needed. The use of the notification form is allowed but not required.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
55.	Permit to Operate ELEVATOR- PASSENGER HAW No. 83-029	Assignable	See notes	None apparent	Automatic on 12/1/29	Applicable	(1) Expired 08/25/2024. 5/16/25: per UH, renewed. (2) Pursuant to HAR §12-229-15.1(a), the seller of any elevator or kindred equipment regulated by HAR §12-229 must notify DLIR, in writing using a form provided by the department within thirty calendar days of the sale of giving the HAW number, location name, location address the equipment, and the name and address of the purchaser. (3) "Equipment" includes elevators, escalators, moving walks, dumbwaiters, material lifts, lifts for the mobility impaired, personnel hoists, and amusement rides. HAR §12-229-1. (4) Representative at DILIR's Boiler and Elevator Branch has confirmed that a notification email should be sent to dlir.hiosh.elevators@hawaii.gov identifying the (i) name and contact information of transferor, (ii) name and contact information of transferee, (iii) serial no. of the elevator, and (iv) the date of the transfer (if known). The Boiler and Elevator Branch will pull their file on the elevator and advise whether further information is needed. The use of the notification form is allowed but not required.
56.	Food Establishment Permit	Unassignable - *see* HAR § 11-50-4 (c).	See notes	N/A	N/A	Unclear	(1) Expired 06/30/2025. (2) The food establishment permit is not transferrable. *See* HAR § 11-50-4 (c). A new owner must apply for a new permit. (3) Issuance of a new permit is subject to (i) submission of a completed application and the required fee, and (ii) passing an inspection of the establishment. The establishment is considered a Category 1 large restaurant. As of April 24, 2025, the application fee for this type of establishment is $400. HAR § 11-50-4 (g).
57.	Food Safety Placard	Unassignable - *see* HAR § 11-50-4 (c).	See notes	N/A	N/A	Unclear	(1) The food safety placard is issued in conjunction with a food establishment permit, subject to a food safety inspection. A food establishment permit is not transferrable to a new owner (i.e., a new owner must be re-inspected and qualify for the permit). Ergo, the food safety placard is not transferrable. (2) A Green Food Safety Placard was issued effective 04/18/2024.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
58.	MKSS Underground Storage Tank	Assignable	Approval of SDOH	None apparent	Automatic on 12/1/29	Applicable	(1) Files included a copy of a UST Permit from SDOH, which expires on 12/8/26. (See HAR § 11-2801.1-323(a) ("No person shall install or operate an UST or tank system without first obtaining a permit from the director.") The renewal application for the permit is due by 06/08/26. (2) Transfer of an UST Permit is subject to approval by SDOH. An application for the transfer must be received by SDOH at least 30 days prior to the effective date of the transfer and on a form prescribed by SDOH. (*See* HAR § 11-280.1-331.) (3) This UST is a single wall tank. Regulations require single wall tanks to be removed by June 2028. UH is in the process of executing the removal and replacement of the UST with 2 smaller above ground tanks. UH expects to receive the new permit by next year.
59.	UIC Permit No. UH-2527 issued 5/20/24 <u>Description</u> Covers 4 injection wells to dispose of septic tank treated domestic sewage effluent from mid-level facilities.	Assignable	Approval of SDOH	None apparent	Automatic on 12/1/29	Applicable	(1) Valid through May 19, 2029. Renewal application should be been made at least 180 days prior to expiration date. (2) Permittee must report pending change in ownership to DOH in writing at least 30 days prior to closing. Permittee of record will retain responsibility until the permit is revoked or reissued. (3) New permittee must apply to DOH using change-in-operator application to obtain re-issuance of permit. (4) Renewal of permit and assignment/re-issuance to MKSOA is recommended.
60.	Letter from the State of Hawaii Department of Health approving the Individual Wastewater System for use at the James Clerk Maxwell Telescope Observatory dated September 27, 2022	Assignable	Written agreement with the Director of the DOH containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee	None apparent	N/A	Inapplicable – outside scope of Automatic Transfer	(1) No expiration date listed. (2) With the consent of the permittee, the director of the Department of Health may modify an individual permit via written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the director to reflect a change in ownership or operational control of a facility where the director determines that no other change in the permit is necessary. *See* HAR § 11-62-57.02; HAR § 11-62 Appendix A 21.d.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
61.	Letter from the State of Hawaii Department of Health approving the Individual Wastewater System for use at Hale Pohaku dated September 27, 2022	Assignable	Written agreement with the Director of the DOH containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee	None apparent	Automatic on 12/1/29	Applicable	(1) No expiration date listed. (2) With the consent of the permittee, the director of the Department of Health may modify an individual permit via written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the director to reflect a change in ownership or operational control of a facility where the director determines that no other change in the permit is necessary. *See* HAR § 11-62-57.02; HAR § 11-62 Appendix A 21.d.
Roadway Easement							
62.	Grant of Easement No. S-4697 dated September 8, 1981 Description Grant of easement by State to University for a roadway from Hale Pohaku Mid-Level Facilities to Summit Area. Expires 12/31/33.	Assignable	Approval of BLNR	None apparent	Automatic on 12/1/29	Applicable	
CDUPs, SPAs, and Related Documents							
Infrastructure							
63.	CDUP HA-1573 dated 3/7/1984 Description CDUP for Permanent Powerline, Road Improvements and Implementation of a Management Plan for Maunakea, with Right of Entry for Construction Purposes	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	Abstract prepared.
64.	CDUP HA-1573A dated 7/21/1989 Description Appears to be amendment to CDUP HA-1573 allowing construction of a detour road for the Mauna Kea Observatory Access Road	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	Abstract prepared.

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65.	SPA HA-96-02 dated 12/29/1995 Description Installation of control targets on the ground for aerial topographic survey	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	Abstract prepared.
66.	SPA HA-96-05 dated 3/11/1996 Description Installation of fiber optic cable from Pohakuloa to Hale Pohaku	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	Abstract prepared.
67.	OCCL approval dated 6/16/2023 for various maintenance activities, safety improvements, and data collection on University-managed lands	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	Abstract prepared.
Subaru							
68.	CDUP HA-2462 re Subaru dated 10/22/1991 Description Construction of Subaru telescope, appurtenant structures and associated infrastructure and temporary accessory use of a portion of the "Skier's Parking Lot" for a concrete batching plan and expansion of facilities at Hale Pohaku	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach. (3) Abstract prepared.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
69.	SPA circa 1997 <u>Description</u> Subaru Concrete Walkway	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	*Note: this SPA referenced in list of permits submitted with TMT CDUA, but M4 could not locate in UH files* (1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach.
70.	SPA HA-05-08 dated 2004 (post facto) <u>Description</u> Subaru Seepage Pit Collar	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	*Note: this SPA referenced in list of permits submitted with TMT CDUA, but M4 could not locate in UH files* (1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach.
Keck							

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
71.	CDUP HA-1646 re Keck I dated 9/5/1984 Description Construction of University of California 10-meter telescope; temporary use of concrete batching plant; and expansion of Hale Pohaku	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach. (3) Abstract prepared.
72.	CDUP HA-2509 re Keck II dated 4/29/1992 Description Expansion of Keck Observatory by constructing second ten-meter telescope adjacent to existing Keck I telescope, and appurtenant development	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach. (3) Abstract prepared.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
73.	SPA re Keck Observatory dated 11/20/1997 Description Site plan approval for construction of six vehicle single story carport	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach. (3) Abstract prepared.
74.	HA-SPA-21 re Keck Observatory Site dated 9/10/1998 Description Site plan approval for construction and operation of two temporary optical test sites on Keck Observatory site	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) Presumably permitted structures have long been removed. Accordingly, this permit may be obsolete.
75.	SPA HA 25-46 re Keck Outdoor Storage Project dated 3/10/2025 Description Site plan approval for temporary outdoor storage of items needed for re-grouting of Keck-1 telescope pier	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach. (3) Abstract prepared.
Gemini							

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
76.	CDUP HA-2691 re Gemini dated 4/12/1994 Description Construction of Gemini Northern 8-Meter Telescope at Maunakea, Hawaii	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach. (3) Abstract prepared.
77.	SPA HA-06-19 re: Gemini dated 12/16/2005 Description Request to Install Seeing Monitor on Gemini Support building	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach. (3) Abstract prepared.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
Smithsonian Submillimeter Array ("SMA")							
78.	CDUP HA-2728 re SMA dated 11/30/1994 amended 12/13/1994 Description Construction of submillimeter array telescope and associated facilities/infrastructure; temporary use of portion of batching plant site; construction of up to two (2) 8-person cabins in existing construction camp; use of approved materials staging area	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach. (3) Abstract prepared.
79.	SPA HA 06-51 re SMA dated 7/26/2006 Description Site Plan Approval for addition of vestibule on north side of control building	Assignable; runs with the land	None specified.	None specified	Automatic on 12/1/29	Applicable	(1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach. (3) Abstract prepared.
80.	Abstract of SPA re SMA dated 4/27/1998 Description Site Plan Approval for construction of temporary enclosure during construction	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) This permit is obsolete.
Canada France Hawaii							

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
81.	CDUP HA-527 re Canada France Hawaii dated 8/12/1974, amended 9/19/1980 Description Construction of telescope, observatory and associated facilities and infrastructure	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach. (3) Abstract prepared.
82.	CDUP HA-527A re Canada France Hawaii – New Weather Tower dated 6/3/1991 Description Construction of a new weather tower	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach. (3) Abstract prepared.
83.	SPA HA-06-49 re Canada France Hawaii dated 6/8/2006, amended 7/13/2011 Description Installation of conduit to connect CFHT and Gemini	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) However, in 8/22/25 Working Group meeting, UH (Dr. Chun) indicated that UH intends to remove the conduit between CFHT and Gemini, and is applying for new SPA to permit the necessary work. Accordingly, this permit may be void before 12/1/29 in which case no action would be necessary. (3) Abstract prepared.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
84.	SPA HA-13-28 re Canada France Hawaii dated 1/15/2013 Description Installation of twelve vent domes	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach. (3) Abstract prepared.
IRTF and UKIRT							
85.	CDUP HA-653 re IRTF and UKIRT dated 9/2/1975, amended 11/12/82 as to UKIRT (HA-653A) Description Construction of telescopes and access road	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) UKIRT improvements have been transferred to UH which has announced plans to decommission. (2) IRTF is operated by UH for NASA. (3) Based on the above, this permit should remain with UH. (4) Under current statutory framework, assignment to MKSOA will be automatic on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (5) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
Hale Pohaku and Visitor Information Center							
86.	CDUP HA-895 re Hale Pohaku dated 05/16/1977 Description Demolition and replacement of two dilapidated buildings at Hale Pohaku occupied by UH IFA. Documents in the file indicate that UH requested an amendment to "renovation and modification instead of demolition and replacement" but it is unclear from the file whether this amendment was approved.	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	Abstract prepared.
87.	CDUP HA-1430 re Hale Pohaku and Visitor Information Center dated 04/30/1982 Description Subdivision and construction of Mid-Level Facilities and Visitor Information Center, replacing original, temporary buildings	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	Abstract prepared.
88.	CDUP HA-1819 re Hale Pohaku dated 03/14/1986 Description Subdivision of 21 acre site; planned and possible future expansion of permanent mid-level facility; information station; long-term construction workers' camp; and construction staging area	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	Abstract prepared.
89.	SPA HA-00-22 dated 4/25/2000 Description Improvements to improve accessibility for disabled persons	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	Abstract prepared.
90.	SPA HA-05-18, 2005 Description Installation of five septic tanks	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	*Note: this SPA referenced in list of permits submitted with TMT CDUA, but M4 could not locate in UH files*
91.	SPA HA-06-17 re Visitor Information Center dated 12/16/2005 Description Minor renovations to enclose stargazing telescopes	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	No conditions additional to the 35 set forth in HA-1430 imposed as the proposed project is considered an accessory structure and is an identified use in the Conservation District under HAR Section 13-5-23 (L-7) (now codified as HAR Section 13-5-22 (P-9)).

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
92.	SPA HA-09-01 re Hale Pohaku dated 7/25/2008 Description Installation of fiber optic cable between common area building and Visitor Information Station	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	Abstract prepared.
93.	SPA HA-17-54 re Hale Pohaku dated 6/23/2017 Description Installation of staging area pipe gates and delineation of parking area with large rocks	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	Abstract prepared.
94.	CDUP HA-3812 re Visitor Information Station dated 6/8/2018 Description Infrastructure Improvements at Visitor Information Station	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	Abstract prepared.
UH 88, 24" Air Force (Hoku Kea), 24" Planetary Patrol							

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
95.	CDUP HA-954 re 88" Telescope Facility, 24" Air Force Telescope, and 24" Planetary Patrol Telescope dated 9/12/1977 Description After the fact CDUP for UH 88" Telescope Facility, 24" Air Force Telescope, and 24" Planetary Patrol Telescope	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) Planetary Patrol telescope was dismantled in the 1990s and no longer exists. (2) Air Force Telescope aka Hoku Ke'a Observatory was transferred to UH Hilo and has been decommissioned. (3) UH 88 is owned by UH. (4) Based on the above, this permit and CDUP HA-3906 should remain with UH. (5) Under current statutory framework, assignment to MKSOA will be automatic on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (6) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach. (7) Abstract prepared.
CSO							
96.	CDUP HA-1492 re CSO dated 1/11/1983 Description Construction of 10-meter telescope for millemeter and submillimeter astronomy and right of entry	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) This observatory has been decommissioned per CDUP HA-3880 (2022.01.18) issued to CalTech. UH is working on terminating the Sublease and OSDA. (2) In 8/22/25 Working Group meeting it was determined that no action is necessary. (3) Abstract prepared.
JCMT							

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
97.	CDUP HA-1515 re JCMT dated 3/8/1983 Description Construction and operation of UK/NL millimeter wave telescope and temporary use of existing unpaved parking area for concrete batching plant	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) JCMT is a UH facility. Original sublease to SERC and OSDA were terminated and improvements were transferred to UH. Now operated by EAO under OSDA with UH. (2) Based on above, this permit should remain with UH. (3) Under current statutory framework, assignment to MKSOA will be automatic on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (4) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach. (5) Abstract prepared.
VLBA							
98.	CDUP HA-2174 re VLBA dated 1/24/1989 Description Construction and operation of VLBA, spur road and temporary batching site	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach. (3) Abstract prepared.

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
99.	SPA HA-96-10 re VLBA – GPS System Monument Accessory dated 8/6/1996 Description Installation of GPS monument	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach. (3) Abstract prepared.
	TMT						
100.	CDUP HA-3568 re TMT, D&O dated 9/27/2017 Description Construction of TMT and approval of TMT Management Plan	Assignable; runs with the land	None specified	None specified	Automatic on 12/1/29	Applicable	(1) Under current statutory framework, CDUPs/SPAs held by UH will be automatically transferred to MKSOA on December 1, 2029. *See* Act 255, Part II, § 7, ¶ (a), as amended by Act 53, § 6. (2) UH and MKSOA agree that some CDUPs impose responsibilities and obligations that MKSOA would not be suited to fulfilling, and therefore, review and analysis of the CDUPs and SPA should be referred to a permitted interaction group to identify and recommend how to address those obligations which may require UH's involvement after the transition period. UH has suggested, and MKSOA agrees that the manner and method for satisfying such CDUP obligations could be addressed in one or more memoranda of agreement (MOA) among MKSOA, UH, and the BLNR. DLNR has expressed concerns with this approach. (3) Abstract prepared.
UH Hilo 0.9M Telescope							
101.	CDUP HA-3406, 2007						*Note: this CDUP referenced in list of permits submitted with TMT CDUA, but M4 could not locate in UH files*

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
Miscellaneous Documents							
102.	Commercial Property Insurance Policy Description Policy Amount: $200,000 Coverage: Business Personal Property (Theft) Name of Insured: Maunakea Shared Services & Research Corporation of the University of Hawaii Policy Term: 6/1/2024 – 6/1/2025	N/A – policy has expired	Written consent of Insurer	None apparent	None apparent	Inapplicable; policy has expired	(1) Expired 6/1/2024. (2) Further discussion necessary to ensure MKSOA has necessary special insurances. 5/22/25: Per UH, Brown & Brown is used to issue inventory insurance for items sold at VIS. Coverage is based on average inventory value.
103.	Site Decommissioning and Restoration Effectiveness Monitoring Report, Summer 2022, Caltech Submillimeter Observatory, Maunakea, Hawaii, dated October 2022	N/A	N/A	N/A	N/A	Applicable	
104.	EA for the Gemini Northern 8-Meter Telescope, dated December 1993	N/A	N/A	N/A	N/A	Applicable	
105.	EIS for Power to Summit Mauna Kea Observatory, revised November 1973	N/A	N/A	N/A	N/A	Applicable	
106.	Final EIS for Mauna Kea Observatory Access Road (Hale Pohaku to Summit of Mauna Kea), dated February 4, 1974	N/A	N/A	N/A	N/A	Applicable	
107.	EIS for Power to Summit Mauna Kea Observatory, dated April 1975	N/A	N/A	N/A	N/A	Applicable	
108.	Project Description and Environmental Review re GTE Hawaiian Telephone Company Fiber Optic Cable Project Pohakuloa to Hale Pohaku Link, dated September 1995	N/A	N/A	N/A	N/A	Applicable	
109.	Final EIS Part I Saddle Road Mamalohoa Highway to Milepost 6, dated August 9, 1999	N/A	N/A	N/A	N/A	Applicable	
110.	Final EIS Part II Saddle Road Mamalohoa Highway to Milepost 6, date stamped September 8, 1999	N/A	N/A	N/A	N/A	Applicable	
111.	Final EIS Part III Saddle Road Mamalohoa Highway to Milepost 6,	N/A	N/A	N/A	N/A	Applicable	

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
112.	The Saddle Road Corridor: An Archaeological Inventory Survey and Traditional Cultural Property Study for the Hawaii Defense Access Road A-AD-6(1) and Saddle Road (SR 200) Project, dated April 1999	N/A	N/A	N/A	N/A	Applicable	
113.	Archaeological Mitigation Plan for Hawaii Defense Access Road A-AD-6(1) and Saddle Road (SR 200) Project, dated April 2002	N/A	N/A	N/A	N/A	Applicable	
114.	Final SEIS and Final 4(f) Evaluation – Saddle Road (State Route 200) Mamalahoa Highway (State Route 190) to Milepost 41, dated February 2010	N/A	N/A	N/A	N/A	Applicable	
115.	Final EA and FONSI re Humu'ula Saddle Region of Hawaii Island: A Detailed Hydrologic Evaluation and Exploratory Drilling Program, TMKs (3) 4-4-16-005, 006 and 007, dated September 5, 2012	N/A	N/A	N/A	N/A	Applicable	
116.	Final EA and FONSI re Humu'ula Saddle Region of Hawaii Island: A Detailed Hydrologic Evaluation and Exploratory Drilling Program, TMK (3) 6-7-001-041, dated March 17, 2014	N/A	N/A	N/A	N/A	Applicable	
117.	Final EA and FONSI re Infrastructure Improvements at Maunakea Visitor Information Station, dated August 2017	N/A	N/A	N/A	N/A	Applicable	
118.	Final EIS re Existing Operations of the UH Observatory and the Construction and Operations of the New IRTF and UKIRT Observatories, dated May 1975	N/A	N/A	N/A	N/A	Applicable	
119.	Final EIS for the Outrigger Telescopes Project, dated February 2005	N/A	N/A	N/A	N/A	Applicable	
120.	Final EA and FONSI for the W.M. Keck Observatory Outrigger Telescopes Project, dated March 2002	N/A	N/A	N/A	N/A	Applicable	
121.	Record of Decision (ROD) for the Outrigger Telescopes Project, dated July 2005	N/A	N/A	N/A	N/A	Applicable	

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
122.	EIS re Hale Pohaku Mid-Elevation Facilities Master Plan, dated November 1979	N/A	N/A	N/A	N/A	Applicable	
123.	Amendment to Revised EIS for Mid-Level Facilities Master Plan at Hale Pohaku, dated August 1980	N/A	N/A	N/A	N/A	Applicable	
124.	Revised EIS for Hale Pohaku Mid-Elevation Facilities Master Plan, dated February 1980	N/A	N/A	N/A	N/A	Applicable	
125.	Hale Pohaku Mid-Elevation Facilities Master Plan Complex Development Report, dated October 1980	N/A	N/A	N/A	N/A	Applicable	
126.	Mauna Kea Science Reserve Complex Development Plan, dated February 1983	N/A	N/A	N/A	N/A	Applicable	
127.	Final SEIS re Amendment to the Mauna Kea Science Reserve Complex Development Plan for Construction Camp Housing at Hale Pohaku, dated October 1985	N/A	N/A	N/A	N/A	Applicable	
128.	Mauna Kea Science Reserve Complex Development Plan, dated February 1983, amended May 1987	N/A	N/A	N/A	N/A	Applicable	
129.	Revised Management Plan for the UH Management Areas on Mauna Kea, dated March 10, 1995	N/A	N/A	N/A	N/A	Applicable	
130.	Final EIS re Mauna Kea Science Reserve Master Plan, dated December 27, 1999	N/A	N/A	N/A	N/A	Applicable	
131.	Mauna Kea Science Reserve Master Plan, dated June 16, 2000	N/A	N/A	N/A	N/A	Applicable	
132.	Draft Decommissioning Plan for the Mauna Kea Observatories dated November 2009	N/A	N/A	N/A	N/A	Applicable	
133.	Final Report on Architectural Inventory Survey of Hale Pohaku Rest Houses 1 and 2 and Comfort Station, Ka'ohe Ahupua'a, Hamakua District, Hawaii Island, Hawaii dated February 2010	N/A	N/A	N/A	N/A	Applicable	
134.	Draft Archeological Monitoring and Reconnaissance Report for the PISCES Apollo Valley Lunar Rover Project dated July 2012	N/A	N/A	N/A	N/A	Applicable	

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
135.	Final Report re: Archaeological Inventory Survey of the Mauna Kea Ice Age Natural Area reserve dated August 2013	N/A	N/A	N/A	N/A	Applicable	
136.	Botanical Baseline Survey (2011) of the University of Hawaii's Managed Lands on Mauna Kea dated August 26, 2013	N/A	N/A	N/A	N/A	Applicable	
137.	Mauna Kea Invasive Species Management Plan dated February 2015	N/A	N/A	N/A	N/A	Applicable	
138.	Draft Report re: Long Term Monitoring of Historic Properties within Three University of Hawaii Management Areas on Mauna Kea Ka'ohe Ahupua'a, Hāmākua District, Hawai'i Island, State of Hawai'i: Yearly Monitoring Report #2 (2013) dated November 2016	N/A	N/A	N/A	N/A	Applicable	
139.	Comprehensive Management Plan 2022 Supplement: Management Actions update dated July 23, 2022	N/A	N/A	N/A	N/A	Applicable	
140.	Master Plan for the University of Hawaii Mauna Kea Lands E O I Na Leo (Listen to the Voices) dated January 20, 2022	N/A	N/A	N/A	N/A	Applicable	
141.	2019 Annual Report to the Board of Land and Natural Resources re: the Status of the Implementation of the Comprehensive Management Plan	N/A	N/A	N/A	N/A	Applicable	
142.	Project Description and Environmental Review for the Smithsonian Astrophysical Observatory Submillimeter Array Telescope dated January 1994	N/A	N/A	N/A	N/A	Applicable	
143.	Final EIS for the Thirty Meter Telescope Project dated May 8, 2010	N/A	N/A	N/A	N/A	Applicable	
144.	Thirty Meter Telescope Management Plan, undated	N/A	N/A	N/A	N/A	Applicable	
145.	Access Way Arthropod Monitoring Report for the Thirty Meter Telescope Project dated April 2012	N/A	N/A	N/A	N/A	Applicable	

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
146.	Buffer Zone Lichen, Arthropod and Botanical Inventory and Assessment for the Thirty Meter Telescope Project dated April 2012	N/A	N/A	N/A	N/A	Applicable	
147.	Final Report re: the Historic Preservation Mitigation Plan in Support of Construction of the Thirty Meter Telescope in the Astronomy Precinct on Mauna Kea dated September 2012	N/A	N/A	N/A	N/A	Applicable	
148.	Final Report re: the Archeological Monitoring Plan in Support of Construction of the Thirty Meter Telescope in the Astronomy Precinct on Mauna Kea dated May 2013	N/A	N/A	N/A	N/A	Applicable	
149.	Geophysical Investigation for the Thirty Meter Telescope Project on Mauna Kea dated January 8, 2013	N/A	N/A	N/A	N/A	Applicable	
150.	Excel Listing of EA, EIS, and EISPN	N/A	N/A	N/A	N/A	Applicable	
151.	Center for Mauna Kea Stewardship and Mauna Kea Shared Services Organizational Chart as of 10/23/2023	N/A	N/A	N/A	N/A	Applicable	
152.	Center for Mauna Kea Stewardship Chart on Funding dated 2023	N/A	N/A	N/A	N/A	Applicable	
153.	Amended Bylaws of the Mauna Kea Management Board dated May 10, 2017	N/A	N/A	N/A	N/A	Applicable	
154.	Master's Report on Public Hearing re: Withdrawal of Land for Forest Reserve dated February 11, 1983	N/A	N/A	N/A	N/A	Applicable	
155.	Grant of Easement for the Mauna Kea Forest Reserve dated October 25, 1974	N/A	N/A	N/A	N/A	Applicable	Actual Grant appears to be missing from files.
156.	Mauna Kea Observatory Access Road (Hale Pohaku to Summit of Mauna Kea Section) Legal Description dated January 20, 1981	N/A	N/A	N/A	N/A	Applicable	
157.	Mauna Kea Earthquake Plan dated November 28, 2016	N/A	N/A	N/A	N/A	Applicable	
158.	Bloodborne Pathogen Awareness Training	N/A	N/A	N/A	N/A	Applicable	

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
159.	MKSS Alcohol and Controlled Substance Testing Program dated September 1, 2017	N/A	N/A	N/A	N/A	Applicable	
160.	Fire Extinguisher Location at Utilities dated October 2015F	N/A	N/A	N/A	N/A	Applicable	
161.	Fire Extinguisher Location at Hale Pohaku dated October 14, 2015	N/A	N/A	N/A	N/A	Applicable	
162.	Fire Extinguishers for VIS/FLBS dated October 16, 2015	N/A	N/A	N/A	N/A	Applicable	
163.	Mauna Kea Observatories Support Services Motor Vehicle Safety Policy dated December 16, 2019	N/A	N/A	N/A	N/A	Applicable	
164.	2021 Hurricane Action Plan	N/A	N/A	N/A	N/A	Applicable	
165.	MKSS 2023-2024 Winter Weather Procedures dated April 21, 2023	N/A	N/A	N/A	N/A	Applicable	
166.	Mauna Kea Emergency Procedures dated June 2023	N/A	N/A	N/A	N/A	Applicable	
167.	Mauna Kea Emergency Phone Numbers dated September 6, 2023	N/A	N/A	N/A	N/A	Applicable	
168.	MKSS Hazardous Material Spill Plan dated September 22, 2023	N/A	N/A	N/A	N/A	Applicable	
169.	Gemini Observatory Safety Manual dated February 2022	N/A	N/A	N/A	N/A	Applicable	
170.	JCMT-UKIRT Plans , undated	N/A	N/A	N/A	N/A	Applicable	
171.	WMKO Emergency Planning and Management Guide dated March 31, 2016 and updated July 18, 2022	N/A	N/A	N/A	N/A	Applicable	
172.	Emergency Response Plans (ERP) & Fire Prevention Plan dated June 22, 2023	N/A	N/A	N/A	N/A	Applicable	
173.	Spill Response dated June 15, 2023	N/A	N/A	N/A	N/A	Applicable	
174.	Hurricane Emergency Plan dated June 22, 2022	N/A	N/A	N/A	N/A	Applicable	

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
175.	Emergency Evacuation Plan dated November 19, 2022	N/A	N/A	N/A	N/A	Applicable	
176.	Smithsonian Astrophysical Observatory (Submillimeter Array) summit Facility Emergency Procedures and Contacts, undated	N/A	N/A	N/A	N/A	Applicable	
177.	Smithsonian Astrophysical Observatory Office Closing in Case of Emergency dated October 15, 2014	N/A	N/A	N/A	N/A	Applicable	
178.	Smithsonian Astrophysical Observatory Spill Prevention and Response Plan dated October 10, 2017	N/A	N/A	N/A	N/A	Applicable	
179.	Emergency Plan for the Summit Facility dated September 6, 2023	N/A	N/A	N/A	N/A	Applicable	
180.	Chemical Spill Checklist	N/A	N/A	N/A	N/A	Applicable	
181.	Subaru Telescope Temporary Evacuation and Eather/Road Condition Check Policy, dated April 2, 2018	N/A	N/A	N/A	N/A	Applicable	
182.	Subaru Telescope Emergency Network	N/A	N/A	N/A	N/A	Applicable	
183.	Subaru Telescope Emergency Plan for Tropical Storm/Hurricane dated September 8, 2018	N/A	N/A	N/A	N/A	Applicable	
184.	Spill/Leak Containment Guidelines For Oil Spills, undated	N/A	N/A	N/A	N/A	Applicable	
185.	VLBA Emergency Action Plan, last updated December 4, 2023	N/A	N/A	N/A	N/A	Applicable	
186.	Engineering Study for Mauna Kea Observatory Access Road Improvements (Summit to Hale Pohaku) dated April 1984	N/A	N/A	N/A	N/A	Applicable	
187.	Final EIS for Mauna Kea Science Reserve Complex Development Plan, January 1983	N/A	N/A	N/A	N/A	Applicable	

No.	Title / Parties / Description	Assignability	Stated Conditions to Assignment	Penalties in Connection with Assignment	Timeframe for Assignment	Applicability of Automatic Transfer	Issues / Observations / Notes
188.	Amendment (March 1989) to Mauna Kea Science Reserve Complex Development Plan (February 1983 as amended May 1987)	N/A	N/A	N/A	N/A	Applicable	
189.	Summit Road Report for the Mauna Kea Access Road Improvements Project, May 2017	N/A	N/A	N/A	N/A	Applicable	
190.	Long-Term Historic Property Monitoring Plan for the University of Hawaii Management Areas on Mauna Kea, Kaʻohe Ahupuaʻa, Hamakua District, Hawaiʻi Island, State of Hawaiʻi, July 2014	N/A	N/A	N/A	N/A	Applicable	

Exhibit C

Form of Allocation of Responsibility Agreement

(See attached)

ALLOCATION OF RESPONSIBILITY AGREEMENT

THIS ALLOCATION OF RESPONSIBILITY AGREEMENT ("Agreement") is dated _____ but effective as of the 1st day of December, 2029 (the "Effective Date"), by and between MAUNA KEA STEWARDSHIP AND OVERSIGHT AUTHORITY (the "Authority"), a body corporate and public instrumentality of the State of Hawai'i, and UNIVERSITY OF HAWAII (the "University"), a public body corporate and the public university of the State of Hawai'i.

RECITALS:

A. The Authority is a body corporate and public instrumentality of the State of Hawai'i established by Act 255, 2022 Hawai'i Session Laws ("Act 255"), "to protect Maunakea for future generations and manage the land contained therein for the purpose of fostering a mutual stewardship paradigm in which ecology, the environment, natural resources, cultural practices, education, and science are in balance and synergy." *See* Haw. Rev. Stat. § 195H-1.

B. The University is a public body corporate and the public university of the State of Hawai'i, the purpose of which is "to give thorough instruction and conduct research in, and disseminate knowledge of" various academic fields of study including, among others, physical sciences such as astronomy. *See* Haw. Rev. Stat. § 304A-102.

C. The summit of Maunakea is uniquely well-suited for astronomy. The high altitude, atmospheric stability, minimal cloud cover, low humidity, minimal atmospheric pollutants, and transparency of the atmosphere to infrared radiation make Maunakea an unparalleled location for astronomy. In 1968 the State of Hawai'i established and leased the Maunakea Science Reserve to the University for purposes of operating a scientific complex to establish astronomy in Hawai'i. As a result of the University's efforts since then, Maunakea has become the premier site on Earth for ground-based astronomy and the University has become a leading educational and research institution in the field of astronomy.

D. In furtherance of the goal of establishing and promoting astronomy, the University entered into that certain [name and date of OSDA] (the "OSDA") with the [name of owner of MKO] concerning the design, construction and operation of the [describe MKO] (the "Observatory") on Maunakea. The OSDA addresses, *inter alia*, matters relating to site development and management, support services to facilitate the operation of the Observatory, and the conduct of astronomy on Maunakea as a scientific endeavor.

E. In addition to its great scientific value, Maunakea is also an important cultural and genealogical site to the people of Hawai'i and particularly to Native Hawaiians. The summit region of Maunakea is a spiritual and special place of significance that is home to cultural landscapes, fragile habitats, and historical and archaeological artifacts. As a result, Maunakea has come to symbolize a rigid dichotomy between culture and science, often leading to polarization between stakeholders on Maunakea and local communities. The Authority was established by the Legislature as a means to bridge this dichotomy and to steward the mountain with the objective of facilitating the harmonious coexistence of uses atop Maunakea.

F. Act 255 as amended by Act 53, 2026 Hawai‘i Session Laws (collectively, the "Act") authorizes the Authority "to protect Maunakea . . . and manage the Land," and provides, at Part II, Section 7, that all rights, powers, functions, and duties of the University relating to such protection and management functions will be transferred to the Authority on the Effective Date. The Act does not, however, authorize the Authority to give instruction or perform research in the science of astronomy which remain functions reserved to the University.

G. Rights, duties and obligations of the University relating to site development, management and support services for the Observatory as provided in the OSDA will be transferred to the Authority by the Act as of the Effective Date, whereas rights duties and obligations relating to the conduct of the science of astronomy will be retained by the University. In order to carry out the Legislature's intent of facilitating the harmonious coexistence of science and culture atop Maunakea, and to facilitate the responsible management and efficient operation of the Observatory, the Authority and the University desire to confirm the allocation between them of the specific rights, duties and obligations set forth in the OSDA, subject to the terms and provisions of this Agreement.

AGREEMENT:

NOW, THEREFORE, in consideration of the mutual covenants and conditions contained in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Authority and the University agree as follows:

ARTICLE 1
Allocation Of OSDA Rights, Duties And Obligations

1.1 University's Rights, Duties and Obligations. The University retains and agrees to perform and be bound by those rights, duties and obligations under the OSDA described on Schedule 1.1 hereto.

1.2 Authority's Rights, Duties and Obligations. The Authority assumes and agrees to perform and be bound by those rights, duties and obligations under the OSDA described on Schedule 1.2 hereto.

ARTICLE 2
Additional Covenants

2.1 Further Assurances. Upon the terms and subject to the conditions herein provided, each of the parties hereto agrees to use its commercially reasonable best efforts to take or cause to be taken all action and to do or cause to be done all things necessary, proper or advisable under applicable law to consummate and effectuate the transaction contemplated by this Agreement as expeditiously as practicable. Furthermore, in case at any time after the Effective Date any further action is necessary or desirable to fulfill the purpose of this Agreement, each party will take or cause to be taken all such necessary action, including without limitation the execution and delivery of such further instruments and documents as may be reasonably requested by the other party for such purposes or otherwise to complete or perfect the transaction contemplated hereby.

ARTICLE 3
Miscellaneous

3.1 Notices. All notices, demands and other communications required or permitted under this Agreement must be in writing and will be deemed given upon receipt if delivered by overnight courier service, or when mailed by certified or registered mail, postage prepaid, return receipt requested, and addressed as follows:

Authority: [to be added]

With a copy to:

Attorney General
425 Queen Street
Honolulu, Hawai'i 96813

University: [to be added]

With a copy to:

University General Counsel
2444 Dole Street
Bachman 101
Honolulu, Hawai'i 96822

3.2 Assignability and Parties in Interest. This Agreement and the rights, interests and obligations of the parties hereunder are not assignable by any party hereto without the prior written consent of the other party, and any assignment made without such consent will be void *ab initio* and the assignee will acquire no rights by reason of such assignment. This Agreement will inure to the benefit of and be binding upon the parties hereto and their respective successors and permitted assigns.

3.3 Governing Law. This Agreement will be governed by and construed in accordance with the laws of the State of Hawai'i.

3.4 Counterparts and Electronic Signatures. This Agreement may be executed in any number of counterparts each of which will be deemed an original, but all of which will constitute one and the same instrument. An electronic signature effectuated by Docusign or transmitted by .pdf attachment to email will be deemed to be an original signature for all purposes and to have the same legal effect as a wet-ink signature.

3.5 Complete Agreement. This Agreement and the schedules attached hereto contain the entire agreement between the parties hereto with respect to the transaction contemplated hereby

and, except as provided herein, supersede all previous and contemporaneous negotiations, commitments, writings and understandings.

3.6 Amendments and Waivers. This Agreement may be amended, modified or supplemented only by a written agreement executed by all parties. No waiver of the obligations of any party will be valid unless in writing and signed by all parties.

3.7 Interpretation. The headings contained in this Agreement are for reference purposes only and do not affect in any way the meaning or interpretation of this Agreement. Each party has carefully reviewed this Agreement with its counsel and has negotiated the terms and provisions of this Agreement its satisfaction. Accordingly, each party agrees that any rules of construction to the effect that ambiguities will be resolved against the drafting party do not apply to the interpretation of this Agreement.

3.8 Severability. Any provision of this Agreement which is invalid, illegal or unenforceable will be ineffective to the extent of such invalidity, illegality or unenforceability, without affecting in any way the remaining provisions hereof.

(The signatures of the parties appear on the following pages)

IN WITNESS WHEREOF and intending to be legally bound, the Authority and the University have executed this Agreement.

MAUNA KEA STEWARDSHIP AND
OVERSIGHT AUTHORITY

By _____
Name:
Title:

Approved as to form:

By _____
Name:
Title:

Dated: _____

[The Authority's signature page to Allocation of Responsibility Agreement]

UNIVERSITY OF HAWAII

By _____
Name:
Title:

By _____
Name:
Title:

Approved as to form:

By _____
Name:
Title:

Dated: _____

[The University's signature page to Allocation of Responsibility Agreement]

Schedule 1.1
The University's Rights, Duties and Obligations

[to be added]

Schedule 1.2
The Authority's Rights, Duties and Obligations

[to be added]

APPENDIX 1

ABSTRACTS

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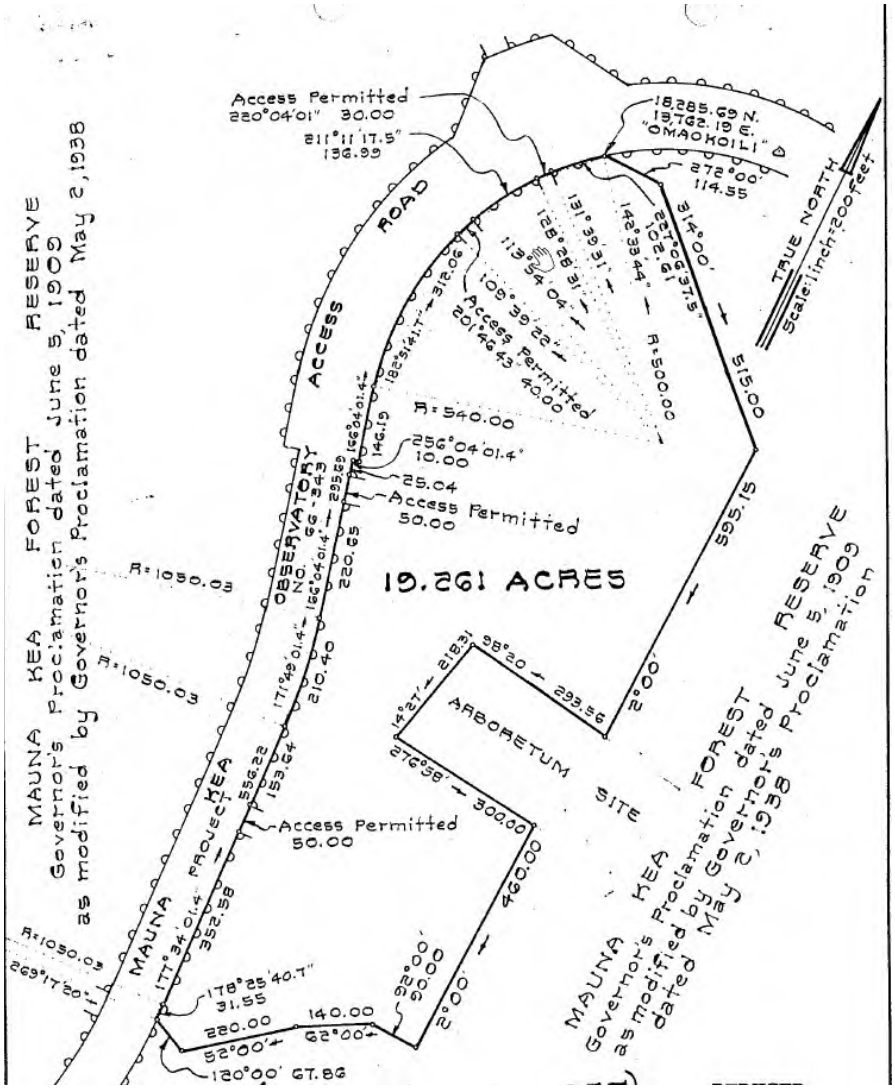
Item	Summary
Lessor	State of Hawaii, by its Board of Land and Natural Resources
Lessee	University of Hawaii
Rent	Free
Commencement Date	September 21, 1999
Premises	All of that certain parcel of land situate at Kaohe, Hamakua, County and Island of Hawaii, Hawaii, identified as "Revised May 1987, Hale Pohaku Mid-Level Facilities," more particularly described in Exhibit A and delineated in Exhibit B:  Note: Lessee shall be solely responsible for any survey and boundary stakeout of the Premises.
Term	Terminates 2/27/2041 (55 years commencing 2/28/1986).

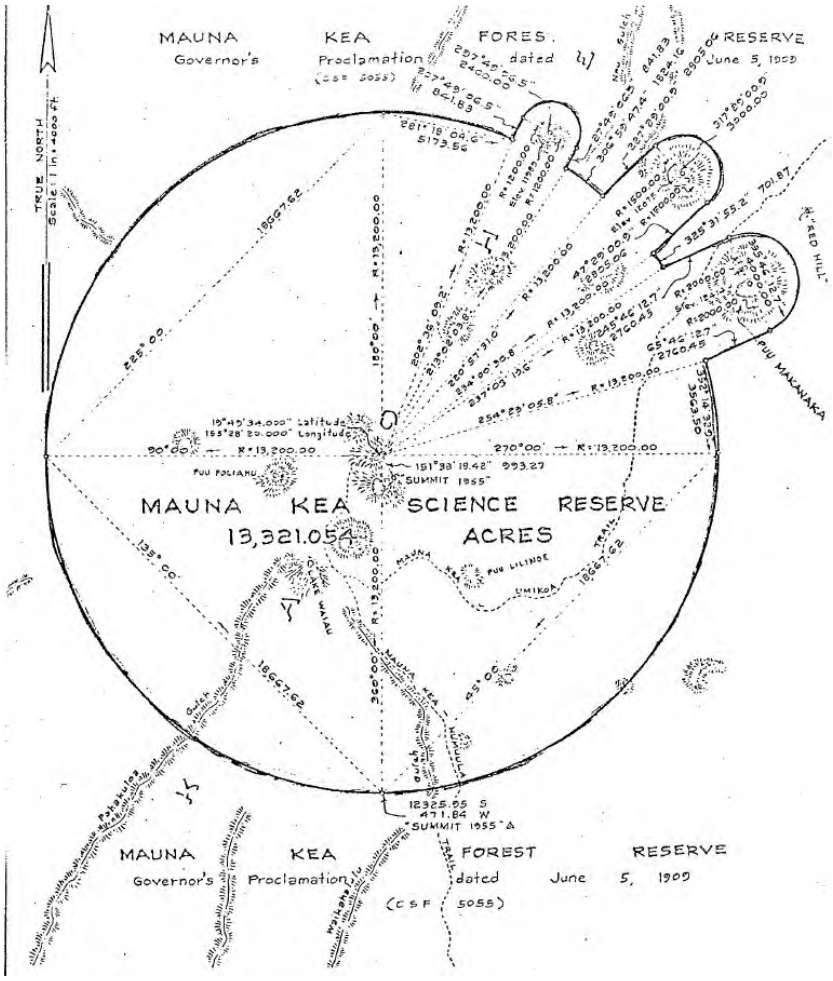
Item	Summary
Permitted Use	Solely for permanent mid-level facilities, a construction camp, an information station and existing facilities purposes. To sell astronomy-related items and operate other concessions at the information station and other UH facilities on the Premises. Lessee or a concessionaire shall be allowed to operate a service to shuttle visitors from the Premises to the Mauna Kea summit for various activities events and Lessee may charge visitors a fee for use of this service.
Improvements	Lessee shall not construct, place, maintain and install any building structure or improvement (the "Improvements") without the prior written approval of BLNR. Improvements must be constructed pursuant to any conditions imposed by BLNR. Title to Improvements remain with Lease S-5529 until expiration or termination pursuant to a breach of Lease S-5529, at which time Lessor may claim title to the Improvements or have Lessee remove the Improvements at its sole cost and expense and restore the Premises to a condition satisfactory to Lessor. All building construction shall comply with all federal, state, and county laws, rules and regulations and shall be in accordance with plans and specifications approved by the Chairman of the BLNR prior to commencement of construction/
Assignment	Allowed with prior written consent of BLNR. Note: an assignment effected pursuant to operation of law is also contingent upon obtaining BLNR's consent.
Right to Enter	Lessor or County and their agent may enter and cross any portion of the Premises for the purpose of performing any public or official duties, provided that the exercise of these rights shall not interfere unreasonably with the Lessee or its use and enjoyment of the Premises.
Extension of Time	Notwithstanding any provision in Lease S-5529, when applicable, BLNR may, for good cause shown, allow additional time beyond the time(s) specified in Lease S-5529 for the Lessee to comply, observe, and perform the lease terms.
Reserved to Lessor	Minerals including oil, gas, coal, bauxite, c=bauxitic clay, diaspore, boehmite, laterite, gibbsite, alumina, all ores of aluminum and all other mineral substances and ore deposits whether slid, gaseous, or liquid, including all geothermal resources in, on or under the land, fast or submerged but not including sand, gravel, rock or other material suitable for use and used in general construction in furtherance of Lessee's permitted activities and not for sale to others. All surface and ground waters appurtenant to the Premises and the right to capture, divert or impound the same. The right to occupy and use the Premises required to exercise this right, provided that just compensation shall be paid to Lessee for any of its improvements that are taken. All prehistoric and historic remains found on the Premises. Ownership of all improvements located on the Premises prior to or on the commencement date of Lease S-5529, excluding improvements constructed by Lessee.

Item	Summary
	Right to enter the Premises and examine the state of its repair and condition at all reasonable times. The right to withdraw the Premises or any portion at any time during the term of Lease S-5529 upon reasonable notice and without compensation for public uses or purposes including residential, commercial, industrial, or resort developments, construction new roads or extensions or changes in line or grade of existing roads, rights of way of BLNR to remove soil, rock, or gravel as necessary for construction of roads and rights of way within or without the Premises. Upon the withdrawal, or upon the taking which causes any portion of the land originally leased to become unusable for the specific use(s) for which the land was leased, the rent shall be reduced in proportion to the value of the land withdrawn or made unusable and if any permanent Improvement constructed by Lessee is destroyed or made unusable in the process of the withdrawal or taking, the proportionate value shall be paid based on the unexpired term of Lease S-5529.
Lessee's Responsibilities	All taxes, rates, assessments, and other outgoings of every description on the Premises whether assessed to Lessor or Lessee. To provide necessary utilities to the premises at its own cost and expense, and to pay for all charges, duties, and rates of every description, including water, sewer, gas, refuse collection or any other similar charges on the Premises whether assessed to or payable by Lessor or Lessee. To keep the Premises and Improvements in a strictly clean, sanitary, and orderly condition To keep, repair, and maintain all Improvements now existing or later constructed or installed on the Premises in good order, condition, and repair, reasonable wear and tear excepted. To obtain all necessary federal, state, or county clearances. To comply with all applicable terms and conditions of CDUA No. HA-1819.
Prohibitions	Use and enjoyment of the Premises shall not support any policy which discriminates against anyone based on race, creed, sex, color, national origin, religion, marital status, familial status, ancestry, physical handicap, disability, age or HIV infection. Lessee shall not commit, suffer, or permit to be committed any waste, nuisance, strip or unlawful, improper or offensive use of the Premises or any part. Lessee shall not cut down, remove, or destroy or suffer to be cut down, removed, or destroyed, any trees now growing on the Premises. Lessee shall not commit or suffer any act or neglect which results in the Premises, any Improvement, or the leasehold estate of the Lessee becoming subject to any attachment, lien, charge, or encumbrance, except as permitted in Lease S-5529. Lessee shall indemnify Lessor from any attachments, liens, charges, encumbrances and all resulting expenses.
Breach	If Lessee shall become bankrupt or shall abandon the Premises or Lease S-5529 and Premises are attached or taken by operation of law or if Lessee shall fail to observe and perform any of the covenants, terms, and conditions contained in Lease S-5529 and on its part to be observed and performed for more than 60 days after delivery of

Item	Summary
	Lessor's written notice of breach of default to Lessee and each mortgagee or holder of record having a security interest in the Premises, Lessor may, subject to HRS Section 171-21, re-enter the Premises or any part and upon or without the re-entry, terminate Lease S-5529 without prejudice to any other remedy or right of action for arrears of rent or termination. Lessor may, in the event of termination, claim title to the Improvements or have them removed by Lessee. Lessor shall retain all rent paid in advance as damages.
Condemnation	If any portion of the Premises is condemned or required for public purposes by any county or city and county, the rental shall be reduced in proportion to the value of the portion of the Premises condemned. Lessee shall be entitled to receive from the condemning authority (a) the value of growing crops, if any, which Lessee is not permitted to harvest and (b) the proportionate value of Lessee's permanent Improvements taken in the proportion it bears to the unexpired term of Lease S-5529. Lessee may alternatively remove and relocate Improvements to the remainder of the Premises. The Lessee shall not, by reason of condemnation, be entitled to claim against Lessor for condemnation or indemnity for leasehold interest and all compensation payable or to be paid for or on account of the leasehold interest shall be the sole property of Lessor. If portion taken renders remainder unsuitable for the use(s) for which the land was leased, Lessee may surrender Lease S-5529 and be discharged and relieved from any further liability, provided that Lessee may remove the permanent Improvements constructed, erected and placed by with within any reasonable period allowed by Lessor. Note: The foregoing right to Lessee is not exclusive of any other rights Lessee may be entitled to by law.
Hazardous Materials	Lessee shall not cause or permit the escape, disposal, or release of any hazardous materials except as permitted by law. Lessee shall not allow the storage or use of such materials in any manner not sanctioned by law or the highest standard in the industry. Lessee shall not allow any such materials to be brought onto the Premises except to use in the ordinary course of its business where it has provided Lessor with written notice identifying the materials and Lessor has given consent, which may be withheld at Lessor's sole and absolute discretion. If any lender or governmental agency requires testing to ascertain whether there has been any release of hazardous materials by Lessee, Lessee shall be responsible for the reasonable costs thereof. Lessee shall execute affidavits, representation, etc. at Lessor's request concerning Lessee's best knowledge and belief regarding the presence of hazardous materials on the Premises placed or released by Lessee. Lessee agrees to be responsible for any damages and claims resulting from the release of hazardous materials on the Premises cause by its agents, officers, and employees in the course of their employment. Note: These covenants survive the expiration or earlier termination of Lease S-5529.
Termination	Lease S-5529 may be terminated: 1. By Lessee if portion of Premises is condemned and the portion taken renders the remainder unsuitable for the use(s) for which the land was leased.

Item	Summary
	2. By mutual agreement without cause, provided neither Lessor nor Lessee are in breach of any condition at the time of the mutual agreement to terminate. The provision may be waived upon written mutual agreement, signed by both parties. 3. If Lessee fails or ceases to use or abandons all or any portion of the Premises for a continuous period of 1 year.
Surrender	At the end of the term or other sooner termination of Lease S-5529, Lessee shall peaceably deliver to Lessor, possession of the Premises and Improvements existing or constructed thereon, of Lessee shall remove such Improvements at Lessor's option. Upon the expiration, termination, and/or revocation of Lease S-5529, if Lessee fails to remove any personal property from the Premises BLNR may, after notice, remove any personal property from the Premises and either deem the property abandoned and dispose of the property or place the property in storage at the cost and expense of Lessee and the Lessee agrees to pay all costs and expenses for disposal, removal, or storage of the personal property. Note: This provision survives termination of Lease S-5529.
Other Provisions	Lessor does not warrant the conditions of the Premises; the Premises are being leased "as is". Time is of the essence.

Abstract of General Lease No. S-4191 dated 6/21/1968 ("Lease S-4191")

Item	Summary
Lessor	State of Hawaii, by its Board of Land and Natural Resources
Lessee	University of Hawaii
Commencement Date	June 21, 1968
Premises	All of that certain parcel of land situate at Kaohe, Hamakua, County and Island of Hawaii, State of Hawaii, more particularly described in Exhibit A: 
Term	Terminates 12/1/2033 (65 years from 1/1/1968)
Specified Use	Scientific complex, including an observatory and scientific reserve as a buffer zone to prevent the intrusion of activities that are inimical (may obstruct or harm) the scientific complex. Inimical activities include light and dust interference to observatory operation and certain types of electric or electronic installation on the Premises.
Assignments	Allowed with prior written consent of BLNR.

Item	Summary
Improvements	Lessee may construct and erect buildings, structures and other improvements on the Premises, provided that plans for constructions and plot plans shall be submitted to the Chairman of BLNR (the "Chairman") for review and approval prior to commencement of construction. Title to the improvements remain with Lessee. Improvements shall be removed or disposed of by Lessee at the expiration or sooner termination of Lease S-4191 or abandoned in place with the approval of the Chairman..
Lessor's Rights	All surface and ground waters appurtenant to the Premises and the right to enter and capture, divert or impound water. Lessor shall exercise such rights in a manner that does not unreasonably interfere with Lessee's use of the Premises. Lessee has the right to use the waters of Lake Waiau for any purpose necessary or incidental to the use permitted by the Lease, except the following are not permitted: 1. drilling or disturbing Lake Waiau's bottom, banks, or areas adjacent 2. activity which will result in the pollution of Lake Waiau waters 3. diversion of any waters arising from springs which furnish the water supply for Pohakuloa or alteration of such springs Right to cross the Premises for inspection or for any government purpose Hunting and recreation rights to be implemented pursuant to rules and regulations issued by BLNR in discharging its fish and game or state parks responsibilities. Such hunting and recreation shall be coordinated with Lessee's activities on the Premises and limited to daylight hours. Right to use the Premises and to grant rights and privileges affecting the Premises to others. No such use shall be permitted or right and privileges granted except upon mutual determination by the parties that such use or grant will not unreasonably interfere with Lessee's use of the Premises. Such agreement shall not be arbitrarily or capriciously withheld.
Lessee's Responsibilities	To keep Premises and improvements in clean, sanitary and orderly condition. To not make, permit or suffer any waste, strip, spoil, nuisance or unlawful, improper or offensive use of the Premises. To properly maintain repair and keep all improvements in good condition. To comply with Regulation 4 of DLNR and all other federal, state, municipal, or county laws, ordinances, rules and regulations affecting the Premises.
Prohibitions	Lessee shall not appropriate, damage, remove, excavate, disfigure, deface or destroy any object of antiquity, prehistoric ruin or monument of historical value. Lessee shall not plant any trees, shrubs, flowers, or other plans in the leased area unapproved by the Chairman. Use and enjoyment of Premises shall not support any policy which discriminates against anyone based on race, creed, color or national origin.
Termination	Lessee may terminate with 30 days written notice to Lessor. Lessor may terminate with 6 months written notice if (2) Lessee fails to comply with any of the terms and conditions of Lease S-4191 or (2) Lessee abandons or fails to use the Premises for the use specified in para. 4 for 2 years.

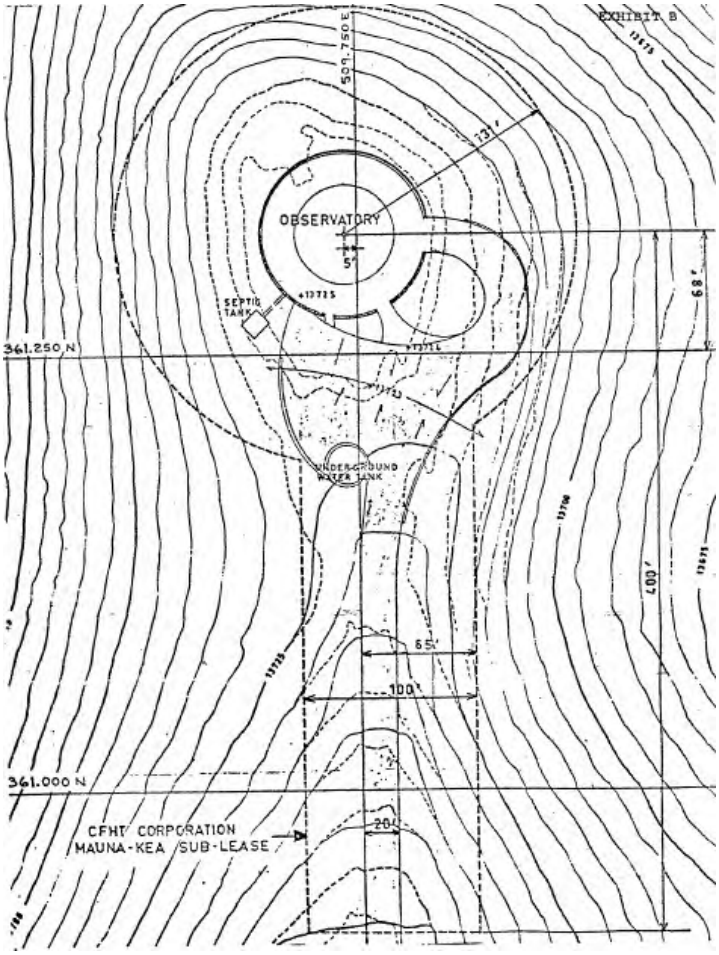
Item	Summary
Surrender	Lessee shall peaceably and quietly surrender and deliver possession of the Premises to Lessor in good order and condition, reasonable wear and tear excepted at the expiration or sooner termination of the Lease/

Abstract of Sublease to the National Aeronautics and Space Administration dated 11/29/1974 (the "Sublease")

Item	Summary
Sublessor	University of Hawaii
Sublessee	United States of America, through the National Aeronautics and Space Administration
Master Lease	General Lease S-4191 (the "Master Lease") Note: The Master Lease controls if any term or provision conflicts with the Sublease.
Rent	US$1.00 per year
Commencement Date	November 29, 1974
Premises	A portion of that certain land area described in Exhibit A of the Master Lease, more specifically identified in Exhibit B, to be described in more detail after a survey by Sublessee within 6 months from the date of the Sublease. Premises conveyed together with the right of access to the Premises over and across the common entrance and rights of way, together with others entitled thereto under such rules and regulations as established from time to time by Sublessor. Note: Exhibit B is missing from the document provided.
Term	Expires December 31, 2033, unless sooner terminated for convenience of Sublessee. Note: If the Master Lease is renewed, Sublessor shall effect a new sublease with Sublessee upon mutually acceptable terms and conditions.
Permitted Use	Exclusively for the infrared astronomical observatory facilities. Sublessee shall not permit or make any waste or strip, or unlawful, improper or abusive use of the Premises. Sublessee shall be liable to Sublessor for all damages it has caused beyond reasonable wear and tear to the extent permitted by applicable Federal law.
Surrender	Upon expiration or sooner termination of the Sublease, Sublessee shall peaceably and quietly leave and surrender and deliver up to the Sublessor the Premises in good repair, order, and clean condition, reasonable wear and tear excepted.
Liability	All goods, ware, merchandise, equipment or other property of the Sublessee shall be kept on the Premises at Sublessee's sole risk.
Fire or Destruction of Premises	If the Premises is rendered unsuitable for observatory purposes by fire or other causes, the Sublease shall terminate unless Sublessee notifies Sublessor of its intent to restore the premises to its prior condition within 6 months of the date of casualty.
Right of Entry	At reasonable times, Sublessor or its agents will have free access to the Premises for the purpose of examining and determining whether the covenants of the Sublease are being fully observed and performed.
Assignment	Allowed with prior written consent of Sublessor. Note: Sublease is silent re: assignment of Sublessor's interest.
Alterations	Sublessee must obtain Lessor's and Sublessor's written approval to make any improvements, major alterations or additions to the Premises and Sublessor's written

Item	Summary
	consent to or install or affix equipment. These approvals shall not be withheld arbitrarily or unreasonably. Title to alterations, additions, improvements and equipment constructed on, affixed or installed in, or placed on the Premises by the Sublessee ("Alterations") shall at all times remain in Sublessee.
Sublessee Responsibilities	Janitorial, custodial and security services, including sewerage and sanitation services. Repair and maintenance of the grounds, buildings, and improvements, and any modification, improvement or alteration approved by Sublessor. Payment for installation and use of utilities (i.e., water, gas, and electricity) and telephones.
Title to Facilities, Alterations, Additions, and Improvements and Equipment	Title to all facilities, additions, improvements, alterations and equipment constructed on, affixed or installed in, or placed on the Premises by the Sublessee ("Alterations") shall at all times remain in the Sublessee. Upon termination or expiration of the Sublease for any cause and with approval of Sublessor and the Chairman of BLNR, the Alterations may be abandoned and surrendered in whole or in part by Sublessee and remain on the Premises as a part thereof with title in Sublessor. Otherwise, Sublessee, subject to the availability of appropriations, shall remove the same in whole or in part at its expense within 1 year after termination or expiration, upon written notice of intent to remove to Sublessor within 30 days after termination. If removal is chosen, Sublessee shall restore the property or any portion affected to its original condition, reasonable wear and tear excepted.

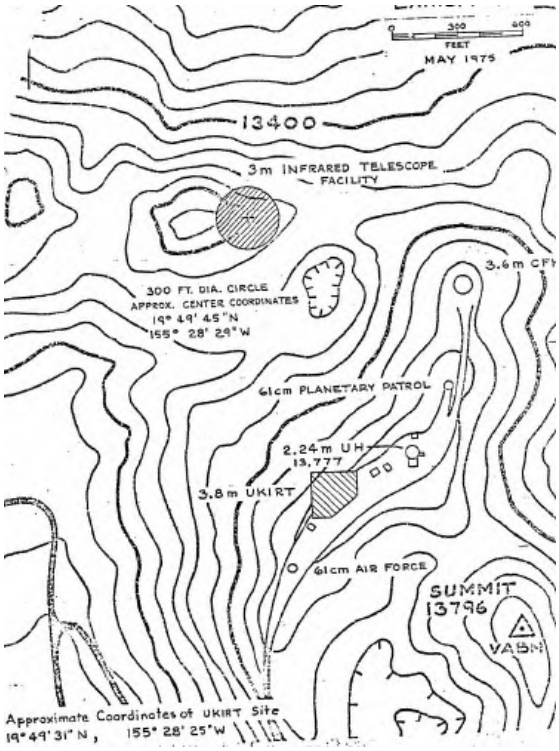
Abstract of Sublease to Canada-France-Hawaii Telescope Corporation dated 12/18/1975 (the "Sublease")

Item	Summary
Sublessor	University of Hawaii
Sublessee	Canada-France-Hawaii Telescope Corporation
Master Lease	General Lease S-4191 (the "Master Lease") Note: The Master Lease controls if any term or provision conflicts with the Sublease.
Rent	Not mentioned.
Commencement Date	December 18, 1975
Premises	A portion of that certain land area described in Exhibit A of the Master Lease, more specifically identified in Exhibit B: 

Item	Summary
Term	Expires December 31, 2033, unless sooner terminated at convenience of Sublessee by six (6) months written notice to Sublessor. Note: Sublessor shall seek to negotiate a renewal of the Master Lease with BLNR or its successor and if the Master Lease is renewed, Sublessor shall effect a new sublease with Sublessee for the life of the renewal or the life of Sublessee, whichever is shorter
Permitted Use	Erecting and managing astronomical observatory facilities.
Fire or Destruction of Premises	If the Premises are rendered unsuitable for observatory purposes by fire or other causes, the Sublease shall be terminated unless Sublessee notifies Sublessor of its intent to restore the Premises to its prior condition within six (6) months of the date of casualty.
Right of Entry	At reasonable times, Sublessor or its agents will have free access to the Premises for the purpose of examining and determining whether the covenants of the Sublease are being fully observed and performed.
Assignment	Allowed with prior written consent of Sublessor. Note: Sublease is silent re: assignment of Sublessor's interest.
Surrender	Upon termination of the Sublease, Sublessee shall peaceably and quietly leave and surrender and deliver to Sublessor the Premises in good repair, order, and clean condition, reasonable wear and tear excepted. Upon the expiration or termination of the Sublease for any cause, and with the approval of the Sublessor and the Chairman of BLNR, Alterations (defined below) may be abandoned and surrendered in whole or in part by Sublessee and remain on the Premises with title in Sublessor. Otherwise, Sublessee shall remove Alterations in whole or in part at its expense within one (1) year thereafter, upon written notice of intent to remove to Sublessor within thirty (30) days after termination or expiration. In the event of removal, Sublessee shall restore the property or any portion affected thereby to its original condition, reasonable wear and tear excepted.
Alterations	Sublessee shall make no improvements, alterations, or additions without the consent of the Lessor and Sublessor or install or affix any equipment without the written consent of Sublessor. Lessor and/or Sublessor shall not arbitrarily or capriciously withhold approval. Title to alterations, additions, improvements and equipment constructed on, affixed or installed in, or placed on the Premises by the Sublessee ("Alterations") shall at all times remain in Sublessee.
Sublessee Responsibilities	Janitorial, custodial and security services, including sewerage and sanitation services. All repair and maintenance of the grounds, building, and improvement erected upon the Premises and any modification, improvement, or alteration made by the Sublessee. Payment for installation and use of utilities required for Premises (water, gas, and electricity) and installation and use of telephones.

Item	Summary
Sublessor Responsibilities	Construction and maintenance of an access road consistent with the overall plan for the development of the Mauna Kea Observatory area to a boundary line of the Premises. Construction of an electric power line to a central terminal near the Mauna Kea Observatory area of approx. 750 KW capacity to meet the requirements of the projected installations of the Sublessee and presently anticipated needs of existing installation and grant to Sublessee an easement over the Sublessor's leased land to access said power. Note: Sublessee to pay the cost of the connection from the telescope site to the central terminal and cost of electric power.

Abstract of Sublease to Science Research Council dated 9/21/1978 (the "Sublease")

Item	Summary
Sublessor	University of Hawaii
Sublessee	Science Research Council
Master Lease	General Lease S-4191 (the "Master Lease") Note: The Master Lease controls if any term or provision conflicts with the Sublease.
Rent	In lieu of rent, Sublessor is granted the exclusive use of fifteen percent (15%) of the time at the Facility, as more specifically detailed in a separate agreement to be executed between the parties. Note: Said separate agreement most likely refers to that certain unrecorded *Agreement Between the Science Research Council and the University of Hawaii Concerning the Construction and Operation of a 3.8-Meter Telescope on Mauna Kea.*
Commencement Date	September 21, 1978
Premises	A portion of that certain land area described in Exhibit A of the Master Lease, more specifically identified in Exhibit B, subject to a survey by the Sublessor within six (6) months of the date of the Sublease:  Note: Premises conveyed with right reserved to Sublessor to establish a 20 ft wide easement to accommodate an access road and power and telephone lines and the right reserved to Sublessee of access to Premises over and across the common entrances and rights of way.

Item	Summary
Term	Term of not more than twenty seven (27) years, commencing on January 21, 1976, with automatic extension without further notice or execution of further documents until the expiration of the Master Lease on December 31, 2033 unless sooner terminated upon five (5) years written notice to the other party.
Permitted Use	Astronomical facilities (the "Facilities") including construction and management of a 3.8 meter telescope facility. Sublessee shall be liable to Sublessor for all damages beyond reasonable wear and tear. Reasonable wear and tear includes without limitation, grading, excavation, and filling of the Premises as may be reasonably required for the construction of the Facilities and shall not constitute strip or waste.
Fire or Destruction of Premises	If the Premises are rendered unsuitable for observatory purposes by fire or other causes, the Sublease shall be terminated unless Sublessee notifies Sublessor of its intent to restore the Premises to its prior condition within six (6) months of the date of casualty.
Assignment	Allowed with prior written consent of Sublessor. Note: Sublease is silent re: assignment of Sublessor's interest.
Surrender	Upon termination of the Sublease, Sublessee shall peaceably and quietly leave and surrender and deliver to Sublessor the Premises in good repair, order, and clean condition, reasonable wear and tear excepted.
Alterations	Sublessee shall make no improvements, major alterations, or additions ("Improvements") to the Premises without the consent of Sublessor and BLNR. Lessor and/or Sublessor shall not arbitrarily or capriciously withhold approval. If Sublessor or BLNR withholds or unreasonably delays approval of such Improvement, Sublessee may terminate the Sublease and be relieved of all further obligations thereunder.
Title to Alterations, Additions, Improvements and Equipment	Upon termination or expiration of the Sublease, Sublessor has first option upon written notice to Sublessee to purchase at a negotiated figure all structural alterations, improvements made and equipment affixed or installed (collectively, the "Alterations"). If the parties cannot agree on a negotiated figure within thirty (30) day from the date of written notice, the dispute shall be submitted to arbitration. If Sublessor does not exercise its purchase option, Sublessee may surrender the Alterations in whole or in part to Sublessor with approval of the Chairman of BLNR. Otherwise, Sublessee shall remove Alterations in whole or in part at its expense within one (1) year thereafter, upon written notice of intent to remove to Sublessor within thirty (30) days after termination or expiration. In the event of removal, Sublessee shall restore the property or any portion affected thereby to even grade.
Sublessee Responsibilities	Janitorial, custodial and security services. All repair and maintenance of the grounds, building, and improvement erected upon the Premises and any modification, improvement, or alteration made by the Sublessee.

Item	Summary
	All charges, duties, and rates including electricity, water, sewer, gas, refuse collection, or any other charges whether assessed to or payable by the Sublessor or Sublessee. Cost to install and use telephones as may be required. All taxes, rates, assessments, and other outgoings of every description on the Premises whether assessed to Sublessor or Sublessee.
Default	If Sublessee fails to observe of comply with any of the terms and conditions of the Sublease within thirty (30) days of written notice by Sublessor. If more than thirty (30) days are required to observe or perform, Sublessee shall initiate action and provide a plan for observance and performance within the sixty (60) days and diligently prosecute the same to completion. Note: Expenses on Default noted as Intentionally Omitted
Disputes	Any controversy, claim, or dispute concerning a question of face arising under the Sublease which is not disposed of by agreement within thirty (30) days shall be referred to and decided by a board or arbitration, acting by majority, in accordance with the rules of the American Arbitration Association. The board shall consist of one arbitrator selected by the Sublessor, one arbitrator selected by the Sublessee, and a neutral arbitrator selected jointly by those arbitrators. Each party shall pay its own expenses of arbitration including the fee of its arbitrator. The neutral arbitrator's fee shall be divided equally. The arbitrators may provide for a different allocation of expenses as part of their decision. All pose arbitration expenses including reasonable attorney's fees, for judicia review of the decision of the arbitrators shall be awarded to the prevailing party. Note: More information re: selection of arbitrators is provided in the section concerning disputes.
Right of Entry	At reasonable times, Sublessor or its agents will have free access to the Premises for the purpose of examining and determining whether the covenants of the Sublease are being fully observed and performed.

Abstract of Sublease to the Science and Engineering Research Council dated 2/10/1984 (the "Sublease")

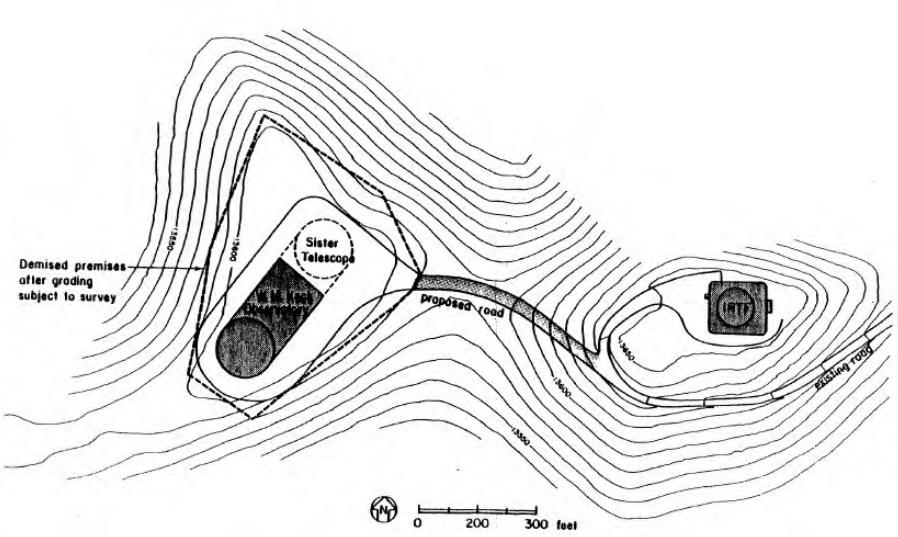
Item	Summary	Ref.
Sublessor	University of Hawaii	
Sublessee	Science and Engineering Research Council	
Master Lease	General Lease S-4191 (the "Master Lease") Note: The Master Lease controls if any term or provision conflicts with the Sublease.	I.E.
Rent	US$1.00 per year	I.C.
Commencement Date	February 10, 1984	
Premises	A portion of that certain land area described in the Master Lease, more specifically identified in Exhibit B, together with right reserved to Sublessor to establish an access road and power and communication lines, and the right reserved to Sublessee of access to said premises over and across the common entrances and rights of way, together with the right reserved to Sublessee to establish communications and data lines between the above portion of land and that portion of land described in the UKIRT Sublease dated 9/21/1978. Site to be surveyed by Sublessee within three (3) months from the date of the Sublease and approved by County of Hawaii. Note: Exhibit B missing.	I.A. I.C.
Term	Expires December 31, 2033, unless sooner terminated per Article IV.F. Note: If the Master Lease is renewed, Sublessor shall negotiate an extension of Sublease with Sublessee if desired.	I.B. II.B.
Permitted Use	Exclusively for construction including a parabolic reflecting telescope and its operating enclosure, data communication terminals, and associated equipment required to support the operations of the telescope (collectively, the "Facilities"). Sublessee shall be liable to Sublessor for all damages beyond reasonable wear and tear. Reasonable wear and tear includes without limitation, grading, excavation, and filling of the Premises as may be reasonably required for the construction of the Facilities and shall not constitute strip or waste. Sublessee shall make reasonable effort to minimize grading, excavation, and filling. All goods, ware, merchandise, equipment or other property of the Sublessee shall be kept on the Premises at the sole risk of the Sublessee.	III.G. III.H.
Operation of Facilities	As a condition to the operation of the Facilities, Sublessee must execute an Operating and Site Development Agreement ("OSDA") with Sublessor. In the absence of an OSDA, the Facilities may be operated only when necessary to ensure the safety of personnel or of the Facilities.	I.F

Item	Summary	Ref.
Fire or Destruction of Premises	If the Facilities are rendered unsuitable for millimeter and submillimeter-wave astronomy by fire or other causes, Sublessee elects not to restore the facilities, and the Sublease is terminated per Section IV.F5., Sublessee shall remove such unsuitable, damaged property or debris within one (1) year after written notice to remove and restore the land to its original condition. If the Sublessee fails to remove such property or debris and restore the land within one (1) year, Sublessor may remove such property or debris and restore the land at the expense of Sublessee. To avoid termination of the Sublease pursuant to Section IV.F., Sublessee must notify Sublessor within six (6) months of the date of casualty that it intends to restore the improvements to their prior condition. If the Facilities or a portion thereof are restored, such restoration is subject to approval by the Sublessor and in keeping with Article III.I. addressing Improvements and Alterations.	I.D.
Insurance	SERC to maintain liability and property insurance in specified amounts.	I.G.
Right of Entry	At reasonable times, Sublessor or its agents will have free access to the Premises for the purpose of examining and determining whether the covenants of the Sublease are being fully observed and performed.	III.A.
Assignment	Allowed with prior written consent of Sublessor. Sublessor's consent is not to be arbitrarily or capriciously withheld or delayed. This provision is not to prevent Sublessee from making Premises available to invitees for the purposes permitted under the Sublease. Sublessor recognizes that Sublessee has entered into an agreement with the Nederlandse Organisatie voor Zuiver-Westenschappelijk Onderzoek ("ZWO") for collaboration in astronomical research which research shall include use of the Facilities by ZWO. Note: Sublease is silent re: assignment of Sublessor's interest.	III.F.
Improvements and Alterations	Sublessee must submit to Sublessor and the Chairman of DLNR the final location map, plans, and specifications for approval prior to commencing work which will expand or change the external structure or appearance of the Facilities. This approval shall not be withheld unreasonably. Sublessor and Lessor shall process such application for approval as expeditiously as possible. If any necessary approvals for the initial construction of the telescope are withheld, without prejudice to any other remedy of Sublessee, Sublessee may terminate the Sublease and be relieved of all further obligations. Title to the Facilities, alterations, additions and improvements remain in the name of the Sublessee at all times.	III.I. IV.G.
Sublessee Responsibilities	Janitorial, custodial and security services, including sewerage and sanitation facilities and services. Repair and maintenance of the Premises and Facilities, including painting Facilities and necessary modifications or alterations. All charges associated with the Facilities, and all charges, duties, and rates of every description, including electricity, water, communications, sewer, gas,	III.B. III.C. III.D. III.E.

Item	Summary	Ref.
	refuse collection or any other similar charges whether assessed to or payable by Sublessor or Sublessee. All taxes, rates, assessments, and other outgoings of every description whether assessed to Sublessor or Sublessee.	
Disputes	Any controversy, claim or dispute not disposed of by agreement within thirty (30) days may be referred to and decided by a board of arbitration acting in majority, consisting of three (3) persons (one arbitrator selected by Sublessor, one by Sublessee and the two selected arbitrators to jointly select the third). The arbitration shall proceed in accordance with the rules of the American Arbitration Association. The decision of the arbitrators shall be final and conclusive, subject to HRS chapter 658, provided that any arbitration award requiring payment or expenditure of any funds by Sublessor shall not be binding upon Sublessor absent a legislative appropriation, which Sublessor shall use its best endeavors to obtain. All parties to bear their own expenses of arbitration including the fee or their arbitrator. The fee of the neutral arbitrator to be divided equally. The arbitrators may provide for a different allocation of expenses. Parties may apply to the court for costs and reasonable attorneys' fees incurred for judicial review of the arbitrators' decision. Note: See Sublease for further details re: selection of arbitrators.	IV.A. IV.B.
Termination	The Sublease may be terminated: 1. If the planned construction described in Exhibit C is not substantially completed by 12/31/1985, unless otherwise agreed in writing by Sublessee and Sublessor. 2. Upon termination of the OSDA unless it is renewed, extended or renegotiated. 3. Upon expiration of the Master Lease S-4191 on 12/31/2033 unless it is renewed or extended. 4. If Sublessee fails to observe of comply with any of the terms and conditions of the Sublease within thirty (30) days of written notice by Sublessor. If more than thirty (30) days are required to observe or perform, Sublessee shall initiate action and provide a plan for observance and performance within the thirty (30) days and diligently prosecute the same to completion. 5. Destruction of the Facilities by fire or other causes rendering the same unsuitable for purposes of millimeter- or submillimeter-wave astronomy, unless Sublessee notifies Sublessor within six (6) months of the date of casualty that it intends to restore the Facilities to their prior condition within a reasonable length of time. 6. By mutual agreement between Sublessor and Sublessee. Note: Exhibit C is missing.	IV.F.
Title to the Facilities, Alterations, Additions, and	Upon termination or expiration of the Sublease, Sublessee may: 1. Negotiate with Sublessor for sale of the Facilities to Sublessor 2. With the approval of Sublessor, peaceably surrender the Premises and all or part of the Facilities to Sublessor, in good repair, order,	IV.G.

Item	Summary	Ref.
Improvements and Disposition in Event of Termination	and clean condition, reasonable wear and tear excepted. Sublessee shall restore the Premises or any portion affected by removal to even grade and repair any damage done to the improvements in the event that any equipment is removed. 3. Sell the Facilities to a third party acceptable to Sublessor, contingent upon the execution of a new sublease and OSDA between third party and Sublessor. Acceptance shall not be arbitrarily or capriciously withheld. If none of the above are agreed upon within six (6) months from the termination or expiration of the Sublease, all Facilities shall be razed and removed at the sole expense of Sublessee within one (1) year after termination or expiration of the Sublease, unless otherwise agreed in writing by Sublessor.	

Abstract of Sublease and Non-Exclusive Easement Agreement to California Institute of Technology dated 10/30/1985 (the "Sublease")

Item	Summary	Ref.
Sublessor	University of Hawaii	
Sublessee	California Institute of Technology	
Master Lease	General Lease S-4191 (the "Master Lease") Note: The Master Lease controls if any term or provision conflicts with the Sublease.	I.G.
Rent	US$1.00 per year	I.E.
Commencement Date	October 30, 1985	
Premises	A portion of that certain land area described in Exhibit A of the Master Lease, more specifically identified in Exhibit C, to be described in more detail after a survey by Sublessee within six (6) months from the date of the Sublease. 	I.A. I.C.
Non-Exclusive Easement	Sublessee shall have right of access to and egress from the Premises over and across the Mauna Kea Science Reserve, utilizing the common entrances and rights of way. Sublessee shall also have the right to construct and utilize an unpaved spur road from the Infrared Telescope Facility to the Premises and to install and utilize power and communication conduits and lines from a central handhole or handholes in the Mauna Kea summit area to the Premises.	I.B.
Term	Expires December 31, 2033, unless sooner terminated or extended per Article IV.F and II.C. Note: If the Master Lease is renewed, Sublessor shall renew or extend the Sublease or negotiate a new Sublease with Sublessee if desired. Sublessor and Lessor shall make every effort to ensure renewal, extension, or renegotiation of the Master Lease.	I.D. II.C.

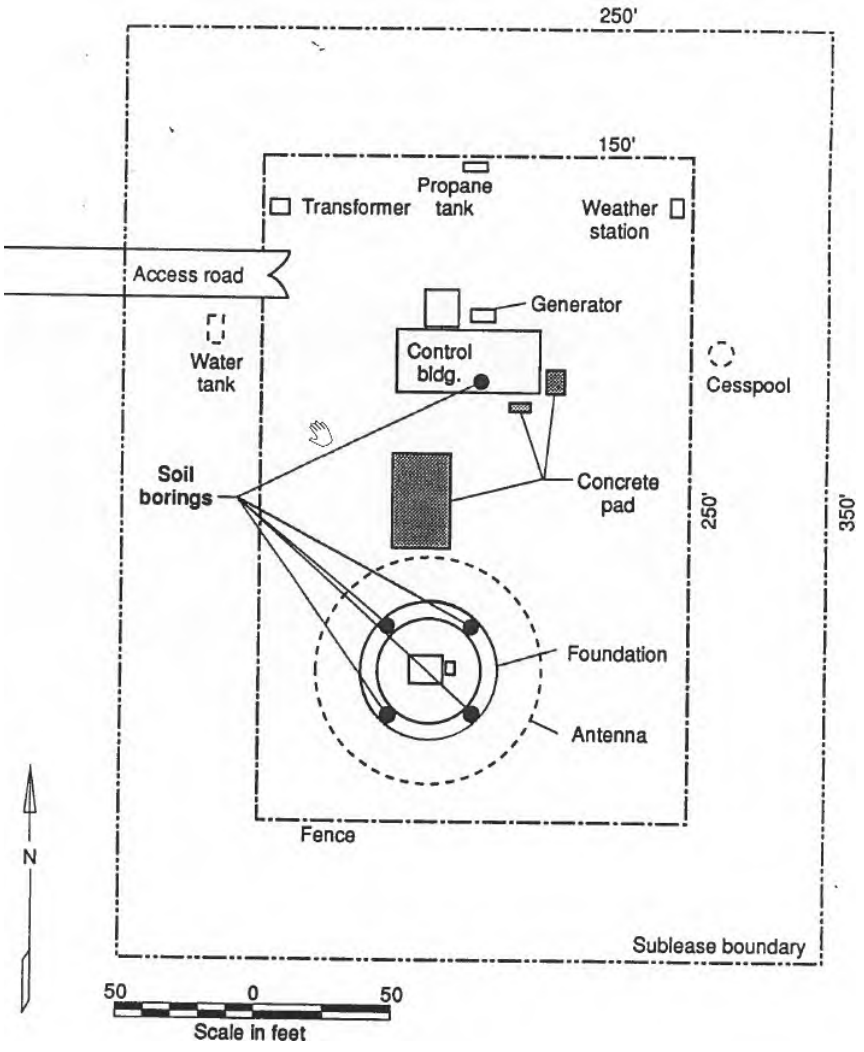
Abstract of Sublease and Non-Exclusive Easement Agreement to California Institute of Technology dated 10/30/1985

Item	Summary	Ref.
Permitted Use	Exclusively for construction including the W. M. Keck Observatory building and dome, its optical/infrared telescope, related equipment and instrumentation, and related support facilities and infrastructure improvements required to support the operations of the observatory (collectively, the "Facilities") with the possible construction of a second observatory building, dome, and telescope. All goods, ware, merchandise, equipment or other property of the Sublessee shall be kept on the Premises at the sole risk of the Sublessee. Sublessee shall be liable to Sublessor for all damages beyond reasonable wear and tear. Reasonable wear and tear includes without limitation, grading, excavation, and filling of the Premises as may be reasonably required for the construction of the Facilities and shall not constitute strip or waste. Sublessee shall make every reasonable effort to minimize grading, excavation, and filling.	III.G.
Fire or Destruction of Premises	If the Facilities are rendered unsuitable for optical or infrared astronomy by fire or other causes, Sublessee elects not to restore the facilities, and the Sublease is terminated per Section IV.F.6., Sublessee shall remove such unsuitable, damaged property or debris within one (1) year after written notice to remove and restore the land to even grade. If the Sublessee fails to remove such property or debris and restore the land within one (1) year, Sublessor may remove such property or debris and restore the land at the expense of Sublessee. To avoid termination of the Sublease pursuant to Section IV.F., Sublessee must notify Sublessor within six (6) months of the date of casualty that it intends to restore the improvements to their prior condition. If the Facilities or a portion thereof are restored, such restoration is subject to approval by the Sublessor (not to be unreasonably withheld) and in keeping with Article III.H. addressing Improvements and Alterations.	I.D.
Operation of Facilities	Sublessee must execute an Operating and Site Development Agreement ("OSDA") with Sublessor. In the absence of the OSDA, the Facilities may be operated only when necessary to ensure the safety of personnel or of the facilities.	I.H.
Insurance	Sublessee shall maintain liability insurance for personal injury or death and property damage in the minimum amounts of $1,000,000.00 per person, $5,000,000.00 per occurrence, and $500,000.00 property damage, subject to revision every five (5) years in writing. Policies should name Lessor and Sublessor as additional insureds, and a copy shall be deposited with the Director of Procurement and Property Management.	I.I.
Right of Entry	At reasonable times, Sublessor or its agents will have free access to the Premises for the purpose of examining and determining whether the covenants of the Sublease are being fully observed and performed.	III.A.

Item	Summary	Ref.
Assignment	Allowed with prior written consent of Sublessor and Master Lessor, contingent upon adherence to the OSDA or execution of a new OSDA. However, Sublessee may sublease the Premises to California Association for Research in Astronomy ("CARA") for the specific purpose of operating the Facilities, subject to CARA's adherence to the terms of the OSDA. Note: Sublease is silent re: assignment of Sublessor's interest.	III.F.
Improvements and Alterations	Sublessee shall construct the Facilities at its sole cost and expense. Sublessee must obtain Sublessor's written approval prior to commencing work on any substantive structural alteration of or addition to the Facilities which will significantly alter the external appearance or structure of the Facilities. This approval shall not be withheld unreasonably. Sublessor shall use its best efforts to secure Lessor's consent. Sublessor shall provide its own approval or objection within sixty (60) days after receipt of Sublessee's request. Title to the Facilities, alterations, additions and improvements remain in the name of the Sublessee at all times.	III.H. IV.G. 1.
Sublessee Responsibilities	Janitorial, custodial and security services, including sewerage and sanitation facilities and services. Repair and maintenance of the Premises and Facilities, including painting Facilities and necessary modifications or alterations. Except as agreed in the OSDA, all charges associated with the Facilities, and all charges, duties, and rates of every description, including electricity, water, communications, sewer, gas, refuse collection or any other similar charges whether assessed to or payable by Sublessor or Sublessee. All taxes, rates, assessments, and other outgoings of every description whether assessed to Sublessor or Sublessee.	III.B. III.C. III.D. III.E.
Termination	The Sublease may be terminated: 1. If the planned construction described in Exhibit D is not substantially completed by 12/31/1999, unless otherwise agreed in writing by Sublessee and Sublessor. 2. Upon termination of the OSDA unless a new OSDA between Sublessor and another party/ies is executed and Lessor, Sublessor, and Sublessee agree in writing to a contribution of the Sublease. 3. Upon expiration of the Master Lease S-4191 on 12/31/2033 unless it is renewed, extended or renegotiated. 4. If Sublessee fails to observe of comply with any of the terms and conditions of the Sublease within sixty (60) days of written notice by Sublessor. If more than sixty (60) days are required to observe or perform, Sublessee shall initiate action and provide a plan for observance and performance within the sixty (60) days and diligently prosecute the same to completion. 5. If Sublessee peaceably surrenders or abandons the Premises. 6. Destruction of the Facilities by fire or other causes rendering the same unsuitable for purposes of optical and infrared astronomy,	IV.F.

Item	Summary	Ref.
	unless Sublessee notifies Sublessor within six (6) months of the date of casualty that it intends to restore the Facilities to their prior condition as specified in Article I.F. 7. By Sublessee upon six (6) months' written notice to Sublessor if Sublessee's contemplated sources of funding become unavailable and after diligent effort, Sublessee is unable to procure alternate funding. 8. By Sublessee upon 2 years notice. 9. By mutual agreement between Sublessor and Sublessee.	
Title to the Facilities, Alterations, Additions, and Improvements and Disposition in Event of Termination or Expiration	If the Sublease terminates or expires and Sublessor has not voluntarily terminated the Master Lease or defaulted on the Sublease or Master Lease, Sublessee shall remove the Facilities, alterations, additions and improvements (the "Property") from Premises within one (1) year of termination or expiration of the Sublease, unless otherwise agreed to in writing by Sublessor and Sublessee. Such Property may be sold with written approval (not to be arbitrarily or capriciously withheld) of Lessor and Sublessor per the terms of section IV.G.2. If Sublessee removes all or part of the Property under section IV.G., unless otherwise agreed to in writing by Sublessor, the removal will be at Sublessee's expense, Sublessee shall restore the Premises or any portion affected by removal to even grade and repair any damage done to the Property not removed within twelve (12) months, and if Sublessee fails to do so, Sublessor may perform removal and restoration at the expense of Sublessee. If the Sublease terminates or expires and Sublessor has either voluntarily surrendered the Master Lease or has defaulted on the Sublease or Master Lease, and Sublessee retains its right to quiet enjoyment of the Property and Premises under the terms of Exhibit B Consent to Sublease, Sublessee agrees to honor the terms of the Sublease. If Sublessor's rights are returned to Lessor or transferred to another organization due to its surrender or default, Sublessee agrees to negotiate in good faith a new OSDA with Lessor or the new sublessor of the Premises with equivalent terms to the OSDA.	IV.G.

Abstract of Sublease and Non-Exclusive Easement Agreement to Associated Universities, Inc./National Radio Astronomy Observatory dated 9/28/1990 (the "Sublease")

Item	Summary	Ref.
Sublessor	University of Hawaii	
Sublessee	Associated Universities, Inc./National Radio Astronomy Observatory	
Master Lease	General Lease S-4191 (the "Master Lease") Note: The Master Lease controls if any term or provision conflicts with the Sublease.	I.G.
Rent	US$1.00 per year	I.E.
Commencement Date	September 28, 1990	
Premises	A portion of that certain land area described in Exhibit A of the Master Lease, more specifically identified in Exhibit C, to be described in more detail after a survey by Sublessee within six (6) months from the date of the Sublease. 	I.A. I.C.

Abstract of Sublease and Non-Exclusive Easement Agreement to Associated Universities, Inc./National Radio Astronomy Observatory dated 9/28/1990

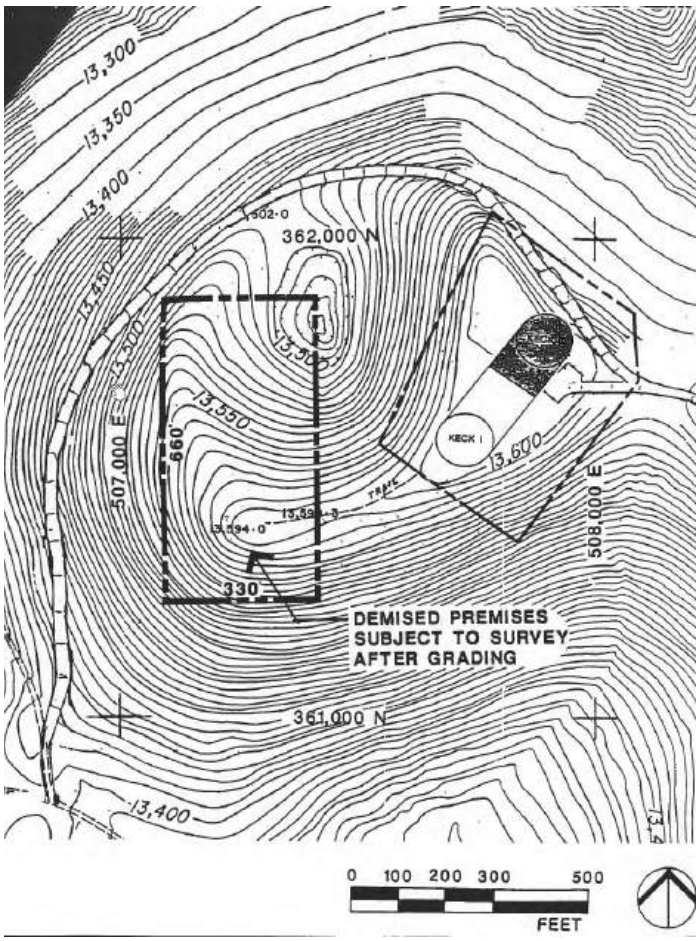
Item	Summary	Ref.
Non-Exclusive Easement	Sublessee shall have right of access to and egress from the Premises over and across the Mauna Kea Science Reserve, utilizing the common entrances and rights of way. Sublessee shall also have the right to construct and utilize an unpaved spur road, from the Mauna Kea access road to the Premises and to install and utilize power and communication conduits and lines from a handhole located near the 12,000 ft. elevation to the Facilities, all of which shall be individually metered. Note: The exact area covered by the non-exclusive easement for the spur road and power and communication conduits and lines shall be more specifically described and agreed to by Sublessor and Sublessor after the survey to be completed pursuant to section I.C..	I.B. I.C.
Term	Expires December 31, 2033, unless sooner terminated or extended per Article IV.F and II.C. Note: If the Master Lease is renewed, Sublessor shall renew or extend the Sublease or negotiate a new Sublease with Sublessee if desired. Sublessor shall make every effort to ensure renewal, extension, or renegotiation of the Master Lease.	I.D. II.C.
Permitted Use	Exclusively for the operation and construction including the Very Long Baseline Array Antenna ("VLBA") control buildings and antenna with related equipment and instrumentation and related support facilities and infrastructure improvements required on the Premises to support the operations of the VLBA (collectively, the "Facilities"). All goods, ware, merchandise, equipment or other property of the Sublessee shall be kept on the Premises at the sole risk of the Sublessee. Sublessee shall be liable to Sublessor for all damages beyond reasonable wear and tear. Reasonable wear and tear includes without limitation, grading, excavation, and filling of the Premises as may be reasonably required for the construction of the Facilities and shall not constitute strip or waste. Sublessee shall make reasonable effort to minimize grading, excavation, and filling. Note: Sublessee must execute an Operating and Site Development Agreement ("OSDA") with Sublessor.	III.G. I.H.
Operation of Facilities	As a condition to the operation of the Facilities, Sublessee must execute an Operating and Site Development Agreement ("OSDA") with Sublessor. In the absence of an OSDA, the Facilities may be operated only when necessary to ensure the safety of personnel or of the Facilities.	I.H.
Fire or Destruction of Premises	If the Facilities are rendered unsuitable for radio astronomy by fire or other causes, Sublessee elects not to restore the facilities, and the Sublease is terminated per Section IV.F.6., Sublessee shall remove such unsuitable, damaged property or debris within one (1) year after written notice to remove and restore the land to even grade. If the Sublessee fails to remove such property or debris and restore the land within one (1) year, Sublessor may remove such property or debris and restore the land at the expense of Sublessee.	I.F. IV.F. 6.

Item	Summary	Ref.
	To avoid termination of the Sublease pursuant to Section IV.F., Sublessee must notify Sublessor within six (6) months of the date of casualty that it intends to restore the improvements to their prior condition. If the Facilities or a portion thereof are restored, such restoration is subject to approval by the Sublessor (not to be unreasonably withheld) and in keeping with Article III.H. addressing Improvements and Alterations.	
Insurance	Sublessee to maintain liability and property insurance in specified amounts.	I.I.
Right of Entry	At reasonable times, Sublessor or its agents will have free access to the Premises for the purpose of examining and determining whether the covenants of the Sublease are being fully observed and performed.	III.A.
Assignment	Allowed with prior written consent of Sublessor and Master Lessor. Sublessor's consent is not to be arbitrarily or capriciously withheld or delayed. This provision is not to prevent Sublessee from making Premises available to invitees for the purposes permitted under the Sublease. Note: Sublease is silent re: assignment of Sublessor's interest.	III.F.
Improvements and Alterations	Sublessee shall construct the Facilities on the Premises at its sole cost and expense. Sublessee must obtain Sublessor's written approval prior to commencing work on any substantive structural alteration of or addition to the Facilities which will significantly alter the external appearance or structure of the Facilities. This approval shall not be withheld unreasonably. Sublessor shall use its best efforts to secure Lessor's consent. Sublessor shall provide its own approval or objection within sixty (60) days after receipt of Sublessee's request. Title to the Facilities, alterations, additions and improvements on the Premises remain in the name of the Sublessee at all times.	III.H. IV.G. 1.
Sublessee Responsibilities	Janitorial, custodial and security services, including sewerage and sanitation facilities and services. Repair and maintenance of the Premises and Facilities, including painting Facilities and necessary modifications or alterations. Except as agreed in the OSDA, all charges associated with the Facilities, and all charges, duties, and rates of every description, including electricity, water, communications, sewer, gas, refuse collection or any other similar charges on the Premises whether assessed to or payable by Sublessor or Sublessee. All taxes, rates, assessments, and other outgoings of every description on the Premises whether assessed to Sublessor or Sublessee.	III.B. III.C. III.D. III.E.

Item	Summary	Ref.
Termination	The Sublease may be terminated: 1. If the planned construction described in Exhibit D is not substantially completed by 12/31/1994, unless otherwise agreed in writing by Sublessee and Sublessor. 2. Upon termination of the OSDA unless a new OSDA between Sublessor and another party/ies is executed and Lessor, Sublessor, and Sublessee agree in writing to a contribution of the Sublease. 3. Upon expiration of the Master Lease S-4191 on 12/31/2033 unless it is renewed, extended or renegotiated. 4. If Sublessee fails to observe of comply with any of the terms and conditions of the Sublease within sixty (60) days of written notice by Sublessor. If more than sixty (60) days are required to observe or perform, Sublessee shall initiate action and provide a plan for observance and performance within the sixty (60) days and diligently prosecute the same to completion. 5. If Sublessee peaceably surrenders or abandons the Premises. 6. Destruction of the Facilities by fire or other causes rendering the same unsuitable for purposes of optical and infrared astronomy, unless Sublessee notifies Sublessor within six (6) months of the date of casualty that it intends to restore the Facilities to their prior condition as specified in Article I.F. 7. By Sublessee upon six (6) months' written notice to Sublessor if Sublessee's contemplated sources of funding become unavailable and after diligent effort, Sublessee is unable to procure alternate funding. 8. By Sublessee upon one (1) year prior notice. 9. By mutual agreement between Sublessor and Sublessee.	IV.F.
Title to the Facilities, Alterations, Additions, and Improvements and Disposition in Event of Termination or Expiration	If the Sublease terminates or expires and Sublessor has not voluntarily terminated the Master Lease or defaulted on the Sublease or Master Lease, Sublessee shall remove the Facilities, alterations, additions and improvements (the "Property") from the Premises within one (1) year of termination or expiration of the Sublease, unless otherwise agreed to in writing by Sublessor and Sublessee. Such Property may be sold, abandoned or surrendered with written approval (not to be arbitrarily or capriciously withheld) of Lessor and Sublessor per the terms of section IV.G.2. If Sublessee removes all or part of the Property under section IV.G., unless otherwise agreed to in writing by Sublessor, the removal will be at Sublessee's expense, Sublessee shall restore the Premises or any portion affected by removal to even grade and repair any damage done to the Property not removed within twelve (12) months, and if Sublessee fails to do so, Sublessor may perform removal and restoration at the expense of Sublessee. If the Sublease terminates or expires and Sublessor has either voluntarily surrendered the Master Lease or has defaulted on the Sublease or Master Lease, and Sublessee retains its right to quiet enjoyment of the Property and Premises under the terms of Exhibit B Consent to Sublease, Sublessee agrees to honor the terms of the Sublease.	IV.G.

Item	Summary	Ref.
	If Sublessor's rights are returned to Lessor or transferred to another organization due to its surrender or default, Sublessee agrees to negotiate in good faith a new OSDA with Lessor or the new sublessor of the Premises with equivalent terms to the OSDA.	

Abstract of Sublease and Non-Exclusive Easement Agreement to National Astronomical Observatory of Japan dated 6/5/1992 (the "Sublease")

Item	Summary	Ref.
Sublessor	University of Hawaii	
Sublessee	National Astronomical Observatory of Japan	
Master Lease	General Lease S-4191 (the "Master Lease") Note: The Master Lease controls if any term or provision conflicts with the Sublease.	I.G.
Rent	US$1.00 per year	I.E.
Commencement Date	June 5, 1992	
Premises	A portion of that certain land area described in Exhibit A of the Master Lease, more specifically identified in Exhibit C, to be described in more detail after a survey by Sublessee within six (6) months from the date of the Sublease. 	I.A. I.C.
Non-Exclusive Easement	Sublessee shall have right of access to and egress from the Premises over and across the Mauna Kea Science Reserve, utilizing the common entrances and rights of way.	I.B.

Abstract of Sublease and Non-Exclusive Easement Agreement to National Astronomical Observatory of Japan dated 6/5/1992

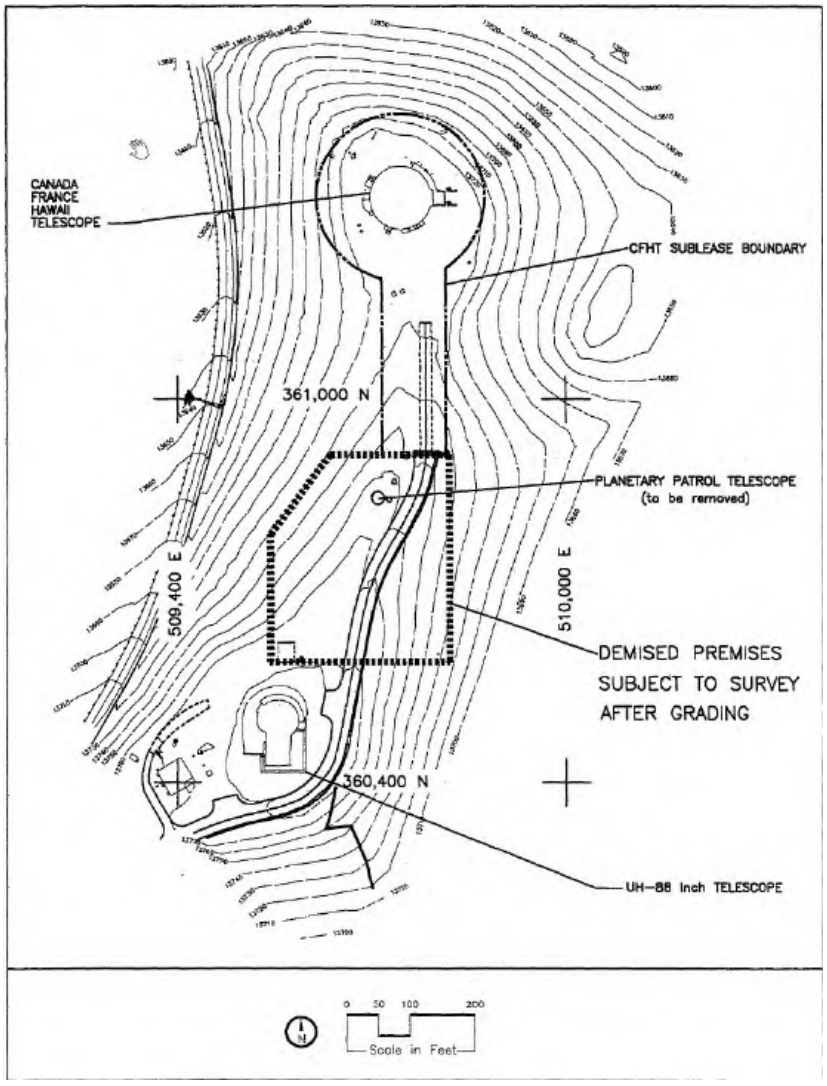
Item	Summary	Ref.
Term	Expires December 31, 2033, unless sooner terminated or extended per Article IV.F and II.C. Note: If the Master Lease is renewed, Sublessor shall renew or extend the Sublease or negotiate a new Sublease with Sublessee if desired. Sublessor shall make every effort to ensure renewal, extension, or renegotiation of the Master Lease.	I.E. II.C.
Permitted Use	Exclusively for the construction including the Japan National Large Telescope ("JNLT") building and dome, its optical/infrared telescope, related equipment and instrumentation and related support facilities and infrastructure improvements required on the Premises to support the operations of the JNLT (collectively, the "Facilities"). All goods, ware, merchandise, equipment or other property of the Sublessee shall be kept on the Premises at the sole risk of the Sublessee. Sublessee shall be liable to Sublessor for all damages beyond reasonable wear and tear. Reasonable wear and tear includes without limitation, grading, excavation, and filling of the Premises as may be reasonably required for the construction of the Facilities and shall not constitute strip or waste. Sublessee shall make reasonable effort to minimize grading, excavation, and filling. Note: Sublessee must execute an Operating and Site Development Agreement ("OSDA") with Sublessor.	III.G. I.H.
Operation of Facilities	As a condition to the operation of the Facilities, Sublessee must execute an Operating and Site Development Agreement ("OSDA") with Sublessor. In the absence of an OSDA, the Facilities may be operated only when necessary to ensure the safety of personnel or of the Facilities.	I.H.
Fire or Destruction of Premises	If the Facilities are rendered unsuitable for optical and infrared astronomy by fire or other causes, Sublessee elects not to restore the facilities, and the Sublease is terminated per Section IV.F.6., Sublessee shall remove such unsuitable, damaged property or debris within one (1) year after written notice to remove and restore the land to even grade. If the Sublessee fails to remove such property or debris and restore the land within one (1) year, Sublessor may remove such property or debris and restore the land at the expense of Sublessee. To avoid termination of the Sublease pursuant to Section IV.F., Sublessee must notify Sublessor within six (6) months of the date of casualty that it intends to restore the improvements to their prior condition. If the Facilities or a portion thereof are restored, such restoration is subject to approval by the Sublessor (not to be unreasonably withheld) and in keeping with Article III.H. addressing Improvements and Alterations.	I.F. IV.F.6.
Insurance	Sublessee to maintain liability and property insurance in specified amounts.	I.I.
Right of Entry	At reasonable times, Sublessor or its agents will have free access to the Premises for the purpose of examining and determining whether the covenants of the Sublease are being fully observed and performed.	III.A.

Abstract of Sublease and Non-Exclusive Easement Agreement to National Astronomical Observatory of Japan dated 6/5/1992

Item	Summary	Ref.
Assignment	Allowed with prior written consent of Sublessor and Master Lessor. Sublessor's consent is not to be arbitrarily or capriciously withheld or delayed. This provision is not to prevent Sublessee from making Premises available to invitees for the purposes permitted under the Sublease. Note: Sublease is silent re: assignment of Sublessor's interest.	III.F.
Improvements and Alterations	Sublessee shall construct the Facilities on the Premises at its sole cost and expense. Sublessee must obtain Sublessor's written approval prior to commencing work on any substantive structural alteration of or addition to the Facilities which will significantly alter the external appearance or structure of the Facilities. This approval shall not be withheld unreasonably. Sublessor shall use its best efforts to secure Lessor's consent. Sublessor shall provide its own approval or objection within sixty (60) days after receipt of Sublessee's request. Title to the Facilities, alterations, additions and improvements on the Premises remain in the name of the Sublessee at all times.	III.H. IV.G. 1.
Sublessee Responsibilities	Janitorial, custodial and security services, including sewerage and sanitation facilities and services. Repair and maintenance of the Premises and Facilities, including painting Facilities and necessary modifications or alterations. Except as agreed in the OSDA, all charges associated with the Facilities, and all charges, duties, and rates of every description, including electricity, water, communications, sewer, gas, refuse collection or any other similar charges on the Premises whether assessed to or payable by Sublessor or Sublessee. All taxes, rates, assessments, and other outgoings of every description on the Premises whether assessed to Sublessor or Sublessee.	III.B. III.C. III.D. III.E.
Termination	The Sublease may be terminated: 1. If the planned construction described in Exhibit D is not substantially completed by 12/31/1999, unless otherwise agreed in writing by Sublessee and Sublessor. 2. Upon termination of the OSDA unless a new OSDA between Sublessor and another party/ies is executed and Lessor, Sublessor, and Sublessee agree in writing to a contribution of the Sublease. 3. Upon expiration of the Master Lease S-4191 on 12/31/2033 unless it is renewed, extended or renegotiated. 4. If Sublessee fails to observe of comply with any of the terms and conditions of the Sublease within sixty (60) days of written notice by Sublessor. If more than sixty (60) days are required to observe or perform, Sublessee shall initiate action and provide a plan for observance and performance within the sixty (60) days and diligently prosecute the same to completion. 5. If Sublessee peaceably surrenders or abandons the Premises.	IV.F.

Item	Summary	Ref.
	6. Destruction of the Facilities by fire or other causes rendering the same unsuitable for purposes of optical and infrared astronomy, unless Sublessee notifies Sublessor within six (6) months of the date of casualty that it intends to restore the Facilities to their prior condition as specified in Article I.G. 7. By Sublessee upon six (6) months' written notice to Sublessor if Sublessee's contemplated sources of funding become unavailable and after diligent effort, Sublessee is unable to procure alternate funding. 8. By Sublessee upon 2 years notice. 9. By mutual agreement between Sublessor and Sublessee.	
Title to the Facilities, Alterations, Additions, and Improvements and Disposition in Event of Termination or Expiration	If the Sublease terminates or expires and Sublessor has not voluntarily terminated the Master Lease or defaulted on the Sublease or Master Lease, Sublessee shall remove the Facilities, alterations, additions and improvements (the "Property") from the Premises within one (1) year of termination or expiration of the Sublease, unless otherwise agreed to in writing by Sublessor and Sublessee. Such Property may be sold, abandoned or surrendered with written approval (not to be arbitrarily or capriciously withheld) of Lessor and Sublessor per the terms of section IV.G.2. If Sublessee removes all or part of the Property under section IV.G., unless otherwise agreed to in writing by Sublessor, the removal will be at Sublessee's expense, Sublessee shall restore the Premises or any portion affected by removal to even grade and repair any damage done to the Property not removed within twelve (12) months, and if Sublessee fails to do so, Sublessor may perform removal and restoration at the expense of Sublessee. If the Sublease terminates or expires and Sublessor has either voluntarily surrendered the Master Lease or has defaulted on the Sublease or Master Lease, and Sublessee retains its right to quiet enjoyment of the Property and Premises under the terms of Exhibit B Consent to Sublease, Sublessee agrees to honor the terms of the Sublease. If Sublessor's rights are returned to Lessor or transferred to another organization due to its surrender or default, Sublessee agrees to negotiate in good faith a new OSDA with Lessor or the new sublessor of the Premises with equivalent terms to the OSDA.	IV.G.

Abstract of Sublease to National Science Foundation dated 9/26/1994 (the "Sublease")

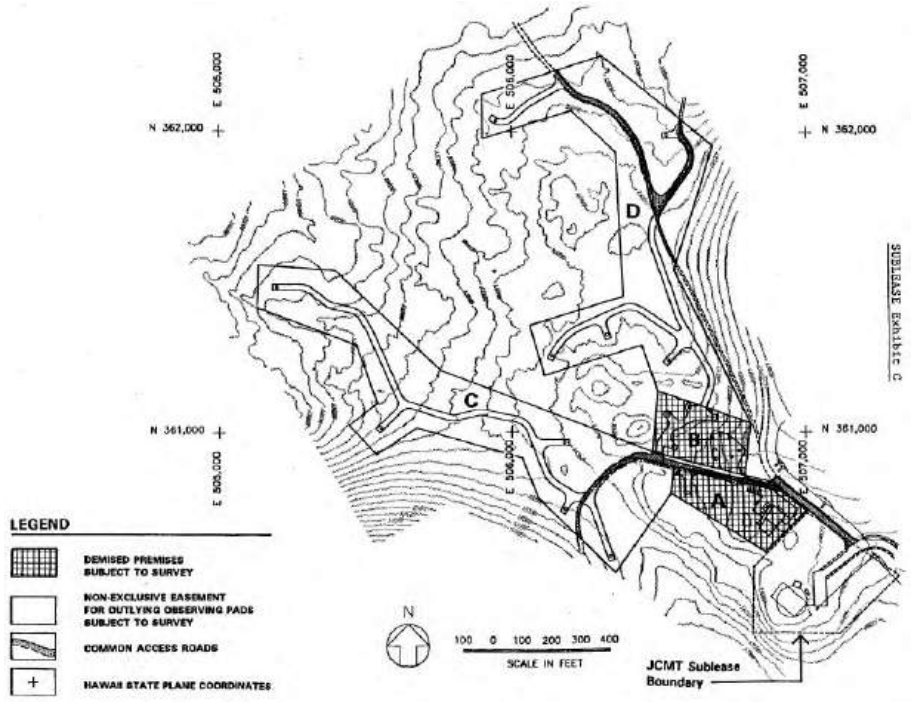
Item	Summary	Ref.
Sublessor	University of Hawaii	
Sublessee	National Science Foundation	
Master Lease	General Lease S-4191 (the "Master Lease") Note: The Master Lease controls if any term or provision conflicts with the Sublease.	I.E.
Rent	US$1.00 per year	I.E.
Commencement Date	September 26, 1994	
Premises	A portion of that certain land area described in Exhibit A of the Master Lease, more specifically identified in Exhibit C, to be described in more detail after a survey by Sublessee within six (6) months from the date of the Sublease.  	I.A. I.C.

Item	Summary	Ref.
	Note: Exhibit C located in OSDA	
Non-Exclusive Easement	Sublessee shall have right of access to and egress from the Premises over and across the Mauna Kea Science Reserve, utilizing the common entrances and rights of way.	I.B.
Term	Expires December 31, 2033, unless sooner terminated or extended per Article IV.F and II.B. Note: If the Master Lease is renewed, Sublessor shall renew or extend the Sublease or negotiate a new Sublease with Sublessee if desired. Sublessor shall make every effort to ensure renewal, extension, or renegotiation of the Master Lease.	I.D. II.B.
Permitted Use	Exclusively for construction including the Gemini 8-Meter Telescope (the "Gemini Mauna Kea") enclosure and support building, its optical/infrared telescope having an effective diameter of approx. 8 meters, related equipment and instrumentation and related support facilities and infrastructure improvements required on the Premises to support the operations of Gemini Mauna Kea (collectively, the "Facilities"). Sublessee shall be liable to Sublessor for all damages beyond reasonable wear and tear. Reasonable wear and tear includes without limitation, grading, excavation, and filling of the Premises as may be reasonably required for the construction of the Facilities and shall not constitute strip or waste. Sublessee shall make reasonable effort to minimize grading, excavation, and filling. All goods, ware, merchandise, equipment or other property of the Sublessee shall be kept on the Premises at the sole risk of the Sublessee.	III.G.
Operation of Facilities	As a condition to the operation of the Facilities, Sublessee must execute an Operating and Site Development Agreement ("OSDA") with Sublessor. In the absence of an OSDA, the Facilities may be operated only when necessary to ensure the safety of personnel or of the Facilities.	I.H.
Fire or Destruction of Premises	If the Facilities are rendered unsuitable for optical or infrared astronomy by fire or other causes, Sublessee elects not to restore the facilities, and the Sublease is terminated per Section IV.F.6., Sublessee shall remove such unsuitable, damaged property or debris within one (1) year after written notice to remove and restore the land to its original condition. If the Sublessee fails to remove such property or debris and restore the land within one (1) year, Sublessor may remove such property or debris and restore the land at the expense of Sublessee. To avoid termination of the Sublease pursuant to Section IV.F., Sublessee must notify Sublessor within six (6) months of the date of casualty that it intends to restore the improvements to their prior condition. If the Facilities or a portion thereof are restored, such restoration is subject to approval by the Sublessor (not to be unreasonably withheld) and in keeping with Article III.H. addressing Improvements and Alterations.	I.D.
Insurance	Sublessee to maintain liability and property insurance in specified amounts.	I.I.

Item	Summary	Ref.
Right of Entry	At reasonable times, Sublessor or its agents will have free access to the Premises for the purpose of examining and determining whether the covenants of the Sublease are being fully observed and performed.	III.A.
Assignment	Allowed with prior written consent of Sublessor and Master Lessor. Sublessor's consent is not to be arbitrarily or capriciously withheld or delayed. This provision is not to prevent Sublessee from making Premises available to invitees for the purposes permitted under the Sublease. Note: Sublease is silent re: assignment of Sublessor's interest.	III.F.
Improvements and Alterations	Sublessee must obtain Sublessor's written approval prior to commencing work on any substantive structural alteration of or addition to the Facilities which will significantly alter the external appearance or structure of the Facilities. This approval shall not be withheld unreasonably. Sublessor shall use its best efforts to secure Lessor's consent. Sublessor shall provide its own approval or objection within sixty (60) days after receipt of Sublessee's request. Title to the Facilities, alterations, additions and improvements remain in the name of the Sublessee at all times.	III.H. IV.G.1.
Sublessee Responsibilities	Janitorial, custodial and security services, including sewerage and sanitation facilities and services. Repair and maintenance of the Premises and Facilities, including painting Facilities and necessary modifications or alterations. Except as agreed in the OSDA, all charges associated with the Facilities, and all charges, duties, and rates of every description, including electricity, water, communications, sewer, gas, refuse collection or any other similar charges whether assessed to or payable by Sublessor or Sublessee. All taxes, rates, assessments, and other outgoings of every description whether assessed to Sublessor or Sublessee.	III.B. III.C. III.D. III.E.
Termination	The Sublease may be terminated: 1. If the planned construction described in Exhibit D is not substantially completed by 12/31/1999, unless otherwise agreed in writing by Sublessee and Sublessor. 2. Upon termination of the OSDA unless a new OSDA between Sublessor and another party/ies is executed and Lessor, Sublessor, and Sublessee agree in writing to a contribution of the Sublease. 3. Upon expiration of the Master Lease S-4191 on 12/31/2033 unless it is renewed, extended or renegotiated. 4. If Sublessee fails to observe of comply with any of the terms and conditions of the Sublease within sixty (60) days of written notice by Sublessor. If more than sixty (60) days are required to observe or perform, Sublessee shall initiate action and provide a plan for observance and performance within the sixty (60) days and diligently prosecute the same to completion. 5. If Sublessee peaceably surrenders or abandons the Premises.	IV.F.

Item	Summary	Ref.
	6. Destruction of the Facilities by fire or other causes rendering the same unsuitable for purposes of optical and infrared astronomy, unless Sublessee notifies Sublessor within six (6) months of the date of casualty that it intends to restore the Facilities to their prior condition as specified in Article I.F. 7. By Sublessee upon six (6) months' written notice to Sublessor if Sublessee's contemplated sources of funding become unavailable and after diligent effort, Sublessee is unable to procure alternate funding. 8. By Sublessee upon 2 years notice. 9. By mutual agreement between Sublessor and Sublessee.	
Title to the Facilities, Alterations, Additions, and Improvements and Disposition in Event of Termination or Expiration	If the Sublease terminates or expires and Sublessor has not voluntarily terminated the Master Lease or defaulted on the Sublease or Master Lease, Sublessee shall remove the Facilities, alterations, additions and improvements (the "Property") from Premises within one (1) year of termination or expiration of the Sublease, unless otherwise agreed to in writing by Sublessor and Sublessee. Such Property may be sold with written approval (not to be arbitrarily or capriciously withheld) of Lessor and Sublessor per the terms of section IV.G.2. If Sublessee removes all or part of the Property under section IV.G., unless otherwise agreed to in writing by Sublessor, the removal will be at Sublessee's expense, Sublessee shall restore the Premises or any portion affected by removal to even grade and repair any damage done to the Property not removed within twelve (12) months, and if Sublessee fails to do so, Sublessor may perform removal and restoration at the expense of Sublessee. If the Sublease terminates or expires and Sublessor has either voluntarily surrendered the Master Lease or has defaulted on the Sublease or Master Lease, and Sublessee retains its right to quiet enjoyment of the Property and Premises under the terms of Exhibit B Consent to Sublease, Sublessee agrees to honor the terms of the Sublease. If Sublessor's rights are returned to Lessor or transferred to another organization due to its surrender or default, Sublessee agrees to negotiate in good faith a new OSDA with Lessor or the new sublessor of the Premises with equivalent terms to the OSDA.	IV.G.

Abstract of Sublease and Non-Exclusive Easement Agreement to Smithsonian Institution dated 5/15/1995 (the "Sublease")

Item	Summary	Ref.
Sublessor	University of Hawaii	
Sublessee	Smithsonian Institution	
Master Lease	General Lease S-4191 (the "Master Lease") Note: The Master Lease controls if any term or provision conflicts with the Sublease.	I.H.
Rent	US$1.00 per year	I.F.
Commencement Date	May 15, 1995	
Premises	A portion of that certain land area described in Exhibit A of the Master Lease, more specifically identified in Exhibit C, as parcels A and B to be described in more detail after a survey by Sublessee within twelve (12) months from the date of the Sublease. 	I.A. I.D.
Non-Exclusive Easement	Sublessee shall have right of access to and egress from the Premises over and across the Mauna Kea Science Reserve, utilizing the common entrances and rights of way. Sublessee shall have the right to install observing pads, ravel ways, underground communications and power lines and other infrastructure improvements needed to support temporary location of antennas in these areas as part of the Smithsonian Submillimeter Array Telescope ("SMA") operations within areas C and D in Exhibit C. Notwithstanding the foregoing, Sublessor retains its right to use areas C and D for other purpose,	I.B. I.C.

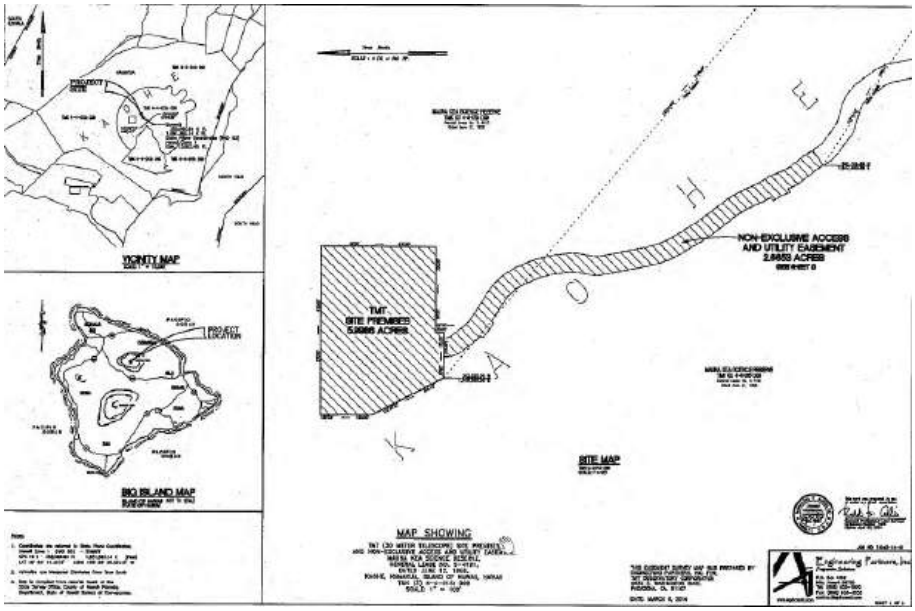
Item	Summary	Ref.
	provided such use does not create significant adverse impact on the operation of the SMA. Sublessee shall not interfere with or otherwise restrict traffic on portions of parcels C and D which are common access roads, as indicated in Exhibit C.	
Term	Expires December 31, 2033, unless sooner terminated or extended per Article IV.F and II.B. Note: If the Master Lease is renewed, Sublessor shall renew or extend the Sublease or negotiate a new Sublease with Sublessee if desired. Sublessor shall make every effort to ensure renewal, extension, or renegotiation of the Master Lease.	I.E. II.B.
Permitted Use	Exclusively for the operation and construction including a control building, an antenna maintenance building, observing pads, antennas, related support facilities and infrastructure improvements, and related equipment and instrumentation required to support the operation for the SMA (collectively, the "Facilities"). All goods, ware, merchandise, equipment or other property of the Sublessee shall be kept on the Premises or the Non-Exclusive Easement for Outlying Observing Pads at the sole risk of the Sublessee. Sublessee shall be liable to Sublessor for all damages beyond reasonable wear and tear. Reasonable wear and tear includes without limitation, grading, excavation, and filling of the Premises as may be reasonably required for the construction of the Facilities and shall not constitute strip or waste. Sublessee shall make every reasonable effort to minimize grading, excavation, and filling. Note: Sublessee must execute an Operating and Site Development Agreement ("OSDA") with Sublessor.	III.G. I.I.
Operation of Facilities	As a condition to the operation of the Facilities, Sublessee must execute an Operating and Site Development Agreement ("OSDA") with Sublessor. In the absence of an OSDA, the Facilities may be operated only when necessary to ensure the safety of personnel or of the Facilities.	I.I.
Fire or Destruction of Premises	If the Facilities are rendered unsuitable for submillimeter astronomy by fire or other causes, Sublessee elects not to restore the facilities, and the Sublease is terminated per Section IV.F.6., Sublessee shall remove such unsuitable, damaged property or debris within one (1) year after written notice to remove and restore the land to even grade. If the Sublessee fails to remove such property or debris and restore the land within one (1) year, Sublessor may remove such property or debris and restore the land at the expense of Sublessee. To avoid termination of the Sublease pursuant to Section IV.F., Sublessee must notify Sublessor within six (6) months of the date of casualty that it intends to restore the improvements to their prior condition. If the Facilities or a portion thereof are restored, such restoration is subject to approval by the Sublessor (not to be unreasonably withheld) and in keeping with Article III.H. addressing Improvements and Alterations.	I.G. IV.F.6.

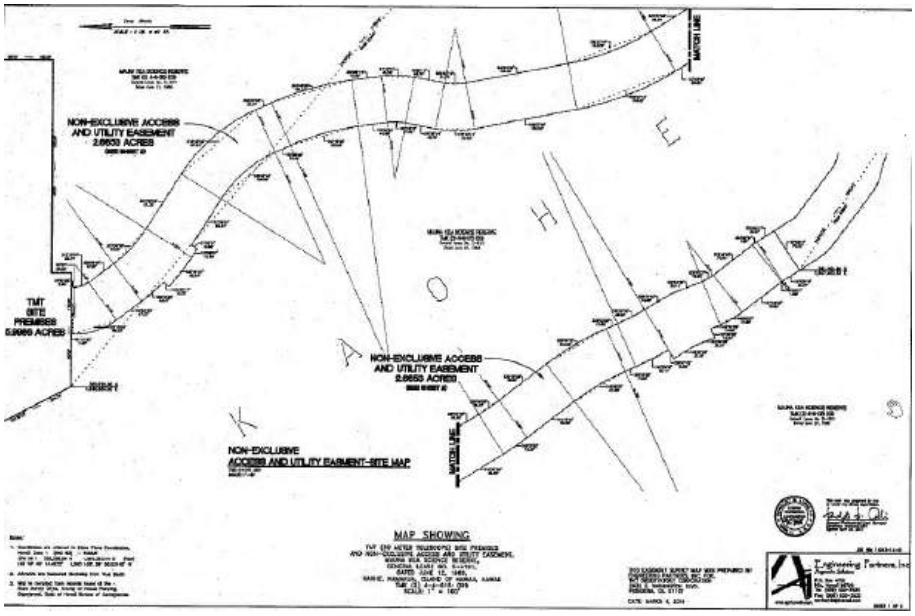
Abstract of Sublease and Non-Exclusive Easement Agreement to Smithsonian Institution dated 5/15/1995

Item	Summary	Ref.
Insurance	Sublessee to maintain liability and property insurance in specified amounts.	I.J.
Right of Entry	At reasonable times, Sublessor or its agents will have free access to the Premises for the purpose of examining and determining whether the covenants of the Sublease are being fully observed and performed.	III.A.
Assignment	Allowed with prior written consent of Sublessor and Master Lessor. Sublessor's consent is not to be arbitrarily or capriciously withheld or delayed. This provision is not to prevent Sublessee from making Premises available to invitees for the purposes permitted under the Sublease. Note: Sublease is silent re: assignment of Sublessor's interest.	III.F.
Improvements and Alterations	Sublessee shall construct the Facilities on the Premises and Non-Exclusive Easement for Outlying Observing Pads at its sole cost and expense. Sublessee must obtain Sublessor's written approval prior to commencing work on any substantive structural alteration of or addition to the Facilities which will significantly alter the external appearance or structure of the Facilities. This approval shall not be withheld unreasonably. Sublessor shall use its best efforts to secure Lessor's consent. Sublessor shall provide its own approval or objection within sixty (60) days after receipt of Sublessee's request. Title to the Facilities, alterations, additions and improvements on the Premises and Non-Exclusive Easement for Outlying Observing Pads remain in the name of the Sublessee at all times.	III.H. IV.G. 1.
Sublessee Responsibilities	Janitorial, custodial and security services, including sewerage and sanitation facilities and services. Repair and maintenance of the Premises and Facilities, including painting Facilities and necessary modifications or alterations. Except as agreed in the OSDA, all charges associated with the Facilities, and all charges, duties, and rates of every description, including electricity, water, communications, sewer, gas, refuse collection or any other similar charges on the Premises and Non-Exclusive Easement for Outlying Observing Pads whether assessed to or payable by Sublessor or Sublessee. All taxes, rates, assessments, and other outgoings of every description on the Premises and Non-Exclusive Easement for Outlying Observing Pads whether assessed to Sublessor or Sublessee.	III.B. III.C. III.D. III.E.
Termination	The Sublease may be terminated: 1. If the planned construction described in Exhibit D is not substantially completed by 12/31/1999, unless otherwise agreed in writing by Sublessee and Sublessor. 2. Upon termination of the OSDA unless a new OSDA between Sublessor and another party/ies is executed and Lessor, Sublessor, and Sublessee agree in writing to a contribution of the Sublease. 3. Upon expiration of the Master Lease S-4191 on 12/31/2033 unless it is renewed, extended or renegotiated.	IV.F.

Item	Summary	Ref.
	4. If Sublessee fails to observe of comply with any of the terms and conditions of the Sublease within sixty (60) days of written notice by Sublessor. If more than sixty (60) days are required to observe or perform, Sublessee shall initiate action and provide a plan for observance and performance within the sixty (60) days and diligently prosecute the same to completion. 5. If Sublessee peaceably surrenders or abandons the Premises. 6. Destruction of the Facilities by fire or other causes rendering the same unsuitable for purposes of optical and infrared astronomy, unless Sublessee notifies Sublessor within six (6) months of the date of casualty that it intends to restore the Facilities to their prior condition as specified in Article I.G. 7. By Sublessee upon six (6) months' written notice to Sublessor if Sublessee's contemplated sources of funding become unavailable and after diligent effort, Sublessee is unable to procure alternate funding. 8. By Sublessee upon 2 years notice. 9. By mutual agreement between Sublessor and Sublessee.	
Title to the Facilities, Alterations, Additions, and Improvements and Disposition in Event of Termination or Expiration	If the Sublease terminates or expires and Sublessor has not voluntarily terminated the Master Lease or defaulted on the Sublease or Master Lease, Sublessee shall remove the Facilities, alterations, additions and improvements (the "Property") from the Premises and Non-Exclusive Easement for Outlying Observing Pads within one (1) year of termination or expiration of the Sublease, unless otherwise agreed to in writing by Sublessor and Sublessee. Such Property may be sold, abandoned or surrendered with written approval (not to be arbitrarily or capriciously withheld) of Lessor and Sublessor per the terms of section IV.G.2. If Sublessee removes all or part of the Property under section IV.G., unless otherwise agreed to in writing by Sublessor, the removal will be at Sublessee's expense, Sublessee shall restore the Premises and Non-Exclusive Easement for Outlying Observing Pads or any portion affected by removal to even grade and repair any damage done to the Property not removed within twelve (12) months, and if Sublessee fails to do so, Sublessor may perform removal and restoration at the expense of Sublessee. If the Sublease terminates or expires and Sublessor has either voluntarily surrendered the Master Lease or has defaulted on the Sublease or Master Lease, and Sublessee retains its right to quiet enjoyment of the Property and Premises under the terms of Exhibit B Consent to Sublease, Sublessee agrees to honor the terms of the Sublease. If Sublessor's rights are returned to Lessor or transferred to another organization due to its surrender or default, Sublessee agrees to negotiate in good faith a new OSDA with Lessor or the new sublessor of the Premises with equivalent terms to the OSDA.	IV.G.

Abstract of Sublease and Non-Exclusive Easement Agreement to TMT International Observatory LLC dated 7/28/2014 (the "Sublease")

Item	Summary	Ref.
Sublessor	University of Hawaii	
Sublessee	TMT International Observatory LLC	
Master Lease	General Lease S-4191 (the "Master Lease") Note: The Master Lease controls if any term or provision conflicts with the Sublease. The Sublease controls if any term or provision conflicts with the Scientific Cooperation Agreement ("SCA").	8
Rent	Year / Annual Rent / Milestone 1-3 / $300,000 / Civil construction 4-5 / $400,000 / Enclosure 6-7 / $600,000 / Telescope Structure 8-9 / $700,000 / Instruments and Mirrors 10 / $900,000 / Commissioning 11 and later / $1,080,000 / Operations Rent shall be paid in advance in equal semi-annual installments on or before January 31st and July 31st of each calendar year. Beginning in January of 2015 and in January of each year thereafter, the annual rental amount for the year shall be adjusted for the annual rate of inflation recorded for subsequent years in accordance with the Consumer Price Index for all Urban Consumers, U.S. City Average (not seasonally adjusted) (base year 1982-1984 - 100).	7
Commencement Date	July 28, 2014	
Premises	A portion of that certain land area described in identified in Exhibits C-1 and C-2:  	A 1 3

Item	Summary	Ref.
Non-Exclusive Easement	Sublessee shall have right of access to and egress from the Premises over and across the Mauna Kea Science Reserve, utilizing the common entrances and rights of way. Sublessee shall also have the right to (i) utilize and construct in, grade, fill, and perform work approved by Lessor and Sublessor in the easement area identified in Exhibits C-1 and C-3 (the "Easement Area"), (ii) utilize and construct in and perform work approved by Lessor and Sublessor and consistent with the TMT Access Way Agreement dated September 13, 212 by and among Sublessor, the Smithsonian Institution Astrophysical Observatory and TMT Observatory Corporation in the spur road from the Mauna Kea Observatory Access Road to the Premises, (iii) install and utilize power and communications conduits and lines from central handhole(s) in the Mauna Kea summit area to the Premises, and (iv) utilize and access the Batch Plant staging area as authorized by that certain Conservation District Use Permit HA-3568 approved by Lessor on April 12, 2013 (the "TMT CDUP").  	2
Term	Expires December 31, 2033, unless sooner terminated or extended. a. Mutual Cancellation of Master Lease and Concurrent Issuance of New Master Lease (1) Sublessor shall use its best efforts to obtain mutual cancellation of the current Master Lease subject to and concurrent with issuance of a new master lease (the "New Master Lease") for a term of 65 years on terms and conditions materially consistent with the form lease submitted to Lessor on 11/8/2013 ("Form Lease") (2) If New Master Lease is approved and duly executed by Lessor and Sublessor, Sublessor shall promptly provide a copy to Sublessee and the following shall apply: i. Provisions of the Sublease continue ii. New Master Lease becomes Master Lease for the purposes of the Sublease or any new sublease and	9.a. 9.b. 9.c.

Item	Summary	Ref.
	references to Master Lease shall mean the New Master Lease iii. Term of the Sublease shall be automatically extended and expire 65 years after the Effective Date or upon expiration or termination of the New Master Lease, whichever occurs first (3) If New Master Lease term is not for 65 years, or the terms are not materially consistent with the Form Lease, Sections 9.a.(2)i., ii., and iii. shall apply unless Sublessee provides a notice of termination to Sublessor in accordance with Section 9.d. within 120 days after Sublessee's receipt of the New Master Lease. Sublessor agrees to diligently negotiate with Sublessee re: mutually acceptable amendments to the Sublease during the 120 day period ad to promptly and diligently pursue approval by Lessor of such amendments. (4) If the New Master Lease is materially consistent with the Form of Lease or otherwise acceptable to Sublessee, Sublessor agrees to execute an amendment to the Sublease to comply with sections 9.a.(2)i., ii., and iii. or a new sublease on the same material terms of the Sublease reflecting compliance with sections 9.a.(2)i., ii., and iii. (5) Sublessee acknowledges that Lessor has sole authority to approve and enter into New Master Lease and no approval has been granted yet. b. If New Master Lease is not approved by Lessor or Sublessor otherwise fails to obtain a New Mater Lease that automatically extents the terms of the Sublease in accordance with 9.a.(3) or (4), Sublessor will immediately and diligently pursue another means of acquiring sufficient rights to continue to lease the Premises to Sublessee on substantially the same terms as the Sublease but for an additional term extending to around 3/31/2079. If a subsequent master lease is approved and executed, at Sublessee's sole option, the terms of sections 9.a.(2)i., ii., and iii. shall apply as if the new master lease is the New Master Lease and Sublessor shall execute a new sublease on the same material terms of the Sublease reflecting compliance with such sections or execute an amendment to the Sublease to comply with such sections OR Sublessor shall negotiate a new sublease with Sublessee on the same material terms as the Sublease with a term ending on or after 3/31/2079 c. Sublessee shall have an option (in its sole discretion) to extend the term of the Sublease beyond 12/31/2033 if Sublessor acquires the right to sublease the Premises to Sublessee under the New Master Lease or other master lease. The extension shall be coterminous with the new master lease, but the term of the Sublease shall not extend beyond 3/31/2079. The option shall expire on 12/31/2033.	
Permitted Use	Solely to construct and operate the Thirty Meter Telescope ("TMT"), enclosure and support building, together with instruments, electrical conductors, cableways and tunnels, driveways and parking lots, power, telephone and communications conduits and lines and access roads within	B 4

Item	Summary	Ref.
	the Premises(collectively, the "TMT Facilities") in accordance with the Sublease and SCA. Such construction and operation shall be conducted in strict compliance with the TMT CDUP. Sublessee shall not construct, place, maintain or install on the Premises any other building, structure, or improvement not specified in or contemplated by the TMT CDUP and not contained within the building envelop of TMT observatory plans approved in accordance with section 37 without the prior written approval of Sublessor and Lessor. Any instruments, equipment or other additions fully contained within the observatory structure or buildings shall not require prior written approval of Sublessor or Lessor, as long as such additions are otherwise in compliance with the terms of the Sublease and Master Lease. TMT Facilities excludes any facilities outside the Premises. Note: Sublessee must execute an SCA with Sublessor.	6
Operation of the TMT Facilities	As a condition to the operation of the Facilities, Sublessee must execute an SCA with Sublessor. In the absence of an SCA, the Facilities may be operated only when necessary to ensure the safety of personnel or of the Facilities.	6
Management and Stewardship Obligations	The Sublease is subject to the applicable rules and regulations of the State Conservation District, including HRS chapter 183C and HAR chapter 13-5. Sublessee shall comply with all applicable State rules and regulations related to historic preservation including but not limited to HRS chapter 6E and HAR chapters 13-197, 13-198, 13-275 through 13-284 and 13-300 and any applicable amendments or supplements. Sublessor shall exercise management jurisdiction of the Premises pursuant to management plans approved by the Lessor, including the Mauna Kea Comprehensive Management Plan ("CMP") and its subplans, the Natural Resources Management Plan, Cultural Resources Management Plan, Decommissioning Plan, and Public Access Plan, the TMT Management Plan, and any amendments or supplements to management plans approved by the Lessor. All public and commercial activities in the areas of Mauna Kea managed by Sublessor including recreational activities shall be governed by administrative rules promulgated pursuant to the authority granted to Sublessor by Act 132 (LH 2009) following consultation with DLNR, OHA, and the public. The Sublease is subject to the right of Native Hawaiians to exercise protected traditional and customary practices as provided in the CMP and consistent with State law. Sublessor has established the Office of Mauna Kea Management at UH Hilo, the Mauna Kea Management Board, and the Kahu Ku Mauna advisory council on Hawaiian cultural matters to manage the lands including the Premises.	5

Item	Summary	Ref.
Insurance	Sublessee to maintain liability, property, auto, and pollution insurance in specified amounts. Note: *See* Sublease for specifics and more details re: general requirements for insurance.	12
Right to Enter	Lessor, Sublessor or the County of Hawaii will have free access to the Premises for the purpose of performing any public or official duties; provided that the exercise of such rights do not interfere unreasonably with the Sublessee or its use and enjoyment of the Premises.	27
Inspection of Subleased Premises	At reasonable times and upon reasonable notice by Sublessor, Sublessee shall permit the Lessor, Sublessor and their respective agents to enter the Premises and examine the state of its repair and condition.	19
Assignment	Allowed with prior written consent of Sublessor and Master Lessor. Note: Sublease is silent re: assignment of Sublessor's interest.	23
Improvements	Sublessee must obtain Sublessor's and Master Lessor's written approval prior to constructing, maintaining ad installing any building, structure or improvement of any kind, except as otherwise provided in the Sublease. Title to the Facilities, alterations, additions and improvements on the Premises remain in the name of the Sublessee at all times.	20
Sublessee Responsibilities	All taxes, rates, assessments, and other outgoings of every description on the Premises whether assessed to Sublessor or Sublessee. Obtaining any utility service and paying all charges, duties and rates of every description including water, sewer, gas, refuse collection or any other charges on the Premises whether assessed to or payable by Lessor, Sublessor or Sublessee. Keeping the Premises and improvements in a strictly clean, sanitary and orderly condition. Sublessee shall not commit or permit any waste, nuisance, strip or unlawful, improper or offensive use of the Premises without he prior written consent of the Lessor and Sublessor, cut down, remove, or destroy (or suffer the same) any trees now growing on the Premises. Repair and maintain all buildings and improvements on the Premises in good order, condition, and repair, reasonable wear and tear excepted. Sublessee shall not commit or suffer any act that results in the Premises, improvements, leasehold estate of the Sublessor, or subleasehold estate of Sublessee becoming subject to attachment, lien, charge, or encumbrance except as provided in the Sublease and shall indemnify Lessor and Sublessor from and against all such attachments, liens, charges, and encumbrances and all resulting expenses. All costs, including reasonable attorneys' fees, and expenses incurred or paid by the Lessor or Sublessor in enforcing the Master Lease or Sublease with respect to Sublessee, in recovering possession of the Premises or in the collection of delinquent rental, taxes, and any and all other charges.	13 14 16 17 21 22 24 38 43

Item	Summary	Ref.
	Obtaining all necessary federal, state or county clearances. Removal of all illegally dumped trash on the Premises within 90 days from the date of execution of the Sublease. Sublessee shall send written notice to Sublessor at end of 90 days.	
Termination	The Sublease may be terminated: 1. By Sublessee upon 6 months prior written notice to Sublessor. 2. If Sublessee causes breach/default of the Master Lease which continues for more than 45 days after delivery of written notice by Sublessor (additional period may be allowed by lessor for good cause), subject to HRS section 171-21, Sublessor may re-enter the Premises and terminate the Sublease without prejudice to any other remedy or right of action and at its option, keep or remove all buildings and improvements. If Sublessor chooses removal, Sublessee shall, at its sole cost and expense, remove the buildings and improvements in accordance with the Site Decommissioning Plan. 3. If the Sublessee becomes bankrupt or the Sublease and Premises is attached or taken by operation of law, or Sublessee fails to observe and perform any of the material covenants, terms and condition of the Sublease (other than a failure that causes a breach of the Master Lease – in which case section 8 applies) for more than 60 days after delivery of written notice by Sublessor, subject to HRS section 171-21, Sublessor may re-enter the Premises and terminate the Sublease without prejudice to any other remedy or right of action and at its option, keep or remove all buildings and improvements in accordance with section 10. Sublessor shall retain all rent paid in advance to be applied to any damages. If Sublessee fails or ceases to use or abandons the Premises for a continues period of 11 months. Sublessor shall provide written notice within 30 days after the 6th month and allow Sublessee 3 months to cure purported abandonment.	8 9.d. 9.e. 9.f.
Effect of Termination or Expiration: Decommissioning	Upon termination or expiration of the Sublease, Sublessee shall, at Sublessor's option and Sublessee's sole cost and expense, either surrender the Premises with all improvements existing or constructed thereon or decommission and remove the TMT Facilities and restore the land in accordance with the CMP and the Decommissioning Plan (defined in Sublease). a. Sublessee shall develop and periodically update a Decommissioning Funding Plan as described in and in accordance with the Decommissioning Plan to provide assurance to Sublessor that sufficient funds will be available to carry out deconstruction and site restoration activities upon termination or expiration of the Sublease. During the term of the Sublease, Sublessor reasonably determines that the Decommissioning funding Plan is insufficient, Sublessee shall consult with Sublessor and negotiate in good faith to determine	10

Item	Summary	Ref.
	the amount of additional funding and provide such additional funding assurance mechanisms. b. Upon expiration or termination of the Sublease or any extended sublease, decommissioning, including site restoration, shall be carried out in strict compliance with a Site Decommissioning Plan developed and approved in accordance with the Decommissioning Plan (the "Decommissioning Obligations"). c. Except as otherwise provided, upon expiration or termination of the Sublease or any extended sublease and completion of the Decommissioning Obligations, Sublessee shall peaceably deliver to Sublessor possession of the Premises in a clean and orderly condition. d. Sublessee shall promptly pay on demand any reasonable and necessary costs incurred by Sublessor or Lessor to remedy any failure by Sublessee to fully and timely perform its Decommissioning Obligations. e. Sections 10, 9.a., 9.b., 9.c. and 11 shall survive expiration or termination of the Sublease. f. If the Sublease expires or is terminated prior to the expiration of the Master Lease an when the TMT Facilities have remaining useful life, at Sublessor's option, Sublessee may be relieved of its Decommissioning Obligations and permitted to surrender its subleasehold interest in the Premises without removal of the TMT Facilities on such terms as may be mutually agreed in writing by Sublessor and Sublessee.	
Condemnation	If the Premises are condemned or required for public purposes by any government authority, the rental shall be reduced in proportion to the value of the portion of the Premises condemned. Sublessee shall be entitled to receive from the condemning authority the proportionate value of the Sublessee's permanent improvements in proportion to the unexpired term of the Sublease or remove and relocate its improvement to the remainder of the lands occupied by Sublessee. Sublessee shall not be entitled to any claim against Lessor or Sublessor for condemnation or indemnity for leasehold interest and all compensation payable on account of the leasehold interest shall be the sole property of the Lessor or Sublessor. If the portion taken renders the remainder of the Premises unsuitable for the use of the Sublease, Sublessee shall have the option to surrender the Sublease and be discharged from any further liability, provided that Sublessee shall remove the permanent improvements constructed, erected and placed by it within any reasonable period allowed by Lessor and Sublessor in accordance with section 10.	26
Hazardous Materials	Sublessee shall not cause or permit the escape, disposal, or release of any hazardous materials except as permitted by law. Sublessee shall not allow the storage or use of such materials in any manner not sanctioned by law or the highest standard in the industry for the storage and use of such materials. Sublessee shall not allow any such materials to be brought onto the Premises except to use in the ordinary course of its business where it has provided Sublessor with a list identifying the materials. If Sublessor disapproves in	31

Item	Summary	Ref.
	writing of any such materials, such disapproved materials shall not be brough onto the Premises, If any lender or governmental agency requires testing to ascertain whether there has been any release of hazardous materials by Sublessee, Sublessee shall be responsible for the reasonable costs thereof. Sublessee shall execute affidavits, representation, etc. at Lessor's or Sublessor's request concerning Sublessee's best knowledge and belief regarding the presence of hazardous materials on the Premises placed or released by Sublessee.	
Withdrawal	If Lessor exercises its power of withdrawal under the Master Lease to withdraw any portion of the Premises for public uses or purposes upon reasonable notice and without compensation except as provided in the master lease in effect or HRS chapter 171 that includes the Premises, Sublessor shall have the right to withdraw the same portions of the Premises upon giving reasonable notice to Sublessee and subject to the Sublessee's clam for any compensation provided under the master lease in effect or HRS Chapter 171 for any permanent improvement constructed on the Premises that is destroyed or made unusable in the process of the withdrawal or taking. Upon such withdrawal or taking, the rent shall be reduced in proportion to the value of the land withdrawn or taken, and to the extent permitted in the master lease in effect or HRS chapter 171, if any permanent improvement constructed by Sublessee is destroyed or made unusable in the process of the withdrawal or taking, the proportionate value shall be paid based upon the unexpired term of the lease (which value shall also include the cost of decommissioning such improvements, including site restoration as required in the Decommissioning Plan).	36
Building Construction	All building construction shall be in full compliance with all applicable laws, rules and regulations of the federal state and county governments and in accordance with the plans and specifications approved by Sublessor and the Chairman of BLNR prior to construction.	37
Dispute Resolution	Disputes not resolved by negotiation shall be submitted to non-binding mediation with DPI and if mediation does not conclude within 6 months after submission, then shall be decided in legal or equitable proceedings in accordance with Hawaii law in any court having jurisdiction in the State of Hawaii. Mediation shall take place in Honolulu. Each party shall bear its own costs and fees for mediation. The fees and expenses of the mediator shall be borne by the parties equally.	41
Historic Preservation	If any historic properties or burial sites (defined in HRS section 6E-2), are found on the Premises, Sublessee shall immediately stop all land utilization and or work and contact the Historic Preservation Office.	42
Phase I Environmental Site Assessment	Prior to termination or revocation of the Sublease, Sublessee shall conduct a Phase I environmental site assessment of the Premises an a complete abatement and disposal of any such sites, if necessary. Failure to comply with this section shall not extend the term of the Sublease or automatically prevent termination or revocation of the lease. Sublessor may refuse to approve termination unless this evaluation and abatement has been performed. In addition, or in the alternative, Sublessor may arrange for	44

Item	Summary	Ref.
	performance if Sublessee does not do so, with all costs and expenses to be charged to and paid by Sublessee.	
Non-warranty	No warranty of condition of Premises by Lessor or Sublessor. Premises are being subleased "as is".	30

Abstract of Tripartite Agreement between the NRC of Canada, the CNRS of France and UH dated ca. June 1974, amended 7/11/1980 and 9/25/1985 (the "Tripartite Agreement")

Item	Summary	Ref.
Observatory Name	CFHT	
Parties	University of Hawaii ("UH") The National Research Council of Canada ("NRC") The Centre National De La Recherche Scientifique of France ("CNRS")	
Related Sublease	Sublease dated 12/18/1975 to Canada-France-Hawaii Telescope Corporation ("Sublease")	
Effective Date	undated	
Premises	As specified in the Sublease and site plan dated 12/15/1973 attached as Annex C.	II.9.
Term	Tripartite Agreement notes that Sublease will run until year 2033. Note: UH agrees to seek renewal of the General Lease No. S-4191 from the State of Hawaii during the life of CFHT and to renew or extend CFHT's sublease if successful.	II.9.
Facilities	Large optical telescope and laboratories, equipment, and associated installations.	I
General Provisions	NRC, CNRS, and UH to establish a Hawaii nonprofit corporation to be named the Canada-France-Hawaii Telescope Corporation ("CFHT") to design, construct, and operate a large optical telescope on Hawaii, along with laboratories, equipment, and associated installations. CFHT to be directed by a Board of Directors (the" BOD") assisted by a Scientific Advisory Council (the "Council"). The BOD to coordinate on technical and administrative problems, ensure that design and operation of the telescope and ancillary installations will satisfy the needs of the astronomers, and be responsible for the use of CFHT funds. The BOD to be composed of 4 members appointed by NRC, 4 members appointed by CNRS and 2 members appointed by UH. The Council to make recommendations to the BOD and Executive Director on scientific and technical matters relevant to CFHT's goals. The Council to be composed of 4 members designated by NRC, 4 members designated by CNRS and 2 members designated by UH. Telescope project to be managed by the Project Officer and Associate Project Officer appointed by the BOD on the nomination of NRC and CNRS during the construction phase. Both to be jointly responsible to the BOD for carrying out design and construction activities. Powers necessary for the management of the Corporation to be delegated to an Executive Director and Associate Executive Director appointed by the BOD upon proposal of NRC and CNRS after consultation with UH. Authority to be defined in Bylaws. During the construction phase, Project	I

Item	Summary	Ref.
	Officer may be appointed Executive Director and Associate Project Officer may be appointed Associate Executive Director. All senior employees of CFHT to be appointed by the BOD in a manner that reflects interests of NRC, CNRS, and UH. The IFA Director has authority to enforce IFA rules on property the IFA has jurisdiction over.	
Financial Provisions	Total capital cost to be 91 million French Francs provided construction commences 1973 and ends 1977 (cost excludes tax and duties but includes components and studies already in existence). NRC and CNRS to equally share responsibility for providing to CFHT the work, components and sums necessary for the construction of the telescope, basic instrumentation, dome, and associated buildings. NRC and CNRS to jointly assume responsibility for cost and design of the telescope. CFHT to assume any and all contractual obligations once formed. CFHT to pay for the cost of power and operating cost of mid-level facilities. UH to (i) furnish sublease to CFHT at no cost until year 2033, (ii) to seek renewal of the General Lease No. S-4191 from the State of Hawaii during the life of CFHT and to renew or extend CFHT's sublease if successful, (iii) construct and maintain an access road to boundary of subleased property, (iv) construct electric power line and grant CFHT access, (v) construct at a mid-level station various structures including offices, accommodations, a data analysis laboratory, and darkrooms (vi) provide and maintain space in the IFA building on the Manoa Campus for CFHT use, and (vii) solicit maximum cooperation to protect the natural qualities of site for astronomical observation. Operating costs to be contributed by UH, NRC and CNRS in the manner set forth in Section II.10.1. NRC and CNRS to each provide 3 astronomers and UH to provide 1 astronomer to CFHT. Personnel hired by CFHT to be paid by CFHT.	II
Final Provisions (amended)	UH, NRC and CNRS to have equitable interest in CFHT as set forth in Section III.14., as amended. Transfer of a member's observation time to a third party other than a scientific agency within that member's own country can only take place with unanimous agreement of Directors present at meeting when proposal is discussed and upon the advice of the Council. Disputes to be resolved first amicably, then, if not possible, submitted to a tribunal of arbitration as set forth in section III.15. Within 5 years after completion of the construction of the telescope, laboratories, equipment, and installations, UH, NRC and CNRS to meet to consider modifications to the Tripartite Agreement. Thereafter, revisions allowed every 3 years upon express request of UH, NRC or CNRS.	III
Assignment	Tripartite Agreement is silent re: assignment of both NASA and UH's interests.	

Abstract of Agreement between UH and the Science Research Council – undated (the "Agreement")

Item	Summary	Ref.
Observatory Name	UKIRT	
Parties	University of Hawaii ("UH") Science Research Council ("SRC")	
Related Sublease	Sublease dated 9/21/1978 with SRC ("Sublease")	
Effective Date	Undated.	
Premises	As specified in the Sublease	
Term	Agreement is silent re: term.	
Facilities	A telescope of 3.8-meter aperture (the "Telescope"), together with the laboratories, equipment and associated installations required to support the project.	1
Sole Responsibilities of UH	Provide sublease to SRC UH entitled to 15% observing time in lieu of rent. Ensure right of access to Premises and provide access road Provide electric power sufficient to meet the requirements of the Telescope up to maximum of 75-kw Make available, at no cost to UH, a telephone connection from the Facilities Construct and maintain at mid-level a complex of office, laboratory and apartment buildings within which 5 apartments, 2 townhouses, and 2 laboratories with an aggregate of approx.. 800 sq. ft. will be set aside for SRC	3
Sole Responsibilities of SRC	Design, fabrication, operation and installation of the Facilities Contribute towards the maintenance of the road from Hale Pohaku to the Telescope based on actual usage of the road by contractors Insure that the contractors and other SRC sponsored personnel observe regulations established for the preservation of the environmental quality and scientific integrity of the summit area Pay pro rata costs, including amortization of permanent financing for offices, laboratories, accommodations, and related services provided by UH at the mid-level facility specifically for SRC use, subject to a separate future agreement. Pay cost of connection of electric power from Telescope to central terminator or generator.	2 3(d)
Assignment	Agreement is silent re: assignment of both SRC and UH's interest.	

Item	Summary	Ref.
Scientific Cooperation and Services	UH to favorably consider requests from astronomers sponsored by the SRC for work on the Telescope and use of space and facilities in the Institute of Astronomy's headquarters building at no profit or cost to UH, subject to availability. Uh to favorably consider requests to provide special services associated with operation and maintenance of Facilities on a cost reimbursable basis including provision of fuel at mid-level area, general workshop services and automobile service facilities, transportation liquified gases, certain communications, telephone and telex services, administrative facilities, supervision of staff and services required for maintenance. SRC may construct a temporary building at mid-level to house contractors and SRC sponsored personnel during the period prior to UH's completion of the mid-level facilities, subject to approval as required under Section XII of the Sublease.	4 5 6

Abstract of Management Plan with National Aeronautics and Space Administration dated 12/6/1977 (the "Management Plan")

Item	Summary	Ref.
Observatory Name	IRTF	
Parties	University of Hawaii ("UH") National Aeronautics and Space Administration ("NASA")	
Related Sublease	Sublease dated 11/29/1974 with NASA ("Sublease")	
Effective Date	Approved 12/6/1977 by NASA	
Premises	As specified in the Sublease.	II
Term	Not specified. Management Plan notes that General Lease and Sublease run until year 2033 but may be renewed if all affected parties agree.	II
Facilities	3-meter infrared telescope and associated building and equipment.	I
Objective	IRTF was established as an astronomical observing facility primarily to obtain infrared observations of interest to NASA. IRTF is to be managed for NASA by UH through IFA with funds and other resources provided by NASA under the terms of an operating contract to be negotiated annually between UH and NASA.	
Responsibilities of NASA	1. Provide funds and guidelines to UH for overall management of IRTF. 2. Solicit and review proposals from UH as necessary for continued management, operation, and maintenance of IRTF. 3. Negotiate an annual contract for management, operation, and maintenance of IRTF 4. Provide funds to manage, operate and maintain the facility, develop auxiliary instruments, and reimburse UH for costs incurred in providing supplies and services through MKSS. 5. Provide funds for depreciation, operation, and maintenance of units at Mid-Level facility constructed to accommodate IRTF-related requirements and usage of that facility. Prior to the construction of units needed for IRTF related programs, UH and NASA to negotiate agreement detailing required IRTF-related accommodations and basis on which annual funding will be computed. UH to charge lodging fee to occupants. 6. Provide 10% observing time to scientific staff involved in operation of IRTF. Additional 15% observing time to be provided to UH. 7. Establish and support a Management and Operations Working Group. 8. Provide a list of candidates for possible membership on Proposal Review Committee. *See* Management Plan Section III-C. 9. Establish reporting requirements. *See* Management Plan Section V. 10. Establish, convene, and attend reviews of IRTF operations, activities and plans at least annually.	III.A
Responsibilities of UH	1. Ensure, at no cost, right of access to NASA representatives or its designees and ensure appropriate utilities easements.	III.B

Item	Summary	Ref.
	2. Provide electric power at no cost sufficient to meet the requirements of IRTF. 3. Provide access to Hawaiian Telephone Company systems available on the summit. 4. Construct, at mid-level on Mauna Kea, a complex of office, laboratory, staff, and visitor accommodations. UH and NASA to negotiate an agreement re: portion of complex to be constructed to meet IRTF related requirements and payment of a fee by NASA as provided in the annual contract covering that portions depreciation and maintenance. 5. Manage, operate, and maintain IRTF. 6. Establish and staff an IRTF Division to manage and operating facility within the IFA with funds provided under the operating contract. 7. Assign personnel from other IFA divisions temporarily to undertake tasks associated with operating IRTF. 8. Establish Proposal Review Committee. 9. Prepare an submit annually to NASA a budget proposal for the operating contract. 10. Prepare and submit to NASA a plan to optimize the operation of the IRTF with the budget proposal. 11. Prepare reports and presentations to NASA per Section VII (Reporting). 12. Submit in advance to NASA a summary of material planned to be presented to the Management and Operations Working Group for IRTF. 13. Publicize the availability of observing time on the IRTF to appropriate publications. 14. Prepare and print an IRTF Observer's Manual. 15. Develop procedures and services that ensure a satisfactory observing run.	
Responsibilities of Scientific Community	Scientific community has no direct responsibility for operation of IRTF, but will use the facility, so interaction with scientific community is critical to success of overall management, operation and use of IRTF. To involve members of scientific community directly, following 2 committees will be established: 1. Management and Operations Working Group for the IRTF ("MOWG-IRTF"): Formed by and report to NASA. Review operation of IRTF and comment to NASA relative to operation of the facility, paying attention to the manner in which the facility is meeting the needs of NASA and the astronomical community. 2. Proposal Review Committee ("PRC"): Formed by and report to UH. Evaluate all proposals and make recommendations for use of all observing time on the IRTF other than 10% specifically reserved for IRTF-related staff, review IFA requests for scheduled "down-time" for maintenance needs.	III.C.
Operational Procedures	Responsibilities of all astronomical activities within UH delegated to IFA. Responsibility for managing, operating, and maintaining the IRTF resides in the IRTF Division of IFA to be staffed with personnel as follows: 1. IFA Director: Contact with NASA on matters associated with overall management interest. Responsible for establishing units within the IFA	IV

Item	Summary	Ref.
	needed to support IRTF operation. Appoints IRTF Division Chief with UH approval. 2. IRTF Manager/IRTF Division Chief: point of contact with NASA for daily operation of IRTF. Reports to IFA Director regularly on status of IRTF operations. Has primary authority and responsibility for detailed management, operation, and maintenance of IRTF. *See* Management Plan Section IV.B. for details re: duties. 3. Other IRTF Division Staff: Scientific staff and Operating and Maintenance Staff. *See* Management Plan Section IV.C. for details on such positions. 4. IFA Administration Division: Led by IFA Administrative Officer who is responsible to UH through the IFA Director for providing effective fiscal, personnel, procurement, and other administrative support to all IFA programs. Handles administrative support of the IRTF Division. IFA to establish MKSS within Administration Division, which will provide principal functions such as: (i) an accommodations facility at Mid-Level, (ii) a motor pool to meet normal transportation needs of users wishing to make use of the service, and (iii) a General Services Office to oversee and ensure supply of electrical power and other utilities to the telescopes and arrange for deliveries of supplies and services as requested, among other things. *See* Management Plan Section IV.D for details. 5. IFA Engineering/Instrumentation Division: Responsible for providing engineering support to IFA staff and procurement and maintenance of auxiliary instrumentation.	
Auxiliary Instrumentation	*See* Management Plan Section V for details on the manner of choosing, developing and maintaining the auxiliary instrumentation for the IRTF. Responsibility for maintenance of the "facility instruments" to be assigned to IRTF Division. Note: Revision to this section has been proposed as current terms are inconsistent with maintenance of the Facility in a state reflecting the latest advances in infrared technology. It is unclear if this revision was adopted. Revised version (i) requires the annual proposal presentation to NASA to include a plan for maintaining continual awareness of state of the art technology relating to the best use of the IRTF and (ii) addresses the development of new instrumentation for the IRTF and funding of the same.	V
Use of IRTF by Visiting Scientists	Any qualified member of the scientific community may request observing time by submitting an observing proposal to be evaluated by PRC. Scientists assigned time on the IRTF will be responsible for following the IRTF Observer's Manual.	VI
Reporting	The annual operating contract will be funded annually for the 12 month period starting January 1 each year. Proposal for contract contribution to be submitted by UH to NASA by the preceding July 1. Budget submission to be followed by an in-person presentation at NASA headquarters by appropriate UH personnel containing a review of IRTF activities during the	VII

Item	Summary	Ref.
	last year, budget justification for coming year, and program plans for the next 5 years. In addition to regular financial reports, annual operating contract to require written quarterly report formally submitted to NASA at beginning of each January, April, July, and October containing a summary of activities during the previous quarter, a listing of publications in which scientists acknowledge use of IRTF, a summary of telescope maintenance and modification activities, and instrument development. In addition, following reports to be submitted: (i) observing schedule for upcoming semiannual period, (ii) nightly observing log for each month, (iii) list of all proposals received for review, and (iv) minutes of meetings of MOWG-IRTF and PRC submitted within 1 month of the meeting.	
Assignment	Management Plan is silent re: assignment of both NASA and UH's interests.	
Insurance	Management Plan is silent re: insurance.	
Termination	Management Plan is silent re: termination.	

Abstract of OSDA to the Science and Engineering Research Council dated 2/10/1984 (the "OSDA")

Item	Summary	Ref.
Observatory Name	JCMT	
Parties	University of Hawaii ("UH") Science and Engineering Research Council ("SERC")	
Related Sublease	Sublease dated 2/10/1984 with SERC ("Sublease")	
Effective Date	February 10, 1984	
Premises	As specified in the Sublease	II
Term	Expires 12/31/2033 unless earlier terminated or extended.	XII
Facilities	A parabolic reflecting telescope approx.. 15 meters in diameter for principal use at submillimeter and millimeter wavelengths, Instruments, Support Areas, and Associated Installations for the telescope.	
Responsibilities of UH	Execution of a sublease covering the Premises Ensure access to the Premises and provision of utilities such as electrical power and telephone Provide services through MKSS at no profit / no loss. Services to be provided include food and lodging, library, fuel, water and utilities, data communications, road maintenance, snow removal, emergency services, public information services and access control, and general administration. Cost of MKSS services to be shared among the observatories. SERC to be represented on MKSS oversight committee. The space available to SERC in the Mid-Level Facilities under the agreement for UKIRT may be insufficient to accommodate the additional needs of JCMT. If desired by SERC, UH will negotiate with SERC to correct this situation, subject to a separate agreement between SERC and UH. If desired by SERC, UH will arrange for SERC's participation in the Base Support Facility subject to a separate agreement between SERC and UH. UH to provide a forum to facilitate discussion of management issues among the Mauna Kea Observatories. Protect the astronomical facilities from interference emanating from within the Science Reserve. Construction of a power line and improvement and pavement of the road including the spur road from the Telescope to the main access road (the "Infrastructure Improvements"), subject to permits and approvals and amendment of the 1977 BLNR Mauna Kea Plan and agreement by existing users of the Science Reserve to share in associated costs. UH to set aside $7,000,000 for the Infrastructure Improvements.	III.B. III.C.

Item	Summary	Ref.
Responsibilities of SERC	Design and construction of the Facilities Installation of individually metered electrical service connection Operation and maintenance of the Facilities If SERC elects to participate in the permanent Mid-Level Facilities at Hale Pohaku to a greater extent than the existing agreement for UKIRT, a separate agreement shall be negotiated covering the terms of such participation. If SERC elects to participate in the Base Support Facilities, a separate agreement shall be negotiated covering the terms of such participation. Ensure that its activities in the Science Reserve are compatible with those of other telescope facilities and the General Lease. Participate in a forum established by UH to discuss the management of the Science Reserve. SERC to reimburse UH $643,000 or its appropriate pro rata share for the cost of the Infrastructure Improvements. Pay its share of MKSS services.	III.A. III.C.
Assignment	Agreement is silent re: assignment of both SERC and UH's interest.	
Scientific Cooperation	1. UH will be entitled to 10% of the observing time or less (allocated on the basis of scientific merit and technical feasibility). 2. UH may nominate 1 member of SERC's Millimetre Telescope Users' Committee or its equivalent and 1 member of the appropriate Telescope Time Allocation Panel or its equivalent. 3. Appointment of at least 1 research fellow by SERC to participate in the Institute for Astronomy research program of millimetre-wave astronomy, assignment of up to 2 research students to be residents at UH, and endeavor to establish a senior appointment to be funded jointly by UH and SERC 4. UH will offer affiliate faculty status to appropriately qualified employees of SERC who are associated with JCMT or UKIRT to enable them to participate in the teaching and training programs at UH-Hilo.	V.
Insurance	SERC to maintain liability and property insurance in specified amounts.	VI
Termination	OSDA terminates on the first to occur of: 1. Termination of the Sublease; 2. December 31, 2033 when GL No. S-4191 terminates, unless extended or renewed; 3. If SERC fails to observe of comply with any of the terms or conditions of the OSDA within 30 days of being notified in writing by UH of its failure to comply; or 4. Mutual written agreement of the parties.	XII

Item	Summary	Ref.
	Termination of the OSDA will not terminate SERC's financial obligation defined in Article III.C.1.f to reimburse UH for its share of the Infrastructure Improvements.	

Abstract of Renegotiated OSDA to the California Institute of Technology dated 6/29/1992 (the "OSDA")

Item	Summary	Ref.
Observatory Name	Keck	
Parties	University of Hawaii ("UH") California Institute of Technology ("CIT") The Regents of the University of California ("UC")	
Related Sublease	Sublease dated 10/30/1985 with CIT and UC ("Sublease")	
Effective Date	June 29, 1992	
Premises	As specified in the Sublease.	III
Term	Expires 12/31/2033 unless earlier terminated or extended. If General Lease S-4191 is extended or renegotiated for a period beyond 12/31/2033, UH shall extend the OSDA.	XVI XVII XVIII
Facilities	Keck I and Keck II, the two 10 meter aperture optical and infrared telescopes and domes, support building, instruments, electrical conductors, cableways and tunnels, driveways and parking lots, power, telephone and communications conduits and lines and access roads within the Premises (collectively, "Keck Observatory").	II
Sole Responsibilities of UH	Facilitate discussion of management issues re: the Mauna Kea Observatories through the Mauna Kea Users' Committee. CIT and UC may appoint four representatives to the Mauna Kea Users' Committee. The final responsibility for management of the Mauna Kea Science Reserve with UH.	V
Sole Responsibilities of CIT and/or UC	Design, fabrication, installation, construction and operation of the Facilities. Fund and construct the Keck Spur Road. The design of the Keck Spur Road is subject to the approval of the UH and BLNR. Fund and arrange for installation of electric power and communications conduits conforming to established standards. Fund and arrange for connection of commercial power and telephone service via these conduits	VI
Operational Responsibilities	UH a. Protect the astronomical facilities from interference emanating from within the Mauna Kea Science Reserve; b. Pursue laws and ordinances to minimize man made light emanating from other areas of the County; c. Submit all permits to appropriate authorities on behalf of CIT and UC; d. Ensure access to CIT and UC; e. Perform infrastructure improvements including completion of summit power and communication distribution loops, completion of Mauna Kea Observatories Communications Network, improvement and pavement of main access road from Hale Pohaku to 11800 ft.	VII

Item	Summary	Ref.
	elevation, extension of Mauna Kea Science Reserve Complex Development Plan beyond year 2000; f. If desired by CIT and UC, UH will arrange for the expansion of the Mid-Level Facilities subject to a separate agreement between CIT and UC and UH; g. Consider possible expansion of Information Station in the future; h. Cost sharing agreements with respect to future infrastructure development costs; i. Provide services through MKSS at no profit / no loss. Services to be provided include food and lodging, utilities, transportation, library and auxiliary services, road maintenance and snow removal, access control and public information services, and general administration. Cost of MKSS services to be shared among the observatories. CIT and UC to be represented on MKSS oversight committee. CIT and UC a. Operate in a scientifically and environmentally responsible manner, consistent with all appliable regulations; b. Prepare all permit applications; c. Pay any costs, fees and other charges associated with access; d. Design and construct any changes to existing roads required for realization of Keck II; e. Contribute $1,462,250 (in 1982 dollars) toward the cost of improvements to the main access road and summit spur roads on the condition that UH secures a contribution of $2,924,500 (in 1982 dollars) towards the cost of such improvements from other sources; f. Contribute $2,214,450 (in July 1992 dollars) toward the cost of continued development of Mauna Kea Infrastructure to be used specifically for (i) modifications to the Detour Road up to a maximum of $250,000, (ii) the provision of high-bandwidth communications to base facilities in Waimea, (iii) extension of the Mauna Kea Science Reserve Complex Development Plan beyond 2000, (iv) an Earth Station for high-bandwidth communications by satellite link; g. If CIT and UC elect to participate in further expansion of Mid-Level Facilities, such participation to be governed by a separate agreement; h. Fund initial costs of the design and installation of an Information Station display for the Keck Observatory and consider making a fair-share contribution to UH for the expansion of the Information Station; i. Cost sharing agreements with respect to future infrastructure development costs; j. Provide funds necessary to operate and maintain Facilities, pay its share of MKSS services, and fund the cost of operating and maintaining power and communications lines.	
Assignment	CIT and UC may not assign without prior written consent of UH, BLNR, and any other bodies whose consent is required under the terms of the General Lease, Sublease, or other agreements and documents except to California Association for Research in Astronomy (“CARA”) for the purpose of constructing and operating the Facilities.	IX

Item	Summary	Ref.
	OSDA is silent re: assignment of UH's interest.	
Scientific Cooperation	1. UH will be entitled to 10% of remaining observing time for Keck I and 15% of the remaining observing time for Keck II after allocation to Observatory Director for engineering purposes. 2. Agreement re: UH participation in construction of the Keck Observatory. 3. UH entitled to appoint an individual to participate in the Science Steering Committee or its replacement and a voting member to the time Allocation Committee if it is established. UH to not be represented on CARA Board unless CARA proposes representation on board by an entity other than CIT, UC, or Keck Foundation. If CARA proposes representation on Board by an entity other than CIT, UC, or Keck Foundation, then CIT and UC to consider adding non-voting UH member to CARA Board. 4. Agreement regarding commercial use of images. 5. Agreements regarding attribution of credit for results obtained for work performed at the observatory.	X
Insurance	CIT and UC to maintain liability and property insurance in specified amounts.	XI
Termination	OSDA terminates on the first to occur of: 1. Mutual written agreement of CIT, UC and UH; 2. Termination of the Sublease; 3. Termination of management or operation of the Facilities by CIT and UC (directly or through CARA) unless CIT or UC find party(ies) acceptable to UH to take over the OSDA; 4. December 31, 2033 when General Lease No. S-4191 terminates, if there are no extensions or a superseding General Lease; or	XVIII

Abstract of OSDA to the Associated Universities, Inc./National Radio Astronomy Observatory dated 9/28/1990 (the "OSDA")

Item	Summary	Ref.
Observatory Name	VLBA	
Parties	University of Hawaii ("UH") Associated Universities, Inc./National Radio Astronomy Observatory ("AU/NRAO")	
Related Sublease	Sublease dated 9/29/90 with AU/NRAO ("Sublease")	
Effective Date	September 28, 1990	
Premises	As specified in the Sublease	II
Term	Expires 12/31/2033 unless earlier terminated or extended. If General Lease S-4191 is extended or renegotiated for a period beyond 12/31/2033, UH shall extend the OSDA.	XVI XVII XVIII
Facilities	The Very Long Baseline Array (includes a parabolical reflector 25 meters in diameter supported by an alt-azimuth mounting structure that permits the antenna to be pointed to any direction above the horizon) the support building, instruments, electronical conductors, cableways and tunnels, driveways and parking lots, power, telephone and communications conduits and lines, and access roads.	
Sole Responsibilities of UH	UH to provide access road to the facilities. UH to provide a forum called the Mauna Kea Users' Committee to facilitate discussion of management issues among the Mauna Kea Observatories. AU/NRAO shall be entitled to appoint two representatives to the Mauna Kea Users' Committee.	IV
Sole Responsibilities of AU/NRAO	Erection and operation of the Facilities Funding the areas of scientific cooperation mentioned in IX. A., B. and C. Design, construct, and fund the VLBA spur road, which design is subject to the approval of UH and BLNR. Fund and arrange for installation of power, data, communications, and telephone conduits and lines from mutually agreed upon handhole.	V
Operational Responsibilities	UH a. Protect the astronomical facilities from interference emanating from within the Mauna Kea Science Reserve; b. Pursue laws and ordinances to minimize man made light or radio frequency emissions from other areas of the County; c. Submit all permits to appropriate authorities on behalf of AU/NRAO; d. Ensure access;	VI

Item	Summary	Ref.
	e. Perform infrastructure improvements including electric power at Hale Pohaku and the summit, communication conduits from Hale Pohaku to the summit, paving of upper section of Mauna Kea Access Road; f. Consider possible expansion of Information Station in the future; g. Cost sharing agreements with respect to future infrastructure development costs; h. Agreement re: construction of Base Support Facilities; i. Provide services through MKSS at no profit / no loss. Services to be provided include food and lodging, transportation, library and auxiliary services, road maintenance and snow removal, access control and public information services, and general administration. AU/NRAO to be represented on MKSS oversight committee. AU/NRAO a. Operate in a scientifically and environmentally responsible manner, consistent with all appliable regulations; b. Prepare all permit applications; c. Pay any costs, fees and other charges associated with access; d. Pay UH $627,707 within 30 days after execution of this OSDA for the provision of an underground power spur line and communications conduits and repeater station infrastructure and equipment below Hale Pohaku; e. Fund initial costs of the design and installation of an Information Station display for VLBA up to $5,000, and entertain proposals by UH for the expansion of the Information Station and for additional outreach activities associated with Gemini Mauna Kea; f. Cost sharing agreements with respect to future infrastructure development costs; g. AU/NRAO will have no access to Mid-Level Facility; h. Agreement re: construction of Base Support Facilities; i. Pay its share of common costs including MKSS services.	
Assignment	AU/NRAO may not assign without prior written consent of UH, BLNR and any other bodies whose consent is required under the terms of the General Lease, Sublease, or other agreements and documents. OSDA is silent re: assignment of UH's interest.	VIII.
Scientific Cooperation	1. Observing time first allocated to NRAO Director for engineering purposes and scheduling of the Hawaii antenna as an element of the VLBA. 2. UH will be entitled to 1/3 of the remaining time scheduled for single dish observing up to a maximum of 15% of the observing time.	IX

Abstract of OSDA to the Associated Universities, Inc./National Radio Astronomy Observatory dated 9/28/1990

Item	Summary	Ref.
	3. Upon request, AU/NRAO to advise UH re: impact of radio astronomy facilities to be located in Hawaii and proposed radio frequency emitting installation; 4. Upon request, AU/NRAO to characterize radio frequency environment within the Science Reserves on Mauna Kea and Haleakala. 5. UH will appoint one member to the Gemini Board. 6. Agreements regarding coordination of interaction with news media.	
Insurance	AU/NRAO to maintain liability and property insurance in specified amounts.	X
Termination	OSDA terminates on the first to occur of: 1. Mutual written agreement of AU/NRAO and UH; 2. Termination of the Sublease; 3. Termination of management or operation of the Facilities by AU/NRAO or its assignee; 4. December 31, 2033 when GL No. S-4191 terminates, unless extended. If GL No. S-4191 is extended, or if UH obtains a new lease for a period beyond 12/31/33, UH shall extend this OSDA subject to revisions as UH and AU/NRAO may agree in good faith.	XVII

Abstract of OSDA to the National Astronomical Observatory of Japan dated 6/5/1992 (the "OSDA")

Item	Summary	Ref.
Observatory Name	Subaru	
Parties	University of Hawaii ("UH") National Astronomical Observatory of Japan ("NAOJ")	
Related Sublease	Sublease dated 6/5/1992 with NAOJ ("Sublease")	
Effective Date	June 5, 1992	
Premises	As specified in the Sublease	II
Term	Expires 12/31/2033 unless earlier terminated or extended. If General Lease S-4191 is extended or renegotiated for a period beyond 12/31/2033, UH shall extend the OSDA.	XV XVI XVII
Facilities	The 8-meter optical-infrared telescope ("Telescope"); a rotatable steel telescope enclosure, 40 meters in diameter, supported on a cylindrical steel building housing a mirror aluminizing plant, and support building and other supporting facilities.	
Sole Responsibilities of UH	UH to provide a forum called the Mauna Kea Users' Committee to facilitate discussion of management issues among the Mauna Kea Observatories. NAOJ shall be entitled to appoint two representatives to the Mauna Kea Users' Committee.	IV
Sole Responsibilities of NAOJ	A. Design, Fabrication, Construction, Installation and Operation of the Facilities. B. Fund and arrange for installation of electric power and communications conduits conforming to established standards. Fund and arrange for connection of commercial power and telephone service via these conduits.	V
Operational Responsibilities	UH a. Protect the astronomical facilities from interference emanating from within the Mauna Kea Science Reserve; b. Pursue laws and ordinances to minimize man made light or radio frequency emissions from other areas of the County; c. Submit all permits to appropriate authorities on behalf of NAOJ; d. Ensure access; e. Perform infrastructure improvements including electric power at Hale Pohaku and the summit, communication conduits from Hale Pohaku to the summit, paving of upper section of Mauna Kea Access Road; f. If desired by NAOJ, UH will arrange for the expansion of the Mid-Level Facilities subject to a separate agreement between NAOJ and UH negotiated in good faith;	VI

Item	Summary	Ref.
	g. Consider possible expansion of Information Station in the future; h. Cost sharing agreements with respect to future infrastructure development costs; i. Agreement re: construction of Base Support Facilities; j. Provide services through MKSS at no profit / no loss. Services to be provided include food and lodging, transportation, library and auxiliary services, road maintenance and snow removal, access control and public information services, and general administration. NAOJ to be represented on MKSS oversight committee. NAOJ a. Operate in a scientifically and environmentally responsible manner, consistent with all appliable regulations; b. Prepare all permit applications; c. Pay any costs, fees and other charges associated with access; d. Design construct and fund the NAOJ Spur Road subject to approval of UH and BLNR; e. Pay UH $2,310,091 within 30 days after execution of this OSDA for the (i) extension of the summit power and communications distributions loop; (ii) improvement of the Mauna Kea Detour Road to accommodate 8-meter mirrors; and (iii) improvement of the Mauna Kea Access Road from Hale Pohaku to the 11,800 ft. elevation to allow for transportation of the mirrors; f. Fund initial costs of the design and installation of an Information Station display for Subaru; g. Cost sharing agreements with respect to future infrastructure development costs; h. Agreement re: construction of Base Support Facilities; i. Pay for its share of MKSS services.	
Assignment	Assignment of rights by NAOJ bound by Sublease section III. F. stating NAOJ must obtain consent of UH and BLNR. OSDA is silent re: assignment of UH's interest.	VIII
Scientific Cooperation	1. Observing time to be allocated based on scientific merit and technical feasibility. UH to receive 15% of engineering time remaining after deduction of 70% of time in the first year and up to 30% in second year. 2. UH and NOAJ to execute separate agreement to allow UH to participate in development of instruments for the Facilities on an equal basis with University research ground in Japan. 3. UH entitled to nominate one scientist to represent UH on NOAJ Board or its equivalent	IX

Item	Summary	Ref.
	4. UH entitled to nominate one member of the Technical Committee for Instrument Development or its equivalent 5. UH observer may be invited to attend Time Allocation meetings 6. NOAJ to provide simultaneous English translation for Board and committee meetings conducted in Japanese and provide English translation of minutes. 7. Agreement re: images obtained with the use of the Facilities. 8. Agreements regarding coordination of interaction with news media. 9. NAOJ to fund a scientific staff position stationed at UH.	
Insurance	NAOJ to maintain liability and property insurance in specified amounts.	X
Termination	OSDA terminates on the first to occur of: 1. Mutual written agreement of NAOJ and UH; 2. Termination of the Sublease; 3. Termination of management or operation of the Facilities by NAOJ; 4. December 31, 2033 when GL No. S-4191 terminates, unless extended. If GL No. S-4191 is extended, or if UH obtains a new lease for a period beyond 12/31/33, UH shall extend this OSDA subject to revisions as UH and NAOJ may agree in good faith.	XVII

Abstract of OSDA to the National Science Foundation dated 8/9/1994 (the "OSDA")

Item	Summary	Ref.
Observatory Name	Gemini	
Parties	University of Hawaii ("UH") National Science Foundation ("NSF")	
Related Sublease	Sublease dated 9/26/94 with NSF ("Sublease")	
Effective Date	August 9, 1994	
Premises	As specified in the Sublease	III
Term	Expires 12/31/2033 unless earlier terminated or extended. If General Lease S-4191 is extended or renegotiated for a period beyond 12/31/2033, UH shall extend the OSDA.	XVI XVII XVIII
Facilities	The Gemini 8-Meter Telescope enclosure, support building, instruments, electrical conductors, cableways and tunnels, driveways and parking lots, power, telephone, and communication conduits and lines, and access roads within the border of the Premises (collectively, "Gemini Mauna Kea").	
Sole Responsibilities of UH	UH to provide a forum called the Mauna Kea Users' Committee to facilitate discussion of management issues among the Mauna Kea Observatories. NSF shall be entitled to appoint two representatives to the Mauna Kea Users' Committee. Should this committee be replaced with another forum at some time in the future, NSF shall be entitled to participate on the same basis as the other agencies operating Major Astronomical Facilities.	V.A
Sole Responsibilities of NSF	A. Design, Fabrication, Construction, Installation and Operation of the Facilities. B. Fund and arrange for installation of power and communications conduits conforming to established standards. Fund and arrange for connection of commercial power and telephone service via these conduits.	VI.
Operational Responsibilities	UH a. Protect the astronomical facilities from interference emanating from within the Mauna Kea Science Reserve; b. Pursue laws and ordinances to minimize man made light from other areas of the County; c. Submit all permits to appropriate authorities on behalf of NSF; d. Ensure access; e. Remove the 24 in. Planetary Patrol Telescope with 30 days after execution of OSDA;	VII.

Item	Summary	Ref.
	f. Perform infrastructure improvements including electric power at Hale Pohaku and the summit, communication conduits from Hale Pohaku to the summit, paving of upper section of Mauna Kea Access Road; g. If desired by NSF, UH will arrange for the expansion of the Mid-Level Facilities subject to a separate agreement between NSF and UH negotiated in good faith; h. Consider possible expansion of Information Station in the future; i. Cost sharing agreements with respect to future infrastructure development costs; j. Provide services through MKSS at no profit / no loss. Services to be provided include food and lodging, library, fuel, water and utilities, data communications, road maintenance, snow removal, emergency services, public information services and access control, and general administration. Cost of MKSS services to be shared among the observatories. NSF to be represented on MKSS oversight committee. NSF a. Operate in a scientifically and environmentally responsible manner, consistent with all appliable regulations; b. Prepare all permit applications; c. Pay any costs, fees and other charges associated with access; d. Design, construct and fund the relocation of the spur access road currently service CFHT; e. Pay UH $255,000 within 30 days after execution of this OSDA as partial consideration for the loss of use of the Planetary Patrol Telescope and for UH's expenses incurred in connection with its removal; f. Contribute $2,363,000 toward the cost of continued development of the Mauna Kea Infrastructure to be used specifically for (i) relocation and upgrading of summit power and communication distribution lines; and (ii) improvement of Mauna Kea Access Road from Hale Pohaku to the 11,800 foot elevation; g. Fund initial costs of the design and installation of an Information Station display for Gemini Mauna Kea, and entertain proposals by UH for the expansion of the Information Station and for additional outreach activities associated with Gemini Mauna Kea; h. Cost sharing agreements with respect to future infrastructure development costs; i. Pay Gemini Mauna Kea's share of MKSS services.	
Assignment	NSF may not assign without prior written consent of UH. OSDA is silent re: assignment of UH's interest.	IX

Item	Summary	Ref.
Scientific Cooperation	1. UH will be entitled to 10% of the observing time. 2. Gemini Partners will assign to UH the work package for the 1 to 5 micron imager. In return, UH will provide an agreed site within the Hilo University Park adjacent to the Joint Astronomy Centre for the Gemini Mauna Kea base facility for $1.00 per year. 3. UH to make space available in a new building to be constructed in the Hilo University Park to NSF rent free. 4. UH will appoint one member to the Gemini Board. 5. Agreements regarding attribution of credit for results obtained for work performed at the observatory. 6. Agreements regarding coordination of interaction with news media.	X
Insurance	NSF to maintain liability and property insurance in specified amounts.	XI
Termination	OSDA terminates on the first to occur of: 1. Mutual written agreement of NSF and UH; 2. Termination of the Sublease; 3. Termination of management or operation of the Facilities by NSF or its assignee; 4. December 31, 2033 when GL No. S-4191 terminates; 5. The expiration of any superseding General Lease or extension of GL No. S-4191. If GL No. S-4191 is extended, or if UH obtains a new lease for a period beyond 12/31/33, UH shall extend this OSDA subject to revisions as UH and NSF may agree in good faith.	XVIII

Abstract of OSDA to the Smithsonian Institution dated 5/15/1995 (the "OSDA")

Item	Summary	Ref.
Observatory Name	SMA	
Parties	University of Hawaii ("UH") Smithsonian Institution ("SAO")	
Related Sublease	Sublease dated 5/15/1995 with SAO ("Sublease")	
Effective Date	May 15, 1995	
Premises	As specified in the Sublease.	II
Term	Expires 12/31/2033 unless earlier terminated or extended. If General Lease S-4191 is extended or renegotiated for a period beyond 12/31/2033, UH shall extend the OSDA.	XVI XVII
Facilities	The Smithsonian Submillimeter Array Telescope (the "SMA") shall include 8 antennas approx. 6 meters in diameter and up to 24 concrete observing pads approx. 3 meters in diameter operating as a radio interferometer, a control building, an antenna maintenance building, service roads for transporting the antennas and underground utility and communications lines connecting the control building to the antenna pads. Any expansion of the SMA beyond 8 antennas shall require a new or amended OSDA and an additional infrastructure contribution as specified in section VII.E.1.c.	III
Sole Responsibilities of UH	Facilitate discussion of management issues re: the Mauna Kea Observatories through the Mauna Kea Users' Committee. SAO may appoint two representatives to the Mauna Kea Users' Committee. Should this committee be replaced with another forum at some time in the future, SAO shall be entitled to participate on the same basis as the other agencies operating Major Astronomical Facilities. The final responsibility for management of the Mauna Kea Science Reserve (the "Reserve") resides with UH.	V
Sole Responsibilities of SAO	Design, fabrication, construction, installation and operation of the Facilities. Funding and arrange for installation of electric power and communications conduits conforming to established standards. Fund and arrange for connection of commercial power and telephone service via these conduits	VI
Operational Responsibilities	UH a. Protect the astronomical facilities from interference emanating from within the Mauna Kea Science Reserve; b. Pursue laws and ordinances to minimize man made radio frequency emissions from other areas of the County; c. Submit all permits to appropriate authorities on behalf of SAO; d. Ensure access to SAO; e. Perform infrastructure improvements including electric power at Hale Pohaku and the summit, communication conduits from Hale	VII

Item	Summary	Ref.
	Pohaku to the summit, paving of upper section of Mauna Kea Access Road; f. If desired by SAO, UH will arrange for the expansion of the Mid-Level Facilities subject to a separate agreement between SAO and UH negotiated in good faith; g. Consider possible expansion of Information Station in the future; h. Cost sharing agreements with respect to future infrastructure development costs; i. Secure federal funding for a building in UH rent-free for SMA base facility or sublease space for SMA base facility at $1.00; j. Provide services through MKSS at no profit / no loss. Services to be provided include food and lodging, library, fuel, water and utilities, data communications, road maintenance, snow removal, emergency services, public information services and access control, and general administration. Cost of MKSS services to be shared among the observatories. SAO to be represented on MKSS oversight committee. SAO a. Operate in a scientifically and environmentally responsible manner, consistent with all appliable regulations; b. Prepare all permit applications; c. Pay any costs, fees and other charges associated with access; d. Design, construct and fund the paving of the Pu'u Poliahu Road between the junction with the Mauna Kea Detour Road and SMA parking lot; e. Contribute $1,098,425 toward the cost of continued development of the Mauna Kea Infrastructure to be used specifically for (i) installation of new electrical switch units near the SMA site and extension of primary electrical feeders; (ii) expansion or upgrading of the summit communications distribution system; (iii) widening and paving the Mauna Kea Detour Road between the spur road into JCMT and the junction with the Pu'u Poliahu Road; (iv) extension of electric power distribution system from Subaru site to handhole near SMA site; (v) provision of a 480 V service; (vi) improvement of power and communications distribution system in the vicinity of JCMT and CSO; and (vii) preparation and implementation of a Historic Preservation Management Plan for the Mauna Kea Science Reserve; f. Cost for SAO's space at the mid-Level Facilities; g. Fund initial costs of the design and installation of an Information Station display for SMA, and entertain proposals by UH for the expansion of the Information Station and for additional outreach activities associated with SMA; h. Cost sharing agreements with respect to future infrastructure development costs; i. Cost of SAO's operating expenses in the SMA base facility; j. Pay SMA's share of MKSS services.	

Item	Summary	Ref.
Assignment	SAO may not assign without prior written consent of UH, BLNR, and any other bodies whose consent is required under the terms of the General Lease, Sublease, or other agreements and documents. OSDA is silent re: assignment of UH's interest.	IX
Scientific Cooperation	1. UH will be entitled to either 12.5% or 15% of the observing time determined according to section X.A.1. 2. UH will accept up to two SAO scientists at any one time as long term visitors to the Institute for Astronomy, subject to approval by the Institute for Astronomy Director. SAO will pay the costs associated with the visitors. 3. UH to establish Fellowship Program at the Institute for Astronomy with support from SAO through an endowment or annual contributions. 4. UH is entitled to one representative or representation in proportion to its guaranteed share of observing time, whichever is greater, on all scientific and policy-setting committees associated with the SMA. 5. Agreements regarding attribution of credit for results obtained for work performed at the observatory. 6. Agreements regarding coordination of interaction with news media. 7. SAO may collaborate scientifically with other Major Astronomical Facilities.	X
Insurance	SAO to maintain liability and property insurance in specified amounts.	XI
Termination	OSDA terminates on the first to occur of: 1. Mutual written agreement of SAO and UH; 2. Termination of the Sublease; 3. Termination of management or operation of the Facilities by SAO or its assignee if any; 4. December 2033 when General Lease No. S-4191 terminates, if there are no extensions or a superseding General Lease; or 5. Date of expiration of the superseding or extended General Lease (if applicable).	XVIII

Abstract of Scientific Cooperation Agreement with TMT International Observatory LLC dated 7/28/2014 (the "OSDA")

Item	Summary	Ref.
Observatory Name	TMT	
Parties	University of Hawaii ("UH") TMT International Observatory LLC ("TMT")	
Related Sublease	Sublease dated 7/28/2014 with TMT ("Sublease") Note: Sublease controls if any term or provision conflicts with the OSDA.	VI.F.b.
Effective Date	July 28, 2014	
Premises	As specified in the Sublease	II
Term	Expires 12/31/2033 unless earlier terminated or extended. See Sublease section 9 for specifications re: extension.	XV XVI XVII
Facilities	The Thirty Meter Telescope (the "Telescope") and enclosure, support building, instruments, electrical conductors, cableways and tunnels, driveways and parking lots, power, telephone, and communication conduits and lines, and access roads within the border of the Premises.	
Sole Responsibilities of UH	UH to provide a forum called the Mauna Kea Users' Committee to facilitate discussion of management issues among the Mauna Kea Observatories. TMT shall be entitled to appoint two representatives to the Mauna Kea Users' Committee. Should this committee be replaced with another forum at some time in the future, TMT shall be entitled to participate on the same basis as the other agencies operating Major Astronomical Facilities.	IV.A
Sole Responsibilities of TMT	A. Design, Fabrication, Construction, Installation and Operation of the Facilities. TMT commits to taking reasonable measures consistent with CDUP HA-3568 and the TMT Access Way Agreement Dated9/13/2012 by and between UH, SAO, and TMT. B. Fund and arrange for installation of power and communications conduits conforming to established standards. Fund and arrange for connection of commercial power and telephone service via these conduits.	V
Operational Responsibilities	UH a. Protect the astronomical facilities from interference emanating from within the Mauna Kea Science Reserve; b. Pursue laws and ordinances to minimize man made light from other areas of the County; c. Ensure no other astronomical facilities will be constructed or operated within an 800 ft. radius surrounding the Telescope. d. Ensure access;	VI

Item	Summary	Ref.
	e. Perform infrastructure improvements including electric power at Hale Pohaku and the summit, communication conduits from Hale Pohaku to the summit, paving of upper section of Mauna Kea Access Road; f. Cost sharing agreements with respect to future infrastructure development costs; g. Provide services through MKSS at no profit / no loss. Services to be provided include food and lodging, library, fuel, water and utilities, data communications, road maintenance, snow removal, emergency services, public information services and access control, and general administration. Cost of MKSS services to be shared among the observatories. TMT to be represented on MKSS oversight committee. TMT a. Operate in a scientifically and environmentally responsible manner, consistent with all appliable regulations; b. Pay any costs, fees and other charges associated with access; c. Contribute $6,600,000 toward the cost of continued development of the Infrastructure to be used specifically for (i) extension of the summit spur road system to the Telescope; (ii) extension of the summit electric power and communications distribution system; and (iii) upgrade of the electrical power infrastructure to accommodate the Facilities including an upgrade to the substation at Hale Pohaku; d. Cost sharing agreements with respect to future infrastructure development costs; e. Pay TMT's share of MKSS services.	
Assignment	TMT may not assign without prior written consent of UH. OSDA is silent re: assignment of UH's interest.	VIII
Scientific Cooperation	1. UH will be entitled to 7.5% of the observing time. 2. TMT to allow UH opportunities to participate in development of Instruments for the Facilities. 3. UH entitled to appoint one non-voting member to TMT's Board. 4. UH entitled to appoint one representative or representation in proportion with its share of observing time, whichever is greater, to TMT's Science Advisory Committee. 5. Agreements regarding attribution of credit for results obtained for work performed at the observatory. 6. Agreements regarding coordination of interaction with news media.	IX
Insurance	TMT to maintain liability and property insurance in amounts specified in the Sublease.	X

Item	Summary	Ref.
Termination	OSDA terminates on the first to occur of: 1. Mutual written agreement of TMT and UH; 2. Termination of the Sublease subject to Sublease section 9.a., b., or c. re: extension.; 3. Termination of management or operation of the Facilities by TMT or its assignee;	XVII

Abstract of the Permit Agreement dated 6/1/2008 to Douglass B. Arnott, dba Arnott's Lodge & Hiking Adventures (the "Permit")

Note: All capitalized terms used but not defined in the abstract shall have the meanings assigned to them by the Permit.

Item	Summary	Ref.
Grantor	University of Hawaii ("UH")	
Permittee	Douglass B. Arnott, dba Arnott's Lodge & Hiking Adventures	
Permit No.	CT-100	
Commencement Date	June 1, 2008	
Premises	Portions of that certain parcel of Government land and any improvements located thereupon, as may be designated by the Office of Mauna Kea Management (OMKM) situated within the University of Hawaii Management Area, Mauna Kea, Hamakua, Hawaii further identified as TMK no. 3rd/4-4-15-09 & 12 as indicated on the map attached Note: Map is missing from attachments.	
Purpose	Commercial activity tours	B.1.
Term	Expires June 30, 2009, unless sooner terminated Note: OMKM and Mauna Kea Management Board are in the process of establishing an updated commercial permit issuance structure, and once finalized, Permittee acknowledges that: (a) OMKM may terminate the Permit with 30 days prior written notice, (b) upon such termination, Permittee must apply for a new permit under the new issuance structure, (c) the Permittee's eligibility for a new permit will be determined purusat to the new permit structure, (d) in determining Permittee's eligibility, OMKM need not consider the Permittee's prior eligibility, and (e) the Permittee does not have an right, preference, or entitlement to a new permit by virtue of having or possessing a permit in the past. UH may extend the Permit at its sole option, and may consider various factors including new data to determine whether to grant such extension(s).	B.2.
One Permit Limitation	Number of permits limited to 1 per person/entity. If this rule is violated, after the issuance of an order to show cause, OMKM may cancel the permits held or deemed to be constructively held by the offender. OMKM may suspend the permit pending the order to show cause.	B.3.
Monthly Fee	Greater of $1,200 or $6 per passenger in each vehicle used by the Permittee to transport passengers to any location within the Premises, including the Visitor Information Center ("VIS") and/or summit of Mauna Kea. Interest will be assessed on any delinquent fees and charges. Fees may be adjusted upon 30 days written notice.	C.1. C.2. C.3.
Security Deposit	Upon execution of the Permit, the Permittee must make a security deposit of $3,600 with OMKM. Permittee is not entitled to a return of the security	C.4.

Item	Summary	Ref.
	deposit unless and until OMKM determines that Permittee has fully performed and complies with all of Permittee's obligations under the Permit.	
Insurance	Permittee to maintain liability and property insurance in specified amounts.	C.6.
Failure to Comply	If Permittee fails to comply with conditions of the Permit, OMKM may assess a charge of $20 per day for every day that Permittee fails to comply after receiving notice from OMKM. OMKM may also assess a $100 service charge for any month that the Permittee fails to comply as required by OMKM.	C.7.
Litigation Costs	Permittee to pay all litigation costs, including reasonable attorneys fees and expenses incurred by OMKM, the Board, the UH, and the State should they be made party to any litigation commenced by or against the Permittee (other than condemnation proceedings). Permittee to pay all litigation costs, including reasonable attorneys fees and expenses incurred by UH in enforcing, suspending, or terminating the Permit or in the collection of any fees, taxes, and other charges.	C.8.
Refusal to Stop	If the Permittee conducts business in relation to the Premises during a period which the Permittee does not have the right to do so, a $2,000 per day fine will be assessed for each such day a business activity is conducted.	C.9.
Removal of Permittee	Permittee has no right to occupy or exclusively possess any portion of the Premises, and the UH and OMKM may remove any vehicles, equipment, and/or personal property left by the Permittee on the Premises at the Permittee's sole cost.	C.10.
Indemnification	Permittee to indemnify the OMKM, the UH, and the State in the manner set forth.	C.11.
Failure to Perform or Comply	If Permittee fails to comply with the terms of the Permit, OMKM will send written notice of such failure. If Permittee continues to fail to comply, OMKM may suspend the Permit for up to 3 days for the first failure and for a minimum of 7 days for each successive failure. OMKM is not limited to suspension (i.e., it may terminate the Permit instead).	D.1.
Reporting	Permittee to submit daily and monthly reports to OMKM in the manner set forth. Failure to submit such report may lead to the assessment of fines. If situations develop or incidents occur within or on the Premises that Permittee recognizes as posing a significant threat to persons, property, ecosystems or biological systems, cultural and historical resources, or science or educational related operations, including any UH operations, Permittee shall notify the OMKM rangers.	D.2. D.3. E.2.
Cancellation	Permittee may cease operations and surrender Permit with 30 days written notice to OMKM. UH, through OMKM, may terminate the Permit at any time with 30 days written notice, even without cause.	D.4. D.5.
Non-payment	If Permittee's failure to pay any fees or charges persists for a period of 10 days or more, the UH, through OMKM, amy immediately suspend the	D.6.

Item	Summary	Ref.
	Permit for a period to be determined by OMKM or terminate the Permit upon written notice at least 5 business days prior to termination.	
Failure to Fully Disclose	OMKM may assess charges against the Permittee and/or suspend or terminate the Permit if Permittee fails to comply with all terms and conditions imposed or required by OMKM including failing to fully disclose all material or relevant information.	D.7.
Prompt Termination	OMKM may immediately prohibit Permittee from conducting any further operations under the Permit if OMKM determines that it is warranted due to the threat to: (1) the ecosystems or biological systems, (b) the cultural and historical resources, (c) the science or educational related operations, including any UH operations, and (d) the observatories, facilities, structures, roads, and infrastructure.	D.8.
Not Eligible for Permit	If Permit is terminated, in whole or in part because of Permittee's failure to fully perform or comply with its obligations under the Permit, the Permittee will not be eligible for a commercial permit for up to 5 years.	D.9.
Monitoring	OMKM to develop data reporting form to reflect type of information that needs to be collected to property analyse and assess impacts of commercial activity levels. Every vehicle owned, operated or controlled by Permittee must check in at VIS whether or not carrying passengers. Permittee to cooperate with OMKM's procedures and processes for impact assessment including completing the registration book at the VIS, daily check in with OMKM rangers, and requiring Permittees to provide feedback and suggestions regarding tour activity.	F.
Operating Rules While on UH Leased Lands	**General:** 1. Permittee may conduct commercial activity tours 7 days a week, subject to weather conditions and requirements imposed by OMKM. OMKM may impose further limits such as restricting commercial uses to weekdays. OMKM shall notify Permittee in writing of such further restriction at least 30 days prior to the effective implementation date, unless the situation requires immediate action or restriction. Permittee is responsible for contacting the VIS prior to departing its own facilities or arriving at the VIS. 2. Permittee is not allowed on the road when it is closed to the public. 3. Upon arrival at the VIS, Permittee must register to inform OMKM of its presence. 4. Permittee and its passengers and customers will be permitted to use portable toilets provided by OMKM. Permittee must ensure that its agents (includes employees, customers, and passengers) use only the designated portable toilet facilities provided by OMKM. 5. Permittee shall ensure that its agents (includes employees, customers, and passengers) do not enter any buildings or structures withi the Premises except for designated public areas on the summit and VIS.	G.

Item	Summary	Ref.
	6. Use of electronic devices restricted to emergency use only within the Science Reserve portion of the Premises. 7. Except for certified assistance animals for the disabled, no animals permitted on Premises. 8. Permittee responsible for appropriately removing from the Premises all solid waste, rubbish, trash, and other discarded items generated by Permittee or its agents including those generated by certified assistance animals for the disabled. 9. Tour operators to comply with Public Utilities Commission regulations for vehicle signage requirements. 10. Permittee to ensure that a designated employee on each tour activity carry a copy of the Permit at all times when on the mountain or within the Premises. 11. Possession, display and consumption of alcoholic beverages prohibited. 12. Permittee to ensure that Permittee's agents and its commercial tour activities for not obstruct or unreasonably interfere with UH operations, any of the observatory, science and educational activities within the Premises, other commercial activities, and other use and activities of general public. 13. Lasers with an output greater than 5 milliwatts not allowed. 14. Permittee and all of its employees, drivers and passengers required to comply with all VIS or OMKM rules and regulations. 15. OMKM reserves right to place restrictions on any commercial tour activities that it deems inappropriate or would negatively impact natural or cultural resources, facilities or infrastructure within or adjacent to the Premises. **Vehicles and Parking:** 1. Only 4-wheel drives may be used to conduct commercial tour activities on the Summit Access Road and within the Mauna Kea Science Reserve. 2. Maximum vehicle capacity allowed is 14 people excluding the driver. 3. Vehicles must be approved by OMKM in writing prior to regular use for commercial activity tours. 4. Up to 2 Standard Vehicles or 1 Modified Vehicle in the VIS parking lot. Oversized Vehicles not allowed in parking lot 5. Oversized Vehicles not allowed on Premises without OMKM's prior written approval, which may be withheld in OMKM's sole discretion. Any approval is subject to the terms outlined in section G.2.e. (as amended) of the Permit, such as payment of fees, etc. 6. OMKM to determine maximum number of commercial vehicles allowed to park at any one time at the VIS or on the adjacent roadways.	

Item	Summary	Ref.
	7. Maximum number of commercial vehicles allowed on the Premises at any one time not to exceed 18. During periods of heavy use, number of commercial vehicles allowed in the Science Reserve portion of the Premises may be limited to a number determined by OMKM. 8. Permittee to ensure that operators of commercial tour vehicles comply with directions of OMKM or VIS employees including OMKM rangers in parking tour vehicles. 9. Permittee to remove its vehicle within 48 hours from the Premises or any area within Mauna Kea if it becomes disabled. 10. Use of a standard 4 wheel drive which is not a part of Permittee's fleet of vehicles (and which may not have been registered with or approved by OMKM) as a temporary vehicle allowed for emergency use only, provided that Permittee provides OMKM. 11. Headlights must be used at all times while vehicles are driven on Summit Access Road. **Allowable number of Tours and Permit Holders:** 1. Permittee not to conduct any commercial activity tours at or to the summit or to the Science Reserve during the daily period from 30 minutes after sunset to 30 minutes before sunrise. Permittee not to conduct any commercial activity tours at or to the Hale Pohaku Mid-level facilities during the daily period from 10 p.m. to 2 ½ hours before sunrise. 2. Permittee may conduct up to maximum of 2 Evening tours per day. 3. Permittee not entitled to minimum number of Day tours or Sunrise tours. Permittee to submit written request to conduct Day or Sunrise tour at least 2 days prior to the date of the scheduled tour, to be approved by OMKM on a first come fist serve space available basis. 4. Total number of persons per tour and per vehicle including Permittee's staff and customers not to exceed 15. Permittee may submit to OMKM written request to exceed maximum limit. 5. OMKM may restrict or decrease number of commercial vehicles and commercial activity tours, modify the schedule of permitted tours, or impose other limitations as it deems necessary with at least 30 days written notice. 6. Permittee agrees not to engage in any activities that are not permitted under the Permit or that UH or OMKM would consider inconsistent with the objectives of the 199 Management Plan. 7. Permittee may only use 1 authorized vehicle per tour, and no accessory or support vehicles without OMKM's prior approval. 8. Maximum number of commercial permits for commercial tour activities is 9.	

Item	Summary	Ref.
	9. Permittee may submit written requests to OMKM to conduct tours or visits beyond that permitted under the Permit pursuant to the terms of section G.3.d. **Conduct of Permittee and Customers:** 1. Permittee to keep all areas within Premises and any facilities in clean, sanitary, and orderly condition. 2. Permittee not to make, permit, or suffer any waste, strip, spoil, nuisance, or unlawful, improper or offensive use of Premises. 3. Permittee to remove rubbish generated by its commercial tour activity. 4. Permittee to ensure compliance with all laws, rules and regulations by its customers. **Hazardous Materials:** 1. Permittee not to cause or permit discharge or presence of any hazardous materials except as permitted by environmental laws. 2. Permittee solely responsible for any cost to clean up and/or remediate such unlawful discharge or presence of hazardous materials. 3. Permittee to indemnify OMKM, UH, and the State from any damages, etc. arising from such unlawful discharge or presence of hazardous materials. **Awareness and Safety:** 1. Permittee to ensure it and its agents are familiar with the general conditions for high altitude hazards and driving, lay of land, route, width, and alignment of the roads. 2. Permittee to ensure that operators of its commercial tour vehicles and any guides are trained regarding proper guidelines for mountain driving and emergency procedures. 3. Permittee to ensure that its agents are appropriately clothed, hydrated, and adequately eaten. 4. Permittee to ensure that all tour rivers/escorts used in connection with its commercial tour activities have and carry proper certification for First Aid and CPR.	
Transfers and Assignment	Transfer of Permit allowed with OMKM prior written approval and payment of consideration (allowed without payment of consideration but subject to OMKM's prior written approval if transfer is by way of bequest, devise, or intestate succession (Bequest")). Change in ownership of 51% or more or less interest in an entity constitutes a Transfer. Transfers to be reported to OMKM at least 7 days prior to consummation or completion. Any Transfer not property approved is void. OMKM may suspend or terminate the permit for failure to comply or providing OMKM with inaccurate, false, or stealing information.	H.

Abstract of the Permit Agreement dated 6/1/2008 to Douglass B. Arnott, dba Arnott's Lodge & Hiking Adventures

Item	Summary	Ref.
	Permittee has no property rights or interests under or in connection with the Permit and will not gain any property rights or interest by virtue of receiving its rights by way of a Bequest. In the event of any Transfer, Permittee to submit to OMKM a statement certified by an independent certified public accountant or Permittee's Chief Financial Officer identifying: (1) Total Consideration, (2) Price Received by Permittee, (3) Maina Kea Portion. OMKM may require submission of copies of the Permittee's financial statements. Note: Permit is silent re: assignment of UH's interest.	
Other Conditions	Permittee not allowed to erect or place any improvements or equipment on Premises except for portable telescopes, to be removed after each daily use. Permittee has inspected Premises and assumes risks of use. Permittee to provide flashlights or other artificial light for the safety of its officers, employees, agents, etc. provided that such light is not to interfere with or adversely affect any o the scientific or educational activities, including any observatory or UH operations. No tours of Mauna Kea Ice Age Natural Area Reserve until a management plan is developed and implemented by the Natural Area Reserve, OMKM, and DLNR's Historic Preservation Division.	I.
OMKM's rights and Responsibilities	OMKM reserves the right to enter the Premises at any time. The acceptance of any fees or charges under the permit or the failure of OMKM to insist upon strict performance of any term of the Permit are not to be deemed a waiver by OMKM of any breach of the Permit by Permittee. OMKM may control and maintain the Mauna Kea Summit Access Road by exercising the following rights: requiring a waiver of liability from each driver, controlling crowds at the VIS, and any other rights and authority as it deems necessary.	J.
Disputes	Any and all disputed and/or questions arising under the Permit to be referred to OMKM and its determination to be final and binding on the parties.	K.
Meetings	OMKM reserves the right to call 2 meetings per year each with 30 days prior written notice (unless OMKM determines that based on unanticipated circumstances, the meeting must be held earlier than 30 days from the notice) that Permittee is required to attend.	L.

Abstract of the Permit Agreement dated 6/1/2008 to Hawaii Forest & Trail, Ltd. (the "Permit")

Note: All capitalized terms used but not defined in the abstract shall have the meanings assigned to them by the Permit.

Item	Summary	Ref.
Grantor	University of Hawaii ("UH")	
Permittee	Hawaii Forest & Trail, Ltd.	
Permit No.	CT-102	
Commencement Date	June 1, 2008	
Premises	Portions of that certain parcel of Government land and any improvements located thereupon, as may be designated by the Office of Mauna Kea Management (OMKM) situated within the University of Hawaii Management Area, Mauna Kea, Hamakua, Hawaii further identified as TMK no. 3rd/4-4-15-09 & 12 as indicated on the map attached Note: Map is missing from attachments.	
Purpose	Commercial activity tours	B.1.
Term	Expires June 30, 2009, unless sooner terminated Note: OMKM and Mauna Kea Management Board are in the process of establishing an updated commercial permit issuance structure, and once finalized, Permittee acknowledges that: (a) OMKM may terminate the Permit with 30 days prior written notice, (b) upon such termination, Permittee must apply for a new permit under the new issuance structure, (c) the Permittee's eligibility for a new permit will be determined purusat to the new permit structure, (d) in determining Permittee's eligibility, OMKM need not consider the Permittee's prior eligibility, and (e) the Permittee does not have an right, preference, or entitlement to a new permit by virtue of having or possessing a permit in the past. UH may extend the Permit at its sole option, and may consider various factors including new data to determine whether to grant such extension(s).	B.2.
One Permit Limitation	Number of permits limited to 1 per person/entity. If this rule is violated, after the issuance of an order to show cause, OMKM may cancel the permits held or deemed to be constructively held by the offender. OMKM may suspend the permit pending the order to show cause.	B.3.
Monthly Fee	Greater of $1,200 or $6 per passenger in each vehicle used by the Permittee to transport passengers to any location within the Premises, including the Visitor Information Center ("VIS") and/or summit of Mauna Kea. Interest will be assessed on any delinquent fees and charges. Fees may be adjusted upon 30 days written notice.	C.1. C.2. C.3.
Security Deposit	Upon execution of the Permit, the Permittee must make a security deposit of $3,600 with OMKM. Permittee is not entitled to a return of the security deposit unless and until OMKM determines that Permittee has fully performed and complies with all of Permittee's obligations under the Permit.	C.4.

Item	Summary	Ref.
Insurance	Permittee to maintain liability and property insurance in specified amounts.	C.6.
Failure to Comply	If Permittee fails to comply with conditions of the Permit, OMKM may assess a charge of $20 per day for every day that Permittee fails to comply after receiving notice from OMKM. OMKM may also assess a $100 service charge for any month that the Permittee fails to comply as required by OMKM.	C.7.
Litigation Costs	Permittee to pay all litigation costs, including reasonable attorneys fees and expenses incurred by OMKM, the Board, the UH, and the State should they be made party to any litigation commenced by or against the Permittee (other than condemnation proceedings). Permittee to pay all litigation costs, including reasonable attorneys fees and expenses incurred by UH in enforcing, suspending, or terminating the Permit or in the collection of any fees, taxes, and other charges.	C.8.
Refusal to Stop	If the Permittee conducts business in relation to the Premises during a period which the Permittee does not have the right to do so, a $2,000 per day fine will be assessed for each such day a business activity is conducted.	C.9.
Removal of Permittee	Permittee has no right to occupy or exclusively possess any portion of the Premises, and the UH and OMKM may remove any vehicles, equipment, and/or personal property left by the Permittee on the Premises at the Permittee's sole cost.	C.10.
Indemnification	Permittee to indemnify the OMKM, the UH, and the State in the manner set forth.	C.11.
Failure to Perform or Comply	If Permittee fails to comply with the terms of the Permit, OMKM will send written notice of such failure. If Permittee continues to fail to comply, OMKM may suspend the Permit for up to 3 days for the first failure and for a minimum of 7 days for each successive failure. OMKM is not limited to suspension (i.e., it may terminate the Permit instead).	D.1.
Reporting	Permittee to submit daily and monthly reports to OMKM in the manner set forth. Failure to submit such report may lead to the assessment of fines. If situations develop or incidents occur within or on the Premises that Permittee recognizes as posing a significant threat to persons, property, ecosystems or biological systems, cultural and historical resources, or science or educational related operations, including any UH operations, Permittee shall notify the OMKM rangers.	D.2. D.3. E.2.
Cancellation	Permittee may cease operations and surrender Permit with 30 days written notice to OMKM. UH, through OMKM, may terminate the Permit at any time with 30 days written notice, even without cause.	D.4. D.5.
Non-payment	If Permittee's failure to pay any fees or charges persists for a period of 10 days or more, the UH, through OMKM, amy immediately suspend the Permit for a period to be determined by OMKM or terminate the Permit upon written notice at least 5 business days prior to termination.	D.6.

Item	Summary	Ref.
Failure to Fully Disclose	OMKM may assess charges against the Permittee and/or suspend or terminate the Permit if Permittee fails to comply with all terms and conditions imposed or required by OMKM including failing to fully disclose all material or relevant information.	D.7.
Prompt Termination	OMKM may immediately prohibit Permittee from conducting any further operations under the Permit if OMKM determines that it is warranted due to the threat to: (1) the ecosystems or biological systems, (b) the cultural and historical resources, (c) the science or educational related operations, including any UH operations, and (d) the observatories, facilities, structures, roads, and infrastructure.	D.8.
Not Eligible for Permit	If Permit is terminated, in whole or in part because of Permittee's failure to fully perform or comply with its obligations under the Permit, the Permittee will not be eligible for a commercial permit for up to 5 years.	D.9.
Monitoring	OMKM to develop data reporting form to reflect type of information that needs to be collected to property analyse and assess impacts of commercial activity levels. Every vehicle owned, operated or controlled by Permittee must check in at VIS whether or not carrying passengers. Permittee to cooperate with OMKM's procedures and processes for impact assessment including completing the registration book at the VIS, daily check in with OMKM rangers, and requiring Permittees to provide feedback and suggestions regarding tour activity.	F.
Operating Rules While on UH Leased Lands	**General:** 1. Permittee may conduct commercial activity tours 7 days a week, subject to weather conditions and requirements imposed by OMKM. OMKM may impose further limits such as restricting commercial uses to weekdays. OMKM shall notify Permittee in writing of such further restriction at least 30 days prior to the effective implementation date, unless the situation requires immediate action or restriction. Permittee is responsible for contacting the VIS prior to departing its own facilities or arriving at the VIS. 2. Permittee is not allowed on the road when it is closed to the public. 3. Upon arrival at the VIS, Permittee must register to inform OMKM of its presence. 4. Permittee and its passengers and customers will be permitted to use portable toilets provided by OMKM. Permittee must ensure that its agents (includes employees, customers, and passengers) use only the designated portable toilet facilities provided by OMKM. 5. Permittee shall ensure that its agents (includes employees, customers, and passengers) do not enter any buildings or structures withi the Premises except for designated public areas on the summit and VIS. 6. Use of electronic devices restricted to emergency use only within the Science Reserve portion of the Premises.	G.

Item	Summary	Ref.
	7. Except for certified assistance animals for the disabled, no animals permitted on Premises. 8. Permittee responsible for appropriately removing from the Premises all solid waste, rubbish, trash, and other discarded items generated by Permittee or its agents including those generated by certified assistance animals for the disabled. 9. Tour operators to comply with Public Utilities Commission regulations for vehicle signage requirements. 10. Permittee to ensure that a designated employee on each tour activity carry a copy of the Permit at all times when on the mountain or within the Premises. 11. Possession, display and consumption of alcoholic beverages prohibited. 12. Permittee to ensure that Permittee's agents and its commercial tour activities for not obstruct or unreasonably interfere with UH operations, any of the observatory, science and educational activities within the Premises, other commercial activities, and other use and activities of general public. 13. Lasers with an output greater than 5 milliwatts not allowed. 14. Permittee and all of its employees, drivers and passengers required to comply with all VIS or OMKM rules and regulations. 15. OMKM reserves right to place restrictions on any commercial tour activities that it deems inappropriate or would negatively impact natural or cultural resources, facilities or infrastructure within or adjacent to the Premises. **Vehicles and Parking:** 1. Only 4-wheel drives may be used to conduct commercial tour activities on the Summit Access Road and within the Mauna Kea Science Reserve. 2. Maximum vehicle capacity allowed is 14 people excluding the driver. 3. Vehicles must be approved by OMKM in writing prior to regular use for commercial activity tours. 4. Up to 2 Standard Vehicles or 1 Modified Vehicle in the VIS parking lot. Oversized Vehicles not allowed in parking lot 5. Oversized Vehicles not allowed on Premises without OMKM's prior written approval, which may be withheld in OMKM's sole discretion. Any approval is subject to the terms outlined in section G.2.e. (as amended) of the Permit, such as payment of fees, etc. 6. OMKM to determine maximum number of commercial vehicles allowed to park at any one time at the VIS or on the adjacent roadways. 7. Maximum number of commercial vehicles allowed on the Premises at any one time not to exceed 18. During periods of heavy use, number of	

Item	Summary	Ref.
	commercial vehicles allowed in the Science Reserve portion of the Premises may be limited to a number determined by OMKM. 8. Permittee to ensure that operators of commercial tour vehicles comply with directions of OMKM or VIS employees including OMKM rangers in parking tour vehicles. 9. Permittee to remove its vehicle within 48 hours from the Premises or any area within Mauna Kea if it becomes disabled. 10. Use of a standard 4 wheel drive which is not a part of Permittee's fleet of vehicles (and which may not have been registered with or approved by OMKM) as a temporary vehicle allowed for emergency use only, provided that Permittee provides OMKM. 11. Headlights must be used at all times while vehicles are driven on Summit Access Road. **Allowable number of Tours and Permit Holders:** 1. Permittee not to conduct any commercial activity tours at or to the summit or to the Science Reserve during the daily period from 30 minutes after sunset to 30 minutes before sunrise. Permittee not to conduct any commercial activity tours at or to the Hale Pohaku Mid-level facilities during the daily period from 10 p.m. to 2 ½ hours before sunrise. 2. Permittee may conduct up to maximum of 2 Evening tours per day. 3. Permittee not entitled to minimum number of Day tours or Sunrise tours. Permittee to submit written request to conduct Day or Sunrise tour at least 2 days prior to the date of the scheduled tour, to be approved by OMKM on a first come fist serve space available basis. 4. Total number of persons per tour and per vehicle including Permittee's staff and customers not to exceed 15. Permittee may submit to OMKM written request to exceed maximum limit. 5. OMKM may restrict or decrease number of commercial vehicles and commercial activity tours, modify the schedule of permitted tours, or impose other limitations as it deems necessary with at least 30 days written notice. 6. Permittee agrees not to engage in any activities that are not permitted under the Permit or that UH or OMKM would consider inconsistent with the objectives of the 199 Management Plan. 7. Permittee may only use 1 authorized vehicle per tour, and no accessory or support vehicles without OMKM's prior approval. 8. Maximum number of commercial permits for commercial tour activities is 9.	

Item	Summary	Ref.
	9. Permittee may submit written requests to OMKM to conduct tours or visits beyond that permitted under the Permit pursuant to the terms of section G.3.d. **Conduct of Permittee and Customers:** 1. Permittee to keep all areas within Premises and any facilities in clean, sanitary, and orderly condition. 2. Permittee not to make, permit, or suffer any waste, strip, spoil, nuisance, or unlawful, improper or offensive use of Premises. 3. Permittee to remove rubbish generated by its commercial tour activity. 4. Permittee to ensure compliance with all laws, rules and regulations by its customers. **Hazardous Materials:** 1. Permittee not to cause or permit discharge or presence of any hazardous materials except as permitted by environmental laws. 2. Permittee solely responsible for any cost to clean up and/or remediate such unlawful discharge or presence of hazardous materials. 3. Permittee to indemnify OMKM, UH, and the State from any damages, etc. arising from such unlawful discharge or presence of hazardous materials. **Awareness and Safety:** 1. Permittee to ensure it and its agents are familiar with the general conditions for high altitude hazards and driving, lay of land, route, width, and alignment of the roads. 2. Permittee to ensure that operators of its commercial tour vehicles and any guides are trained regarding proper guidelines for mountain driving and emergency procedures. 3. Permittee to ensure that its agents are appropriately clothed, hydrated, and adequately eaten. 4. Permittee to ensure that all tour rivers/escorts used in connection with its commercial tour activities have and carry proper certification for First Aid and CPR.	
Transfers and Assignment	Transfer of Permit allowed with OMKM prior written approval and payment of consideration (allowed without payment of consideration but subject to OMKM's prior written approval if transfer is by way of bequest, devise, or intestate succession (Bequest")). Change in ownership of 51% or more or less interest in an entity constitutes a Transfer. Transfers to be reported to OMKM at least 7 days prior to consummation or completion. Any Transfer not property approved is void. OMKM may suspend or terminate the permit for failure to comply or providing OMKM with inaccurate, false, or stealing information.	H.

Item	Summary	Ref.
	Permittee has no property rights or interests under or in connection with the Permit and will not gain any property rights or interest by virtue of receiving its rights by way of a Bequest. In the event of any Transfer, Permittee to submit to OMKM a statement certified by an independent certified public accountant or Permittee's Chief Financial Officer identifying: (1) Total Consideration, (2) Price Received by Permittee, (3) Maina Kea Portion. OMKM may require submission of copies of the Permittee's financial statements. Note: Permit is silent re: assignment of UH's interest.	
Other Conditions	Permittee not allowed to erect or place any improvements or equipment on Premises except for portable telescopes, to be removed after each daily use. Permittee has inspected Premises and assumes risks of use. Permittee to provide flashlights or other artificial light for the safety of its officers, employees, agents, etc. provided that such light is not to interfere with or adversely affect any o the scientific or educational activities, including any observatory or UH operations. No tours of Mauna Kea Ice Age Natural Area Reserve until a management plan is developed and implemented by the Natural Area Reserve, OMKM, and DLNR's Historic Preservation Division.	I.
OMKM's rights and Responsibilities	OMKM reserves the right to enter the Premises at any time. The acceptance of any fees or charges under the permit or the failure of OMKM to insist upon strict performance of any term of the Permit are not to be deemed a waiver by OMKM of any breach of the Permit by Permittee. OMKM may control and maintain the Mauna Kea Summit Access Road by exercising the following rights: requiring a waiver of liability from each driver, controlling crowds at the VIS, and any other rights and authority as it deems necessary.	J.
Disputes	Any and all disputed and/or questions arising under the Permit to be referred to OMKM and its determination to be final and binding on the parties.	K.
Meetings	OMKM reserves the right to call 2 meetings per year each with 30 days prior written notice (unless OMKM determines that based on unanticipated circumstances, the meeting must be held earlier than 30 days from the notice) that Permittee is required to attend.	L.

Abstract of the Permit Agreement dated 6/1/2008 to Hawaiian Haoles, Inc. (the "Permit")

Note: All capitalized terms used but not defined in the abstract shall have the meanings assigned to them by the Permit.

Item	Summary	Ref.
Grantor	University of Hawaii ("UH")	
Permittee	Hawaiian Haoles, Inc.	
Permit No.	CT-103	
Commencement Date	June 1, 2008	
Premises	Portions of that certain parcel of Government land and any improvements located thereupon, as may be designated by the Office of Mauna Kea Management (OMKM) situated within the University of Hawaii Management Area, Mauna Kea, Hamakua, Hawaii further identified as TMK no. 3rd/4-4-15-09 & 12 as indicated on the map attached Note: Map is missing from attachments.	
Purpose	Commercial activity tours	B.1.
Term	Expires June 30, 2009, unless sooner terminated Note: OMKM and Mauna Kea Management Board are in the process of establishing an updated commercial permit issuance structure, and once finalized, Permittee acknowledges that: (a) OMKM may terminate the Permit with 30 days prior written notice, (b) upon such termination, Permittee must apply for a new permit under the new issuance structure, (c) the Permittee's eligibility for a new permit will be determined purusat to the new permit structure, (d) in determining Permittee's eligibility, OMKM need not consider the Permittee's prior eligibility, and (e) the Permittee does not have an right, preference, or entitlement to a new permit by virtue of having or possessing a permit in the past. UH may extend the Permit at its sole option, and may consider various factors including new data to determine whether to grant such extension(s).	B.2.
One Permit Limitation	Number of permits limited to 1 per person/entity. If this rule is violated, after the issuance of an order to show cause, OMKM may cancel the permits held or deemed to be constructively held by the offender. OMKM may suspend the permit pending the order to show cause.	B.3.
Monthly Fee	Greater of $1,200 or $6 per passenger in each vehicle used by the Permittee to transport passengers to any location within the Premises, including the Visitor Information Center ("VIS") and/or summit of Mauna Kea. Interest will be assessed on any delinquent fees and charges. Fees may be adjusted upon 30 days written notice.	C.1. C.2. C.3.
Security Deposit	Upon execution of the Permit, the Permittee must make a security deposit of $3,600 with OMKM. Permittee is not entitled to a return of the security deposit unless and until OMKM determines that Permittee has fully performed and complies with all of Permittee's obligations under the Permit.	C.4.

Abstract of the Permit Agreement dated 6/1/2008 to Hawaiian Haoles, Inc.

Item	Summary	Ref.
Insurance	Permittee to maintain liability and property insurance in specified amounts.	C.6.
Failure to Comply	If Permittee fails to comply with conditions of the Permit, OMKM may assess a charge of $20 per day for every day that Permittee fails to comply after receiving notice from OMKM. OMKM may also assess a $100 service charge for any month that the Permittee fails to comply as required by OMKM.	C.7.
Litigation Costs	Permittee to pay all litigation costs, including reasonable attorneys fees and expenses incurred by OMKM, the Board, the UH, and the State should they be made party to any litigation commenced by or against the Permittee (other than condemnation proceedings). Permittee to pay all litigation costs, including reasonable attorneys fees and expenses incurred by UH in enforcing, suspending, or terminating the Permit or in the collection of any fees, taxes, and other charges.	C.8.
Refusal to Stop	If the Permittee conducts business in relation to the Premises during a period which the Permittee does not have the right to do so, a $2,000 per day fine will be assessed for each such day a business activity is conducted.	C.9.
Removal of Permittee	Permittee has no right to occupy or exclusively possess any portion of the Premises, and the UH and OMKM may remove any vehicles, equipment, and/or personal property left by the Permittee on the Premises at the Permittee's sole cost.	C.10.
Indemnification	Permittee to indemnify the OMKM, the UH, and the State in the manner set forth.	C.11.
Failure to Perform or Comply	If Permittee fails to comply with the terms of the Permit, OMKM will send written notice of such failure. If Permittee continues to fail to comply, OMKM may suspend the Permit for up to 3 days for the first failure and for a minimum of 7 days for each successive failure. OMKM is not limited to suspension (i.e., it may terminate the Permit instead).	D.1.
Reporting	Permittee to submit daily and monthly reports to OMKM in the manner set forth. Failure to submit such report may lead to the assessment of fines. If situations develop or incidents occur within or on the Premises that Permittee recognizes as posing a significant threat to persons, property, ecosystems or biological systems, cultural and historical resources, or science or educational related operations, including any UH operations, Permittee shall notify the OMKM rangers.	D.2. D.3. E.2.
Cancellation	Permittee may cease operations and surrender Permit with 30 days written notice to OMKM. UH, through OMKM, may terminate the Permit at any time with 30 days written notice, even without cause.	D.4. D.5.
Non-payment	If Permittee's failure to pay any fees or charges persists for a period of 10 days or more, the UH, through OMKM, amy immediately suspend the Permit for a period to be determined by OMKM or terminate the Permit upon written notice at least 5 business days prior to termination.	D.6.

Item	Summary	Ref.
Failure to Fully Disclose	OMKM may assess charges against the Permittee and/or suspend or terminate the Permit if Permittee fails to comply with all terms and conditions imposed or required by OMKM including failing to fully disclose all material or relevant information.	D.7.
Prompt Termination	OMKM may immediately prohibit Permittee from conducting any further operations under the Permit if OMKM determines that it is warranted due to the threat to: (1) the ecosystems or biological systems, (b) the cultural and historical resources, (c) the science or educational related operations, including any UH operations, and (d) the observatories, facilities, structures, roads, and infrastructure.	D.8.
Not Eligible for Permit	If Permit is terminated, in whole or in part because of Permittee's failure to fully perform or comply with its obligations under the Permit, the Permittee will not be eligible for a commercial permit for up to 5 years.	D.9.
Monitoring	OMKM to develop data reporting form to reflect type of information that needs to be collected to property analyse and assess impacts of commercial activity levels. Every vehicle owned, operated or controlled by Permittee must check in at VIS whether or not carrying passengers. Permittee to cooperate with OMKM's procedures and processes for impact assessment including completing the registration book at the VIS, daily check in with OMKM rangers, and requiring Permittees to provide feedback and suggestions regarding tour activity.	F.
Operating Rules While on UH Leased Lands	**General:** 1. Permittee may conduct commercial activity tours 7 days a week, subject to weather conditions and requirements imposed by OMKM. OMKM may impose further limits such as restricting commercial uses to weekdays. OMKM shall notify Permittee in writing of such further restriction at least 30 days prior to the effective implementation date, unless the situation requires immediate action or restriction. Permittee is responsible for contacting the VIS prior to departing its own facilities or arriving at the VIS. 2. Permittee is not allowed on the road when it is closed to the public. 3. Upon arrival at the VIS, Permittee must register to inform OMKM of its presence. 4. Permittee and its passengers and customers will be permitted to use portable toilets provided by OMKM. Permittee must ensure that its agents (includes employees, customers, and passengers) use only the designated portable toilet facilities provided by OMKM. 5. Permittee shall ensure that its agents (includes employees, customers, and passengers) do not enter any buildings or structures withi the Premises except for designated public areas on the summit and VIS. 6. Use of electronic devices restricted to emergency use only within the Science Reserve portion of the Premises.	G.

Item	Summary	Ref.
	7. Except for certified assistance animals for the disabled, no animals permitted on Premises. 8. Permittee responsible for appropriately removing from the Premises all solid waste, rubbish, trash, and other discarded items generated by Permittee or its agents including those generated by certified assistance animals for the disabled. 9. Tour operators to comply with Public Utilities Commission regulations for vehicle signage requirements. 10. Permittee to ensure that a designated employee on each tour activity carry a copy of the Permit at all times when on the mountain or within the Premises. 11. Possession, display and consumption of alcoholic beverages prohibited. 12. Permittee to ensure that Permittee's agents and its commercial tour activities for not obstruct or unreasonably interfere with UH operations, any of the observatory, science and educational activities within the Premises, other commercial activities, and other use and activities of general public. 13. Lasers with an output greater than 5 milliwatts not allowed. 14. Permittee and all of its employees, drivers and passengers required to comply with all VIS or OMKM rules and regulations. 15. OMKM reserves right to place restrictions on any commercial tour activities that it deems inappropriate or would negatively impact natural or cultural resources, facilities or infrastructure within or adjacent to the Premises. **Vehicles and Parking:** 1. Only 4-wheel drives may be used to conduct commercial tour activities on the Summit Access Road and within the Mauna Kea Science Reserve. 2. Maximum vehicle capacity allowed is 14 people excluding the driver. 3. Vehicles must be approved by OMKM in writing prior to regular use for commercial activity tours. 4. Up to 2 Standard Vehicles or 1 Modified Vehicle in the VIS parking lot. Oversized Vehicles not allowed in parking lot 5. Oversized Vehicles not allowed on Premises without OMKM's prior written approval, which may be withheld in OMKM's sole discretion. Any approval is subject to the terms outlined in section G.2.e. (as amended) of the Permit, such as payment of fees, etc. 6. OMKM to determine maximum number of commercial vehicles allowed to park at any one time at the VIS or on the adjacent roadways. 7. Maximum number of commercial vehicles allowed on the Premises at any one time not to exceed 18. During periods of heavy use, number of	

Item	Summary	Ref.
	commercial vehicles allowed in the Science Reserve portion of the Premises may be limited to a number determined by OMKM. 8. Permittee to ensure that operators of commercial tour vehicles comply with directions of OMKM or VIS employees including OMKM rangers in parking tour vehicles. 9. Permittee to remove its vehicle within 48 hours from the Premises or any area within Mauna Kea if it becomes disabled. 10. Use of a standard 4 wheel drive which is not a part of Permittee's fleet of vehicles (and which may not have been registered with or approved by OMKM) as a temporary vehicle allowed for emergency use only, provided that Permittee provides OMKM. 11. Headlights must be used at all times while vehicles are driven on Summit Access Road. **Allowable number of Tours and Permit Holders:** 1. Permittee not to conduct any commercial activity tours at or to the summit or to the Science Reserve during the daily period from 30 minutes after sunset to 30 minutes before sunrise. Permittee not to conduct any commercial activity tours at or to the Hale Pohaku Mid-level facilities during the daily period from 10 p.m. to 2 ½ hours before sunrise. 2. Permittee may conduct up to maximum of 2 Evening tours per day. 3. Permittee not entitled to minimum number of Day tours or Sunrise tours. Permittee to submit written request to conduct Day or Sunrise tour at least 2 days prior to the date of the scheduled tour, to be approved by OMKM on a first come fist serve space available basis. 4. Total number of persons per tour and per vehicle including Permittee's staff and customers not to exceed 15. Permittee may submit to OMKM written request to exceed maximum limit. 5. OMKM may restrict or decrease number of commercial vehicles and commercial activity tours, modify the schedule of permitted tours, or impose other limitations as it deems necessary with at least 30 days written notice. 6. Permittee agrees not to engage in any activities that are not permitted under the Permit or that UH or OMKM would consider inconsistent with the objectives of the 199 Management Plan. 7. Permittee may only use 1 authorized vehicle per tour, and no accessory or support vehicles without OMKM's prior approval. 8. Maximum number of commercial permits for commercial tour activities is 9.	

Item	Summary	Ref.
	9. Permittee may submit written requests to OMKM to conduct tours or visits beyond that permitted under the Permit pursuant to the terms of section G.3.d. **Conduct of Permittee and Customers:** 1. Permittee to keep all areas within Premises and any facilities in clean, sanitary, and orderly condition. 2. Permittee not to make, permit, or suffer any waste, strip, spoil, nuisance, or unlawful, improper or offensive use of Premises. 3. Permittee to remove rubbish generated by its commercial tour activity. 4. Permittee to ensure compliance with all laws, rules and regulations by its customers. **Hazardous Materials:** 1. Permittee not to cause or permit discharge or presence of any hazardous materials except as permitted by environmental laws. 2. Permittee solely responsible for any cost to clean up and/or remediate such unlawful discharge or presence of hazardous materials. 3. Permittee to indemnify OMKM, UH, and the State from any damages, etc. arising from such unlawful discharge or presence of hazardous materials. **Awareness and Safety:** 1. Permittee to ensure it and its agents are familiar with the general conditions for high altitude hazards and driving, lay of land, route, width, and alignment of the roads. 2. Permittee to ensure that operators of its commercial tour vehicles and any guides are trained regarding proper guidelines for mountain driving and emergency procedures. 3. Permittee to ensure that its agents are appropriately clothed, hydrated, and adequately eaten. 4. Permittee to ensure that all tour rivers/escorts used in connection with its commercial tour activities have and carry proper certification for First Aid and CPR.	
Transfers and Assignment	Transfer of Permit allowed with OMKM prior written approval and payment of consideration (allowed without payment of consideration but subject to OMKM's prior written approval if transfer is by way of bequest, devise, or intestate succession (Bequest")). Change in ownership of 51% or more or less interest in an entity constitutes a Transfer. Transfers to be reported to OMKM at least 7 days prior to consummation or completion. Any Transfer not property approved is void. OMKM may suspend or terminate the permit for failure to comply or providing OMKM with inaccurate, false, or stealing information.	H.

Item	Summary	Ref.
	Permittee has no property rights or interests under or in connection with the Permit and will not gain any property rights or interest by virtue of receiving its rights by way of a Bequest. In the event of any Transfer, Permittee to submit to OMKM a statement certified by an independent certified public accountant or Permittee's Chief Financial Officer identifying: (1) Total Consideration, (2) Price Received by Permittee, (3) Maina Kea Portion. OMKM may require submission of copies of the Permittee's financial statements. Note: Permit is silent re: assignment of UH's interest.	
Other Conditions	Permittee not allowed to erect or place any improvements or equipment on Premises except for portable telescopes, to be removed after each daily use. Permittee has inspected Premises and assumes risks of use. Permittee to provide flashlights or other artificial light for the safety of its officers, employees, agents, etc. provided that such light is not to interfere with or adversely affect any o the scientific or educational activities, including any observatory or UH operations. No tours of Mauna Kea Ice Age Natural Area Reserve until a management plan is developed and implemented by the Natural Area Reserve, OMKM, and DLNR's Historic Preservation Division.	I.
OMKM's rights and Responsibilities	OMKM reserves the right to enter the Premises at any time. The acceptance of any fees or charges under the permit or the failure of OMKM to insist upon strict performance of any term of the Permit are not to be deemed a waiver by OMKM of any breach of the Permit by Permittee. OMKM may control and maintain the Mauna Kea Summit Access Road by exercising the following rights: requiring a waiver of liability from each driver, controlling crowds at the VIS, and any other rights and authority as it deems necessary.	J.
Disputes	Any and all disputed and/or questions arising under the Permit to be referred to OMKM and its determination to be final and binding on the parties.	K.
Meetings	OMKM reserves the right to call 2 meetings per year each with 30 days prior written notice (unless OMKM determines that based on unanticipated circumstances, the meeting must be held earlier than 30 days from the notice) that Permittee is required to attend.	L.

Abstract of the Permit Agreement dated 6/1/2008 to Paradise Safaris, Inc. (the "Permit")

Note: All capitalized terms used but not defined in the abstract shall have the meanings assigned to them by the Permit.

Item	Summary	Ref.
Grantor	University of Hawaii ("UH")	
Permittee	Paradise Safaris, Inc.	
Permit No.	CT-106	
Commencement Date	June 1, 2008	
Premises	Portions of that certain parcel of Government land and any improvements located thereupon, as may be designated by the Office of Mauna Kea Management (OMKM) situated within the University of Hawaii Management Area, Mauna Kea, Hamakua, Hawaii further identified as TMK no. 3rd/4-4-15-09 & 12 as indicated on the map attached Note: Map is missing from attachments.	
Purpose	Commercial activity tours	B.1.
Term	Expires June 30, 2009, unless sooner terminated Note: OMKM and Mauna Kea Management Board are in the process of establishing an updated commercial permit issuance structure, and once finalized, Permittee acknowledges that: (a) OMKM may terminate the Permit with 30 days prior written notice, (b) upon such termination, Permittee must apply for a new permit under the new issuance structure, (c) the Permittee's eligibility for a new permit will be determined purusat to the new permit structure, (d) in determining Permittee's eligibility, OMKM need not consider the Permittee's prior eligibility, and (e) the Permittee does not have an right, preference, or entitlement to a new permit by virtue of having or possessing a permit in the past. UH may extend the Permit at its sole option, and may consider various factors including new data to determine whether to grant such extension(s).	B.2.
One Permit Limitation	Number of permits limited to 1 per person/entity. If this rule is violated, after the issuance of an order to show cause, OMKM may cancel the permits held or deemed to be constructively held by the offender. OMKM may suspend the permit pending the order to show cause.	B.3.
Monthly Fee	Greater of $1,200 or $6 per passenger in each vehicle used by the Permittee to transport passengers to any location within the Premises, including the Visitor Information Center ("VIS") and/or summit of Mauna Kea. Interest will be assessed on any delinquent fees and charges. Fees may be adjusted upon 30 days written notice.	C.1. C.2. C.3.
Security Deposit	Upon execution of the Permit, the Permittee must make a security deposit of $3,600 with OMKM. Permittee is not entitled to a return of the security deposit unless and until OMKM determines that Permittee has fully performed and complies with all of Permittee's obligations under the Permit.	C.4.

Abstract of the Permit Agreement dated 6/1/2008 to Paradise Safaris, Inc.

Item	Summary	Ref.
Insurance	Permittee to maintain liability and property insurance in specified amounts.	C.6.
Failure to Comply	If Permittee fails to comply with conditions of the Permit, OMKM may assess a charge of $20 per day for every day that Permittee fails to comply after receiving notice from OMKM. OMKM may also assess a $100 service charge for any month that the Permittee fails to comply as required by OMKM.	C.7.
Litigation Costs	Permittee to pay all litigation costs, including reasonable attorneys fees and expenses incurred by OMKM, the Board, the UH, and the State should they be made party to any litigation commenced by or against the Permittee (other than condemnation proceedings). Permittee to pay all litigation costs, including reasonable attorneys fees and expenses incurred by UH in enforcing, suspending, or terminating the Permit or in the collection of any fees, taxes, and other charges.	C.8.
Refusal to Stop	If the Permittee conducts business in relation to the Premises during a period which the Permittee does not have the right to do so, a $2,000 per day fine will be assessed for each such day a business activity is conducted.	C.9.
Removal of Permittee	Permittee has no right to occupy or exclusively possess any portion of the Premises, and the UH and OMKM may remove any vehicles, equipment, and/or personal property left by the Permittee on the Premises at the Permittee's sole cost.	C.10.
Indemnification	Permittee to indemnify the OMKM, the UH, and the State in the manner set forth.	C.11.
Failure to Perform or Comply	If Permittee fails to comply with the terms of the Permit, OMKM will send written notice of such failure. If Permittee continues to fail to comply, OMKM may suspend the Permit for up to 3 days for the first failure and for a minimum of 7 days for each successive failure. OMKM is not limited to suspension (i.e., it may terminate the Permit instead).	D.1.
Reporting	Permittee to submit daily and monthly reports to OMKM in the manner set forth. Failure to submit such report may lead to the assessment of fines. If situations develop or incidents occur within or on the Premises that Permittee recognizes as posing a significant threat to persons, property, ecosystems or biological systems, cultural and historical resources, or science or educational related operations, including any UH operations, Permittee shall notify the OMKM rangers.	D.2. D.3. E.2.
Cancellation	Permittee may cease operations and surrender Permit with 30 days written notice to OMKM. UH, through OMKM, may terminate the Permit at any time with 30 days written notice, even without cause.	D.4. D.5.
Non-payment	If Permittee's failure to pay any fees or charges persists for a period of 10 days or more, the UH, through OMKM, amy immediately suspend the Permit for a period to be determined by OMKM or terminate the Permit upon written notice at least 5 business days prior to termination.	D.6.

Item	Summary	Ref.
Failure to Fully Disclose	OMKM may assess charges against the Permittee and/or suspend or terminate the Permit if Permittee fails to comply with all terms and conditions imposed or required by OMKM including failing to fully disclose all material or relevant information.	D.7.
Prompt Termination	OMKM may immediately prohibit Permittee from conducting any further operations under the Permit if OMKM determines that it is warranted due to the threat to: (1) the ecosystems or biological systems, (b) the cultural and historical resources, (c) the science or educational related operations, including any UH operations, and (d) the observatories, facilities, structures, roads, and infrastructure.	D.8.
Not Eligible for Permit	If Permit is terminated, in whole or in part because of Permittee's failure to fully perform or comply with its obligations under the Permit, the Permittee will not be eligible for a commercial permit for up to 5 years.	D.9.
Monitoring	OMKM to develop data reporting form to reflect type of information that needs to be collected to property analyse and assess impacts of commercial activity levels. Every vehicle owned, operated or controlled by Permittee must check in at VIS whether or not carrying passengers. Permittee to cooperate with OMKM's procedures and processes for impact assessment including completing the registration book at the VIS, daily check in with OMKM rangers, and requiring Permittees to provide feedback and suggestions regarding tour activity.	F.
Operating Rules While on UH Leased Lands	**General:** 1. Permittee may conduct commercial activity tours 7 days a week, subject to weather conditions and requirements imposed by OMKM. OMKM may impose further limits such as restricting commercial uses to weekdays. OMKM shall notify Permittee in writing of such further restriction at least 30 days prior to the effective implementation date, unless the situation requires immediate action or restriction. Permittee is responsible for contacting the VIS prior to departing its own facilities or arriving at the VIS. 2. Permittee is not allowed on the road when it is closed to the public. 3. Upon arrival at the VIS, Permittee must register to inform OMKM of its presence. 4. Permittee and its passengers and customers will be permitted to use portable toilets provided by OMKM. Permittee must ensure that its agents (includes employees, customers, and passengers) use only the designated portable toilet facilities provided by OMKM. 5. Permittee shall ensure that its agents (includes employees, customers, and passengers) do not enter any buildings or structures withi the Premises except for designated public areas on the summit and VIS. 6. Use of electronic devices restricted to emergency use only within the Science Reserve portion of the Premises.	G.

Item	Summary	Ref.
	7. Except for certified assistance animals for the disabled, no animals permitted on Premises. 8. Permittee responsible for appropriately removing from the Premises all solid waste, rubbish, trash, and other discarded items generated by Permittee or its agents including those generated by certified assistance animals for the disabled. 9. Tour operators to comply with Public Utilities Commission regulations for vehicle signage requirements. 10. Permittee to ensure that a designated employee on each tour activity carry a copy of the Permit at all times when on the mountain or within the Premises. 11. Possession, display and consumption of alcoholic beverages prohibited. 12. Permittee to ensure that Permittee's agents and its commercial tour activities for not obstruct or unreasonably interfere with UH operations, any of the observatory, science and educational activities within the Premises, other commercial activities, and other use and activities of general public. 13. Lasers with an output greater than 5 milliwatts not allowed. 14. Permittee and all of its employees, drivers and passengers required to comply with all VIS or OMKM rules and regulations. 15. OMKM reserves right to place restrictions on any commercial tour activities that it deems inappropriate or would negatively impact natural or cultural resources, facilities or infrastructure within or adjacent to the Premises. **Vehicles and Parking:** 1. Only 4-wheel drives may be used to conduct commercial tour activities on the Summit Access Road and within the Mauna Kea Science Reserve. 2. Maximum vehicle capacity allowed is 14 people excluding the driver. 3. Vehicles must be approved by OMKM in writing prior to regular use for commercial activity tours. 4. Up to 2 Standard Vehicles or 1 Modified Vehicle in the VIS parking lot. Oversized Vehicles not allowed in parking lot 5. Oversized Vehicles not allowed on Premises without OMKM's prior written approval, which may be withheld in OMKM's sole discretion. Any approval is subject to the terms outlined in section G.2.e. (as amended) of the Permit, such as payment of fees, etc. 6. OMKM to determine maximum number of commercial vehicles allowed to park at any one time at the VIS or on the adjacent roadways. 7. Maximum number of commercial vehicles allowed on the Premises at any one time not to exceed 18. During periods of heavy use, number of	

Item	Summary	Ref.
	commercial vehicles allowed in the Science Reserve portion of the Premises may be limited to a number determined by OMKM. 8. Permittee to ensure that operators of commercial tour vehicles comply with directions of OMKM or VIS employees including OMKM rangers in parking tour vehicles. 9. Permittee to remove its vehicle within 48 hours from the Premises or any area within Mauna Kea if it becomes disabled. 10. Use of a standard 4 wheel drive which is not a part of Permittee's fleet of vehicles (and which may not have been registered with or approved by OMKM) as a temporary vehicle allowed for emergency use only, provided that Permittee provides OMKM. 11. Headlights must be used at all times while vehicles are driven on Summit Access Road. **Allowable number of Tours and Permit Holders:** 1. Permittee not to conduct any commercial activity tours at or to the summit or to the Science Reserve during the daily period from 30 minutes after sunset to 30 minutes before sunrise. Permittee not to conduct any commercial activity tours at or to the Hale Pohaku Mid-level facilities during the daily period from 10 p.m. to 2 ½ hours before sunrise. 2. Permittee may conduct up to maximum of 2 Evening tours per day. 3. Permittee not entitled to minimum number of Day tours or Sunrise tours. Permittee to submit written request to conduct Day or Sunrise tour at least 2 days prior to the date of the scheduled tour, to be approved by OMKM on a first come fist serve space available basis. 4. Total number of persons per tour and per vehicle including Permittee's staff and customers not to exceed 15. Permittee may submit to OMKM written request to exceed maximum limit. 5. OMKM may restrict or decrease number of commercial vehicles and commercial activity tours, modify the schedule of permitted tours, or impose other limitations as it deems necessary with at least 30 days written notice. 6. Permittee agrees not to engage in any activities that are not permitted under the Permit or that UH or OMKM would consider inconsistent with the objectives of the 199 Management Plan. 7. Permittee may only use 1 authorized vehicle per tour, and no accessory or support vehicles without OMKM's prior approval. 8. Maximum number of commercial permits for commercial tour activities is 9.	

Item	Summary	Ref.
	9. Permittee may submit written requests to OMKM to conduct tours or visits beyond that permitted under the Permit pursuant to the terms of section G.3.d. **Conduct of Permittee and Customers:** 1. Permittee to keep all areas within Premises and any facilities in clean, sanitary, and orderly condition. 2. Permittee not to make, permit, or suffer any waste, strip, spoil, nuisance, or unlawful, improper or offensive use of Premises. 3. Permittee to remove rubbish generated by its commercial tour activity. 4. Permittee to ensure compliance with all laws, rules and regulations by its customers. **Hazardous Materials:** 1. Permittee not to cause or permit discharge or presence of any hazardous materials except as permitted by environmental laws. 2. Permittee solely responsible for any cost to clean up and/or remediate such unlawful discharge or presence of hazardous materials. 3. Permittee to indemnify OMKM, UH, and the State from any damages, etc. arising from such unlawful discharge or presence of hazardous materials. **Awareness and Safety:** 1. Permittee to ensure it and its agents are familiar with the general conditions for high altitude hazards and driving, lay of land, route, width, and alignment of the roads. 2. Permittee to ensure that operators of its commercial tour vehicles and any guides are trained regarding proper guidelines for mountain driving and emergency procedures. 3. Permittee to ensure that its agents are appropriately clothed, hydrated, and adequately eaten. 4. Permittee to ensure that all tour rivers/escorts used in connection with its commercial tour activities have and carry proper certification for First Aid and CPR.	
Transfers and Assignment	Transfer of Permit allowed with OMKM prior written approval and payment of consideration (allowed without payment of consideration but subject to OMKM's prior written approval if transfer is by way of bequest, devise, or intestate succession (Bequest")). Change in ownership of 51% or more or less interest in an entity constitutes a Transfer. Transfers to be reported to OMKM at least 7 days prior to consummation or completion. Any Transfer not property approved is void. OMKM may suspend or terminate the permit for failure to comply or providing OMKM with inaccurate, false, or stealing information.	H.

Item	Summary	Ref.
	Permittee has no property rights or interests under or in connection with the Permit and will not gain any property rights or interest by virtue of receiving its rights by way of a Bequest. In the event of any Transfer, Permittee to submit to OMKM a statement certified by an independent certified public accountant or Permittee's Chief Financial Officer identifying: (1) Total Consideration, (2) Price Received by Permittee, (3) Maina Kea Portion. OMKM may require submission of copies of the Permittee's financial statements. Note: Permit is silent re: assignment of UH's interest.	
Other Conditions	Permittee not allowed to erect or place any improvements or equipment on Premises except for portable telescopes, to be removed after each daily use. Permittee has inspected Premises and assumes risks of use. Permittee to provide flashlights or other artificial light for the safety of its officers, employees, agents, etc. provided that such light is not to interfere with or adversely affect any o the scientific or educational activities, including any observatory or UH operations. No tours of Mauna Kea Ice Age Natural Area Reserve until a management plan is developed and implemented by the Natural Area Reserve, OMKM, and DLNR's Historic Preservation Division.	I.
OMKM's rights and Responsibilities	OMKM reserves the right to enter the Premises at any time. The acceptance of any fees or charges under the permit or the failure of OMKM to insist upon strict performance of any term of the Permit are not to be deemed a waiver by OMKM of any breach of the Permit by Permittee. OMKM may control and maintain the Mauna Kea Summit Access Road by exercising the following rights: requiring a waiver of liability from each driver, controlling crowds at the VIS, and any other rights and authority as it deems necessary.	J.
Disputes	Any and all disputed and/or questions arising under the Permit to be referred to OMKM and its determination to be final and binding on the parties.	K.
Meetings	OMKM reserves the right to call 2 meetings per year each with 30 days prior written notice (unless OMKM determines that based on unanticipated circumstances, the meeting must be held earlier than 30 days from the notice) that Permittee is required to attend.	L.

Abstract of the Permit Agreement dated 6/1/2008 to Roberts Tours & Transportation, Inc. (the "Permit")

Note: All capitalized terms used but not defined in the abstract shall have the meanings assigned to them by the Permit.

Item	Summary	Ref.
Grantor	University of Hawaii ("UH")	
Permittee	Robert's Tours & Transportation, Inc.	
Permit No.	CT-107	
Commencement Date	June 1, 2008	
Premises	Portions of that certain parcel of Government land and any improvements located thereupon, as may be designated by the Office of Mauna Kea Management (OMKM) situated within the University of Hawaii Management Area, Mauna Kea, Hamakua, Hawaii further identified as TMK no. 3rd/4-4-15-09 & 12 as indicated on the map attached Note: Map is missing from attachments.	
Purpose	Commercial activity tours	B.1.
Term	Expires June 30, 2009, unless sooner terminated Note: OMKM and Mauna Kea Management Board are in the process of establishing an updated commercial permit issuance structure, and once finalized, Permittee acknowledges that: (a) OMKM may terminate the Permit with 30 days prior written notice, (b) upon such termination, Permittee must apply for a new permit under the new issuance structure, (c) the Permittee's eligibility for a new permit will be determined purusat to the new permit structure, (d) in determining Permittee's eligibility, OMKM need not consider the Permittee's prior eligibility, and (e) the Permittee does not have an right, preference, or entitlement to a new permit by virtue of having or possessing a permit in the past. UH may extend the Permit at its sole option, and may consider various factors including new data to determine whether to grant such extension(s).	B.2.
One Permit Limitation	Number of permits limited to 1 per person/entity. If this rule is violated, after the issuance of an order to show cause, OMKM may cancel the permits held or deemed to be constructively held by the offender. OMKM may suspend the permit pending the order to show cause.	B.3.
Monthly Fee	Greater of $1,200 or $6 per passenger in each vehicle used by the Permittee to transport passengers to any location within the Premises, including the Visitor Information Center ("VIS") and/or summit of Mauna Kea. Interest will be assessed on any delinquent fees and charges. Fees may be adjusted upon 30 days written notice.	C.1. C.2. C.3.
Security Deposit	Upon execution of the Permit, the Permittee must make a security deposit of $3,600 with OMKM. Permittee is not entitled to a return of the security	C.4.

Item	Summary	Ref.
	deposit unless and until OMKM determines that Permittee has fully performed and complies with all of Permittee's obligations under the Permit.	
Insurance	Permittee to maintain liability and property insurance in specified amounts.	C.6.
Failure to Comply	If Permittee fails to comply with conditions of the Permit, OMKM may assess a charge of $20 per day for every day that Permittee fails to comply after receiving notice from OMKM. OMKM may also assess a $100 service charge for any month that the Permittee fails to comply as required by OMKM.	C.7.
Litigation Costs	Permittee to pay all litigation costs, including reasonable attorneys fees and expenses incurred by OMKM, the Board, the UH, and the State should they be made party to any litigation commenced by or against the Permittee (other than condemnation proceedings). Permittee to pay all litigation costs, including reasonable attorneys fees and expenses incurred by UH in enforcing, suspending, or terminating the Permit or in the collection of any fees, taxes, and other charges.	C.8.
Refusal to Stop	If the Permittee conducts business in relation to the Premises during a period which the Permittee does not have the right to do so, a $2,000 per day fine will be assessed for each such day a business activity is conducted.	C.9.
Removal of Permittee	Permittee has no right to occupy or exclusively possess any portion of the Premises, and the UH and OMKM may remove any vehicles, equipment, and/or personal property left by the Permittee on the Premises at the Permittee's sole cost.	C.10.
Indemnification	Permittee to indemnify the OMKM, the UH, and the State in the manner set forth.	C.11.
Failure to Perform or Comply	If Permittee fails to comply with the terms of the Permit, OMKM will send written notice of such failure. If Permittee continues to fail to comply, OMKM may suspend the Permit for up to 3 days for the first failure and for a minimum of 7 days for each successive failure. OMKM is not limited to suspension (i.e., it may terminate the Permit instead).	D.1.
Reporting	Permittee to submit daily and monthly reports to OMKM in the manner set forth. Failure to submit such report may lead to the assessment of fines. If situations develop or incidents occur within or on the Premises that Permittee recognizes as posing a significant threat to persons, property, ecosystems or biological systems, cultural and historical resources, or science or educational related operations, including any UH operations, Permittee shall notify the OMKM rangers.	D.2. D.3. E.2.
Cancellation	Permittee may cease operations and surrender Permit with 30 days written notice to OMKM. UH, through OMKM, may terminate the Permit at any time with 30 days written notice, even without cause.	D.4. D.5.
Non-payment	If Permittee's failure to pay any fees or charges persists for a period of 10 days or more, the UH, through OMKM, amy immediately suspend the	D.6.

Item	Summary	Ref.
	Permit for a period to be determined by OMKM or terminate the Permit upon written notice at least 5 business days prior to termination.	
Failure to Fully Disclose	OMKM may assess charges against the Permittee and/or suspend or terminate the Permit if Permittee fails to comply with all terms and conditions imposed or required by OMKM including failing to fully disclose all material or relevant information.	D.7.
Prompt Termination	OMKM may immediately prohibit Permittee from conducting any further operations under the Permit if OMKM determines that it is warranted due to the threat to: (1) the ecosystems or biological systems, (b) the cultural and historical resources, (c) the science or educational related operations, including any UH operations, and (d) the observatories, facilities, structures, roads, and infrastructure.	D.8.
Not Eligible for Permit	If Permit is terminated, in whole or in part because of Permittee's failure to fully perform or comply with its obligations under the Permit, the Permittee will not be eligible for a commercial permit for up to 5 years.	D.9.
Monitoring	OMKM to develop data reporting form to reflect type of information that needs to be collected to property analyse and assess impacts of commercial activity levels. Every vehicle owned, operated or controlled by Permittee must check in at VIS whether or not carrying passengers. Permittee to cooperate with OMKM's procedures and processes for impact assessment including completing the registration book at the VIS, daily check in with OMKM rangers, and requiring Permittees to provide feedback and suggestions regarding tour activity.	F.
Operating Rules While on UH Leased Lands	**General:** 1. Permittee may conduct commercial activity tours 7 days a week, subject to weather conditions and requirements imposed by OMKM. OMKM may impose further limits such as restricting commercial uses to weekdays. OMKM shall notify Permittee in writing of such further restriction at least 30 days prior to the effective implementation date, unless the situation requires immediate action or restriction. Permittee is responsible for contacting the VIS prior to departing its own facilities or arriving at the VIS. 2. Permittee is not allowed on the road when it is closed to the public. 3. Upon arrival at the VIS, Permittee must register to inform OMKM of its presence. 4. Permittee and its passengers and customers will be permitted to use portable toilets provided by OMKM. Permittee must ensure that its agents (includes employees, customers, and passengers) use only the designated portable toilet facilities provided by OMKM. 5. Permittee shall ensure that its agents (includes employees, customers, and passengers) do not enter any buildings or structures withi the Premises except for designated public areas on the summit and VIS.	G.

Item	Summary	Ref.
	6. Use of electronic devices restricted to emergency use only within the Science Reserve portion of the Premises. 7. Except for certified assistance animals for the disabled, no animals permitted on Premises. 8. Permittee responsible for appropriately removing from the Premises all solid waste, rubbish, trash, and other discarded items generated by Permittee or its agents including those generated by certified assistance animals for the disabled. 9. Tour operators to comply with Public Utilities Commission regulations for vehicle signage requirements. 10. Permittee to ensure that a designated employee on each tour activity carry a copy of the Permit at all times when on the mountain or within the Premises. 11. Possession, display and consumption of alcoholic beverages prohibited. 12. Permittee to ensure that Permittee's agents and its commercial tour activities for not obstruct or unreasonably interfere with UH operations, any of the observatory, science and educational activities within the Premises, other commercial activities, and other use and activities of general public. 13. Lasers with an output greater than 5 milliwatts not allowed. 14. Permittee and all of its employees, drivers and passengers required to comply with all VIS or OMKM rules and regulations. 15. OMKM reserves right to place restrictions on any commercial tour activities that it deems inappropriate or would negatively impact natural or cultural resources, facilities or infrastructure within or adjacent to the Premises. **Vehicles and Parking:** 1. Only 4-wheel drives may be used to conduct commercial tour activities on the Summit Access Road and within the Mauna Kea Science Reserve. 2. Maximum vehicle capacity allowed is 14 people excluding the driver. 3. Vehicles must be approved by OMKM in writing prior to regular use for commercial activity tours. 4. Up to 2 Standard Vehicles or 1 Modified Vehicle in the VIS parking lot. Oversized Vehicles not allowed in parking lot 5. Oversized Vehicles not allowed on Premises without OMKM's prior written approval, which may be withheld in OMKM's sole discretion. Any approval is subject to the terms outlined in section G.2.e. (as amended) of the Permit, such as payment of fees, etc. 6. OMKM to determine maximum number of commercial vehicles allowed to park at any one time at the VIS or on the adjacent roadways.	

Item	Summary	Ref.
	7. Maximum number of commercial vehicles allowed on the Premises at any one time not to exceed 18. During periods of heavy use, number of commercial vehicles allowed in the Science Reserve portion of the Premises may be limited to a number determined by OMKM. 8. Permittee to ensure that operators of commercial tour vehicles comply with directions of OMKM or VIS employees including OMKM rangers in parking tour vehicles. 9. Permittee to remove its vehicle within 48 hours from the Premises or any area within Mauna Kea if it becomes disabled. 10. Use of a standard 4 wheel drive which is not a part of Permittee's fleet of vehicles (and which may not have been registered with or approved by OMKM) as a temporary vehicle allowed for emergency use only, provided that Permittee provides OMKM. 11. Headlights must be used at all times while vehicles are driven on Summit Access Road. **Allowable number of Tours and Permit Holders:** 1. Permittee not to conduct any commercial activity tours at or to the summit or to the Science Reserve during the daily period from 30 minutes after sunset to 30 minutes before sunrise. Permittee not to conduct any commercial activity tours at or to the Hale Pohaku Mid-level facilities during the daily period from 10 p.m. to 2 ½ hours before sunrise. 2. Permittee may conduct up to maximum of 2 Evening tours per day. 3. Permittee not entitled to minimum number of Day tours or Sunrise tours. Permittee to submit written request to conduct Day or Sunrise tour at least 2 days prior to the date of the scheduled tour, to be approved by OMKM on a first come fist serve space available basis. 4. Total number of persons per tour and per vehicle including Permittee's staff and customers not to exceed 15. Permittee may submit to OMKM written request to exceed maximum limit. 5. OMKM may restrict or decrease number of commercial vehicles and commercial activity tours, modify the schedule of permitted tours, or impose other limitations as it deems necessary with at least 30 days written notice. 6. Permittee agrees not to engage in any activities that are not permitted under the Permit or that UH or OMKM would consider inconsistent with the objectives of the 199 Management Plan. 7. Permittee may only use 1 authorized vehicle per tour, and no accessory or support vehicles without OMKM's prior approval. 8. Maximum number of commercial permits for commercial tour activities is 9.	

Item	Summary	Ref.
	9. Permittee may submit written requests to OMKM to conduct tours or visits beyond that permitted under the Permit pursuant to the terms of section G.3.d. **Conduct of Permittee and Customers:** 1. Permittee to keep all areas within Premises and any facilities in clean, sanitary, and orderly condition. 2. Permittee not to make, permit, or suffer any waste, strip, spoil, nuisance, or unlawful, improper or offensive use of Premises. 3. Permittee to remove rubbish generated by its commercial tour activity. 4. Permittee to ensure compliance with all laws, rules and regulations by its customers. **Hazardous Materials:** 1. Permittee not to cause or permit discharge or presence of any hazardous materials except as permitted by environmental laws. 2. Permittee solely responsible for any cost to clean up and/or remediate such unlawful discharge or presence of hazardous materials. 3. Permittee to indemnify OMKM, UH, and the State from any damages, etc. arising from such unlawful discharge or presence of hazardous materials. **Awareness and Safety:** 1. Permittee to ensure it and its agents are familiar with the general conditions for high altitude hazards and driving, lay of land, route, width, and alignment of the roads. 2. Permittee to ensure that operators of its commercial tour vehicles and any guides are trained regarding proper guidelines for mountain driving and emergency procedures. 3. Permittee to ensure that its agents are appropriately clothed, hydrated, and adequately eaten. 4. Permittee to ensure that all tour rivers/escorts used in connection with its commercial tour activities have and carry proper certification for First Aid and CPR.	
Transfers and Assignment	Transfer of Permit allowed with OMKM prior written approval and payment of consideration (allowed without payment of consideration but subject to OMKM's prior written approval if transfer is by way of bequest, devise, or intestate succession (Bequest")). Change in ownership of 51% or more or less interest in an entity constitutes a Transfer. Transfers to be reported to OMKM at least 7 days prior to consummation or completion. Any Transfer not property approved is void. OMKM may suspend or terminate the permit for failure to comply or providing OMKM with inaccurate, false, or stealing information.	H.

Item	Summary	Ref.
	Permittee has no property rights or interests under or in connection with the Permit and will not gain any property rights or interest by virtue of receiving its rights by way of a Bequest. In the event of any Transfer, Permittee to submit to OMKM a statement certified by an independent certified public accountant or Permittee's Chief Financial Officer identifying: (1) Total Consideration, (2) Price Received by Permittee, (3) Maina Kea Portion. OMKM may require submission of copies of the Permittee's financial statements. Note: Permit is silent re: assignment of UH's interest.	
Other Conditions	Permittee not allowed to erect or place any improvements or equipment on Premises except for portable telescopes, to be removed after each daily use. Permittee has inspected Premises and assumes risks of use. Permittee to provide flashlights or other artificial light for the safety of its officers, employees, agents, etc. provided that such light is not to interfere with or adversely affect any o the scientific or educational activities, including any observatory or UH operations. No tours of Mauna Kea Ice Age Natural Area Reserve until a management plan is developed and implemented by the Natural Area Reserve, OMKM, and DLNR's Historic Preservation Division.	I.
OMKM's rights and Responsibilities	OMKM reserves the right to enter the Premises at any time. The acceptance of any fees or charges under the permit or the failure of OMKM to insist upon strict performance of any term of the Permit are not to be deemed a waiver by OMKM of any breach of the Permit by Permittee. OMKM may control and maintain the Mauna Kea Summit Access Road by exercising the following rights: requiring a waiver of liability from each driver, controlling crowds at the VIS, and any other rights and authority as it deems necessary.	J.
Disputes	Any and all disputed and/or questions arising under the Permit to be referred to OMKM and its determination to be final and binding on the parties.	K.
Meetings	OMKM reserves the right to call 2 meetings per year each with 30 days prior written notice (unless OMKM determines that based on unanticipated circumstances, the meeting must be held earlier than 30 days from the notice) that Permittee is required to attend.	L.

Abstract of the Permit Agreement dated 6/1/2008 to Taikobo Hawaii, Inc. (the "Permit")

Note: All capitalized terms used but not defined in the abstract shall have the meanings assigned to them by the Permit.

Item	Summary	Ref.
Grantor	University of Hawaii ("UH")	
Permittee	Taikobo Hawaii, Inc.	
Permit No.	CT-108	
Commencement Date	June 1, 2008	
Premises	Portions of that certain parcel of Government land and any improvements located thereupon, as may be designated by the Office of Mauna Kea Management (OMKM) situated within the University of Hawaii Management Area, Mauna Kea, Hamakua, Hawaii further identified as TMK no. 3rd/4-4-15-09 & 12 as indicated on the map attached Note: Map is missing from attachments.	
Purpose	Commercial activity tours	B.1.
Term	Expires June 30, 2009, unless sooner terminated Note: OMKM and Mauna Kea Management Board are in the process of establishing an updated commercial permit issuance structure, and once finalized, Permittee acknowledges that: (a) OMKM may terminate the Permit with 30 days prior written notice, (b) upon such termination, Permittee must apply for a new permit under the new issuance structure, (c) the Permittee's eligibility for a new permit will be determined purusat to the new permit structure, (d) in determining Permittee's eligibility, OMKM need not consider the Permittee's prior eligibility, and (e) the Permittee does not have an right, preference, or entitlement to a new permit by virtue of having or possessing a permit in the past. UH may extend the Permit at its sole option, and may consider various factors including new data to determine whether to grant such extension(s).	B.2.
One Permit Limitation	Number of permits limited to 1 per person/entity. If this rule is violated, after the issuance of an order to show cause, OMKM may cancel the permits held or deemed to be constructively held by the offender. OMKM may suspend the permit pending the order to show cause.	B.3.
Monthly Fee	Greater of $1,200 or $6 per passenger in each vehicle used by the Permittee to transport passengers to any location within the Premises, including the Visitor Information Center ("VIS") and/or summit of Mauna Kea. Interest will be assessed on any delinquent fees and charges. Fees may be adjusted upon 30 days written notice.	C.1. C.2. C.3.
Security Deposit	Upon execution of the Permit, the Permittee must make a security deposit of $3,600 with OMKM. Permittee is not entitled to a return of the security deposit unless and until OMKM determines that Permittee has fully performed and complies with all of Permittee's obligations under the Permit.	C.4.

Item	Summary	Ref.
Insurance	Permittee to maintain liability and property insurance in specified amounts.	C.6.
Failure to Comply	If Permittee fails to comply with conditions of the Permit, OMKM may assess a charge of $20 per day for every day that Permittee fails to comply after receiving notice from OMKM. OMKM may also assess a $100 service charge for any month that the Permittee fails to comply as required by OMKM.	C.7.
Litigation Costs	Permittee to pay all litigation costs, including reasonable attorneys fees and expenses incurred by OMKM, the Board, the UH, and the State should they be made party to any litigation commenced by or against the Permittee (other than condemnation proceedings). Permittee to pay all litigation costs, including reasonable attorneys fees and expenses incurred by UH in enforcing, suspending, or terminating the Permit or in the collection of any fees, taxes, and other charges.	C.8.
Refusal to Stop	If the Permittee conducts business in relation to the Premises during a period which the Permittee does not have the right to do so, a $2,000 per day fine will be assessed for each such day a business activity is conducted.	C.9.
Removal of Permittee	Permittee has no right to occupy or exclusively possess any portion of the Premises, and the UH and OMKM may remove any vehicles, equipment, and/or personal property left by the Permittee on the Premises at the Permittee's sole cost.	C.10.
Indemnification	Permittee to indemnify the OMKM, the UH, and the State in the manner set forth.	C.11.
Failure to Perform or Comply	If Permittee fails to comply with the terms of the Permit, OMKM will send written notice of such failure. If Permittee continues to fail to comply, OMKM may suspend the Permit for up to 3 days for the first failure and for a minimum of 7 days for each successive failure. OMKM is not limited to suspension (i.e., it may terminate the Permit instead).	D.1.
Reporting	Permittee to submit daily and monthly reports to OMKM in the manner set forth. Failure to submit such report may lead to the assessment of fines. If situations develop or incidents occur within or on the Premises that Permittee recognizes as posing a significant threat to persons, property, ecosystems or biological systems, cultural and historical resources, or science or educational related operations, including any UH operations, Permittee shall notify the OMKM rangers.	D.2. D.3. E.2.
Cancellation	Permittee may cease operations and surrender Permit with 30 days written notice to OMKM. UH, through OMKM, may terminate the Permit at any time with 30 days written notice, even without cause.	D.4. D.5.
Non-payment	If Permittee's failure to pay any fees or charges persists for a period of 10 days or more, the UH, through OMKM, amy immediately suspend the Permit for a period to be determined by OMKM or terminate the Permit upon written notice at least 5 business days prior to termination.	D.6.

Item	Summary	Ref.
Failure to Fully Disclose	OMKM may assess charges against the Permittee and/or suspend or terminate the Permit if Permittee fails to comply with all terms and conditions imposed or required by OMKM including failing to fully disclose all material or relevant information.	D.7.
Prompt Termination	OMKM may immediately prohibit Permittee from conducting any further operations under the Permit if OMKM determines that it is warranted due to the threat to: (1) the ecosystems or biological systems, (b) the cultural and historical resources, (c) the science or educational related operations, including any UH operations, and (d) the observatories, facilities, structures, roads, and infrastructure.	D.8.
Not Eligible for Permit	If Permit is terminated, in whole or in part because of Permittee's failure to fully perform or comply with its obligations under the Permit, the Permittee will not be eligible for a commercial permit for up to 5 years.	D.9.
Monitoring	OMKM to develop data reporting form to reflect type of information that needs to be collected to property analyse and assess impacts of commercial activity levels. Every vehicle owned, operated or controlled by Permittee must check in at VIS whether or not carrying passengers. Permittee to cooperate with OMKM's procedures and processes for impact assessment including completing the registration book at the VIS, daily check in with OMKM rangers, and requiring Permittees to provide feedback and suggestions regarding tour activity.	F.
Operating Rules While on UH Leased Lands	**General:** 1. Permittee may conduct commercial activity tours 7 days a week, subject to weather conditions and requirements imposed by OMKM. OMKM may impose further limits such as restricting commercial uses to weekdays. OMKM shall notify Permittee in writing of such further restriction at least 30 days prior to the effective implementation date, unless the situation requires immediate action or restriction. Permittee is responsible for contacting the VIS prior to departing its own facilities or arriving at the VIS. 2. Permittee is not allowed on the road when it is closed to the public. 3. Upon arrival at the VIS, Permittee must register to inform OMKM of its presence. 4. Permittee and its passengers and customers will be permitted to use portable toilets provided by OMKM. Permittee must ensure that its agents (includes employees, customers, and passengers) use only the designated portable toilet facilities provided by OMKM. 5. Permittee shall ensure that its agents (includes employees, customers, and passengers) do not enter any buildings or structures withi the Premises except for designated public areas on the summit and VIS. 6. Use of electronic devices restricted to emergency use only within the Science Reserve portion of the Premises.	G.

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	7. Except for certified assistance animals for the disabled, no animals permitted on Premises. 8. Permittee responsible for appropriately removing from the Premises all solid waste, rubbish, trash, and other discarded items generated by Permittee or its agents including those generated by certified assistance animals for the disabled. 9. Tour operators to comply with Public Utilities Commission regulations for vehicle signage requirements. 10. Permittee to ensure that a designated employee on each tour activity carry a copy of the Permit at all times when on the mountain or within the Premises. 11. Possession, display and consumption of alcoholic beverages prohibited. 12. Permittee to ensure that Permittee's agents and its commercial tour activities for not obstruct or unreasonably interfere with UH operations, any of the observatory, science and educational activities within the Premises, other commercial activities, and other use and activities of general public. 13. Lasers with an output greater than 5 milliwatts not allowed. 14. Permittee and all of its employees, drivers and passengers required to comply with all VIS or OMKM rules and regulations. 15. OMKM reserves right to place restrictions on any commercial tour activities that it deems inappropriate or would negatively impact natural or cultural resources, facilities or infrastructure within or adjacent to the Premises. **Vehicles and Parking:** 1. Only 4-wheel drives may be used to conduct commercial tour activities on the Summit Access Road and within the Mauna Kea Science Reserve. 2. Maximum vehicle capacity allowed is 14 people excluding the driver. 3. Vehicles must be approved by OMKM in writing prior to regular use for commercial activity tours. 4. Up to 2 Standard Vehicles or 1 Modified Vehicle in the VIS parking lot. Oversized Vehicles not allowed in parking lot 5. Oversized Vehicles not allowed on Premises without OMKM's prior written approval, which may be withheld in OMKM's sole discretion. Any approval is subject to the terms outlined in section G.2.e. (as amended) of the Permit, such as payment of fees, etc. 6. OMKM to determine maximum number of commercial vehicles allowed to park at any one time at the VIS or on the adjacent roadways. 7. Maximum number of commercial vehicles allowed on the Premises at any one time not to exceed 18. During periods of heavy use, number of	

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	commercial vehicles allowed in the Science Reserve portion of the Premises may be limited to a number determined by OMKM. 8. Permittee to ensure that operators of commercial tour vehicles comply with directions of OMKM or VIS employees including OMKM rangers in parking tour vehicles. 9. Permittee to remove its vehicle within 48 hours from the Premises or any area within Mauna Kea if it becomes disabled. 10. Use of a standard 4 wheel drive which is not a part of Permittee's fleet of vehicles (and which may not have been registered with or approved by OMKM) as a temporary vehicle allowed for emergency use only, provided that Permittee provides OMKM. 11. Headlights must be used at all times while vehicles are driven on Summit Access Road. **Allowable number of Tours and Permit Holders:** 1. Permittee not to conduct any commercial activity tours at or to the summit or to the Science Reserve during the daily period from 30 minutes after sunset to 30 minutes before sunrise. Permittee not to conduct any commercial activity tours at or to the Hale Pohaku Mid-level facilities during the daily period from 10 p.m. to 2 ½ hours before sunrise. 2. Permittee may conduct up to maximum of 2 Evening tours per day. 3. Permittee not entitled to minimum number of Day tours or Sunrise tours. Permittee to submit written request to conduct Day or Sunrise tour at least 2 days prior to the date of the scheduled tour, to be approved by OMKM on a first come fist serve space available basis. 4. Total number of persons per tour and per vehicle including Permittee's staff and customers not to exceed 15. Permittee may submit to OMKM written request to exceed maximum limit. 5. OMKM may restrict or decrease number of commercial vehicles and commercial activity tours, modify the schedule of permitted tours, or impose other limitations as it deems necessary with at least 30 days written notice. 6. Permittee agrees not to engage in any activities that are not permitted under the Permit or that UH or OMKM would consider inconsistent with the objectives of the 199 Management Plan. 7. Permittee may only use 1 authorized vehicle per tour, and no accessory or support vehicles without OMKM's prior approval. 8. Maximum number of commercial permits for commercial tour activities is 9.	

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	9. Permittee may submit written requests to OMKM to conduct tours or visits beyond that permitted under the Permit pursuant to the terms of section G.3.d. **Conduct of Permittee and Customers:** 1. Permittee to keep all areas within Premises and any facilities in clean, sanitary, and orderly condition. 2. Permittee not to make, permit, or suffer any waste, strip, spoil, nuisance, or unlawful, improper or offensive use of Premises. 3. Permittee to remove rubbish generated by its commercial tour activity. 4. Permittee to ensure compliance with all laws, rules and regulations by its customers. **Hazardous Materials:** 1. Permittee not to cause or permit discharge or presence of any hazardous materials except as permitted by environmental laws. 2. Permittee solely responsible for any cost to clean up and/or remediate such unlawful discharge or presence of hazardous materials. 3. Permittee to indemnify OMKM, UH, and the State from any damages, etc. arising from such unlawful discharge or presence of hazardous materials. **Awareness and Safety:** 1. Permittee to ensure it and its agents are familiar with the general conditions for high altitude hazards and driving, lay of land, route, width, and alignment of the roads. 2. Permittee to ensure that operators of its commercial tour vehicles and any guides are trained regarding proper guidelines for mountain driving and emergency procedures. 3. Permittee to ensure that its agents are appropriately clothed, hydrated, and adequately eaten. 4. Permittee to ensure that all tour rivers/escorts used in connection with its commercial tour activities have and carry proper certification for First Aid and CPR.	
Transfers and Assignment	Transfer of Permit allowed with OMKM prior written approval and payment of consideration (allowed without payment of consideration but subject to OMKM's prior written approval if transfer is by way of bequest, devise, or intestate succession (Bequest")). Change in ownership of 51% or more or less interest in an entity constitutes a Transfer. Transfers to be reported to OMKM at least 7 days prior to consummation or completion. Any Transfer not property approved is void. OMKM may suspend or terminate the permit for failure to comply or providing OMKM with inaccurate, false, or stealing information.	H.

Item	Summary	Ref.
	Permittee has no property rights or interests under or in connection with the Permit and will not gain any property rights or interest by virtue of receiving its rights by way of a Bequest. In the event of any Transfer, Permittee to submit to OMKM a statement certified by an independent certified public accountant or Permittee's Chief Financial Officer identifying: (1) Total Consideration, (2) Price Received by Permittee, (3) Maina Kea Portion. OMKM may require submission of copies of the Permittee's financial statements. Note: Permit is silent re: assignment of UH's interest.	
Other Conditions	Permittee not allowed to erect or place any improvements or equipment on Premises except for portable telescopes, to be removed after each daily use. Permittee has inspected Premises and assumes risks of use. Permittee to provide flashlights or other artificial light for the safety of its officers, employees, agents, etc. provided that such light is not to interfere with or adversely affect any o the scientific or educational activities, including any observatory or UH operations. No tours of Mauna Kea Ice Age Natural Area Reserve until a management plan is developed and implemented by the Natural Area Reserve, OMKM, and DLNR's Historic Preservation Division.	I.
OMKM's rights and Responsibilities	OMKM reserves the right to enter the Premises at any time. The acceptance of any fees or charges under the permit or the failure of OMKM to insist upon strict performance of any term of the Permit are not to be deemed a waiver by OMKM of any breach of the Permit by Permittee. OMKM may control and maintain the Mauna Kea Summit Access Road by exercising the following rights: requiring a waiver of liability from each driver, controlling crowds at the VIS, and any other rights and authority as it deems necessary.	J.
Disputes	Any and all disputed and/or questions arising under the Permit to be referred to OMKM and its determination to be final and binding on the parties.	K.
Meetings	OMKM reserves the right to call 2 meetings per year each with 30 days prior written notice (unless OMKM determines that based on unanticipated circumstances, the meeting must be held earlier than 30 days from the notice) that Permittee is required to attend.	L.

Abstract of the Permit Agreement dated 6/1/2008 to Jack's Tours, Inc. (the "Permit")

Note: All capitalized terms used but not defined in the abstract shall have the meanings assigned to them by the Permit, as supplemented by that certain Supplement No. 1 to Mauna Kea Commercial Tour Use Permit No. CT-104 and that certain Supplement No. 2 to Mauna Kea Commercial Tour Use Permit No. CT-104 ("Supplement No. 2"). The Permit, as supplemented, was assigned to Super Vacation Hawaii LLC pursuant to that certain Assignment of Mauna Kea Commercial Tour Use Permit No. CT-104 and Consent Agreement dated December 13, 2018, which assignment was consented to by the University of Hawaii ("UH").

The original Permit issued to Jack's Tours, Inc. was not provided, and will be requested from UH. The summaries below assume that the same template form used for all permits was used for the original Permit issued to Jack's Tours, Inc. However, confirmation is necessary.

Item	Summary	Ref.
Grantor	UH	
Original Permittee	Jack's Tours, Inc.	
Permit Assigned to	Super Vacation Hawaii LLC	
Permit No.	CT-104	
Commencement Date	June 1, 2008	
Premises	Portions of that certain parcel of Government land and any improvements located thereupon, as may be designated by the Office of Mauna Kea Management (OMKM) situated within the University of Hawaii Management Area, Mauna Kea, Hamakua, Hawaii further identified as TMK no. 3rd/4-4-15-09 & 12 as indicated on the map attached Note: Map is missing from attachments.	
Purpose	Commercial activity tours	B.1.
Term	Expires June 30, 2009, unless sooner terminated Note: OMKM and Mauna Kea Management Board are in the process of establishing an updated commercial permit issuance structure, and once finalized, Permittee acknowledges that: (a) OMKM may terminate the Permit with 30 days prior written notice, (b) upon such termination, Permittee must apply for a new permit under the new issuance structure, (c) the Permittee's eligibility for a new permit will be determined purusat to the new permit structure, (d) in determining Permittee's eligibility, OMKM need not consider the Permittee's prior eligibility, and (e) the Permittee does not have an right, preference, or entitlement to a new permit by virtue of having or possessing a permit in the past. UH may extend the Permit at its sole option, and may consider various factors including new data to determine whether to grant such extension(s).	B.2.
One Permit Limitation	Number of permits limited to 1 per person/entity. If this rule is violated, after the issuance of an order to show cause, OMKM may cancel the permits	B.3.

Item	Summary	Ref.
	held or deemed to be constructively held by the offender. OMKM may suspend the permit pending the order to show cause.	
Monthly Fee	Greater of $1,200 or $6 per passenger in each vehicle used by the Permittee to transport passengers to any location within the Premises, including the Visitor Information Center ("VIS") and/or summit of Mauna Kea. Interest will be assessed on any delinquent fees and charges. Fees may be adjusted upon 30 days written notice.	C.1. C.2. C.3.
Security Deposit	Upon execution of the Permit, the Permittee must make a security deposit of $3,600 with OMKM. Permittee is not entitled to a return of the security deposit unless and until OMKM determines that Permittee has fully performed and complies with all of Permittee's obligations under the Permit.	C.4.
Insurance	Permittee to maintain liability and property insurance in specified amounts.	C.6.
Failure to Comply	If Permittee fails to comply with conditions of the Permit, OMKM may assess a charge of $20 per day for every day that Permittee fails to comply after receiving notice from OMKM. OMKM may also assess a $100 service charge for any month that the Permittee fails to comply as required by OMKM.	C.7.
Litigation Costs	Permittee to pay all litigation costs, including reasonable attorneys fees and expenses incurred by OMKM, the Board, the UH, and the State should they be made party to any litigation commenced by or against the Permittee (other than condemnation proceedings). Permittee to pay all litigation costs, including reasonable attorneys fees and expenses incurred by UH in enforcing, suspending, or terminating the Permit or in the collection of any fees, taxes, and other charges.	C.8.
Refusal to Stop	If the Permittee conducts business in relation to the Premises during a period which the Permittee does not have the right to do so, a $2,000 per day fine will be assessed for each such day a business activity is conducted.	C.9.
Removal of Permittee	Permittee has no right to occupy or exclusively possess any portion of the Premises, and the UH and OMKM may remove any vehicles, equipment, and/or personal property left by the Permittee on the Premises at the Permittee's sole cost.	C.10.
Indemnification	Permittee to indemnify the OMKM, the UH, and the State in the manner set forth.	C.11.
Failure to Perform or Comply	If Permittee fails to comply with the terms of the Permit, OMKM will send written notice of such failure. If Permittee continues to fail to comply, OMKM may suspend the Permit for up to 3 days for the first failure and for a minimum of 7 days for each successive failure. OMKM is not limited to suspension (i.e., it may terminate the Permit instead).	D.1.
Reporting	Permittee to submit daily and monthly reports to OMKM in the manner set forth. Failure to submit such report may lead to the assessment of fines. If situations develop or incidents occur within or on the Premises that Permittee recognizes as posing a significant threat to persons, property, ecosystems or biological systems, cultural and historical resources, or	D.2. D.3. E.2.

Item	Summary	Ref.
	science or educational related operations, including any UH operations, Permittee shall notify the OMKM rangers.	
Cancellation	Permittee may cease operations and surrender Permit with 30 days written notice to OMKM. UH, through OMKM, may terminate the Permit at any time with 30 days written notice, even without cause.	D.4. D.5.
Non-payment	If Permittee's failure to pay any fees or charges persists for a period of 10 days or more, the UH, through OMKM, amy immediately suspend the Permit for a period to be determined by OMKM or terminate the Permit upon written notice at least 5 business days prior to termination.	D.6.
Failure to Fully Disclose	OMKM may assess charges against the Permittee and/or suspend or terminate the Permit if Permittee fails to comply with all terms and conditions imposed or required by OMKM including failing to fully disclose all material or relevant information.	D.7.
Prompt Termination	OMKM may immediately prohibit Permittee from conducting any further operations under the Permit if OMKM determines that it is warranted due to the threat to: (1) the ecosystems or biological systems, (b) the cultural and historical resources, (c) the science or educational related operations, including any UH operations, and (d) the observatories, facilities, structures, roads, and infrastructure.	D.8.
Not Eligible for Permit	If Permit is terminated, in whole or in part because of Permittee's failure to fully perform or comply with its obligations under the Permit, the Permittee will not be eligible for a commercial permit for up to 5 years.	D.9.
Monitoring	OMKM to develop data reporting form to reflect type of information that needs to be collected to property analyse and assess impacts of commercial activity levels. Every vehicle owned, operated or controlled by Permittee must check in at VIS whether or not carrying passengers. Permittee to cooperate with OMKM's procedures and processes for impact assessment including completing the registration book at the VIS, daily check in with OMKM rangers, and requiring Permittees to provide feedback and suggestions regarding tour activity.	F.
Operating Rules While on UH Leased Lands	**General:** 1. Permittee may conduct commercial activity tours 7 days a week, subject to weather conditions and requirements imposed by OMKM. OMKM may impose further limits such as restricting commercial uses to weekdays. OMKM shall notify Permittee in writing of such further restriction at least 30 days prior to the effective implementation date, unless the situation requires immediate action or restriction. Permittee is responsible for contacting the VIS prior to departing its own facilities or arriving at the VIS. 2. Permittee is not allowed on the road when it is closed to the public.	G.

Item	Summary	Ref.
	3. Upon arrival at the VIS, Permittee must register to inform OMKM of its presence. 4. Permittee and its passengers and customers will be permitted to use portable toilets provided by OMKM. Permittee must ensure that its agents (includes employees, customers, and passengers) use only the designated portable toilet facilities provided by OMKM. 5. Permittee shall ensure that its agents (includes employees, customers, and passengers) do not enter any buildings or structures withi the Premises except for designated public areas on the summit and VIS. 6. Use of electronic devices restricted to emergency use only within the Science Reserve portion of the Premises. 7. Except for certified assistance animals for the disabled, no animals permitted on Premises. 8. Permittee responsible for appropriately removing from the Premises all solid waste, rubbish, trash, and other discarded items generated by Permittee or its agents including those generated by certified assistance animals for the disabled. 9. Tour operators to comply with Public Utilities Commission regulations for vehicle signage requirements. 10. Permittee to ensure that a designated employee on each tour activity carry a copy of the Permit at all times when on the mountain or within the Premises. 11. Possession, display and consumption of alcoholic beverages prohibited. 12. Permittee to ensure that Permittee's agents and its commercial tour activities for not obstruct or unreasonably interfere with UH operations, any of the observatory, science and educational activities within the Premises, other commercial activities, and other use and activities of general public. 13. Lasers with an output greater than 5 milliwatts not allowed. 14. Permittee and all of its employees, drivers and passengers required to comply with all VIS or OMKM rules and regulations. 15. OMKM reserves right to place restrictions on any commercial tour activities that it deems inappropriate or would negatively impact natural or cultural resources, facilities or infrastructure within or adjacent to the Premises. **Vehicles and Parking:** 1. Only 4-wheel drives may be used to conduct commercial tour activities on the Summit Access Road and within the Mauna Kea Science Reserve. 2. Maximum vehicle capacity allowed is 14 people excluding the driver. 3. Vehicles must be approved by OMKM in writing prior to regular use for commercial activity tours.	

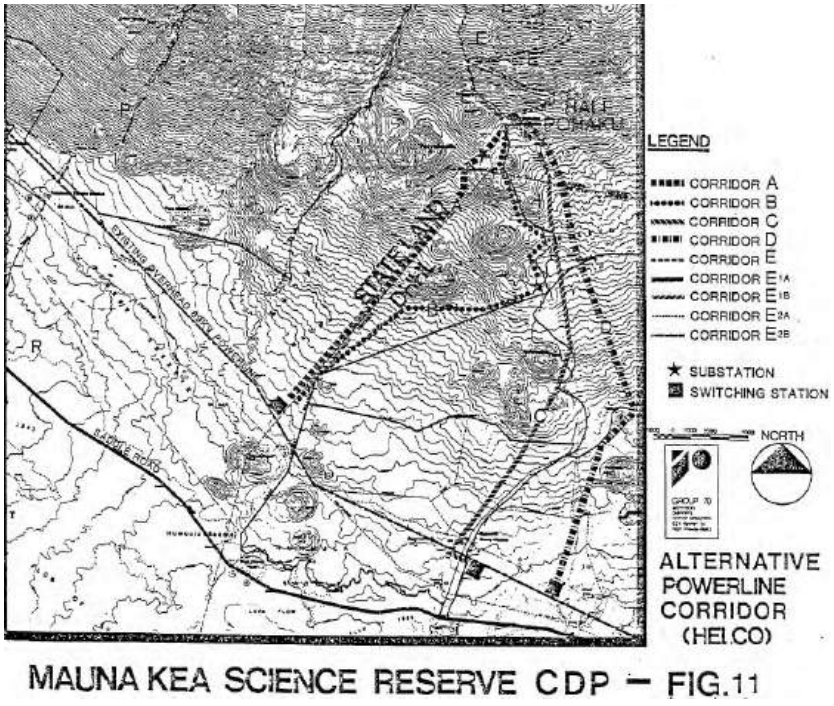
Item	Summary	Ref.
	4. Up to 2 Standard Vehicles or 1 Modified Vehicle in the VIS parking lot. Oversized Vehicles not allowed in parking lot 5. Oversized Vehicles not allowed on Premises without OMKM's prior written approval, which may be withheld in OMKM's sole discretion. Any approval is subject to the terms outlined in section G.2.e. (as amended) of the Permit, such as payment of fees, etc. 6. OMKM to determine maximum number of commercial vehicles allowed to park at any one time at the VIS or on the adjacent roadways. 7. Maximum number of commercial vehicles allowed on the Premises at any one time not to exceed 18. During periods of heavy use, number of commercial vehicles allowed in the Science Reserve portion of the Premises may be limited to a number determined by OMKM. 8. Permittee to ensure that operators of commercial tour vehicles comply with directions of OMKM or VIS employees including OMKM rangers in parking tour vehicles. 9. Permittee to remove its vehicle within 48 hours from the Premises or any area within Mauna Kea if it becomes disabled. 10. Use of a standard 4 wheel drive which is not a part of Permittee's fleet of vehicles (and which may not have been registered with or approved by OMKM) as a temporary vehicle allowed for emergency use only, provided that Permittee provides OMKM. 11. Headlights must be used at all times while vehicles are driven on Summit Access Road. **Allowable number of Tours and Permit Holders:** 1. Permittee not to conduct any commercial activity tours at or to the summit or to the Science Reserve during the daily period from 30 minutes after sunset to 30 minutes before sunrise. Permittee not to conduct any commercial activity tours at or to the Hale Pohaku Mid-level facilities during the daily period from 10 p.m. to 2 ½ hours before sunrise. 2. Permittee may conduct up to maximum of 2 Evening tours per day. 3. Permittee not entitled to minimum number of Day tours or Sunrise tours. Permittee to submit written request to conduct Day or Sunrise tour at least 2 days prior to the date of the scheduled tour, to be approved by OMKM on a first come fist serve space available basis. 4. Total number of persons per tour and per vehicle including Permittee's staff and customers not to exceed 15. Permittee may submit to OMKM written request to exceed maximum limit. 5. OMKM may restrict or decrease number of commercial vehicles and commercial activity tours, modify the schedule of permitted tours, or impose other limitations as it deems necessary with at least 30 days written notice.	

Item	Summary	Ref.
	6. Permittee agrees not to engage in any activities that are not permitted under the Permit or that UH or OMKM would consider inconsistent with the objectives of the 199 Management Plan. 7. Permittee may only use 1 authorized vehicle per tour, and no accessory or support vehicles without OMKM's prior approval. 8. Maximum number of commercial permits for commercial tour activities is 9. 9. Permittee may submit written requests to OMKM to conduct tours or visits beyond that permitted under the Permit pursuant to the terms of section G.3.d. **Conduct of Permittee and Customers:** 1. Permittee to keep all areas within Premises and any facilities in clean, sanitary, and orderly condition. 2. Permittee not to make, permit, or suffer any waste, strip, spoil, nuisance, or unlawful, improper or offensive use of Premises. 3. Permittee to remove rubbish generated by its commercial tour activity. 4. Permittee to ensure compliance with all laws, rules and regulations by its customers. **Hazardous Materials:** 1. Permittee not to cause or permit discharge or presence of any hazardous materials except as permitted by environmental laws. 2. Permittee solely responsible for any cost to clean up and/or remediate such unlawful discharge or presence of hazardous materials. 3. Permittee to indemnify OMKM, UH, and the State from any damages, etc. arising from such unlawful discharge or presence of hazardous materials. **Awareness and Safety:** 1. Permittee to ensure it and its agents are familiar with the general conditions for high altitude hazards and driving, lay of land, route, width, and alignment of the roads. 2. Permittee to ensure that operators of its commercial tour vehicles and any guides are trained regarding proper guidelines for mountain driving and emergency procedures. 3. Permittee to ensure that its agents are appropriately clothed, hydrated, and adequately eaten. 4. Permittee to ensure that all tour rivers/escorts used in connection with its commercial tour activities have and carry proper certification for First Aid and CPR.	
Transfers and Assignment	Transfer of Permit allowed upon a Force Majeure Event as defined by Supplement No. 2 or with OMKM's prior written approval and payment of	H.

Item	Summary	Ref.
	consideration (allowed without payment of consideration but subject to OMKM's prior written approval if transfer is by way of bequest, devise, or intestate succession (Bequest")). Change in ownership of 51% or more or less interest in an entity constitutes a Transfer. Transfers to be reported to OMKM at least 7 days prior to consummation or completion. Any Transfer not property approved is void. OMKM may suspend or terminate the permit for failure to comply or providing OMKM with inaccurate, false, or stealing information. Permittee has no property rights or interests under or in connection with the Permit and will not gain any property rights or interest by virtue of receiving its rights by way of a Bequest. In the event of any Transfer, Permittee to submit to OMKM a statement certified by an independent certified public accountant or Permittee's Chief Financial Officer identifying: (1) Total Consideration, (2) Price Received by Permittee, (3) Maina Kea Portion. OMKM may require submission of copies of the Permittee's financial statements. Note: Permit is silent re: assignment of UH's interest.	
Other Conditions	Permittee not allowed to erect or place any improvements or equipment on Premises except for portable telescopes, to be removed after each daily use. Permittee has inspected Premises and assumes risks of use. Permittee to provide flashlights or other artificial light for the safety of its officers, employees, agents, etc. provided that such light is not to interfere with or adversely affect any o the scientific or educational activities, including any observatory or UH operations. No tours of Mauna Kea Ice Age Natural Area Reserve until a management plan is developed and implemented by the Natural Area Reserve, OMKM, and DLNR's Historic Preservation Division.	I.
OMKM's rights and Responsibilities	OMKM reserves the right to enter the Premises at any time. The acceptance of any fees or charges under the permit or the failure of OMKM to insist upon strict performance of any term of the Permit are not to be deemed a waiver by OMKM of any breach of the Permit by Permittee. OMKM may control and maintain the Mauna Kea Summit Access Road by exercising the following rights: requiring a waiver of liability from each driver, controlling crowds at the VIS, and any other rights and authority as it deems necessary.	J.
Disputes	Any and all disputed and/or questions arising under the Permit to be referred to OMKM and its determination to be final and binding on the parties.	K.
Meetings	OMKM reserves the right to call 2 meetings per year each with 30 days prior written notice (unless OMKM determines that based on unanticipated circumstances, the meeting must be held earlier than 30 days from the notice) that Permittee is required to attend.	L.

Abstract of CDUP HA-1573 dated 3/7/1984 ("HA-1573")

Purpose: Construction of permanent powerline connection from Hawaii Electric Light Company system along Saddle Road to Hale Pohaki and the summit of Mauna Kea and proposed Summit Access Road improvements.

Condition	Summary	Ref.
Alignment	Powerline alignment to follow Corridor A:  MAUNA KEA SCIENCE RESERVE CDP – FIG.11	1
Discouraging Illegal Uses	Applicant to develop measures to discourage illegal use of powerline service roads for approval by the Chairperson	2
Land Use Authorization	Applicant to obtain permission from Natural Area Reserves System Commission for portions of powerline alignment passing through Mauna Kea Natural Area Reserve	3
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws including HAR Section 13-2-21 (now codified as HAR Chapter 13-5); and 2. all applicable Public Health Regulations.	4, 9
Indemnification of the State of Hawaii	Applicant to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to the granting of HA-1573.	5
Other	Other terms and conditions as prescribed by Chairperson.	6
Authorization to Occupy State Land	Requirement to obtain authorization from Department of Land and Natural Resources for occupation of State lands	7
Historic Remains	Applicant to stop construction and immediately contact the State Historic Preservation Division if any historic remains are found	8

Condition	Summary	Ref.
Fire Contingency Plan	Fire contingency plan acceptable to the Division of Forestry and Wildlife to be implemented during and after construction	10
Approval of Construction Plans and Specification	All construction, altercation, demolition, repair, etc. to be subject to applicable county building codes Applicant to submit copies of construction plans and specifications to the Chairman for approval prior to construction	11
Construction Period	Construction of any approved use to be started within one (1) year of approval and completed within three (3) years of approval.	12

Abstract of CDUP HA-1573A dated 7/21/1989 ("HA-1573A")

Purpose: Construction of detour road for Mauna Kea Observatory Access Road.

Condition	Summary	Ref.
Compliance with Laws	Applicant to comply with all applicable federal, state and county laws including HAR Section 13-2-21 (now codified as HAR Chapter 13-5).	1
Indemnification of the State of Hawaii	Applicant to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to the granting of HA-1573A.	2
Approval of Construction Plans	Applicant to submit copies of construction plans and specifications to the chairperson for approval (approval by the chairperson does not infer approval required of other agencies) prior to construction,	3
Maintenance	University of Hawaii to maintain detour road after construction	4
Notice of Construction	Contractor to notify the Hawaii District Land Office forty-eight (48) hours' notice before commencing construction.	5
Commencement of Construction	Construction to be commenced immediately after necessary approvals have been obtained.	6
Construction Are	Detour road alignment to be flagged, and activity to be restricted to flagged area	7
Limitation of Access	Detour road to be limited to four-wheel drive and construction vehicles	8
Failure to Comply	Failure to comply with any condition will void HA-1573A.	9
Other	Other terms and conditions as prescribed by Chairperson.	10

Abstract of SPA HA-96-02 dated 12/29/1995 ("SPA HA 96-02")

Purpose: Data collection.

Condition	Summary	Ref.
Compliance with Laws	Applicant to comply with: 1. all applicable federal, state and county laws including HAR Section 13-5-42; and 2. all applicable DOH Administrative Rules (HAR Title 11).	1, 2
Land Use Authorization	Applicant to obtain: 1. right of entry from Department of Land and Natural Resources ("DLNR"), Land Division to work on unencumbered State lands; and 2. authorization from DLNR, Natural Area Reserves System for work within Mauna Kea Ice Age Natural Area Reserve.	3, 4
Historic Sites	Ground survey team to take precautions to avoid damage to historic sites and natural features	5
Four-wheel-drives	Travel in a four-wheel-drive to be minimized and not allowed beyond existing dirt roads or non-cinder cones.	6
ATVs	ATVs not to be used to reach any target point.	7
Target Placement	Targets at locations 1, 4, 18, 21, 23, 24, 26, and 28 to be places to avoid disturbing any stone alignments or low mounds that could mark burials. Previously used placement may be reused if it does not disturb any stone features.	8
Briefing	Survey teams to receive briefing by member of State Historic Preservation Division ("SHPD") on nature and distribution of historic sites before beginning work.	9
Vinyl Sheets	All vinyl sheets used to mark targets to be removed within 6 months of acceptance of aerial photographs by SHPD.	10
Indemnification of the State of Hawaii	Applicant to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to the granting of SPA HA 96-02.	11

Abstract of SPA HA-96-05 dated 3/11/1996 ("SPA HA 96-05")

Purpose: Installation of a fiber optic communications cable within an existing easement approved for electrical power transmission from Pohakuloa to Hale Pohaku.

Condition	Summary	Ref.
Compliance with Laws and CDUP HA-1573	Requires compliance with: 1. all applicable federal, state and county laws including HAR Section 13-2-21 (now codified as HAR Chapter 13-5); 1. all conditions imposed under CDUP HA-1573, as amended; and 2. all applicable DOH Administrative Rules (HAR Title 11).	1, 2, 3
Grading	No new grading or other ground altering improvements to be made to the approach to Poles 53 through 57 on the west side of Pu'u Kalepeamoa	4
Briefing	Staff archeologist Marc Smith to brief GTE Hawaii Tel staff or and/or contractors on historic preservations concerns on first day of work.	5
Fire Contingency Plan	Copy of final Fire Contingency Plan to be submitted for approval by Department of Forest and Wildlife Branch Manager and his Protection Forester.	6
Approval of Construction Plans	Applicant to submit copies of construction plans to DLNR for approval.	7
Indemnification of the State of Hawaii	Permittee to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to granting SPA HA 96-05.	8

Abstract of Office of Conservation and Coastal Lands Approval dated 6/16/2023

Purpose: Various maintenance activities, safety improvements, and data collection on University-managed lands

Condition	Summary	Ref.
Reliance on Applicant	If the information and data provided by the applicant prove to be false, incomplete or inaccurate, approval may be modified, suspended or revoked	1
Compliance with Best Practices	Staff and contractors to implement best managed practices from information packet	2
Comprehensive Management Plan	All conditions of current Maunakea Comprehensive Management Plan to be followed.	3
Change in Scope	If scope of project changes or cumulative natural resource impacts is perceived to be moderate or nature, DLNR may require additional authorization or approvals.	4

Abstract of CDUP HA-2462 re Subaru, dated 10/22/1991 ("HA-2462")

Purpose: Construction of Subaru telescope, appurtenant structures and associated infrastructure and temporary accessory use of a portion of the "Skier's Parking Lot" for a concrete batching plan and expansion of facilities at Hale Pohaku.

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws including HAR Section 13-2-21 (now codified as HAR Chapter 13-5). 2. all applicable DOH Administrative Rules (HAR Title 11)	1, 3
Right of Entry	BLNR approved construction of right-of entry	2
Approval of Construction Plans and Specification	Applicant to submit copies of construction plans and specifications to the Chairperson for approval for consistency with conditions in HA-2462 and declarations in application. Approval by the Chairperson does not infer approval required of other agencies.	4
Construction Period	Construction to be started within two (2) year of approval and completed within seven (7) years of approval.	5
Reliance on Applicant	If the information and data provided by the applicant prove to be false, incomplete or inaccurate, HA-2462 may be modified, suspended or revoked, in whole or in part, and/or DLNR may institute legal proceedings.	6
EIS and Management Plan Conditions	Applicant to comply with applicable mitigation measures in the accepted environmental impact statement for this project and the Mauna Kea Science Reserve Complex Development (Management) Plan	7
Batching Plant	Applicant to establish batching plan at the identified alternative site location.	8
Skier's Parking Lot	Applicant to: 1. Install removable barrier to prevent vehicular access to Skier's Parking Lot (the "Lot") 2. Coordinate with Natural Area Reserve Commission to develop recommendation re: rehabilitation and future use of the Lot 3. Implement said recommendation, subject to BLNR approval	9
Litter	Applicant to remove litter generated by construction from project and surrounding areas	10
Failure to Comply	Failure to comply with any condition will void HA-2462	11
Other	Other terms and conditions as prescribed by Chairperson	12

Abstract of CDUP HA-1646 re Keck I dated 9/5/1984

Purpose: Construction of University of California 10-meter telescope; temporary use of concrete batching plant; and expansion of Hale Pohaku

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws including HAR Section 13-2-21 (now codified as HAR Chapter 13-5). 2. all applicable Public Health Regulations.	1, 5
Other	Other terms and conditions as prescribed by Chairperson	2
Historic Remains	Applicant to stop construction and immediately contact the State Historic Preservation Division if any historic remains are found	4
Authorization to Occupy State Land	Requirement to obtain authorization from Department of Land and Natural Resources ("DLNR") for occupation of State lands	3
Approval of Construction Plans and Specification	Construction, etc. subject to applicable county building code. Applicant to submit copies of construction plans and specifications to the Chairperson for approval for consistency with conditions in CDUP and declarations in application. Approval by the Chairperson does not infer approval required of other agencies.	6
Construction Period	Construction to be started within one (1) year of approval and completed within three (3) years of approval. Failure to comply will void the application.	7
Mamane and Ulei	Forestry and Parks personnel to be notified prior to removal of any mamane and ulei. Mamane and ulei to be planted to enhance project site and adjacent areas if possible and mamane trees removed or damaged by construction to be replaced if possible.	8, 9
Palila Breeding Season	Construction not to be commenced during palila breeding season unless birds were discouraged from nesting in construction area prior to and during the nest site selection, paring, and breeding/rearing period.	10
Sewage Disposal System	Sewage disposal system to be monitored by applicant to identify and control any adverse environmental impact(s)	11
Post Cleanup Inspection	Wildlife biologist or forester to inspect post cleanup work. Inspector to be assigned by DLNR and expenses to be paid by UH.	12
Batching Plant	Applicant to make "batching" site available for public parking when not in use and site to be cleaned and leveled to accommodate parking when temporary batching use is complete.	13

Abstract of CDUP HA-2509 re Keck II dated 4/29/1992 ("HA-2509")

Purpose: Expansion of Keck Observatory by constructing second ten-meter telescope adjacent to existing Keck I telescope, and appurtenant development

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws including HAR Section 13-2-21 (now codified as HAR Chapter 13-5). 2. all applicable DOH Administrative Rules (HAR Title 11) 3. Section 7 of the Endangered Species Act of 1973 (required consultation with the Secretary of the Interior before constructing any cabins)	1, 2, 8
Wastewater Treatment Plant	Applicant to finalize design of Wastewater Treatment Plant with DOH	3
Consistency with Leases and Assignment	Applicant to ensure proposed activities are consisted with pertinent state leases and assignment	4
Approval of Construction Plans and Specification	Applicant to submit copies of construction plans and specifications to the Chairperson for approval for consistency with conditions in CDUP and declarations in application. Approval by the Chairperson does not infer approval required of other agencies.	5
Construction Period	Construction to be started within one (1) year of approval and completed within five (5) years of approval.	6
Reliance on Applicant	If the information and data provided by the applicant prove to be false, incomplete or inaccurate, HA-2509 may be modified, suspended or revoked, in whole or in part, and/or DLNR may institute legal proceedings.	7
EIS and Management Plan Conditions	Applicable mitigation measures in the accepted environmental impact statement for this project and the Mauna Kea Science reserve Complex Development (Management) Plan to be incorporated as conditions of approval	8
Batching Plant	Applicant to establish batching plan as specified in HA-2462 (Subaru) and restore to condition acceptable to DLNR when not in use	9
Old Skier's Parking Lot	Applicant to: 1. Restore Old Skier's Parking Lot (the "Lot") to natural state 2. Close access to the Lot with continuous barrier 3. Coordinate activities related to the Lot with Natural Area Reserve Commission	10, 11, 12
Applicant Responsibilities	Applicant to: 1. remove litter generated by construction from project and surrounding areas 2. maintain project	13

Condition	Summary	Ref.
Notification of Construction	Applicant provide written notification to DLNR upon commencement and completion of construction	14
Failure to Comply	Failure to comply with any condition will void HA-2509	15
Other	Other terms and conditions as prescribed by Chairperson	16
Overflow Public Parking	Portion of abandoned generator site to be set aside for overflow public parking (area to remain unpaved)	17

Abstract of SPA re Keck Observatory dated 11/20/1997 (the "SPA")

Purpose: Construction of six vehicle single story carport

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws including HAR Section 13-2-21 (now codified as HAR Chapter 13-5). 2. all applicable DOH Administrative Rules (HAR Title 11)	1, 3
CDUP-2509	Applicant to comply with all conditions under CDUP HA-2509	2
Indemnification of the State of Hawaii	Applicant to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to the granting of the SPA	4

SPA HA 25-46 re Keck Outdoor Storage Project dated 3/10/2025 ("SPA HA 25-46")

Purpose: Temporary outdoor storage of items needed for re-grouting of Keck-I telescope pier

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws including HAR Chapter 13-5; and 2. all applicable DOH Administrative Rules (HAR Title 11).	1, 3
Indemnification of the State of Hawaii	Permittee to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to the granting of the SPA	2
Construction Period	Construction to be started within one (1) year of approval in accordance with construction plans signed by chairperson, and completed and all temporary structures removed within seven (7) months of approval. Permittee to provide written notification to DLNR upon commencement and completion of construction.	4
No Vested Rights of Exclusivity	SPA HA 25-46 is not exclusive and does not convey vested rights	5
Reliance on Applicant	If the information and data provided by the applicant prove to be false, incomplete or inaccurate, SPA HA 25-46 may be modified, suspended or revoked, in whole or in part, and/or DLNR may institute legal proceedings.	6
Water and Sanitation	Potable water supply and sanitation facilities, if any, required to have approval of DOH and County Department of Water Supply	7
Minimize Impacts	Applicant to minimize: 1. interference, nuisances or harm (eliminate if possible) 2. impacts of construction to off-site roadways, utilities and public facilities	8, 9
Protection of Native Hawaiian Practices	Approved work shall not hamper, impede, or otherwise limit the exercise of traditional, customary, or religious practices of native Hawaiians in immediate area, to extent practices are provided for by Constitution of State of Hawaii and Hawaii statute and caselaw.	10
Historic Remains	Applicant to stop construction and immediately contact the State Historic Preservation Division if any historic remains are found	11
Other	Other terms and conditions as prescribed by Chairperson	12
Failure to Comply	Failure to comply with any condition will void SPA HA 25-46	13

Abstract of CDUP HA-2691 re Gemini dated 4/12/1994 ("HA-2691")

Purpose: Construction of Gemini Northern 8-Meter Telescope at Mauna Kea, Hawaii

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws including HAR Section 13-2-21 (now codified as HAR Chapter 13-5). 2. all applicable DOH Administrative Rules (HAR Title 11)	1, 3
Indemnification of the State of Hawaii	Applicant to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to the granting of the CDUP	2
Approval of Construction Plans and Specification	Applicant to submit copies of construction plans and specifications to the Chairperson for approval for consistency with conditions in CDUP and declarations in application.	4
Construction Period	Construction to be started within two (2) years of approval and completed within seven (7) years of approval.	5
EIS Conditions	Applicant to abide by mitigation measures set forth in the accepted environmental impact statement for this project	6
Failure to Comply	Failure to comply with any condition will void HA-2691.	7
Reliance on Applicant	If the information and data provided by the applicant prove to be false, incomplete or inaccurate, HA-2691 may be modified, suspended or revoked, in whole or in part, and/or DLNR may institute legal proceedings.	8
Other	Other terms and conditions as prescribed by Chairperson	9

Abstract of SPA HA-06-19 re: Gemini dated 12/16/2005 ("SPA HA-06-19")

Purpose: Install Seeing Monitor on Gemini Support building

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws 2. all applicable DOH Administrative Rules, especially HAR section 11-60.1-33 (Fugitive Dust) and Chapter 11-46 (Community Noise Control; if applicable)	1, 3
Indemnification of the State of Hawaii	Applicant to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to the granting of SPA HA-06-19	2
Approval of Plans	Applicant to submit copies of construction plans and specifications to the Chairperson for approval for consistency with conditions in SPA HA-06-19 and declarations in application.	4
Construction Period	Construction to be started within one (1) year of approval and completed within three (3) years of approval. Applicant to notify DLNR when construction initiated and completed.	5
No Vested Rights of Exclusivity	SPA HA-06-19 is not exclusive and does not convey vested rights	6
Reliance on Applicant	If the information and data provided by the applicant prove to be false, incomplete or inaccurate, SPA HA-06-19 may be modified, suspended or revoked, in whole or in part, and/or DLNR may institute legal proceedings.	7
Minimize Impacts	Applicant to minimize: 1. interference, nuisances or harm (eliminate if possible) 2. impacts of construction to off-site roadways, utilities and public facilities	8, 9
Other	Other terms and conditions as prescribed by Chairperson	10
Failure to Comply	Failure to comply with any condition will void SPA HA-06-19	11

Abstract of CDUP HA-2728 re SMA dated 11/30/1994 amended 12/13/1994 ("HA-2728")

Purpose: Construction of submillimeter array telescope and associated facilities/infrastructure; temporary use of portion of batching plant site; construction of up to two (2) 8-person cabins in existing construction camp; use of approved materials staging area

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws including HAR Section 13-2-21 (now codified as HAR Chapter 13-5). 2. all applicable DOH Administrative Rules (HAR Title 11) 3. Section 7 of the Endangered Species Act of 1973 (required consultation with the Secretary of the Interior before constructing any cabins)	1, 2, 8
Indemnification of the State of Hawaii	Applicant to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to the granting of HA-2728	3
Authorization to Occupy State Land	Requirement to obtain authorization from Department of Land and Natural Resources ("DLNR") for occupation of State lands	4
Confinement of Construction Related Activities	All construction related activities to be confused to approved areas. Fence to be installed between construction area and the shrines identified as Sites 50-10-5224 and 50-10-5225.	5
Historic Remains	Applicant to stop construction and immediately contact the State Historic Preservation Division if any historic remains are found	6
Congruence with Surroundings	Applicant to paint control building and antenna maintenance facility and finish visible surface of observing pads with colored concrete or paint to match the surroundings	7, 10
Minimize Impact on Recreation	Applicant to minimize the impact of the facility on recreational activities (e.g., skiing, snow play, etc.) and remove fencing around the observing pads when not in use	9
Notification of Construction	Applicant to notify DLNR upon commencement and completion of construction	11
Construction Period	Construction to be started within two (2) years of approval and completed within seven (7) years of approval.	12
Approval of Construction Plans and Specification	Applicant to submit copies of construction plans and specifications to the Chairperson for approval (approval by the Chairperson does not infer approval required of other agencies)	13
FEIS Conditions	Applicant to abide by mitigation measures set forth in the final environmental impact statements for this project incorporated as conditions of approval	14
Reliance on Applicant	If the information and data provided by the applicant prove to be false, incomplete or inaccurate, HA-2728 may be modified, suspended or revoked, in whole or in part, and/or DLNR may institute legal proceedings.	15

Condition	Summary	Ref.
CDUP HA-1573	All conditions imposed under CDUP HA-1573 (Infrastructure) remain in effect	16
Failure to Comply	Failure to comply with any condition will void HA-2728	17
Other	Other terms and conditions as prescribed by Chairperson	18

Abstract of SPA HA 06-51 re SMA dated 7/26/2006 ("SPA HA 06-51")

Purpose: Addition of vestibule on north side of control building

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with all applicable federal, state and county laws including HAR Chapter 13-5.	1
Indemnification of the State of Hawaii	Applicant to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to the granting of SPA HA 06-51	2
Authorization by OMKM	Requirement to obtain authorization from Office of Mauna Kea Management and abide by any conditions imposed	3
Approval of Plans	Applicant to submit future site plans to DLNR for approval with submission to other pertinent agencies to follow said approval.	4
Reliance on Applicant	If the information and data provided by the applicant prove to be false, incomplete or inaccurate, SPA HA 06-51 may be modified, suspended or revoked, in whole or in part, and/or DLNR may institute legal proceedings.	5
Interference, Nuisances or Harm	Applicant to take measures to minimize or eliminate interference, nuisances or harm	6
Restoration	Site to be restored to original state upon termination of use of SMA facility	7
Debris	Trash and debris to be transported to authorized off site waste transfer station	8
Other	Other terms and conditions as prescribed by Chairperson	9
Failure to Comply	Failure to comply with any condition will void SPA HA 06-51	10

Abstract of CDUP HA-527 re Canada France Hawaii dated 8/12/1974, amended 9/19/1980 ("HA-527")

Purpose: Construction of CFHT telescope, observatory and associated facilities and infrastructure

Condition	Summary	Ref.
Master Plan	UH to submit master plan of summit no later than December 31, 1974 for DLNR approval.	1
Personnel	UH to provide personnel for maintenance and management of summit	2
Excavation	Excavated material to be restored or disposed of in manner approved by DLNR. Excavation limited to 8,000 cubic yards. Bulk of material not to be stored for more than two (2) years and all material to be removed at end of five (5) years.	3
Condition of Area	Area to be kept clean and tidy	4
UH Responsibility	UH to ensure conditions are met	5
Approval of Construction Plans	Prior to commencing work, applicant to submit copies of plans for earthwork, construction and landscaping to the Chairman for approval	6
Notification of Construction	Applicant to provide written notification to DLNR upon commencement and completion of work	7
Clearing and Grading	Clearing and grading subject to DLNR approval	8
Debris	Debris and rubbish to be removed to approved sanitary disposal site	9
Compliance with Laws	Requires compliance with all applicable federal, state and county laws including Section 2C of Departmental Regulation No. 4.	10
Clearance	Applicant to obtain clearance from appropriate county agency re: safety of proposed construction	11
Restoration	Upon termination of used, area to be restored to condition satisfactory to DLNR	12
Construction Period	Construction to be started within one (1) year of approval.	13
Indemnification of the State of Hawaii	Applicant to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to the granting of HA-527 and not the fault of the State	14
Construction Site	Applicant to confer with the County of Hawaii Planning Department re: the most feasible site	(Amd. 2)[1]
Archeological Reconnaissance	Qualified archaeologist to conduct reconnaissance of property to determine existence of historic, cultural, architectural, and archaeological site	(Amd. 3)
Emilie Experiment	Copy of Emilie Experiment results to be submitted to UH and DLNR Proper scholarly credit to be given to State in any publications re Experiment	(Amd. 4, 5)

[1] Amendment dated 9/19/1980

Abstract of CDUP HA-527A re Canada France Hawaii – New Weather Tower dated 6/3/1991 ("HA-527A")

Purpose: Construction of a new weather tower.

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with all applicable federal, state and county laws including HAR Section 13-2-21 (now codified as HAR Chapter 13-5).	1
Building and Equipment Plans	DLNR to be notified regarding allocation of facility equipment. Any modification of building and equipment plans to be reviewed and approved by Chairperson.	2
Maintenance	Applicant to maintain ground and facilities in excellent state to not degrade environment	3
Equipment and Structure Color	Applicant to ensure all equipment and structures are non-reflective, subject to DLNR approval	4
Litter	Applicant to remove litter generated by construction from project and surrounding areas	5
Removal of Existing Tower	Existing tower to be removed once new tower is constructed and calibrated	6
Supporting Guy Wires	Applicant to minimize use of supporting guy wires	7
Approval of Construction Plans and Specification	Applicant to submit copies of construction plans and specifications to the Chairman for approval (approval by the Chairman does not infer approval required of other agencies) prior to construction, except where altercation or repair does not change or expand on existing land use	8
Construction Period	Construction to be started within one (1) year of approval and completed within three (3) years of approval.	9
Reliance on Applicant	If the information and data provided by the applicant prove to be false, incomplete or inaccurate, HA-527A may be modified, suspended or revoked, in whole or in part, and/or DLNR may institute legal proceedings.	10
EIS Conditions	Applicant to abide by mitigation measures set forth in the accepted environmental impact statement for this project	11
Failure to Comply	Failure to comply with any condition will void HA-527A	12
Other	Other terms and conditions as prescribed by Chairperson	13

Abstract of SPA HA-06-49 re Canada France Hawaii dated 6/8/2006, amended 7/13/2011 (the "Conduit SPA")

Purpose: Installation of conduit to connect CFHT and Gemini to conduct the OHANA project for the purpose of demonstrating optical interferometry.

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws including HAR Chapter 13-5 2. all applicable DOH Administrative Rules	1, 2
Reliance on Applicant	If the information and data provided by the applicant prove to be false, incomplete or inaccurate, the Conduit SPA may be modified, suspended or revoked, in whole or in part, and/or DLNR may institute legal proceedings.	3
Minimize Impact	Applicant to minimize or eliminate interference, nuisances or harm.	4
Indemnification of the State of Hawaii	Applicant to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to the granting of the Conduit SPA	5
Preservation of Cinder Cone	Excavation or trenching prohibited on undisturbed parts of cinder cone and care to be exercised when removing exposed cables and concrete from face of cinder cone	6
Fee	Applicant to pay $50.00 to DLNR for Conduit SPA	7
Historic Remains	Applicant to stop construction and immediately contact the State Historic Preservation Division if any historic remains are found	8
CDUP HA-527	All conditions imposed by HA-527 apply	9

Abstract of SPA HA-13-28 re Canada France Hawaii dated 1/15/2013 (the "Vent SPA")

Purpose: Installation of twelve large vents in the existing dome skin.

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws including HAR Chapter 13-5 2. all applicable DOH Administrative Rules	1, 2
Construction Period	Construction to be started within one (1) year of approval and completed within three (3) years of approval. Applicant to notify DLNR in writing when construction initiated and completed.	3
Reliance on Applicant	If the information and data provided by the applicant prove to be false, incomplete or inaccurate, the Vent SPA may be modified, suspended or revoked, in whole or in part, and/or DLNR may institute legal proceedings.	4
Minimize Impacts	Permittee to minimize: 1. interference, nuisances or harm (eliminate if possible) 2. impacts of construction to off-site roadways, utilities and public facilities	5, 7
Historic Remains	Applicant to stop construction and immediately contact the State Historic Preservation Division if any historic remains are found	6
CDUP HA-527	All conditions imposed by HA-527 apply	8
OMKM Conditions	Conditions placed by OMKM on its permit apply to the Vent SPA	9
Comprehensive Management Plan	Permittee to comply with management actions outlined in Comprehensive Management Plan	10
Other	Other terms and conditions as prescribed by Chairperson	11
Failure to Comply	Failure to comply with any condition will void "this CDUP"[2]	12

[2] Presumably refers to HA-527

Abstract of CDUP HA-653 re IRTF and UKIRT dated 9/2/1975 ("HA-653")

Purpose: Construction of telescopes and access road.

Condition	Summary	Ref.
Compliance Required	Requires compliance with: 1. all applicable federal, state and county laws including Section 2C and 2F of Departmental Regulation No. 4 2. all requirements set forth in General Lease S-4191	1
Underground Conduit	UH to consider placement of underground conduit for distribution of electric power above and below the 12,700 foot elevation to preserve natural setting and aesthetics of Mauna Kea	2
Notification of Construction	UH to provide written notification to Chairman of BLNR upon commencement and completion of work on UKIRT and IRTF	3
Congruence with Surrounding	UH to blend exterior of observatory and related facilities to the surrounding area	4
Visibility	UH to locate IRTF and related facilities to be invisible from Hilo	5
Approval of Construction Plans	Prior to commencement of construction, applicant to submit copies of construction plans for UKIRT and IRTF and related facilities to the Chairman for approval	6
Litter	UH to maintain land within science reserve including roadway access and abutting lands "litter -free"	7
Post Conditions	UH to post CDUP conditions at mid-level facilities and observatory for personnel to review	8
Approval Limited to this CDUP	Approval of UKIRT and IRTF not to affect UH's mid-level facilities	9
Sharing Mauna Kea	UH to heed communities reasonable concerns and complaints in terms of sharing and caring for use of Mauna Kea for mutual benefit	10
Indemnification of the State of Hawaii	Applicant indemnify the State of Hawaii against any claim arising out of any act or omission of applicant related to the granting of HA-653 and not the fault of the State	11
Other	Other terms and conditions as prescribed by Chairperson and approved by BLNR	12

Abstract of Amended CDUP HA-653A re UKIRT dated 11/12/1982 ("HA-653A")

Purpose: Construction of telescopes and access road.

Condition	Summary	Ref.
Compliance Required	Requires compliance with: 1. all applicable federal, state and county laws including HAR Section 13-2-21 (now codified as HAR Chapter 13-5) 2. all applicable Public Health Regulations	1, 5
Indemnification of the State of Hawaii	Applicant to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to the granting of HA-653A	2
Other	Other terms and conditions as prescribed by Chairperson	3
Historic Remains	Applicant to stop construction and immediately contact the State Historic Preservation Division if any historic remains are found	4
Fire Contingency Plan	Fire contingency plan acceptable to Division of Forestry and Wildlife to be implemented during and after construction	6
Notification	Applicant to notify following DLNR divisions of date of construction commencement: 1. Division of Forestry and Wildlife 2. Natural Area Reserves System 3. Division of Water and Land Development 4. Division of Land Management 5. Division of Conservation and Resources Enforcement	7
Compatibility and Cohesion with Surroundings	Existing physical and environmental aspects (e.g., natural beauty and open space characteristics) of land to be preserved or improved Buildings, structures, and facilities to harmonize with physical and environmental conditions	8, 9
Approval of Construction Plans and Specification	Construction, altercation, demolition, repair, etc. to be subject to applicable county building codes Applicant to submit copies of final location map, plans, and specifications to the Chairman for approval.	10
Construction Period	Construction to be started within one (1) year of approval and completed within three (3) years of approval.	11

Abstract of CDUP HA-895 re Hale Pohaku dated 5/16/1977 ("HA-895")

Purpose: Demolition and replacement[1] of two dilapidated buildings at Hale Pohaku occupied by UH IFA.

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with all applicable federal, state and county laws including Section 2C of Departmental Regulation No. 4.	1
Indemnification of the State of Hawaii	Applicant to include in its contracts for construction of IRTF facilities an indemnification of the State of Hawaii against any claim arising out of any act or omission of applicant related to the granting of HA-895	2
Other	Other terms and conditions as prescribed by Chairperson	3
Historic Remains	Applicant to stop construction and immediately contact the State Historic Preservation Division if any historic remains are found	4
Compliance with Mauna Kea Plan	Applicant to comply with the policies and procedures of the Mauna Kea Plan	5

[1] Documents in the file indicate that UH requested an amendment to "renovation and modification instead of demolition and replacement" but it is unclear from the file whether this amendment was approved.

Abstract of CDUP HA-1430 re Hale Pohaku and Visitor Information Center dated 4/30/1982 ("HA-1430")

Purpose: Subdivision and construction of Mid-Level Facilities and Visitor Information Center, replacing original, temporary.

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws including HAR Section 13-2-21 (now codified as HAR Chapter 13-5). 2. all applicable Public Health Regulations	1, 6
Indemnification of the State of Hawaii	Applicant to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to the granting of HA-1430	2
Other	Other terms and conditions as prescribed by Chairperson	3
Authorization to Occupy State Land	Requirement to obtain authorization from Department of Land and Natural Resources ("DLNR") for occupation of State lands	4
Historic Remains	Applicant to stop construction and immediately contact the State Historic Preservation Division if any historic remains are found	5
Fire Contingency Plan	Fire contingency plan to be implemented during and after construction and during relocation or demolition of existing temporary buildings, if any	7
Compatibility and Cohesion with Surroundings	Use to be compatible with and appropriate to surroundings and capabilities of the land Existing physical and environmental aspects (e.g., natural beauty and open space characteristics) of land to be preserved or improved Buildings, structures, and facilities to harmonize with physical and environmental conditions	8, 9, 10
Soil and Water Conservation District	Use of area to confirm with Soil and Water Conservation District program or plan on file with DLNR	11
Water and Sanitation	Potable water supply and sanitation facilities, if any, required to have approval of DOH and Board/Department of Water Supply	12
Approval of Construction Plans and Specification	All construction, altercation, demolition, repair, etc. to be subject to applicable county building codes Applicant to submit copies of construction plans and specifications to the Chairman for approval (approval by the Chairman does not infer approval required of other agencies) prior to construction, except where altercation or repair does not change or expand on existing land use	13
Chairman Approval Required	Chairman approval required for: 1. provisions for access, parking, drainage, fire protection, safety signs, lighting and changes in landscape	14, 19

Condition	Summary	Ref.
	2. clearing areas for construction (includes removal of ground cover of slopes over 40%)	
Minimize Impacts	Applicant to minimize: 1. interference, nuisances or harm (eliminate if possible) 2. obstruction to public roads, trails and pathways. If not possible, applicant to provide substitute roads, trails or pathways 3. overloading of off-site roadways, utilities, and public facilities	15, 16, 18
Lanes Limited	Access road lanes limited to 2 (excludes public highways)	17
Revegetation	Cleared areas to be revegetated within thirty (30) days unless otherwise provided for in a plan approved by DLNR	20
Construction Period	Construction to be started within one (1) year of approval and completed within three (3) years of approval.	21
No Hunting Equipment	No hunting equipment allowed at Hale Pohaku	22
Litter	UH responsible for removal and control of litter in areas under UH jurisdiction	23, 30
Approval not Precedent	Approval of CDUP is limited to the development of Mid-Level Area and does not imply approval for any future actions or set precedent for any future request	24, 35
Limited Use	Mid-level facilities to be used by only Observatory staff and individuals whose work is directly related to science reserve activities at the summit	25
UH Proposals to be Developed	UH to develop proposals for BLNR review before 1982: 1. maintenance and management of all facilities for BLNR review 2. an agreement between UH and DLNR for provision of personnel and funding for operation of the Visitor Information Center 3. regulating number of 4-wheel drive vehicles allowed on summit 4. use by public of the original Hale Pohaku stone buildings, which are to be retained	26, 27, 28, 29
No Pets	No pets allowed at Hale Pohaku or summit	31
Phasing Plan	Applicant to submit phasing plan for construction and demolition (if required) for DLNR review within 30 days of approval of CDUP	32
Final Construction Plan	Final construction to be reviewed by Planning Office and approved by BLNR Chairman	33
Mauna Kea Plan	Applicant to meet all conditions of Mauna Kea Plan	34

Abstract of CDUP HA-1819 re Hale Pohaku dated 3/14/1986 ("HA-1819")

Purpose: Subdivision of 21 acre site; planned and possible future expansion of permanent mid-level facility; information station; long-term construction workers' camp; and construction staging area.

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws including HAR Section 13-2-21 (now codified as HAR Chapter 13-5). 2. all applicable Public Health Regulations	1, 4
Authorization to Occupy State Land	Requirement to obtain authorization from Department of Land and Natural Resources ("DLNR") for occupation of State lands	2
Historic Remains	Applicant to stop construction and immediately contact the State Historic Preservation Division if any historic remains are found	3
Approval of Construction Plans and Specification	All construction, altercation, demolition, repair, etc. to be subject to applicable county building codes Applicant to submit copies of construction plans and specifications to the Chairman for approval (approval by the Chairman does not infer approval required of other agencies) prior to construction, except where altercation or repair does not change or expand on existing land use	5
Construction Period	Construction to be started within one (1) year of approval and completed within five (5) years of approval.	6
Mamane Trees	Removal of Mamane trees to be minimized and removed trees to be transplanted. Distributed areas to be planted with appropriate native species.	7
Undergrowth Control	Undergrowth to be controlled to prevent fires from destroying existing Mamane forest	8
Palila Breeding Season	Construction to be halted during Palila breeding season unless Palila are discouraged from nesting in construction area before and during breeding season. Such activities to be coordinated with the Division of Forestry and Wildlife, and U.S. Fish and Wildlife Service	9
Planting of Native Species	Surfaces exposed by construction to be planted with native grasses, shrubs and trees	10
Restriction on Construction Area	To extent possible, construction to be limited to open areas with forest cover	11
Control of Non-native Birds	Removal of Non-native birds (e.g., house sparrows) by removal of nests and mistnetting to be coordinated with the Division of Forestry and Wildlife, and U.S. Fish and Wildlife Service	12
Education Program	Education program to limit human disturbances to be developed	13
No Pet Cats	No pet cats allowed at proposed construction camp	14

Condition	Summary	Ref.
Trapping Programs	Feral cat and rat trapping programs to be continued and coordinated with the Division of Forestry and Wildlife, and U.S. Fish and Wildlife Service	15
Garbage	Garbage to be stored in elevated rodent proof containers	16
Lighting	Only downward directed lights to be used	17
Confinement of Work	All work to be confined within 21-acre parcel unless otherwise approved by DLNR	18
Archeological Plan	Applicant not to begin construction work on the 2 sites within the 21-acre parcel until it develops archeological plan with Division of Historic Sites for the same, to be approved by DLNR	19
No Hunting or Fire Arms	No hunting or possession of fire arms allowed at construction camp site	20
Other	Other terms and conditions as prescribed by Chairperson	21

Abstract of SPA HA-00-22 dated 4/25/2000 ("SPA HA-00-22")

Purpose: Improvements to improve accessibility for disabled persons

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws including HAR Chapter 13-5 2. all applicable DOH Administrative Rules.	1, 3
Indemnification of the State of Hawaii	Applicant to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to granting SPA HA-00-22	2
Approval of Final Construction Plans	Applicant to submit final construction plans for approval prior to commencement of construction	4
Consultations	Applicant to consult with following departments prior to commencement of construction: 1. DLNR Hawaii District Land Office 2. DLNR Historic Preservation Division.	5, 8
Reliance on Applicant	If the information and data provided by the applicant prove to be false, incomplete or inaccurate, SPA HA-00-22 may be modified, suspended or revoked, in whole or in part, and/or DLNR may institute legal proceedings.	6
Minimize Impacts	Applicant to minimize interference, nuisances or harm.	7
Failure to Comply	Failure to comply with any condition will void SPA HA-00-22	9

Abstract of SPA HA-09-01 re Hale Pohaku dated 7/25/2008 ("SPA HA-09-01")

Purpose: Installation of fiber optic cable between common area building and Visitor Information Station at Hale Pohaku

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws 2. all applicable DOH Administrative Rules, especially HAR section 11-60.1-33 (Fugitive Dust)	1, 3
Indemnification of the State of Hawaii	Applicant to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to granting SPA HA-09-01	2
Construction Period	Construction to be started within one (1) year of approval and completed within one and a half (1.5) years of approval in accordance with plans signed by Chairperson. Applicant to notify DLNR in writing when construction initiated and completed.	4
No Vested Rights or Exclusivity	SPA HA-09-01 is not exclusive and does not convey vested rights	5
Reliance on Applicant	If the information and data provided by the applicant prove to be false, incomplete or inaccurate, SPA HA-09-01 may be modified, suspended or revoked, in whole or in part, and/or DLNR may institute legal proceedings.	6
Minimize Impacts	Applicant to minimize: 1. interference, nuisances or harm (eliminate if possible) 2. impacts of construction to off-site roadways, utilities and public facilities	7, 8
Historic Remains	Applicant to stop construction and immediately contact the State Historic Preservation Division if any historic remains are found	9
OMKM Approval Required	OMKM Board approval of installation required	10
Monitoring of Installation	OMKM Rangers to be allowed to visit and monitor installation	11
Trees and Indigenous Flora	No removal of trees or disturbances to indigenous flora	12
Inspections	Route to be inspected on quarterly basis	13
Other	Other terms and conditions as prescribed by Chairperson	14
Failure to Comply	Failure to comply with any condition will void "this CDUP"[2]	15

[2] Presumably refers to HA-1430

Abstract of SPA SPA HA-17-54 re Hale Pohaku dated 6/23/2017 ("SPA HA-17-54")

Purpose: Installation of staging area pipe gates and delineation of parking area with large rocks

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws 2. all applicable DOH Administrative Rules.	1, 3
Indemnification of the State of Hawaii	Permittee to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to granting SPA HA-17-54	2
Reliance on Applicant	If the information and data provided by the applicant prove to be false, incomplete or inaccurate, SPA HA-17-54 may be modified, suspended or revoked, in whole or in part, and/or DLNR may institute legal proceedings.	4
Approval of Landowner	Permittee to obtain landowner's permission for improvements prior to commencement of construction.	5
Compliance with Mauna Kea Comprehensive Management Plan	Permittee to continue compliance with relevant terms and conditions of Mauna Kea Comprehensive Management Plan	6
Historic Remains	Permittee to stop construction and immediately contact the State Historic Preservation Division if any historic remains are found	7
Compliance with OMKM Conditions	Compliance with following conditions recommended by OMKM required: 1. Written notification of OMKM at least 5 days prior to beginning field work on OH managed lands. 2. Requirement to attend Mauna Kea orientation prior to participating in field work. 3. Allow OMKM Randers to visit and monitor activities 4. Compliance with all actions and measures described in proposal including community benefits, CMP compliance list and mitigation measures. 5. Ensure loose tools or equipment are (i) not left unattended and (ii) properly stored at end of each day. 6. Protocols to include measures ensuring debris and equipment are not blown from job site in high wind conditions. Infrastructure (temporary or permanent) must be able to withstand 120mph winds. 7. Improvements to be designed and installed wit withstand severe weather conditions. 8. Proper disposal of all waste material. Perishable items to be removed from site at end of each day and properly disposed. 9. Employe invasive species prevention best practices including inspection of materials by DLNR-approved biologist prior to entering UH managed lands.	8

Condition	Summary	Ref.
	10. Stationary motorized equipment must have drain pan to catch fuel or fluid leaks. To allow expansion with reduced atmospheric pressure, fuel tanks should not be more than ¾ full prior to transport to summit (unless used as the fuel source for transport). 11. Large, heavy, or oversized loads to notify Mauna Kea Road Conditions listserve at least 1 day prior to delivery. Loads requiring escort on public roadway must be accompanied to final destination. Projects failing to do so must obtain approval from Rangers before arriving, or may be denied entry. 12. If a nene appears within 100 feet of ongoing work, all activity to be temporarily suspended until it leaves the area of its own accord. Feeding nene is prohibited. 13. Approval not transferrable or assignable. Copy of approval must be on-site at all times when working on UH-managed lands. 14. No use of mechanized equipment unless authorized by permit. 15. Compliance with other permit requirements (e.g., building permits, DLNR permits, etc.). 16. Placement of permanent markers, monuments, mag nails, survey pins, etc. not allowed without prior approval from OMKM (and State if required). All surveyor work to be shared with OMKM digitally using common, transferable coordinate reference system. 17. Written notification of OMKM when field activity completed 18. Project must be completed within time frame specified in proposal and when applicable, DLNR approval , and shall not continue past time frame without prior written approval from OMKM.	
Other	Other terms and conditions as prescribed by Chairperson	9
Failure to Comply	Failure to comply with any condition will void SPA HA-17-54	10

Abstract of CDUP HA-3812 re Visitor Information Station dated 6/8/2018 ("HA-3812")

Purpose: Infrastructure Improvements at Visitor Information Station

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws 2. all applicable DOH Administrative Rules.	1, 3
Authorization to Occupy State Land	Requirement to obtain authorization from Department of Land and Natural Resources ("DLNR") for occupation of State lands	2
Recordable Form	Permittee to provide documentation of recordable form of permit approval prior to submission for approval of subsequent construction plans	4
Approval of Construction Plans	Applicant to submit copies of construction plans and specifications to the chairperson for approval (approval by the chairperson does not infer approval required of other agencies) prior to construction,	5
Timing of Construction	Construction to be initiated within one (1) year of approval and completed within three (3) years of approval. Permittee to notify DLNR in writing upon commencement and completion of construction.	6
Compliance with EAS or EIS	Compliance with following mitigation representations set forth in accepted EAS/EIS for proposed use required:	7
Compliance with Best Practices	Compliance with best managed practices discussed in application required.	8
No Vested Rights or Exclusivity	HA-3812 is not exclusive and does not convey vested rights	9
Reliance on Applicant	If the information and data provided by the applicant prove to be false, incomplete or inaccurate, HA-3812 may be modified, suspended or revoked, in whole or in part, and/or DLNR may institute legal proceedings.	10
Potable Water	Any potable water supply and sanitation facilities must be approved by DOH and county department of water supply	11
Minimize Impacts	Permittee to minimize: 1. interference, nuisances or harm (eliminate if possible) 2. obstruction to public roads, trails and pathways. If not possible, applicant to provide substitute roads, trails or pathways acceptable to DLNR 3. impacts to off-site roadways, utilities, and public facilities	12, 13, 14
Revegetation	Cleared areas to be revegetated within thirty (30) days unless otherwise provided for.	15
Soil and Water Conservation	Use of area to conform with program of appropriate soil and water conservation district or plan on file with DLNR.	16

Condition	Summary	Ref.
Building/Grading Permit	Permittee to obtain county building and/or grading permit prior to final construction plan approval.	17
Landscaping and Irrigation	Landscaping and irrigation to be contained within the property for all landscaped areas.	18
Protection of Beaches	Provisions for protection of beaches and primary coastal dune to be established to satisfaction of DLNR including avoidance, relocation, or other best management practices where applicable.	19
Protection of Native Hawaiian Practices	Approved work shall not hamper, impede, or otherwise limit the exercise of traditional, customary, or religious practices of native Hawaiians in immediate area, to extent practices are provided for by Constitution of State of Hawaii and Hawaii statute and caselaw.	20
Historic Remains	Permittee to stop construction and immediately contact the State Historic Preservation Division if any historic remains are found	21
Compliance with Mauna Kea Comprehensive Management Plan	Permittee to continue compliance with relevant terms and conditions of Mauna Kea Comprehensive Management Plan and associated Resource Sub Plans.	22
Protection of Native Bird and Bats	Compliance with following conditions to protection of native bird and bat species required: 1. nest survey for endangered species to be conducted not more than 14 days before start of any vegetation clearing; 2. new lighting installed to be minimum amount for safety and to be places low to ground, shielded and red to minimize impact to wildlife and stargazing; 3. qualified biologist to survey the area for Nene prior to any land clearing or excavation; 4. surveys for endangered bird and bat species to be conducted rior to any ground disturbing activities, and USFWS to be contacted if engendered species are encountered; 5. DOFAW to be contacted if Nene nest is found; and 6. Construction to be halted if engendered species are present and not continues until species leaves of its own volition.	23
Archeological	Permittee to comply with the minorotring conditions stipulated in the Final 2018 *Archeological Monitoring Plan in support of the infrastructure improvements at Maunakea VIS*.	24
Cessation of Construction Activity	On-site construction monitors may order all construction activity cease up to seventy-two (72) hours when they determine that (a) there has been a violation of the terms or conditions of HA-3812 that warrants cessation of construction activities or (b) continued construction will unduly harm natural or cultural resources. Chairperson of BLNR may issue cease and desist order to extend period of time construction is prohibited, or such other order the Chairperson deems appropriate.	25, 26

Condition	Summary	Ref.
Other	Other terms and conditions as prescribed by Chairperson	27
Failure to Comply	Failure to comply with any condition will void HA-3812.	28

Abstract of CDUP HA-954 re 88" Telescope Facility, 24" Air Force Telescope, and 24" Planetary Patrol Telescope dated 9/12/1977

Purpose: After the fact CDUP for UH 88" Telescope Facility, 24" Air Force Telescope, and 24" Planetary Patrol Telescope.

Condition	Summary	Ref.
Compliance Required	Requires compliance with: 1. all applicable federal, state and county laws including Section 2C of Departmental Regulation No. 4 2. policies and directives of Mauna Kea Plan	1, 2
Other	Other terms and conditions as prescribed by Chairman	3
Indemnification of the State of Hawaii	UH staff and personnel to absolve the State of Hawaii from any fault or blame for injury or fatal harm caused by their own negligence in observing safety practices and procedures	4

Abstract of CDUP HA-1492 re CSO dated 1/11/1983

Purpose: Construction of 10-meter telescope for millimeter and submillimeter astronomy and right of entry

Condition	Summary	Ref.
Compliance Required	Requires compliance with: 1. all applicable federal, state and county laws including HAR Section 13-2-21 (now codified as HAR Chapter 13-5) 2. all applicable Public Health Regulations	A1, A5
Other	Other terms and conditions as prescribed by Chairperson	A2
Authorization to Occupy State Land	Requirement to obtain authorization from Division of Land Management of DLNR for occupation of State lands	A3
Historic Remains	Applicant to stop construction and immediately contact the State Historic Preservation Division if any historic remains are found	A4
Fire Contingency Plan	Fire contingency plan acceptable to Division of Forestry and Wildlife to be implemented during and after construction	A6
Approval Not Precedence	Approval not to be considered precedence for any future BLNR action	B
No Further Commitment	No further commitment of land use involving major improvements within the Mauna Kea Science Reserve to be considered until Mauna Kea Science Reserve Development Plan is completed.	C

Abstract of CDUP HA-1515 re JCMT dated 3/8/1983

Purpose: Construction and operation of the UK/NL Millimeter-wave telescope and temporary use of an existing unpaved parking area for a concrete batching plant

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws including HAR Section 13-2-21 (now codified as HAR Chapter 13-5); and 2. all applicable Public Health Regulations.	1, 5
Authorization to Occupy State Land	Requirement to obtain authorization from Department of Land and Natural Resources for occupation of State lands	3
Historic Remains	Applicant to stop construction and immediately contact the State Historic Preservation Division if any historic remains are found	4
Other	Other terms and conditions as prescribed by Chairman	2
Fire Contingency Plan	Fire contingency plan acceptable to the Division of Forestry and Wildlife to be implemented during and after construction	6
Approval not Precedent	Approval shall not be considered as precedence for any future Board of Land and Natural Resources action.	7

Abstract of CDUP HA-2174 re VLBA dated 1/24/1989 ("HA-2174")

Purpose: Construction of VLBA, spur road, and temporary batching site at the Mana Kea Science Reserve

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws including HAR Section 13-2-21 (now codified as HAR Chapter 13-5); and 2. all applicable DOH Administrative Rules (HAR Title 11).	3, 5
Old Skier's Parking Lot	Applicant to restore Old Skier's Parking Lot to previous state upon completion of construction.	1
Antenna Facility	If the antenna facility is permanently closed or abandoned, buildings and above-ground structures are to be removed and area restored to its natural condition.	2
Responsibility for Damage	State of Hawaii not to be liable for any loss, liability, claim or demand for property damage, property loss, or personal injury, including death, caused by or resulting from any act or omission of Applicant or its contractor in connection with HA-2174.	4
Approval of Construction Plans and Specification	Applicant to submit copies of construction plans and specifications to the Chairperson for approval for consistency with conditions of permit and declarations in application. Approval by the Chairperson does not infer approval required of other agencies.	6
Construction Period	Construction to be started within one (1) year of approval and completed within three (3) years of approval.	7
Failure to Comply	Failure to comply with any condition will void HA-2174	8
Other	Other terms and conditions as prescribed by Chairperson	9

Abstract of SPA HA-96-10 re VLBA – GPS System Monument Accessory dated 8/6/1996 ("SPA HA-96-10")

Purpose: Installation of a Global Positioning System monument accessory.

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws including HAR Section 13-5-42; and 2. all applicable DOH Administrative Rules (HAR Title 11).	1, 2
Historic Remains	Applicant to stop work and immediately contact the State Historic Preservation Division if any historic remains are found.	3
Indemnification of the State of Hawaii	Permittee to indemnify State of Hawaii against any claim arising out of any act or omission of applicant related to granting SPA HA-96-10.	4

Abstract of CDUP HA-3568 re TMT, D&O dated 9/27/2017 ("HA-3568")

Purpose: Construction of Thirty Meter Telescope ("TMT") and approval of TMT Management Plan

Condition	Summary	Ref.
Compliance with Laws	Requires compliance with: 1. all applicable federal, state and county laws including HAR Section 13-5; and 2. all applicable DOH Administrative Rules.	1, 3
Authorization to Occupy State Land	Requirement to obtain authorization from Department of Land and Natural Resources ("DLNR") for occupation of State lands	2
Construction Period	Construction to be started within two (2) years of approval and completed within twelve (12) years of approval. Permittee to notify DLNR upon commencement and completion of construction.	4
Approval of Construction Plans and Specification	Applicant to submit copies of construction plans and specifications to the Chairman for approval (approval by the Chairman does not infer approval required of other agencies) prior to construction.	5
Compliance with Other Plans	Mitigation measures incorporated as conditions in Permit: 1. EIS 2. CDUA 3. Historic Preservation Mitigation Plan 4. Construction Plan 5. Historical & Archeological Site Plan 6. Maintenance Plan 7. Arthropod Monitoring Plan 8. Terms and conditions of Comprehensive Management Plan and associated sub plans 9. Approved TMT Management Plan is approved including specific management plans (Cultural Resources Management, Education & Outreach, Astronomical resources, permitting and Enforcement, Infrastructure and Maintenance, Construction Guidelines, Site Recycling, Decommissioning, Demolition & restoration, Future Land Uses, and Monitoring, Evaluation & Updates).	6, 7, 8, 9
Special Conditions	University of Hawaii at Hilo ("UHH"), Office of Mauna Kea Management ("OMKM") and TMT International Observatory, LLC ("TIO") to implement following: 1. Ensure employees attend, at minimum, 1 day of mandatory cultural and natural resources training 2. Work with 'Imiloa Astronomy Center, OMKM and Kahu Ku Mauna to develop informational exhibits for visitors re: the natural, cultural, and archaeological resources of Maunakea for use at VIS, 'Imiloa, TMT facilities, etc.; 3. Fund re-naturalization of closed access road on Pu'u Poli'ahu, partial re-naturalization of batch plan staging area after construction is complete and camouflaging of utility	1-25, 32-42

Condition	Summary	Ref.
	pull boxes in certain locations to reduce visual impact from summit; 4. Implement invasive species control program 5. Work with OMKM to develop and implement wekiu bug habitat restoration study; 6. Implement "Zero Waste Management" policy; 7. Fill employment opportunities locally as best possible; 8. Mandate employees traveling beyond Hale Pohaku to ride share using project vehicles; 9. Use energy savings decides (e.g., solar hot water systems, photovoltaic power systems, energy efficient light fixtures, Energy Star rated appliances); 10. UH to decommission three (3) telescopes permanently asap, with no new observatories to be constructed on those sites (this commitment to be legally binding on UH and included in a lease renewal or extension proposed by UH for Maunakea); 11. At least two (2) additional facilities to be permanently decommissioned by December 31, 2033, including VLBA; 12. Provide $1M annually adjusted for inflation for "Community Benefits Package" which will commence with construction and continue through term of sublease. Package to be administered via The Hawaii Island New Knowledge (THINK) Fund Board of Advisors. In addition to types of programs described in Findings of Fact, at least $5K of the contribution to be used to support a program(s) to assist at risk use, specifically focusing on children of incarcerated parents; 13. Board of Advisors to ensure reasonable amount of funding is directed at programs for the most vulnerable and underserved members of Hawaii Island communities so that they can participate in technological future; 14. Funding to be distributed with reasonable promptness and not to be used to build permanent endowment; 15. Partner with other institutions to implement a Workforce Pipeline Program, headed by at least one full-time position through the Community Outreach office, to prepare local residents for jobs in science, engineering, and technical fields; 16. UHH to ensure that survey of power line corridor easement complies with DLNR standards and is in accordance with the conditions contained in the grant of easement (including the Mauna Kea Ice Age Natural Area Reserve) that was approved by the BLNR in August 1985. The University of Hawaii will provide copies of the survey to DOFAW; 17. OMKM to consult with the U.S. Fish and Wildlife Service and experts who are advising OMKM, including representatives from the DLNR regarding surveys of the wēkiu bug and invertebrates along the utility corridor,	

Condition	Summary	Ref.
	including Puʻu Hau Kea and the puʻu west of the Parking Area 1; 18. Construction contractor to be required to minimize visual changes to land within utility line right-of-way during upgrades. Any disturbance outside of the easement area of the construction corridor to be restored to the extent possible; 19. UHH to present a plan for handling recreational parking during construction to OCCL for review and approval, at least one (1) month prior to beginning construction; 20. Following construction, TMT to keep area clean and free of trash or unattended tools and equipment, unless authorized in writing by OMKM and OCCL; 21. Archaeological Monitoring Plan to be submitted to the State Historic Preservation Division for review and approval prior to commencement of construction; 22. Sublease rent to be deposited into the Manna Kea Lands Management Special Fund, and only used for management of Mauna Kea and related purposes as provided by law; 23. UHH/OMKM to notify OCCL of the date of the twice-annual inspections of the project site and allow DLNR staff to attend if available; 24. UHH/OMKM to provide OCCL and BLNR a copy of TIO's annual report to OMKM; 25. UHH to allow BLNR to name a DLNR representative to participate in the CMP five-year management review process; 26. See below; 27. See below; 28. See below; 29. See below; 30. See below; 31. See below; 32. No construction work shall be initiated until Applicant demonstrates compliance with all preconstruction conditions and mitigation measures specifically required in this decision. Once this condition has been satisfied, the Department will issue notice to proceed with construction; 33. TIO to set aside funds annually in a sufficient amount to allow for site observatory and access way site restoration; 34. Daytime activities at TMT to be minimized on up to four days per year, as identified by Kahu Kū Mauna; 35. UHH to consult with Kahu Kū Mauna Council and cultural practitioners to the extent feasible to plan for, and establish, an appropriate area on Mauna Kea, within the MKSR, to be used by native Hawaiians for religious and cultural purposes; provided that this condition shall not affect the timing of TMT construction or operation;	

Condition	Summary	Ref.
	36. UHH to allow reasonable access to the area established under Condition 35 for the exercise of any native Hawaiian traditional and customary practices to the extent feasible, reasonable, and safe. The allocation of this area shall be in addition to all other cultural and access rights of native Hawaiians to other areas of Mauna Kea as provided by law or by other conditions set forth herein; 37. In order to enhance the Hawaiian cultural presence on Mauna Kea, UHH to include products and handicrafts with a native Hawaiian cultural theme among those sold at the Mauna Kea VIS, and explore whether an expanded area for specifically native Hawaiian crafts can be accommodated at or near the VIS; 38. UHH to implement a cooperative internship and mentorship program between personnel working at the astronomy facilities on Mauna Kea and Hawaiian communities; 39. UHH and TIO to develop a plan to implement and extend early entry programs for at-risk children of Hawaiian ancestry and other at-risk youth in the community of UH Hilo. UHH/TIO to report to BLNR on the progress of this condition prior to the completion of construction. The early entry program shall provide educational opportunities in STEM-related and other curriculum such as the following: a. Astronomy, math, science, engineering, environmental science and technical support careers at astronomy facilities; b. Hawaiian language and culture; c. Navigation; d. Geology; e. Biology and agriculture; f. Law Enforcement/criminal justice; g. New disciplines of learning dependent on career fields needed; and h. On-the-job training as necessary. 40. UHH to make reasonable accommodations for the use of facilities at Hale Pōhaku for the Hawaiian Language and Hawaiian Studies programs at UHH and HCC, along with their continued use by others; 41. Kahu Kū Mauna to review policies concerning the construction and retention of personal or group shrines such as ‘ahu, and recommend policies to OMKM and/or BLNR as appropriate, within 18 months; and 42. UHH and OMKM allowed to take reasonable measures consistent with law, including limitations on the use of the TMT Access Way, if necessary for the security of TMT.	
Potable Water	Any potable water supply and sanitation facilities must be approved by DOH and county department of water supply	26

Condition	Summary	Ref.
No Vested Rights or Exclusivity	HA-3568 is not exclusive and does not convey vested rights	27
Reliance on Applicant	If the information and data provided by the applicant prove to be false, incomplete or inaccurate, HA-3568 may be modified, suspended or revoked, in whole or in part, and/or DLNR may institute legal proceedings.	28
Minimize Impacts	UHH to minimize: 1. interference, nuisances or harm (eliminate if possible) 2. impacts of construction to off-site roadways, utilities and public facilities	29, 31
Historic Remains	Permittee to stop construction and immediately contact the State Historic Preservation Division if any historic remains are found	30
Other	Other terms and conditions as may be prescribed by the Chairperson.	43