SP67-47 - KAUAI HELICOPTERS

8/3/67
9/67

32
31

9/10
12/15

31

STATE OF HAWAII
LAND USE COMMISSION

Minutes of Meeting

Hale Halawai Cultural Center
Kona, Hawaii

January 12, 1968 - 1:00 p.m.

Commissioners Present: C. E. S. Burns, Chairman
Wilbert Choi
Jim Ferry
Goro Inaba
Leslie Wung
Shiro Nishimura
Keigo Murakami

Commissioner Absent: Shelley Mark

Staff Present: Ramon Duran, Executive Officer
Ah Sung Leong, Planner III
Roy Takeyama, Legal Counsel
George Pai, Attorney General's Office
Dora Horikawa, Stenographer

Persons planning to testify before the Commission were sworn in by Chairman Burns.

HEARING

PETITION BY OLOHANA CORPORATION (A67-166) TO RECLASSIFY APPROXIMATELY 840 ACRES FROM THE AGRICULTURAL DISTRICT TO THE URBAN DISTRICT AT KAWAIHAE, HAWAII

A recommendation to approve the petition was presented by Mr. Duran in the staff report, on the basis that the request did not contribute toward scattered urban developments, conformed to the General Plans of the County and of the State of Hawaii, and the area was not suited for any agricultural pursuit.

Mr. Duran advised that staff was in receipt of a letter from the Queen's Hospital, owners of portions of the petitioned area, endorsing and concurring with petitioner's request for the reclassification. However, the signature of Richard Smart, owner of a portion of the area petitioned, supporting the request has not been received.

It was pointed out that since approximately two-thirds of the 400 acres owned by Mr. Smart were presently in golf course use, about 150 acres would be available for residential development.

It was Mr. Duran's understanding that adequate water was available in the Kawaihae District.

Since the LUC's concurrence with the County's recommendation intended agreement with the conditions imposed by that agency, it was recommended that the 6 months' extension be approved.

Commissioner Inaba made a motion to approve the extension, seconded by Commissioner Ferry and passed unanimously.

REHEARING REQUEST BY KAUAI HELICOPTERS (SP67-47)

Mr. Duran read a letter received from Mr. Tatsuo Asari, attorney for Kauai Helicopters, requesting a rehearing before the Land Use Commission.

Since this matter was acted upon December 15, 1967 and not brought up within 24 hours of the decision according to the Commission's policy, Chairman Burns advised that they would have to apply again through a new application with new evidence.

TENTATIVE SCHEDULE

January 24, 1968 in the evening was set as the next meeting date.

Since there was no further business, the meeting was adjourned.

NOTICE OF PUBLIC HEARING
SPECIAL PERMIT, LAND USE - COUNTY OF KAUAI

NOTICE IS HEREBY GIVEN of a public hearing to be held by the County of Kauai Planning and Traffic Commission in the County Building at Lihue on Tuesday, April 16, 1968, at 1:30 p.m., or as soon thereafter as those interested may be heard to consider an application for special permit within the County of Kauai as provided for in Section 98H-6, RLH 1955, as amended.

Docket Number and Applicant	Tax Map Key	Permission Requested
SP-68-1 Kauai Helicopters	3-6-02-4	Use of property as heliport, with office and repair shop.

Map showing the area under consideration for special permit is on file in the office of the Kauai Planning and Traffic Commission and is open to the public for inspection during office hours.

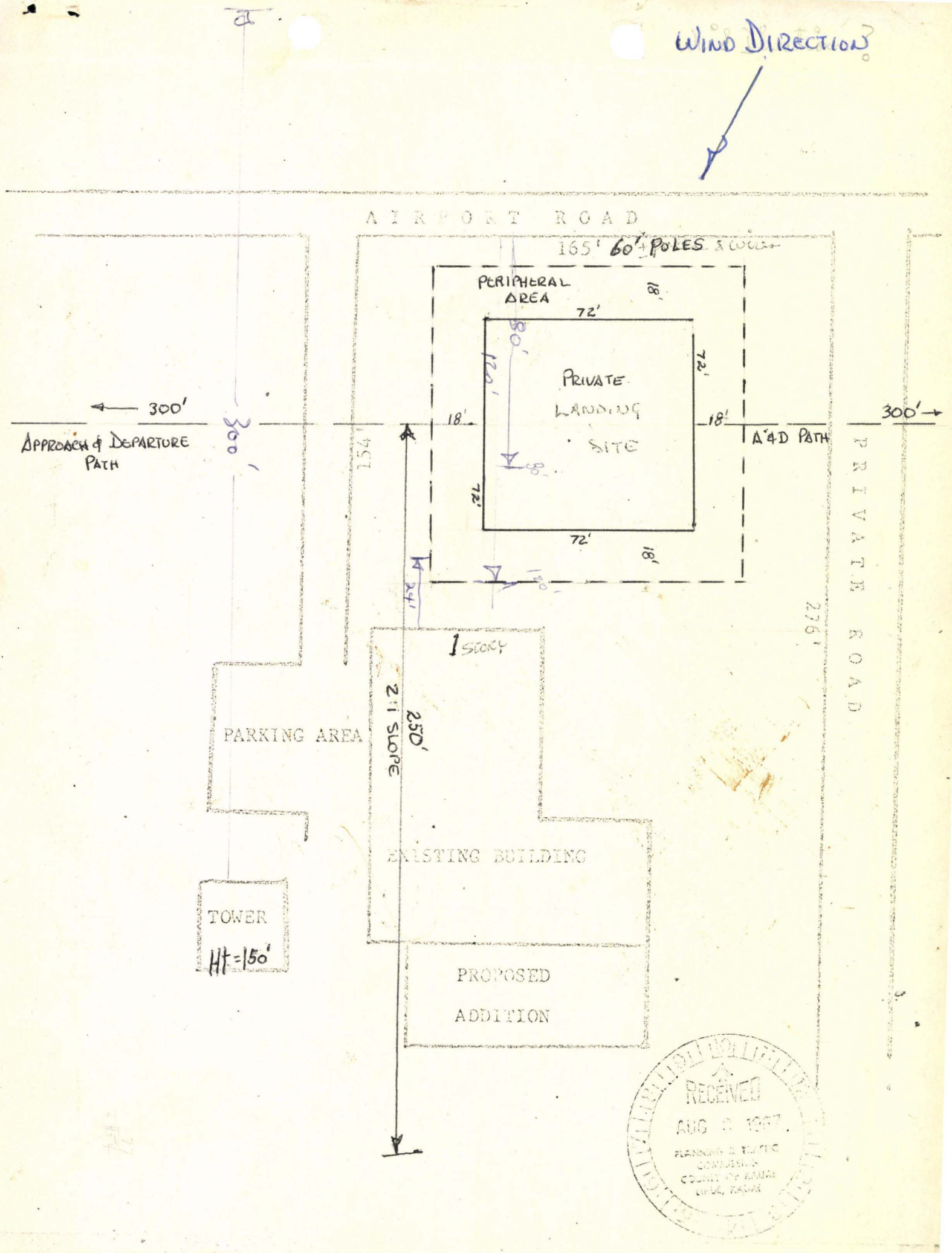
All written protests or comments regarding the above application should be filed in writing to said Commission before the date of the public hearing or submitted in person at the time of the public hearing, or up to fifteen (15) days following this public hearing.

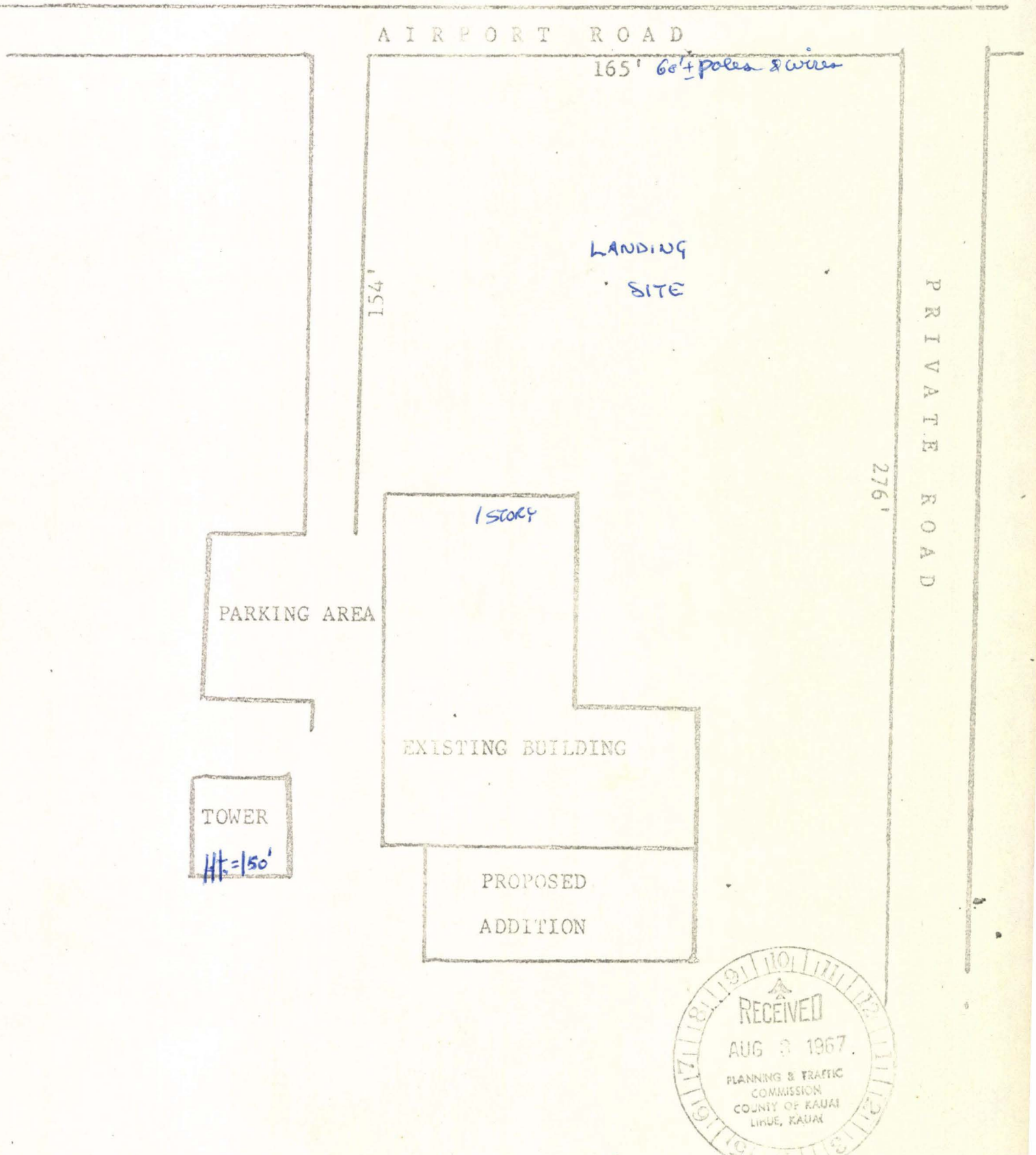
KAUAI PLANNING AND TRAFFIC COMMISSION
Masashi Kageyama, Chairman
By Brian K. Nishimoto, Planning Director

(April 8, 1968)

SP-68-1

KAUAI HELICOPTERS


WIND DIRECTION
AIRPORT ROAD
165'
60' POLES
PERIPHERAL AREA
18'
72'
80'
120'
72'
PRIVATE LANDING SITE
18'
18'
72'
72'
18'
300'
APPROACH & DEPARTURE PATH
300'
154'
300'
A'4D PATH
PRIVATE ROAD
276'
24'
1 STORY
2:1 SLOPE
250'
PARKING AREA
EXISTING BUILDING
TOWER
Ht=150'
PROPOSED ADDITION
RECEIVED
AUG 8 1957
PLANNING & ZONING COMMISSION
COUNTY OF KAUAI
LIHUE, KAUAI


AIRPORT ROAD
165'
60'± poles & wires
LANDING
SITE
154'
276'
PRIVATE ROAD
1 STORY
PARKING AREA
EXISTING BUILDING
TOWER
Ht = 150'
PROPOSED
ADDITION
RECEIVED
AUG 3 1967
PLANNING & TRAFFIC
COMMISSION
COUNTY OF KAUAI
LIHUE, KAUAI

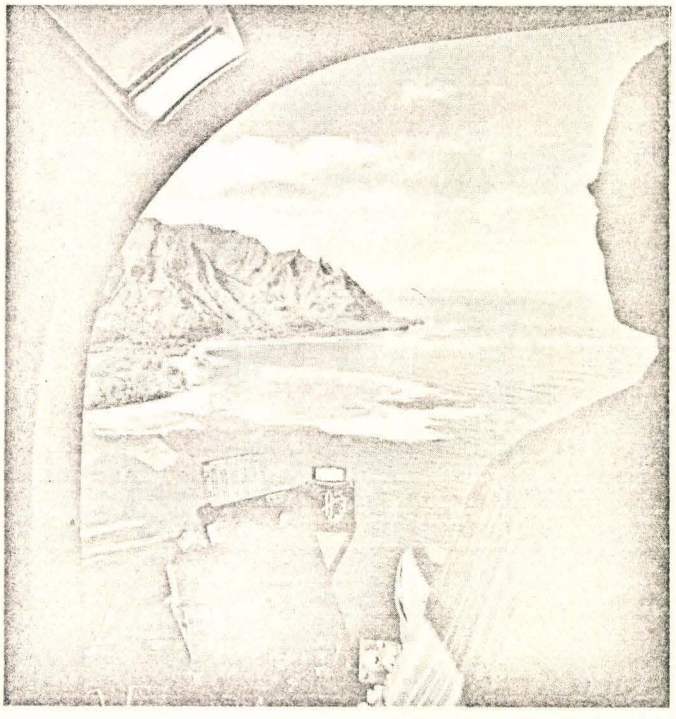
Enjoy an Unforgettable Experience on . . .

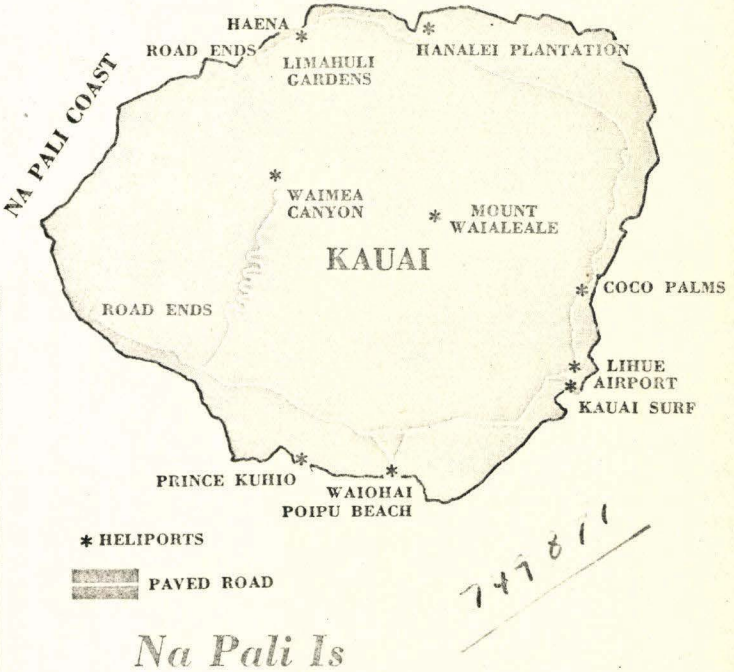
KAUAI

Hawaii's Garden Island

. . . literally a trip into a remote paradise

a new dimension in travel awaits you on the Garden Isle . . . the famed Na Pali Coast, Kalalau Valley, Mt. Waialeale . . . the wettest spot on earth, the Valley of the Lost Tribe, plus countless waterfalls and exquisite beaches are yours in safety and comfort . aboard the Helicopters of Presidents.





Na Pali Is

A photographer's paradise with remnants of an ancient civilization to explore.

We Invite You

To plan picnics or camping trips in the unspoiled valleys along Na Pali Coast.

FLIGHT DESCRIPTION AI RATES
JANUARY 1, 1967

ALL RATES ARE PER PERSON except charter rate. Tax is included.

	FROM HAENA HELIPORT	FROM HANALEI PLANTATION HOTEL	FROM ANY OTHER HOTEL OR HELIPORT
FLIGHT #1—INSIDE THE WAIALEALE CRATER (WETTEST SPOT ON EARTH)	$20.00	$20.00	$20.00
FLIGHT #2—NA PALI COAST SCENIC FLIGHT	$20.00	$25.00	CHARTER RATE
FLIGHT #3—NA PALI COAST AND WAIMEA CANYON (Grand Canyon of the Pacific)	$25.00	$35.00	CHARTER RATE
FLIGHT #4—"EXPERIENCE OF A LIFETIME" (Covers virtually all the inaccessible beauty of Kauai)	$60.00	$60.00	$60.00
FLIGHT #5—PICNIC OR CAMPING TRIP ON NA PALI COAST. ROUND TRIP.	$30.00	$40.00	CHARTER RATE
CHARTER RATE: For the helicopter carrying up to 3-4 passengers, maximum total passenger weight: 600 pounds. Minimum Charter: 30 minutes.			$150.00 per flight hour

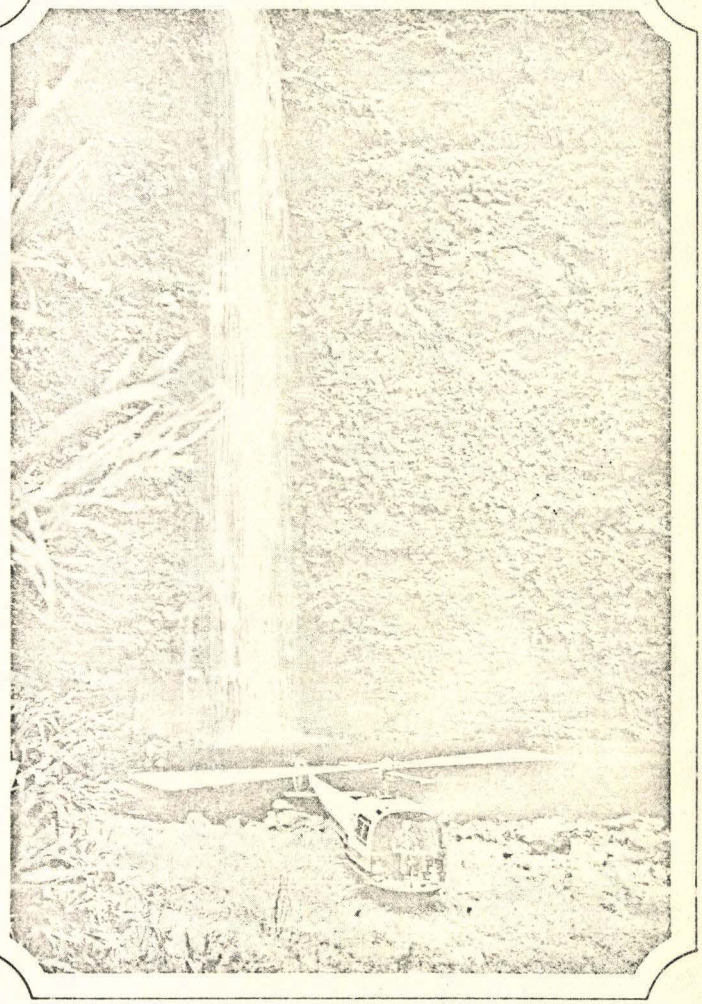
Reservations:
Phone collect from anywhere in Hawaii
Kauai 22-371 or 22-131
or write

KAUAI HELICOPTERS

P. O. Box 788
Lihue, Kauai, Hawaii 96766

or see your travel agent

Kauai Helicopters



Flight-Seeing On

Kauai

HAWAII'S GARDEN ISLAND

March 27, 1968

Mr. Brian Nishimoto, Director
Planning & Traffic Commission
County of Kauai
P. O. Box 111
Lihue, Kauai

Subject: Special Permit Request of Kauai Helicopters for a Landing Pad at KTOH Radio Station Site

Dear Mr. Nishimoto:

Pursuant to our discussion of the proper procedure for reconsidering this request, on March 23, 1968 I again reviewed the filing of a new petition with the Land Use Commission. I presented two alternatives for reconsidering the matter, that is, the filing of a new special permit application or an appeal of the LUC's decision to the Circuit Court by the petitioner. I informed the LUC of the reluctance on the part of the County to accept a new petition since your Commission had already taken a position on this matter, and that any reconsideration or appeal involves the LUC's decision and not your Commission's decision.

The Commission, in its judicious manner of processing all matters before it, makes every effort to allow the petitioner ample opportunity to present his case. The applicant or his attorney was not present at the action meeting of the Commission, although the attorney was notified well in advance of the meeting date.

The Land Use Commission has a policy of not reconsidering its decision beyond a 24-hour period. Inasmuch as the petitioner requested a reconsideration of the Land Use Commission's decision some two weeks after their action, the policy of the Commission is to request the petitioners to refile their petition for such reconsideration.

Recognizing that to appeal to the Circuit Court could necessitate a year or two delay, and in view of its policy for reconsidering matters of this type, the Land Use Commission recommends that you accept the new petition, process it in the regular manner, reiterate your original position and transmit same with any additional information to the Land Use Commission for final disposition.

Your favorable consideration of this request will be appreciated.

Very truly yours,

RAMON DURAN
Executive Officer

Attorney Ponders: The Garden Island 1-8-68

Is a Mobile Home a Trailer or a House?

The question "Is a mobile home a trailer or is it a house?" stymied the Planning and Traffic Commissioners at Thursday's meeting. The answer may come from the County Attorney's office where the matter has been sent for legal interpretation.

Action was deferred on R. E. "Eddie" Page request placing one Mobile Home on each of his two Waipouli lots. They would be on permanent foundations and "will not be trashy" said Mr. Page in a letter to the Commission.

KAUAI HELICOPTERS

The State Land Use Commission voted to deny the grant of a special permit to Kauai Helicopters to store aircraft, perform repairs and maintenance, and to enlarge the building as office facilities in Lihue.

Kauai Helicopters under a special permit has been using the KTOH Ahukini road site for a few months and have sub-leased the Lihue Plantation property from Kauai Publishing Company. County Planning director Brian Nishimoto will discontinue the special permit. The Land Use Commission found the use too industrial in character for an area zoned single family residential. It also felt the proximity of the telephone poles and radio tower too close for safety and, the 50 mile an hour traffic going by may be dangerously distracted by landing helicopters and cause accidents.

The Kahili Mountain Park was also approved by the State Land Commission with five conditions. The park is a rustic camping-recreational facility for family use mauka of Koloa town.

The conditions include one . . . the total operation must remain under one management . . . two, the commercial accessory uses to the campsite must be used primarily by occupants of the camping units . . . three, the golf driving range must not be flood-lighted at night . . . four, no commercial advertising signs will be allowed in view of a public way except an unlighted or or indirectly lighted camp site sign not to exceed 8 square feet in area; . . . and five, the operation and location and type of facilities must be substantially as presented by the applicant.

CHURCH VARIANCE

The Planning and Traffic Commission denied Roger Hee's request for church use on his Kapaa property, formerly the site of the Dew Drop Inn, due to inadequate parking.

FOR CARS

The Commission approved two new areas for commercial zone consisting of 13,075 square feet. The area is situated west of both Kauai Publishing Company and the Salvation Army.

The area containing 2,900 square feet is proposed for future parking by Kauai Publishing Company. The 10,175 square foot area is proposed for lease for a car wash operation.

WITH U.S. COMBAT AIR FORCES, Vietnam--Technical Sergeant Curtiss L. Puckett, son of Mrs. Frances W. Puckett of 37 Highview, Jackson, Tenn., is on duty at Da Nang AB, Vietnam.

January 16, 1968

Mr. Tatsuo Asari, Attorney
Kauai Helicopters
P. O. Box 126
Lihue, Kauai 96766

Re: Special Permit by Kauai Helicopters (SP67-47)

Dear Mr. Asari:

Pursuant to your request of January 4, 1968 concerning the above-captioned subject, your letter was discussed by the Land Use Commission at its meeting in Kona, January 12, 1968. Please be advised that under the Administrative Procedures Act, a reconsideration of your request must be initiated within 24 hours of the decision of the Commission. Since the meeting was conducted on December 15, 1967 and no action initiated to reconsider the Commission's decision within the following 24 hours, you have no alternative but to initiate a new petition should you desire to pursue this matter.

Also be advised that the use of the property in question for a heliport without the proper approval is contrary to Section 98H-12 and may be subject to violation proceedings.

If I can be of any further assistance in this matter, please do not hesitate to write me.

Very truly yours,

RAMON DURAN
Executive Officer

cc: Brian Nishimoto, Director
Kauai Planning Commission

2315

LUC meetings

TATSUO ASARI
ATTORNEY AT LAW
LIHUE, KAUAI, HAWAII 96766

PHONE 23-421

P. O. BOX 126

January 4, 1968

Land Use Commission
State of Hawaii
426 Queen Street
Honolulu, Hawaii 96813

Dear Sir:

Subject: Kauai Helicopters
Special Permit SP67-47

The above-named applicant whom I represent have received your Staff Report, together with your letter, denying its application for special permit. After careful study of the matter, it's petitioner's belief that information not available to the Commission through no fault of the petitioner would have perhaps resulted in a different action by the Commission where it provided the Commission at the time of the hearing.

Circumstances beyond the control of the petitioner, we believe influenced the Commission in its action to the detriment of the petitioner. Even at the present time we are in the process of gathering the pertinent information. Inasmuch as the investigation relative to the crash of the helicopter on the Island of Kauai is not complete, we are awaiting the final determination which should be available in a short time. We would like to assemble all the data necessary before we make a specific request for a rehearing. However, we feel it only proper to inform you at this time of our intention to request a rehearing, and accordingly do so at this time.

Yours very truly,

TATSUO ASARI

TA:la

cc: Kauai Helicopters

P. O. BOX 111

COUNTY OF KAUAI
STATE OF HAWAII

TELEPHONE 23-661

LIHUE, KAUAI, HAWAII 96766

December 22, 1967

Kauai Helicopters
P. O. Box 788
Lihue, Kauai 96766

Gentlemen:

Re: Special Permit SP-67-47 - Kauai Helicopters
Tax Map Key 3-6-02:4

You are herewith notified that at its meeting on December 15, 1967, the Land Use Commission voted to deny the grant of a special permit to Kauai Helicopters to store aircraft, perform repairs and maintenance, and to enlarge the building as office facilities in Lihue, Kauai, identifiable by Tax Map Key 3-6-02:4.

Enclosed for your information is a copy of the Land Use Commission's letter of notification denying your petition, together with its staff report.

In accordance with Chapter 98H-12, Revised Laws of Hawaii 1955 as amended, you are hereby notified to correct any use violation immediately.

Very truly yours,

PLANNING AND TRAFFIC COMMISSION

Brian Nishimoto

Brian Nishimoto, Planning Director

cc: Ramon Duran
Tatsuo Asari

December 18, 1967

Mr. Brian Nishimoto, Director
Planning & Traffic Commission
County of Kauai
P. O. Box 111
Lihue, Kauai

Dear Mr. Nishimoto:

At its meeting on December 15, 1967, the Land Use Commission voted to deny the grant of a special permit to Kauai Helicopters to store aircraft, perform repairs and maintenance, and to enlarge the building as office facilities in Lihue, Kauai, identifiable by Tax Map Key 3-6-02: 4.

Enclosed for your information is the staff report.

Very truly yours,

RAMON DURAN
Executive Officer

Encl.
cc: ~~Department of Taxation~~
Mr. Tatsuo Asari, Attorney, Kauai Helicopters

STATE OF HAWAII
LAND USE COMMISSION

Minutes of Meeting

Land Use Commission Hearing Room
Honolulu, Hawaii

December 15, 1967 - 2:00 p.m.

Commissioners Present: C. E. S. Burns, Jr., Chairman
Shelley Mark
Jim P. Ferry
Goro Inaba
Leslie Wung
Keigo Murakami
Shiro Nishimura

Commissioner Absent: Wilbert Choi

Staff Present: Ramon Duran, Executive Officer
Ah Sung Leong, Planner III
Roy Takeyama, Legal Counsel
Dora Horikawa, Stenographer

Persons planning to testify before the Commission were sworn in by Chairman Burns.

HEARINGS

PETITION OF THE EPISCOPAL CHURCH IN HAWAII (A67-163) TO RECLASSIFY APPROXIMATELY 6.7 ACRES FROM AGRICULTURE TO URBAN AT PUULOA, EWA, OAHU

A recommendation for approval of the petition based on the staff analysis as outlined in the staff report was presented by Mr. Leong. The major land areas in the leeward section such as Barbers Point, Naval Air Station, Campbell Industrial Park, Makakilo, Waipahu were identified on the map.

Reverend David Kennedy of the St. Barnabas' Episcopal Church in Ewa testified that subject property was purchased for the construction of an additional church site in Ewa. Subsequently they selected another more centrally located site and now wished to dispose of the subject parcel for residential development.

Reverend Kennedy submitted that this was an ideal location for homes being right across from the Ewa Beach Park.

Since there was no further testimony, the hearing was closed.

similar requests. Commissioner Ferry felt that due to the land ownership pattern, this was not probable. Mr. Duran indicated on the map that it was very probable the other properties would be developed.

Commissioner Ferry moved that the petitioner's request be granted for a change of zoning from Conservation to Urban on the theory that these lands are suitable for urban development. The motion was seconded by Commissioner Nishimura and defeated by the following votes:

Ayes: Commissioners Murakami, Nishimura, Ferry, Chairman Burns

Nays: Commissioners Wung, Inaba, Mark

SPECIAL PERMIT APPLICATION BY KAUAI HELICOPTERS (SP67-47) TO USE PROPERTY AS A HELIPORT TO STORE AIRCRAFT, PERFORM REPAIRS, AND ENLARGE BUILDING

A recommendation for denial of the special permit was presented by Mr. Duran as outlined in the staff memo (see copy of memo on file).

Commissioner Ferry commented on the conspicuous and hazardous nature of the operation which was visible from the road right off the airport, and the flagrant violation of the operators in landing almost anywhere.

In discussing the various sites operated by Kauai Helicopters with the FAA, Mr. Duran was advised that unless the operator called it to their attention, and particularly landing sites not involving paid passengers, the FAA had no reason to conduct an investigation. However, the operators would be 100% liable for any accidents.

Chairman Burns observed that the proposed site was the most unlikely site for a heliport since it was adjacent to a 150' tower and 60' poles.

Mr. Duran advised that the Kauai Planning Director had recommended denial of the application but that the Planning Commission recommended approval of a 2-year permit since the petitioners had a 2-year lease on the property.

Commissioner Nishimura moved to deny the special permit application, which was seconded by Commissioner Ferry and passed unanimously.

SPECIAL PERMIT APPLICATION BY KAHILI MOUNTAIN PARK, INC. (SP67-48) TO DEVELOP A CAMPING-RECREATIONAL FACILITY AT KOLOA, KAUAI

Mr. Leong presented the staff memo recommending approval of the special permit subject to the conditions outlined in the report (see copy of report on file). A detailed description of the proposed main building on the site was offered by Mr. Leong, based on the floor plan submitted by the petitioner.

There was a great need and clamor for this type of development in the area and Commissioner Ferry was entirely in favor of endorsing such an undertaking by private investment to meet the demand.

STATE OF HAWAII

LAND USE COMMISSION

VOTE RECORD

Item SP67-47 - KAUAI HELICOPTORS Date ~~November 27~~ December 15, 1967

Place ~~Kahului Library~~ Honolulu Time 2:00 p.m.

Names	Yes	No	Abstain	Absent
WUNG, L.	✓			
INABA, G.	✓			
MURAKAMI, K.	✓			
~~OTA, C.~~ CHOI, W.				
~~WENKAM, R.~~				
BURNS, C.E.S.	✓			
NISHIMURA, S.	✓			
MARK, S.	✓			
FERRY, J.	✓			
~~THOMPSON, M.~~				

Ab
S

Comments:

Denied

10 Helicopter Crashes H

Yesterday's fatal helicopter crash on Kauai was the 10th crash of a helicopter in Hawaii in the last five years. It was the third in which an occupant of the craft was killed.

On Monday, two men received minor injuries in a crash on the Palolo ridge above Honolulu. They are Charles Whitman, vice president of Central Pacific Helicopters, and Hugh Hill, an apprentice lineman for Hawaiian Electric Co.

Whitman blamed a cargo sling getting entangled with the landing gear as the probable cause of the accident.

The two previous fatal helicopter crashes occurred in 1963.

On July 5, 1963, Douglas Griffith of Waikiki was killed when his Carter's Copters helicopter plunged 200 feet into Kewalo Basin following engine failure.

On May 17, 1963, one Marine was killed and eight others injured when a Marine Corps helicopter crashed and

STATE OF HAWAII
LAND USE COMMISSION

~~Kahului Library~~ Honolulu
~~Kahului, Maui~~

December 15,
~~November 27~~, 1967
2:30 p.m.

STAFF REPORT

SP67-47 - KAUAI HELICOPTERS

An application for a special permit has been filed with the Kauai Planning and Traffic Commission by attorney Tatsuo Asari for the petitioner. The property in question described by TMK 3-6-02: 4 consisting of 2.8 acres is in the Agricultural District. The property is situated along the south side of Ahukini Highway or Airport Road approximately 400 feet east of the proposed Molokoa Unit II Subdivision.

The property is presently used by the Garden Isle Publishing Co. as a radio transmitting station which includes a 150' radio tower and a 1-story building for the transmitting facilities. Kauai Helicopters has obtained a 2-year sub-lease from the Garden Island Publishing Company which began on July 1, 1967 and ends on June 30, 1969. The applicants are already using the facility to park their aircraft.

The applicants desire to use the property as a heliport to store the aircraft, to perform repairs and maintenance, and to enlarge the building as office facilities. There will be no passenger service provided on the site.

The frontage on the highway of the property in question is 165 feet. There are also approximately 60' highpower poles and wires along the airport road in front of this property. The landing site will be in the front yard between the highway, power poles, tower and existing building.

The Kauai County Planning Commission, on October 5, 1967, voted to recommend the approval of the application.

The petitioners have submitted, in support of their request, information that the helicopter used by the applicant can operate in an area approximately 36 feet in diameter. "Taking all factors into consideration, including gusty winds and inclement weather, a safe area would be 100' square." The area of the landing site on the property in question between the 60' power poles and the 150' high antenna tower and the 1-story building is approximately 150' square.

There are two helicopter operators on the Island of Kauai, namely Kauai Helicopters, the applicants, and Garden Isle Helicopters. Kauai Helicopters claim to have 8 heliports. The Garden Isle Helicopters claim to have 6 main heliports. This is exclusive of the Lihue Airport. In Wailua, Kauai Helicopters uses the beach as a heliport and Garden Island Helicopters uses the rear yard of a residence.

The Federal Aviation Agency has advised that all heliports, except temporary ones, require their approval. The only approved site is the heliport at the Kauai Surf Hotel. The State's Aviation Division has no regulation to govern any of these sites.

Application was made at the Lihue Airport early this year for "T" hangar space, at which time space was not available. There are buildings, however, that could be used for office space and the storage of maintenance equipment and there is a possibility of hangar space becoming available in the near future. There is space available for the construction of a hangar on the airport site by the petitioner. However, one of the undesirable features of most leases on the airport is the stipulation by the State that they may be terminated upon 30-days notice. This feature is included as a condition in the event the State abandons a facility or technological advances necessitate rearrangement of the facilities. The possibility of such a happening

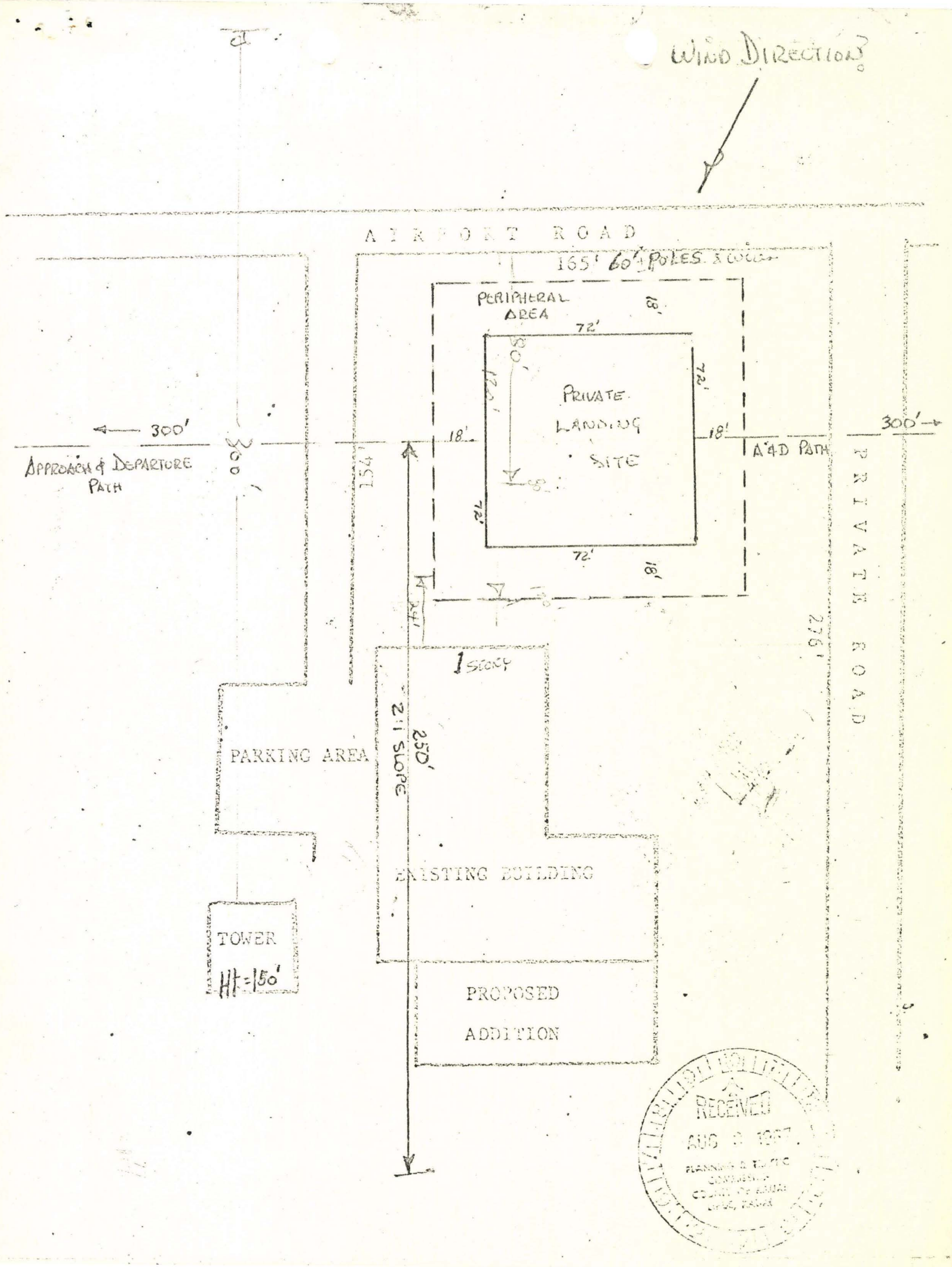
occurring is extremely remote. The airport manager claims he has discussed this situation with the applicant and has been in constant contact by telephone and letter, contrary to the petitioners' statement that since February of 1967 "no action has been forthcoming after several inquiries".

Recommendation

Having reviewed the circumstances affecting this request and conducting a field investigation of the site and surrounding physical conditions, and having evaluated the criteria established by the Commission to determine the reasonableness of the request, your staff recommends that the petition be denied for the following reasons:

1. The nature of this request is that of industrial in character; that of parking, storage, servicing and maintenance of a helicopter. Activity of this type is presently being conducted one mile from this site at the Lihue Airport. It is only appropriate and logical that activities of this nature be conducted on the airport site or at least adjacent to the airport. The terminal facilities were designed for the convenience of our air passengers and the airport is compatible with the surrounding land uses.
2. Although their helicopter may land and take off in a 100' square area, the site seems undesirable because of the obstructions of 60' poles and the 150' tower surrounding the site.
3. The airport road in front of the property in question has a speed limit of 50 miles per hour. The landings and take-offs of the helicopter next to the road could attract the attention of motorists, averting their attention to driving, and perhaps causing serious accidents, particularly since this road is 2-lanes wide for traffic moving in both directions.

In summation, the heliport petition should be denied on the basis of the aforementioned and the applicant should be required to correct the zoning violation immediately.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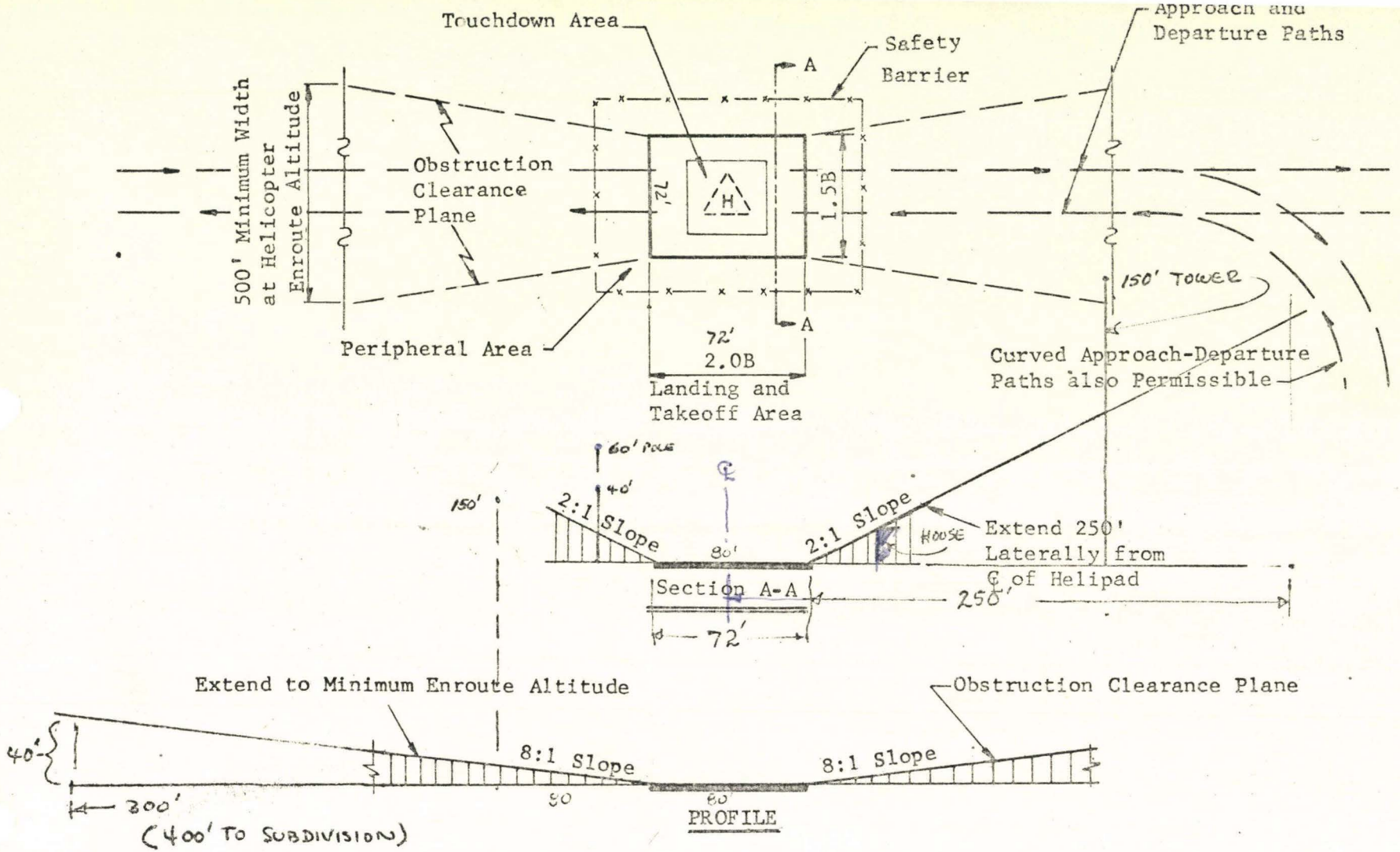
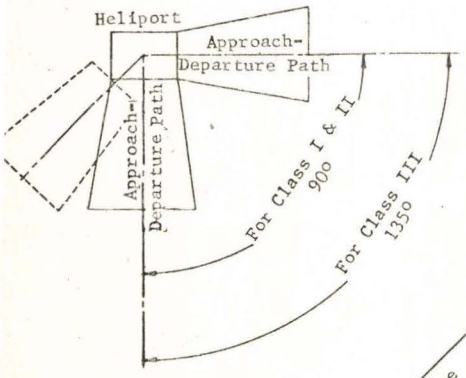
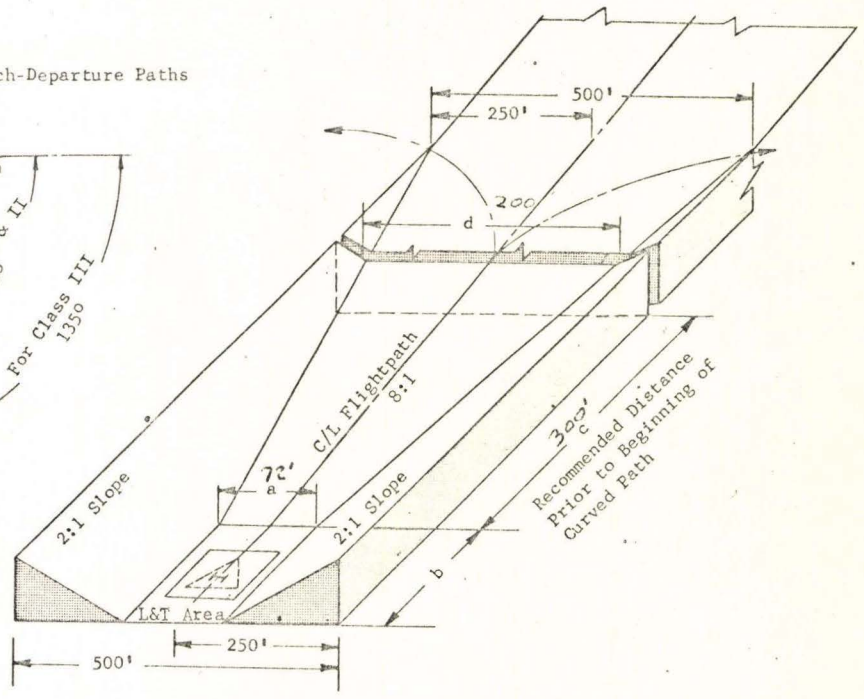


NOTE: Dimension B Equals Overall Length of Helicopter

FIGURE 9. SMALL HELIPORT LAYOUT

Minimum Angles Between Approach-Departure Paths





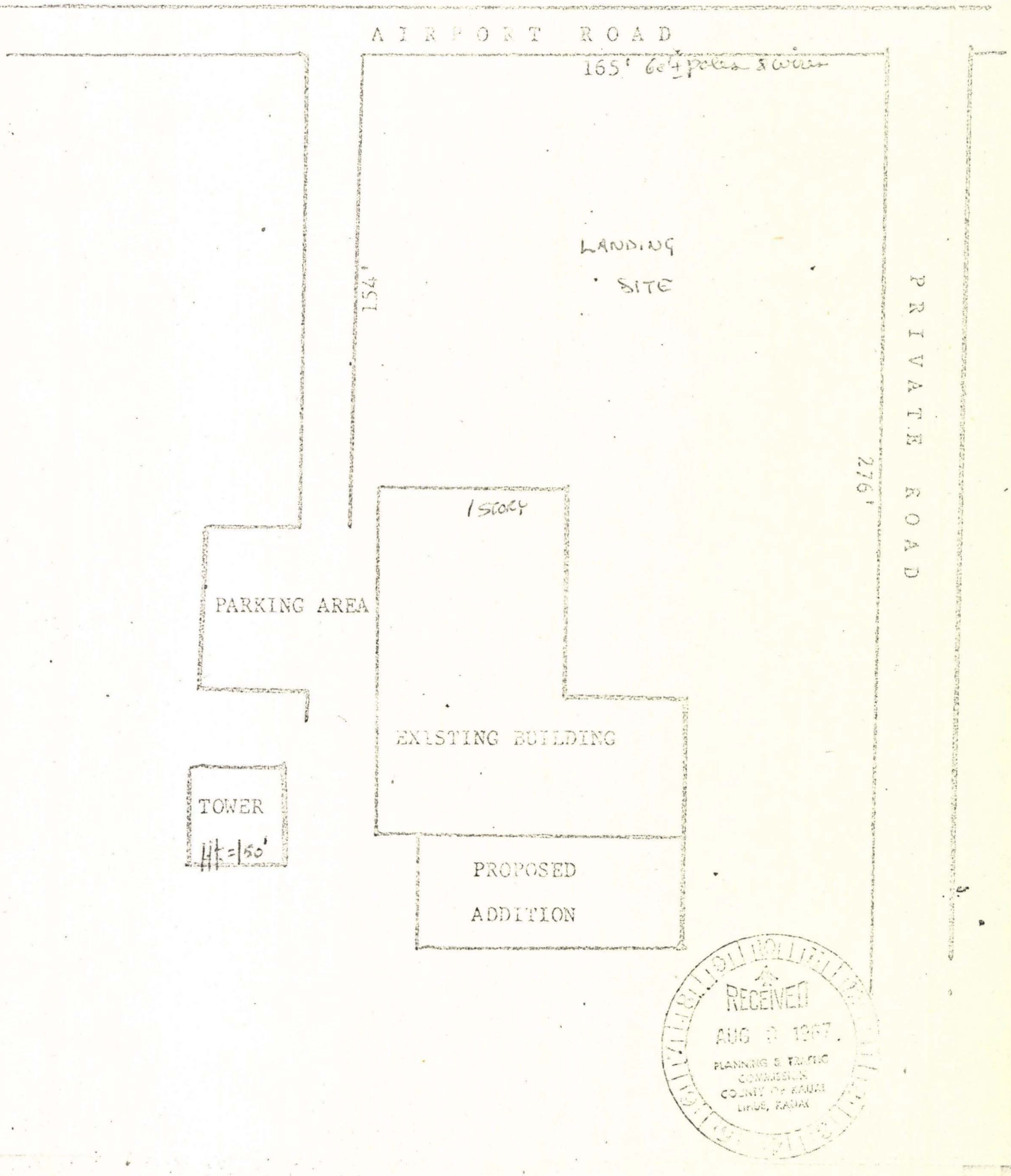
PERSPECTIVE VIEW OF APPROACH-DEPARTURE PATH

Heliport Class	FAR Category Helicopter	a	b	c	d	Minimum Angle Between Approach-Departure Paths
I Private	FAR Part 27, 29 (CAR 6 & 7)	1.5	1.5	300'	200'	90°
II Small Public	FAR Part 27 (CAR 6)	1.5	2.0	300'	300'	90°
III Large Public	FAR Part 27, 29 (CAR 6 & 7)	* 1.5	* 2.0	400'	300'	135°

Dimensions a and b:
(1) are expressed as multiples of overall helicopter length.
(2) may be increased or decreased upon evaluation of the site by FAA.

*For scheduled airline operations, other factors, related to a specific site would need to be considered.

FIGURE 11. APPROACH-DEPARTURE PATH AND OBSTRUCTION CLEARANCE DIAGRAMS


AIRPORT ROAD
165' 60± poles & wires
LANDING SITE
154'
276'
PRIVATE ROAD
1 story
PARKING AREA
EXISTING BUILDING
TOWER
Ht = 160'
PROPOSED
ADDITION
RECEIVED
AUG 8 1967
PLANNING & TRAFFIC COMMISSION
COUNTY OF KAUAI
LIHUE, KAUAI

FLIGHT DESCRIPTION AI RATES
JANUARY 1, 1967

ALL RATES ARE PER PERSON except charter rate. Tax is included.

	FROM HAENA HELIPORT	FROM HANALEI PLANTATION HOTEL	FROM ANY OTHER HOTEL OR HELIPORT
FLIGHT #1—INSIDE THE WAIALEALE CRATER (WETTEST SPOT ON EARTH)	$20.00	$20.00	$20.00
FLIGHT #2—NA PALI COAST SCENIC FLIGHT	$20.00	$25.00	CHARTER RATE
FLIGHT #3—NA PALI COAST AND WAIMEA CANYON (Grand Canyon of the Pacific)	$25.00	$35.00	CHARTER RATE
FLIGHT #4—"EXPERIENCE OF A LIFETIME" (Covers virtually all the inaccessible beauty of Kauai)	$60.00	$60.00	$60.00
FLIGHT #5—PICNIC OR CAMPING TRIP ON NA PALI COAST. ROUND TRIP.	$30.00	$40.00	CHARTER RATE
CHARTER RATE: For the helicopter carrying up to 3-4 passengers, maximum total passenger weight: 600 pounds. Minimum Charter: 30 minutes.			$150.00 per flight hour

Reservations:
Phone collect from anywhere in Hawaii
Kauai 22-371 or 22-131
or write

KAUAI HELICOPTERS

P. O. Box 788
Lihue, Kauai, Hawaii 96766

or see your travel agent

Kauai Helicopters

Flight-Seeing On

KAUAI

HAWAII'S GARDEN ISLAND

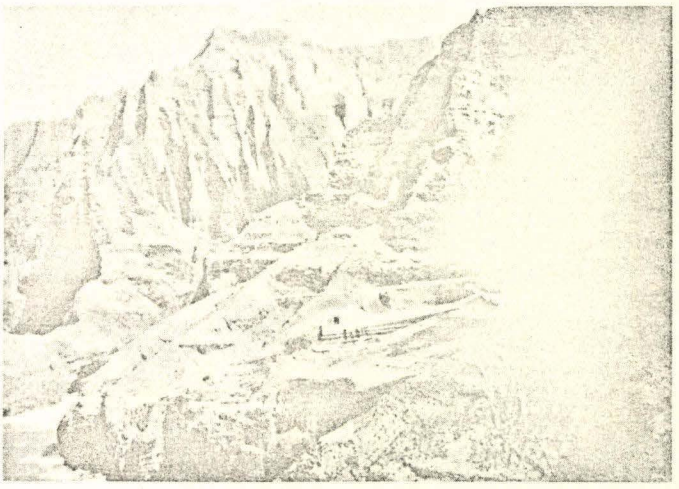
Enjoy an Unforgettable Experience on . . .

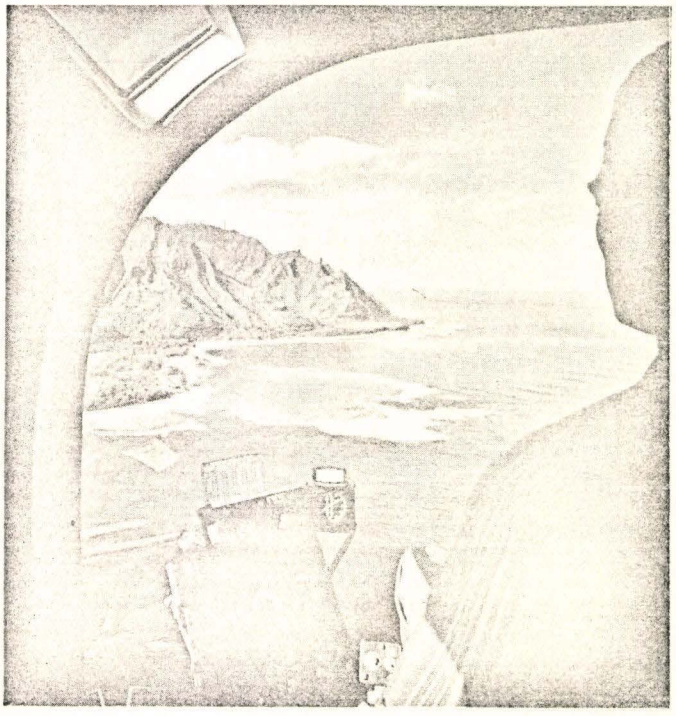
KAUAI

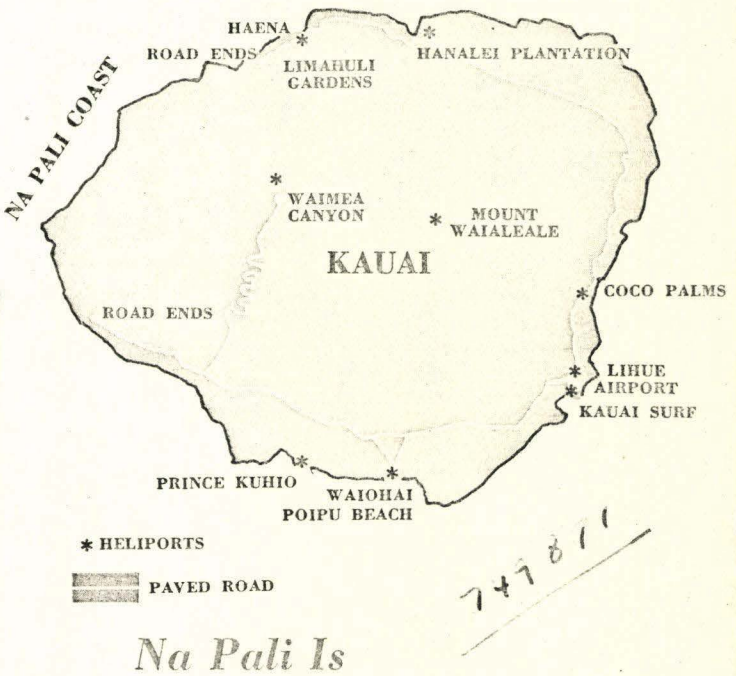
Hawaii's Garden Island

. . . literally a trip into a remote paradise

a new dimension in travel awaits you on the Garden Isle . . . the famed Na Pali Coast, Kalalau Valley, Mt. Waialeale . . . the wettest spot on earth, the Valley of the Lost Tribe, plus countless waterfalls and exquisite beaches are yours in safety and comfort aboard the Helicopters of Presidents.







Na Pali Is

A photographer's paradise with remnants of an ancient civilization to explore.

We Invite You

To plan picnics or camping trips in the unspoiled valleys along Na Pali Coast.

STATE OF HAWAII
LAND USE COMMISSION
426 QUEEN STREET
HONOLULU, HAWAII 96813

December 5, 1967

Mr. Tatsuo Asari, Attorney
Kauai Helicopters
P. O. Box 126
Lihue, Kauai 96766

Dear Mr. Asari:

The Land Use Commission next meets at 2:00 p.m. in the Land Use Commission Hearing Room, 426 South Queen Street, Honolulu, Hawaii, on December 15, 1967.

On or about that time a decision on your special permit application (SP67-47) will be rendered.

Although there is no requirement for you to be present, please feel free to do so should you wish to attend.

Very truly yours,

Ramon Duran

RAMON DURAN
Executive Officer

12/8/67

Do you wish me to attend? Please submit reply within reasonable time.

Tatsuo Asari

TATSUO ASARI

12-11

TA:la

Attend if you desire. What ever you believe is in the best interest of your client. R.D

December 5, 1967

Mr. Tatsuo Asari, Attorney
Kauai Helicopters
P. O. Box 126
Lihue, Kauai 96766

Dear Mr. Asari:

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Although there is no requirement for you to be present, please feel free to do so should you wish to attend.

Very truly yours,

RAMON DURAN
Executive Officer

November 29, 1967

Mr. Tatsuo Asari, Attorney
Kauai Helicopters
P. O. Box 126
Lihue, Kauai 96766

Subject: Kauai Helicopters
Special Permit SP67-47

Dear Mr. Asari:

This is to advise you that we were unable to act on your special permit application at our Land Use Commission meeting on November 27, 1967 due to the lack of a quorum. Four of our Commissioners, two of whom were hospitalized, were unable to be present.

We will advise you of the meeting date when a decision on your application will be rendered. Thank you for your cooperation.

Very truly yours,

RAMON DURAN
Executive Officer

cc: Kauai Planning Comm.

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
PACIFIC REGION
P. O. BOX 4009
HONOLULU, HAWAII 96812

Mr. Ramon Duran
Executive Officer
State Land Use Commission
426 Queen Street
Honolulu, Hawaii 96813

NOV 22 1967

IN REPLY REFER TO: PC-640

Dear Mr. Duran:

This is in response to your letter to Mr. Sanders concerning State Land Use Commission Special Permit (SP67-47), Request by Kauai Helicopters.

The Pacific Region, Federal Aviation Administration has made only one favorable determination for a heliport on the island of Kauai. This was for a site at the Kauai Surf and the determination was issued December 21, 1966. We have also issued favorable determinations for several small airports on the island. These could be used by helicopters. Therefore, without knowing the exact geographic location utilized as a helipad, we would be unable to say positively whether the heliports implied in the brochure have received favorable airspace determinations. We will contact Kauai Helicopters to verify the status of airspace clearances at all sites.

The staff of our General Aviation District Office have authorized air taxi helicopter operations at several sites on the island of Kauai. These authorizations are for specific sites and are required before an operator may carry passengers for hire. Therefore, those sites which are used for commercial purposes have been checked and meet safety criteria. The sites listed in your letter are locations where either a specific helicopter landing has been authorized for air taxi purposes, are near existing airstrips which could be used, or are enroute emergency landing helipads. We have discussed this matter with our General Aviation District Office and they will contact the helicopter operators to verify that the sites advertised are those checked previously.

The Jet Ranger helicopter operated by Kauai Helicopters is capable of operating safely under very restricted conditions. If no passengers or cargo are carried for hire, there would be no requirement for our General Aviation District Office to check the proposed maintenance site. However, our staff intends to review the site and discuss any limitations with the helicopter operators.

We are enclosing the following material for your reference:

1. Federal Aviation Regulations, Part 157, Notice of Construction, Alteration, Activation, and Deactivation of Airports.

2. Form FAA 2681.

3. Heliport Design Guide, AC 150/5390-1.

We hope this information will be of assistance to you.

Sincerely yours,

Richard T. Puckey

Richard T. Puckey
Chief, Airports Division

Enclosures

November 9, 1967

Mr. J. O. Sanders, Chief
Airspace and Standards Branch
Federal Aviation Administration
P. O. Box 4009
Honolulu, Hawaii 96812

Subject: State Land Use Commission Special Permit (SP67-47)
Request by Kauai Helicopters

Dear Mr. Sanders:

An application for a special permit has been submitted by Mr. Tatsuo Asari, attorney, for Kauai Helicopters. The applicant desires to use a 2.8 acre parcel owned by Lihue Plantation Company and leased to the Garden Isle Publishing Company, TMK 3-6-02: 4. The property is situated on the Lihue Airport Road or Ahukini Road. It will be used primarily for parking and landings and to perform some minor repair and maintenance work on the helicopters. The business office would be located on the site also. However, passengers will not embark or disembark at this site.

At the present time, the site is being used as a radio transmitting station which includes a 150' high radio tower, a 1-story radio transmitting building and power poles and lines at the front of the property along the airport road. Incidentally, Kauai Helicopters is already using the site as a heliport.

This matter has been discussed with Mr. Joseph Soares, Kauai FAA representative, and he has suggested we contact you for additional information and comments.

It is our understanding that each aircraft landing field or site requires the approval of FAA. If this is the case, has this particular site been approved as a heliport? We note that in a brochure by Kauai Helicopters that 7 additional heliports are in use on Kauai as follows: Kauai Surf, Coco Palms, Hanalei Plantation, Limahuli Gardens near Haena above Waimea Canyon, Prince Kuhio and Waiohai in the Poipu area. We also note that Garden Islands Helicopters, in one of their brochures, list 6 main heliports on Kauai as follows: Kauai Surf, Wailua, Haena, Kokee Park, Waimea and Prince Kuhio. Have all of these sites been approved or what is their status?

According to State law, since the Kauai Planning and Traffic Commission approved this request, the State Land Use Commission, by November 27, 1967, must either concur with the County of Kauai, modify or deny this request. The Land Use Commission has scheduled a meeting on Maui on the 27th to consider this and other matters.

Evidence submitted by the applicant to the Kauai Commission indicates that a helicopter can operate in an area approximately 36 feet in diameter, taking all factors into consideration, including gusty winds and inclement weather. A safe allowable area would be 100 square feet. This being the case, from the standpoint of flying safety, the front yard of the site in question is more than adequate. Nevertheless, there still exist 60' power poles and power lines bordering one edge of the proposed site and a 150' tower within approximately 100 feet of the site.

Any comments with reference to the proposed application, as well as any observations comparing a location on the Lihue Airport or a site adjacent to the airport or any other site to the one in question with seemingly navigational hazards to determine which would be more desirable would be sincerely appreciated.

Enclosed herewith is a copy of the site plan and a location map for your information.

Very truly yours,

RAMON DURAN
Executive Officer

Encl.

November 16, 1967

Mr. Tatsuo Asari, Attorney
Kauai Helicopters
P. O. Box 126
Lihue, Kauai 96766

Dear Mr. Asari:

The Land Use Commission next meets at 2:30 p.m. at the Kahului Library, Kahului, Maui on November 27, 1967.

At that time, your application for a special permit (SP67-47) will be reviewed.

Although there is no requirement for you to be present, should you wish to attend, please feel free to do so.

Very truly yours,

RAMON DURAN
Executive Officer

FLIGHT DESCRIPTION AND RATES
JANUARY 1, 1967

ALL RATES ARE PER PERSON except charter rate. Tax is included.

	FROM HAENA HELIPORT	FROM HANALEI PLANTATION HOTEL	FROM ANY OTHER HOTEL OR HELIPORT
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CHARTER RATE: For the helicopter carrying up to 3-4 passengers, maximum total passenger weight: 600 pounds. Minimum Charter: 30 minutes.			$150.00 per flight hour

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Phone collect from anywhere in Hawaii
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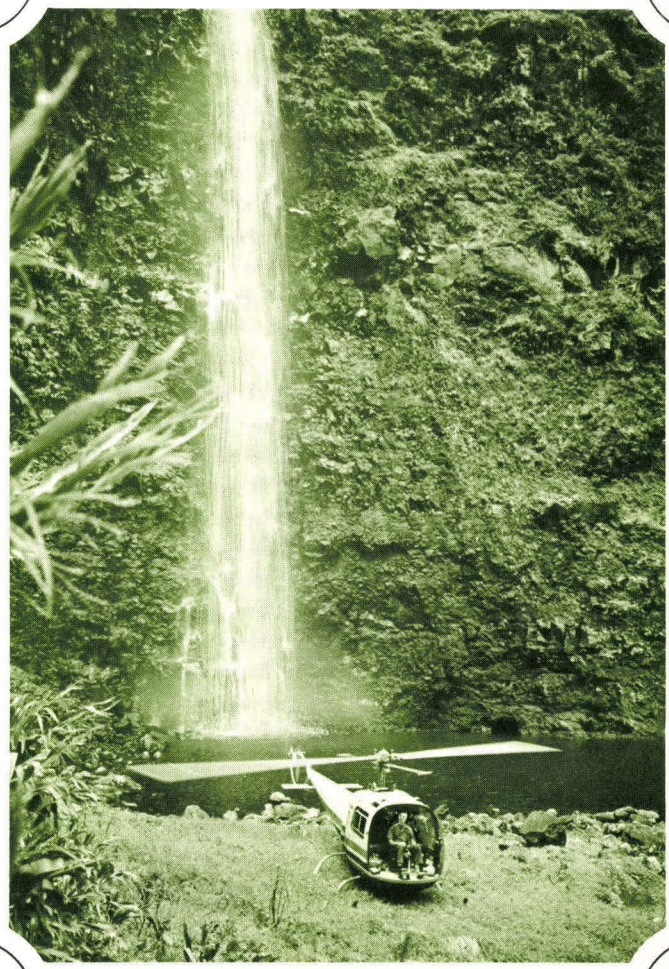
or write

KAUAI HELICOPTERS

P. O. Box 788
Lihue, Kauai, Hawaii 96766

or see your travel agent

Kauai Helicopters



Flight-Seeing On

KAUAI

HAWAII'S GARDEN ISLAND

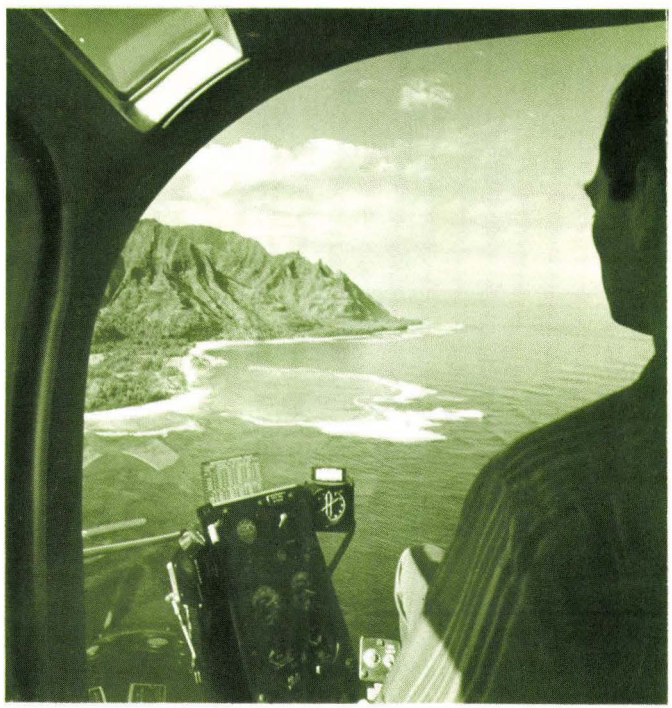
Enjoy an Unforgettable Experience on . . .

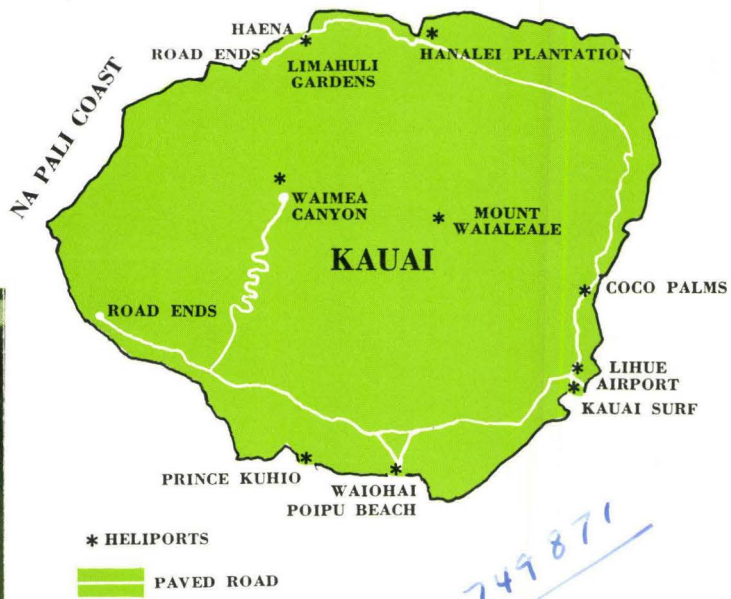
KAUAI

Hawaii's Garden Island

. . . literally a trip into a remote paradise

a new dimension in travel awaits you on the Garden Isle . . . the famed Na Pali Coast, Kalalau Valley, Mt. Waialeale . . . the wettest spot on earth, the Valley of the Lost Tribe, plus countless waterfalls and exquisite beaches are yours in safety and comfort aboard the Helicopters of Presidents.





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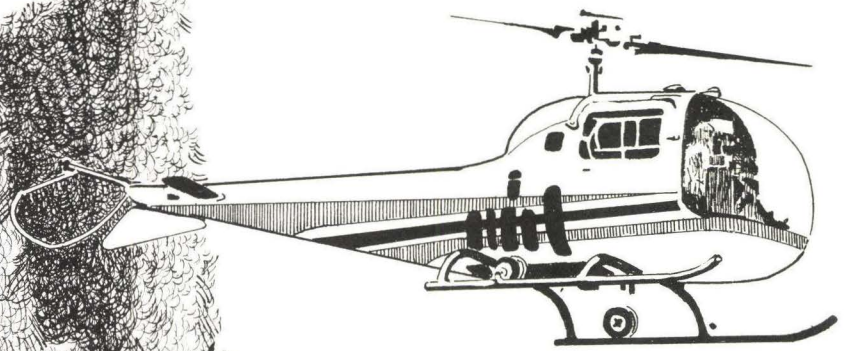
Na Pali Is

A photographer's paradise with remnants of an ancient civilization to explore.

We Invite You

To plan picnics or camping trips in the unspoiled valleys along Na Pali Coast.

GARDEN ISLAND HELICOPTERS



For reservations, see your travel agent or write:

GARDEN ISLAND HELICOPTERS

P. O. Box 447
Eleele, Kauai, Hawaii
Phone: 23-721

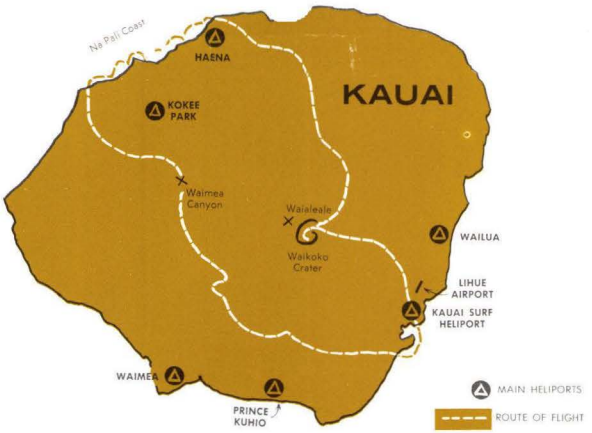
In Honolulu call CONTACT Office: 936-524
Suite E3, 2394 Kalakaua Ave.

Breath-taking

KAUAI

THE GARDEN ISLAND

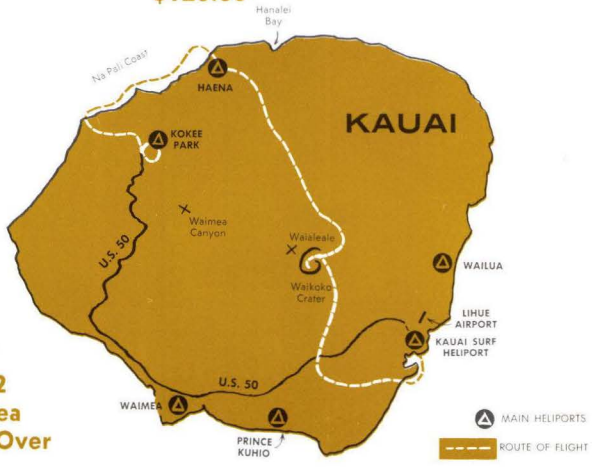
PRINTED IN HAWAII U.S.A.



FLT No. 1

This is the most unforgettable experience you can enjoy on the Garden Island. It covers all of the outstanding, inaccessible scenery of Kauai. Flight time is one hour. You will view Olokele, Waimea Canyon, Na Pali Coast and much more.

Total charges for the helicopter carrying up to 4 passengers
$120.00

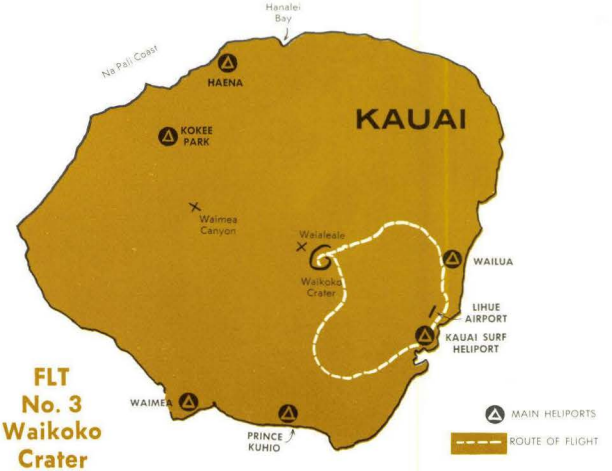


FLT No. 2 Waimea Change-Over

This Land-Air tour is an ideal way to see all of the best scenery without retracing your routes. A group of 4 or more is necessary. Half of the group travels, Via U.S. 50 to the Waimea Canyon and beautiful *Kokee Park*. The other half of the group will fly to Kokee via Waikoko Crater, Hanalei and Na Pali. At Kokee, an exchange is made and each group returns to the Kauai Surf by the opposite route. The land portion of this tour may be made either by Limousine or by U-drive car.

Helicopter fare per person
$20.00
(Minimum of 4)

Jack Harter, originator of scenic helicopter flights on Kauai, is now based at the Kauai Surf Resort Hotel.



FLT No. 3 Waikoko Crater

Waikoko Crater is one of the World's most unique places. At its top is Waialeale, the 'Wettest Spot on Earth.' The rainfall on the peak creates waterfalls of great beauty inside the Crater which can be reached only by copter. Enroute are the spectacular views of eastern Kauai.

Helicopter fare per person
$20.00
(Minimum of 2)

SP67-47 Kauai Helicopters

① Soil Survey = KM (Pg 286)

KM = Kahana stony silty clay, severely eroded phase (5 to 15% slopes); see attached sheet

② Rainfall = Key # 1020 Lihue (Elev 207')
Median Annual Rainfall = 54.1"

③ Elev. = approx 200'

④ Aerial Photo = EKP-2CC-181

stones occur throughout the solum. Depth to weathered rock material ranges from 24 to 50 inches in most places.

The soil is used for the production of cane in essentially the same way as the associated gently sloping phase of Kahana stony silty clay. Some areas have been retired from cane cultivation. Machinery is used, and some effort is made to remove the loose stones from the surface and pile them in the fields. Slopes are a moderate handicap in the use of machinery and in the distribution of irrigation water. Erosion has reduced the capacity of the soil to absorb water and to hold it after irrigation. Consequently, yields are probably somewhat lower on this soil than on the nonstony and gently sloping units of the Kahana series.

Bermudagrass is the most common native grass on the areas used for pasture. Kikuyu and paspalums are among the important species used for introduction.

Kahana stony silty clay, eroded moderately steep phase (15 to 30 percent slopes) (Kj).—This soil occurs principally in small areas associated with the more gently sloping stony soils of the Kahana series on Kauai. Slopes are so strong that they seriously interfere with the use of machinery. Loose stones form a litter on the surface that interferes with the use of machinery, particularly in harvesting operations.

The soil has a truncated profile as a result of erosion. The present A_1 horizon was originally part of the B_2 horizon in most places. Under cultivation or under the native grasses of the region, it has now developed into a layer moderately high in organic matter. Usually 20 to 40 inches of soil remains over the weathered soil material, but loose rock cores are abundant throughout the profile and on the surface of the soil. Effervescence with H_2O_2 is distinctly less in these areas than on the uneroded soil.

This soil may be cropped with the associated less strongly sloping soils, but its steeper areas are commonly idle. Erosion is little or no problem when the soil is used for sugarcane, but it would be serious if it were used for pineapple. In idle areas, guava is one of the principal species in the plant association and it commonly occurs in association with Bermudagrass or lantana.

Kahana stony silty clay, severely eroded phase (5 to 15 percent slopes) (Km).—This soil is typical of the areas where cane production has been abandoned after mechanization of the industry in Hawaii. Such areas were cropped to sugarcane when most of the labor was performed by hand. The soils are very severely eroded. In most places all of the soil material down to the B_3 horizon has been removed, and in some places erosion has cut into the C horizon. Many loose rock cores litter the surface and very seriously interfere with or completely prohibit cultivation. In some places bedrock outcrops are also common.

The present soil profile in most places consists of a 6- or 8-inch surface layer, in which organic matter has accumulated, over a thin red silty clay horizon similar to that of the B_3 horizon described for the Kahana series. This layer commonly rests on weathered rock material at less than 18 inches. In many places the weathered rock material is exposed, and commonly it has developed a thin A_1 horizon.

Some areas of this phase are actively eroding and are bare of vegetation. Although the waterholding capacity and the ability of the soil to absorb water have been considerably reduced by erosion, productivity of pasture should be at least moderate once a sod is formed. One of the major problems is control of such shrubs as guava and lantana where the use of machinery for its eradication is difficult or impossible. This soil is unsuited to agriculture that requires the use of machinery.

Kahana stony clay loam, shallow phase (0 to 5 percent slopes) (Ki).—This phase occurs near Koloa on the island of Kauai and consists of a shallow soil developed on lavas younger than normal for the Kahana series. The two uppermost horizons are very much like the A_1 and B_1 horizons as indicated in the profile descriptions for the Kahana series; but the B_2 and B_3 horizons are absent, and the C horizon is commonly only 2 to 5 inches thick. Depth to bedrock is variable, ranging from as little as 14 inches to as much as 40 inches in some places. Locally there are a few bedrock outcrops that interfere with cultivation. Loose stones, representing fragments of the underlying bedrock, are sufficiently numerous on the surface to interfere with machine cultivation, but they do not generally prohibit the use of machinery. Slope is not a serious handicap.

When essentially all operations could be performed economically by hand, this soil was cropped intensively to cane. It is shallow, has limited water-holding capacity, and dries quickly after irrigation. It requires intensive fertilization with nitrogen and phosphorus, but potassium is relatively well supplied.

None of this soil is used for pineapple. On areas that are not cropped, guava and lantana are among the dominant shrubs and Bermuda grass and Natal redtop are the more prominent grasses.

Kahana series, steep phases (20 to 45 percent slopes) (Kd).—This unit includes all soils of the Kahana series—regardless of texture, stoniness, or erosion—that occur on slopes between 20 and 45 percent in gradient. These soils are generally too steep for cultivation with machinery. They occur as small areas in association with other Kahana soils or in association with soils of the Wahiawa series on Oahu. Some of these areas are essentially free of stones and are uneroded. Others are very stony and may be shallow to bedrock. No attempt was made to differentiate between these conditions, because the steepness of slope completely overshadowed all other properties in determining land use.

At one time areas of these soils were used for sugarcane, irrigated and cultivated by hand labor, but most of them have been abandoned. In most places these soils are covered with guava or lantana in association with Bermudagrass, Natal redtop, or weeds. The total area is small, and the unit is of limited importance among the soils of Hawaii.

HALIIMAILE SERIES

The Haliimaile series consists of reddish-brown soils that occur only on Maui; they are in the 35- to 60-inch rainfall belt below Makawao. Elevations range from 500 to 2,000 feet above sea level. These soils are in vegetation zone C_1 as defined in the section on Soils and Vegetation. They are fine-textured and are similar to soils of the

2280

TATSUO ASARI
ATTORNEY AT LAW
LIHUE, KAUAI, HAWAII 96766

PHONE 23-421

P. O. BOX 126

November 3, 1967

Land Use Commission
State of Hawaii
Mr. Ramon Duran
426 Queen Street
Honolulu, Hawaii 96813

Dear Mr. Duran:

Subject: Kauai Helicopters
Special Permit SP67-47

We would be most happy to have our application considered on your November 27 meeting or soon thereafter as is reasonably possible as suggested by you. I appreciate the difficulties under which you operate the Commission which has State wide jurisdiction.

Yours very truly,

TATSUO ASARI

TA:la

October 31, 1967

Mr. Tatsuo Asari, Attorney
Kauai Helicopters
P. O. Box 126
Lihue, Kauai 96766

Dear Mr. Asari:

Subject: Kauai Helicopters
Special Permit SP67-47

The period prescribed for action on the abovementioned petition by the State Land Use Commission expires on November 24, 1967. At the present time, there are 8 members on the 9-member Commission legally empowered to act upon your petition. One position on the Commission is vacant. In order for your request to be approved, it will require the affirmative vote of at least 5 members. Two of our existing members are out of the State and will not return until after the expiration date for action on your application by the Land Use Commission as specified by the Land Use Law. The Land Use Commission has scheduled a meeting in Kahului, Maui on November 27, 1967.

We believe that to observe the spirit and intent of the law and in all fairness to you, the petitioner, that your petition be continued three days to November 27 or until the next meeting of the Commission with all or most of the members in attendance in order that your petition can be judiciously decided.

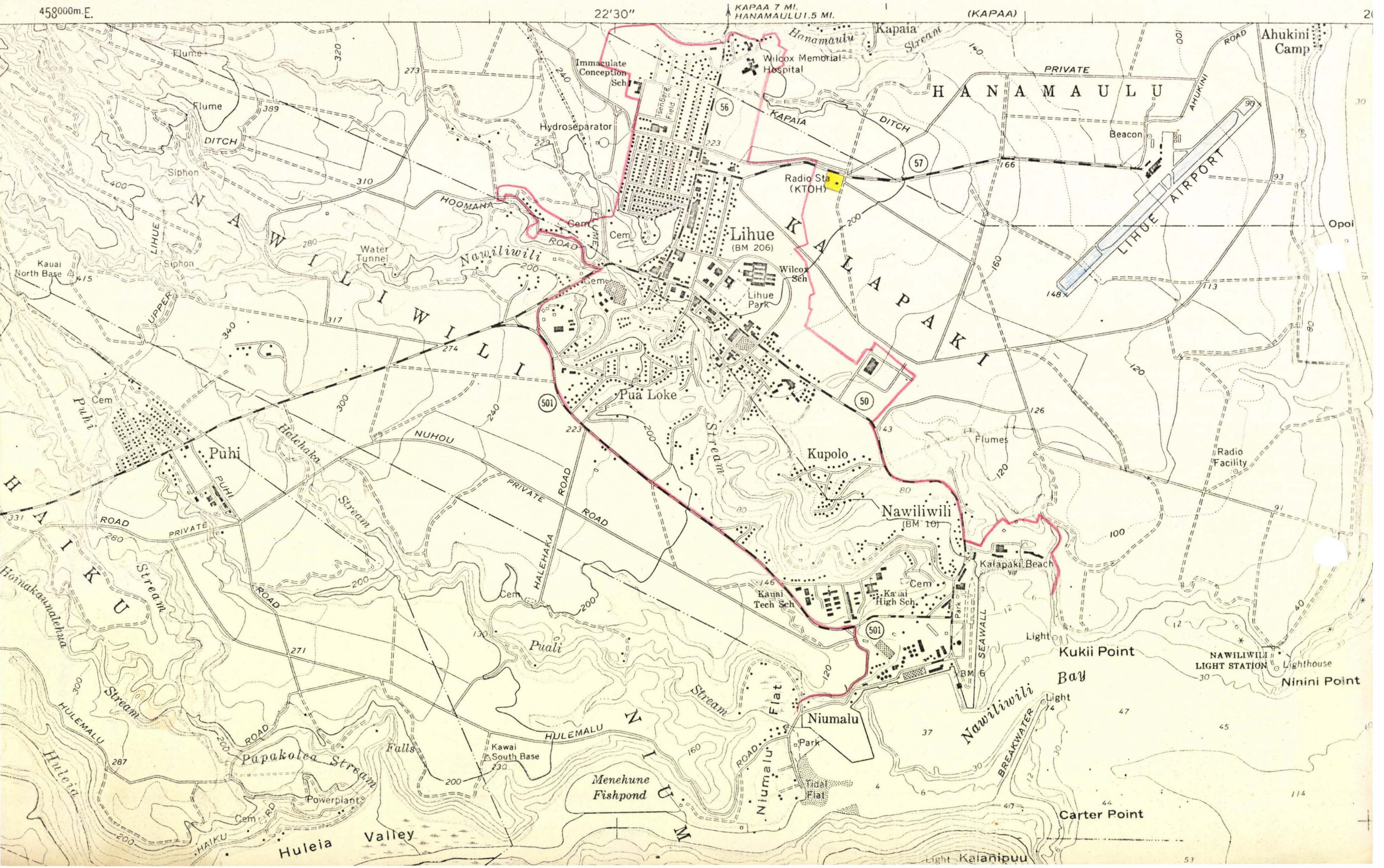
We would appreciate an expression from you regarding the extension of time till November 27 or soon thereafter as is reasonably possible.

Very truly yours,

RAMON DURAN
Executive Officer

cc: Kauai Planning Comm.

CAL SURVEY



458000m.E.
22'30"
KAPAA 7 MI.
HANAMAULU 1.5 MI.
(KAPAA)
Flume
Flume
DITCH
Siphon
Siphon
Kauai North Base
UPPER
LIHUE
HOOMANA
ROAD
Water Tunnel
Nawiliwili
Immaculate Conception Sch
Isenberg Field
Hydroseparator
Cem
Cem
Cem
FLUME
Wilcox Memorial Hospital
Hanamaulu
Kapaia
Stream
KAPAIA
DITCH
PRIVATE
HANAMAULU
AHUKINI
ROAD
Ahukini Camp
Beacon
LIHUE AIRPORT
Radio Sta (KTOH)
Lihue (BM 206)
KALAPAKI
Wilcox Sch
Lihue Park
Opoi
NAWILIWILI
Pua Loke
Puhi
Cem
Halehaka
Stream
PUHI
NUHOU
PRIVATE
ROAD
HALEHAKA
ROAD
Stream
Kupolo
Flumes
Radio Facility
Nawiliwili (BM 10)
Kalapaki Beach
Kauai Tech Sch
Kauai High Sch
Cem
Park
SEAWALL
Light
Kukii Point
Bay
Nawiliwili
NAWILIWILI LIGHT STATION
Lighthouse
Ninini Point
HAIKU
ROAD
PRIVATE
Hoinakaunalehua
Stream
Puali
Stream
Flat
Niumalu
Park
NIUMALU
Niumalu ROAD
Tidal Flat
BREAKWATER
Light
Carter Point
HULEMALU
ROAD
HULEMALU
Stream
Papakolea Stream
Falls
Kawai South Base
Menehune Fishpond
NIUM
Huleia
Powerplant
Cem
HAIKU
RD
Huleia Valley
Light
Kalanipuu

Hanger Space not

Space permit – 1 yr. – auth. to 30 days

Channel Air Lift Freight Bldg

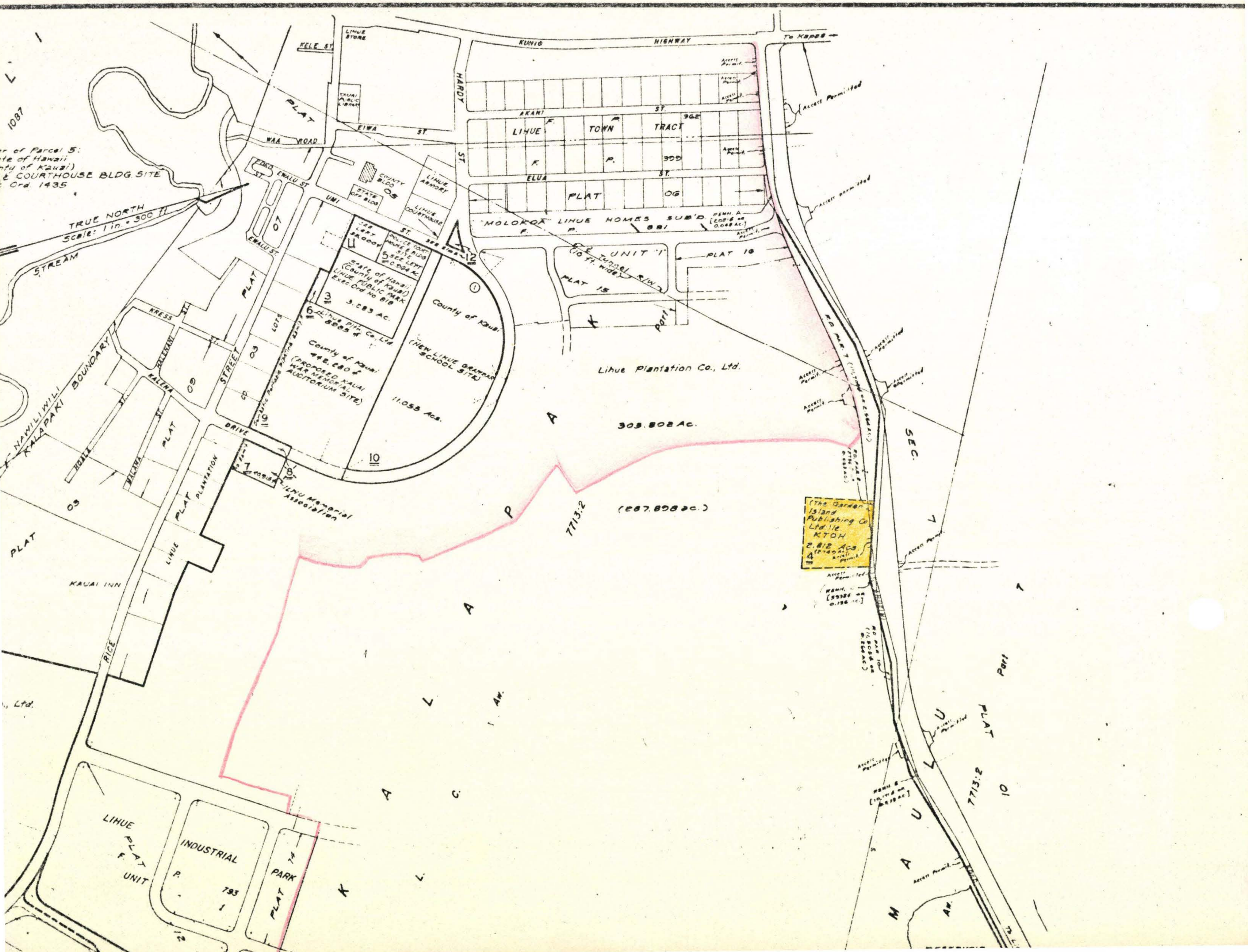
FAA Dick Pake* - Honolulu

Jack Lawrence Airport Man

FAA Joe ~~Soares~~ SOARES

.P. Clint Childs (1st Nat. bank)

Ed -
Madares



1087
...r of Parcel 5:
...te of Hawaii
...nty of Kauai)
... & COURTHOUSE BLDG. SITE
... Ord. 1435
TRUE NORTH
Scale: 1 in. = 300 ft.
STREAM
NAWILIWILI
KALAPAKI BOUNDARY
KUHIO HIGHWAY
To Kapaa
HARDY ST.
AKAHI ST.
ELUA ST.
EIWA ST.
WAA ROAD
KELE ST.
EWALU ST.
UMI ST.
KRESS ST.
RICE
STREET
DRIVE
LIHUE TOWN TRACT
F. P. 962
PLAT 09
PLAT 06
MOLOKOA LIHUE HOMES SUB'D.
F. P. 881
UNIT 'I'
PLAT 16
PLAT 15
(10 ft. wide) Tunnel R/W
LIHUE STORE
KAUAI PUBLIC LIBRARY
COUNTY BLDG.
STATE OFF. BLDG.
LIHUE ARMORY
LIHUE COURTHOUSE
PLAT 07
PLAT 03
County of Kauai
(NEW LIHUE GRAMMAR SCHOOL SITE)
11.055 Acs.
State of Hawaii (County of Kauai) LIHUE PUBLIC PARK Exec. Ord. No. 818
3.283 Ac.
Lihue Plth. Co., Ltd.
County of Kauai
(PROPOSED KAUAI WAR MEMORIAL AUDITORIUM SITE)
Memorial Association
Lihue Plantation Co., Ltd.
303.802 Ac.
7713:2
(287.898 Ac.)
(The Garden Island Publishing Co. Ltd.) KTOH
2.812 Acs.
Access Permitted
Access Permit
SEC.
PLAT 10
Part
KALAPAKI
MAULU
KAUAI INN
LIHUE PLANTATION
LIHUE INDUSTRIAL PARK
F. P. 793
UNIT I
PLAT 14
12
Ltd.

P. O. BOX 111

COUNTY OF KAUAI · STATE OF HAWAII

TELEPHONE 23-661

LIHUE, KAUAI, HAWAII 96766

SP-67-41

October 9, 1967

RECEIVED
OCT 10 1967
State of Hawaii
LAND USE COMMISSION

State of Hawaii
Land Use Commission
426 Queen Street
Honolulu, Hawaii 96813

Subject: Application for Special Permit
Our File No. SP-67-1 -- Kauai Helicopters

Gentlemen:

At the regular meeting of the Planning and Traffic Commission held on October 5, 1967, the Commission approved subject application for special permit.

In accordance with provisions under Section 98H-6 of RLH 1955, as amended, we herewith transmit for your consideration the foregoing application, transcript of proceedings attached.

Very truly yours,

PLANNING AND TRAFFIC COMMISSION

Brian Nishimoto

Brian Nishimoto, Director

attach.

cc: T. Asari

C
O
P
Y

TATSUO ASARI
ATTORNEY AT LAW
LIHUE, KAUAI, HAWAII

August 3, 1967

Planning and Traffic Commission
County of Kauai
Lihue, Hawaii 96766

Petitioners, Kauai Helicopters, respectfully submit herein "APPLICATION FOR SPECIAL PERMIT." Please be advised that the applicant did make application with the State of Hawaii for the use of one of the "T Hangers" located at Lihue Airport. The application was made in February, 1967 and to date no action has been forthcoming after several inquiries. It becoming necessary to vacate from its present location, petitioners are most anxious to secure a more desirable site from that which it is presently operating. This means in and around Lihue.

Lawrence called about once again Applicant has changed his mind + wants to KTOIT

Sept 23

At the onset, it would clearly be stated that a heliport is distinct and separate from an airport. Treatment of each should not be synonymous. To illustrate this point, I am taking the liberty of attaching a picture taken on July 3, 1967 on my recent trip to New York City, showing a helicopter landing on the PANAM Building. Mr. Robinson of Kauai Helicopters informs me that its helicopter can operate in an area approximately 36' in diameter. Taking all factors into consideration, including gusty winds and inclement weather, a safe allowable area would be 100 feet square. It is herein respectfully requested that the Commission note that the area proposed is considerably in excess of this margin of safety.

On my inquiry to Mr. Robinson if there would be any other site he would select if all of the Lihue area was available, it appears that he would be hard pressed to pick another, inasmuch as portions of the building on this site will be utilized as offices and it goes without saying that the site is easily accessible to the tourists that are to utilize the services of the applicant. It, however, has the additional advantages of being located in an area where whatever noise caused by its operation can be discounted.

Applicant plans one addition to the existing structures. Said addition would in no way distract from the appearance of the site in question.

It is herein respectfully requested that the matter be given your careful attention. The undersigned will be most happy to answer any questions you may have in this matter.

/s/ TATSUO ASARI

COUNTY OF KAUAI
PLANNING AND TRAFFIC COMMISSION

Lihue, Kauai, Hawaii

This space for official use

Date Application and Fee received by KP&TC _____

RECEIVED
AUG 3 1967
PLANNING & TRAFFIC COMMISSION
COUNTY OF KAUAI
LIHUE, KAUAI

APPLICATION FOR SPECIAL PERMIT

(I) (We) hereby request approval of a special permit to use certain property located in the County of Kauai, Island of _____, Land Use Commission Temporary District Boundary map number and/or name _____, for the following-described purpose:

Description of property:

Tax Key 3-6-02-4

Petitioner's interest in subject property:

Sublease beginning July 1, 1967 through June 30, 1969.

Petitioner's reason(s) for requesting special permit:

Reasons as set forth in accompanying letter of application.

KAUAI HELICOPTERS

Signature(s) **By:** Tatsuo Asari
Its attorney

Address: **P. O. Box 126, Lihue, Hawaii 96766**

Telephone: **23-421**

This space for official use

The property is situated in a(n) AGRICULTURAL district, whose regulations adopted by the Land Use Commission prohibit the desired use.

Signature(s) Thomas T. Yamada

For (agency) KAUAI PLANNING & TRAFFIC COMMISSION

KAUAI PLANNING AND TRAFFIC COMMISSION
LIHUE, KAUAI, HAWAII

Staff Report

TO: Planning & Traffic Commission

RE: Special Permit Application SP-67-1

DISTRICT CLASSIFICATION: Agricultural

PETITIONER: Kauai Helicopters

Background

An application for special permit has been submitted by Mr. Tatsuo Asari, attorney for the petitioner, Kauai Helicopters.

The property in question for a special permit use is described by Tax Map Key 3-6-02-4, consisting of an area of 2.812 acres, owned by the Lihue Plantation Company and leased to the Garden Island Publishing Company (KTOH). Subject property is situated along the south side of Ahukini Highway, approximately 400 ft. east of the proposed Molokoa Unit II residential subdivision boundary in Lihue, Kauai, being also the limits of the urban district in this area. The property is presently used by the Garden Island Publishing Co. as a radio transmitting station which includes a radio tower and a building to house the transmitting facilities. According to the submitted application Kauai Helicopters has obtained a 2-year sub-lease from the Garden Island Publishing Co. which began on July 1, 1967 and to end on June 30, 1969. It has been noticed that the Kauai Helicopters is already using the area as a heliport. The property is located within the Agricultural District. The County General Plan designates this vicinity also as agricultural in use. The proposed zoning maps also indicates this property as to remain in agricultural classification.

Petition

The applicant desires to use the property as a heliport for stated reasons in the special permit application. Mr. Robinson, manager of Kauai Helicopters, has indicated during our verbal discussions that he plans to add an addition to the existing building on the site to perform some minor repair and maintenance work on the helicopters. In addition, he plans to relocate his business office at the Lihue Shopping Center to the existing radio transmitting station building and convert one of the spaces for his business office to receive the tourists and interested public for helicopter tours and services.

Analysis

Under the present State Land Use District Regulations (Sub Part E, 2.24), certain unusual and reasonable uses may be permitted within the Agricultural and Rural Districts other than those for which the District is classified.

The following guidelines are established by the State Land Use Commission in determining an "unusual and reasonable use."

a) Such use shall not be contrary to the objectives sought to be accomplished by the Land Use Law and Regulations.

b) That the desired use would not adversely affect the surrounding property.

c) Such use would not unreasonably burden public agencies to provide roads and streets, sewers, water, drainage and school improvements, and police and fire protection.

d) Unusual conditions, trends and needs have arisen since the district boundaries and regulations were established.

e) That the land upon which the proposed use is sought is unsuited for the uses permitted within the District.

f) That the proposed use will not substantially alter or change the essential character of the land and the present use.

g) That the proposed use will make the highest and best use of the land involved for the public welfare.

In applying these tests to this particular desired use the staff finds the following:

Test a) The desired use is contrary to the objectives sought to be accomplished by the Land Use Law and Regulations. The desired use which includes the repair and maintenance of the helicopters and a business office falls in the urban category.

Test b) The surrounding property being in cane does not appear to be affected adversely by the desired use. A check with our local tax office indicates that the desired use will not cause the surrounding property to appreciate in the tax rate in this particular instance, since the present use is being taxed under the commercial rate.

Test c) The desired use does not seem to unreasonably burden public agencies to provide roads and streets, sewers, water, drainage and school improvements, and police and fire protection.

Test d) Since the establishment of the district boundaries and regulations, the helicopter and the heliport may be a new trend that was not considered in the land use law. However, the operation of a business office and the repair and maintenance of the helicopters still constitutes a use contrary to the intent of the Land Use Law within an agricultural district.

Test e) The subject property is very suitable for the raising of cane.

Test f) The desired use will alter the essential character and present use of the land.

Test g) In terms of the State Land Use District Classification, the County General Plan and the proposed zoning maps, the best use of the subject land for the public welfare is for the preservation and protection of the public utility or the conversion of the present use into the raising of cane.

The staff recognizes that the helicopter is a versatile piece of equipment that offers the visitors and the public a new mode of transportation for recreation and business services not available to Kauai until recently. This type of service has its use on Kauai.

The question, however, to be resolved under this special permit petition is whether the desired use is an "unusual or reasonable" use that may be permitted within the Agricultural District.

Regulation 2.14 (f) of the State Land Use Regulations permits public and private "open land" types of recreational uses but not including among other things private airports. The local Airports Division under the Department of Transportation interprets heliport as a private airport.

Regulation 2.14 (g) also permits public, private, and quasi-public utility lines but not including offices or yards for equipment, material, vehicle storage, repair or maintenance.

Recommendation

The staff, after careful consideration of the State Land Use Regulations, finds that the desired use is not an "unusual or reasonable" use within an Agricultural District; and that the desired use, being commercial in nature, is no different from other commercial ventures such as a bus and taxi tour service; and that the desired use sought by the applicant is contrary to the intent and objectives of the State Land Use Law.

The staff therefore recommends denial of the special permit.

Respectfully submitted,

Brian Nishimoto

Brian Nishimoto, Director

Dated: September 7, 1967

-3-

KAUAI PLANNING AND TRAFFIC COMMISSION
PUBLIC HEARING
SPECIAL PERMIT, LAND USE - COUNTY OF KAUAI

APPLICATION NO. SP-67-1

USE OF PROPERTY AS HELIPORT, WITH OFFICE AND REPAIR SHOP

A public hearing on the above application was opened by Chairman Masashi Kageyama on Thursday, September 7, 1967, at 1:35 p.m. in the County Board Room at Lihue. Following Commissioners were present:

Mr. Masashi Kageyama, Chairman
Mr. Norman Hashisaka
Mr. Takato Sokei
Mr. Jimpe Tamura
Mr. Isao Yoneji
Mr. Leonard Zalopany

Pertinent information and analysis on the petition was presented by Planning Director Nishimoto (see report on file).

There were no letters of protest as of this date.

Mr. Tatsuo Asari, attorney for the petitioner, stated in effect that the Commissioners should seriously consider the fact that land is not readily available in Lihue; that you don't quite start a business by merely hoping to secure the most ideal land available, so you must take the land which is available to you. The present situation seems ideal because (1) the company would benefit by the trade that goes by; (2) besides idealness of the existing building, the noise can be discounted because it is removed from the urban area. Mr. Asari felt this type of operation is not identical to an airport where a runway is required. He said that Mr. Robinson of Kauai Helicopters stated he had applied with the State Department of Transportation concerning the use of one of the hangars at the Lihue Airport but had received no response on the matter. Mr. Asari said there are plans to build a shed and conduct repair work, however, these are naturally connected to the operational business itself. He pointed out that the business is unique and the desirable service will be in great demand and that the site itself would not disturb the public. Mr. Asari felt strongly toward the continuity of the business in view of the fact that his client cannot choose a site; that the type of service should be considered in granting them a special permit.

Mr. Zalopany inquired the number of years Kauai Helicopters has been in operation.

Mr. Jim Reynolds of Kauai Helicopters answered four (4) years; that they have been operating from the middle of Kukuiolono Golf Course; that it is not a central location and there is danger of golfers. Mr. Reynolds stated they have been seeking a heliport site for the past six months. The area under consideration will be used primarily for parking and landings will probably take place once or twice a day; that passengers will not embark

and disembark at the heliport. Further, the Hanalei Plantation site was not suitable as the sea breeze caused corrosion.

To Mr. Yoneji's question concerning preference should space become available at the Lihue Airport, Mr. Reynolds stated the KTOH site would be advantageous because the hangar at the airport would require extensive modifications and rental would be on a month to month basis. He assured that the planned shed would not detract the public.

Director Nishimoto reported that in checking with Mr. Lawrence of the Airport Division, space was later available, however, Mr. Robinson was not interested. Mr. Reynolds agreed space was available but there was no assurance as to whether or not remodeling of the hangar would be permitted.

Chairman Kageyama stated the Commission must allow fifteen (15) days before any action can be taken on the petition, therefore, the matter will be taken under advisement.

The hearing was closed at 2:09 p.m.

DECISION OF COMMISSION: Upon submission of additional information by Kauai Helicopters and Radio KTOH, recommendation for approval was subject to conditions described by the Planning Director (see report attached).

At the regular meeting of the Commission held on October 5, 1967, the foregoing application for special permit was approved by the following vote:

AYES: Hashisaka, Sokei, Tamura, Yoneji, Zalopany, Kageyama - 6
NOES: None - 0
ABSENT, NOT VOTING: Faye - 1

Respectfully submitted,

Thomas T. Yamasaki
Secretary to the Commission

my

KAUAI PLANNING AND TRAFFIC COMMISSION
LIHUE, KAUAI, HAWAII

Staff Report

TO: Planning and Traffic Commission

RE: Special Use Permit, SP-67-1

PETITIONER: Kauai Helicopters

Reference to petitioner's additional information:

In view of the added information and clarification by both Mr. Robinson of KauaiHelicopters and Mr. Eto of Radio KTOH, the staff reconsiders the analysis of this case.

The staff was not aware during the initial review that Kauai Helicopters did not intend to receive upon the premises on a commercial basis the passengers for tours. Also, Radio KTOH's explanation that the premises was utilized as a commercial use up until the end of January 1967, may qualify the continuance of the commercial use provided a 1-year lapse of discontinued use does not occur.

Under these conditions, the staff considers the desired use as conditionally reasonable and recommends approval of the special permit up until the expiration of Kauai Helicopter's sublease from Radio KTOH, ending on June 30, 1969, or until such time that the use becomes a hazard to public safety or a nuisance factor to future developments that may occur within this vicinity, whichever comes first.

Brian Nishimoto
Planning Director

Oct. 5, 1967

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KAUAI HELICOPTERS P. O. BOX 788 LIHUE, HAWAII 96766

September 18, 1967

Mr. Brian Nishimoto
Director
Kauai Planning and Traffic
Commission
Lihue, Kauai, Hawaii 96766

Dear Mr. Nishimoto:

It became evident to us only after reading your staff report concerning our Special Permit Application SP-67-1 that we had neglected to point out three very important facts concerning our intended use of the property.

1. The State Land Use Commission has consistantly granted exception to regulation 2.14 (f) of the State Land Use Regulations regarding establishment of private airports in agricultural districts: at Kaanapali, Maui, where Amfac operates a private airport in the midst of cane fields; on Kunia Road, Oahu, where the International Country Club operates a private airport; and most recently when the State Land Use Commission affirmed the recommendation of October, 1966, to permit Royal Hawaiian Air Service to construct and operate a private airport in an agricultural district.

2. The building on the property in question has been used as a commercial office building and for incidental maintenance of equipment since 1940, a usage substantially the same as that proposed in our application.

3. We do not intend to initiate sightseeing flights from this location, only to locate our business office there, where almost reservations are made by phone or letter, to park our helicopters there each night, and to perform minor maintenance incidental to the helicopter operation.

We apologize for neglecting to point out the above facts in our initial application. With this additional information at your disposal, we request that you reconsider your recommendation to the Planning and Traffic Commission.

Sincerely,

JWR:mjd

Jerry W. Robinson

G-a

C
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P
Y

RADIO
K T O H
P. O. Box 1748, Lihue, Kauai Hawaii 96766

September 21, 1967

Mr. Brian Nishimoto, Director
Traffic & Planning Commission
County of Kauai
Lihue, Kauai

Dear Mr. Nishimoto:

I have just read your recommendations to the Traffic and Planning Commission with reference to a special permit application submitted by Kauai Helicopters to use part of the old KTOH Radio station site for a helicopter service base.

For your information Radio KTOH has been using the site on Ahukini Road for the past 27 years for commercial purposes. We have had our offices, broadcast studios as well as a transmitting tower on the site since May, 1940. Although the office and broadcast studio facilities were moved to our new location on Kuhio Highway earlier this year, we are still transmitting from the Ahukini tower.

In view of the fact that KTOH has been operating out at the Ahukini Road site for 27 years, I firmly feel that the traffic and planning commission should permit the site to be classified as in the past under the "unusual and reasonable" guideline established by the state land use commission.

For your information, we are looking into the possibility of relocating our tower to a better site inasmuch as we are momentarily expecting approval of a construction permit from the FCC to boost our power from 1,000 to 5,000 watts.

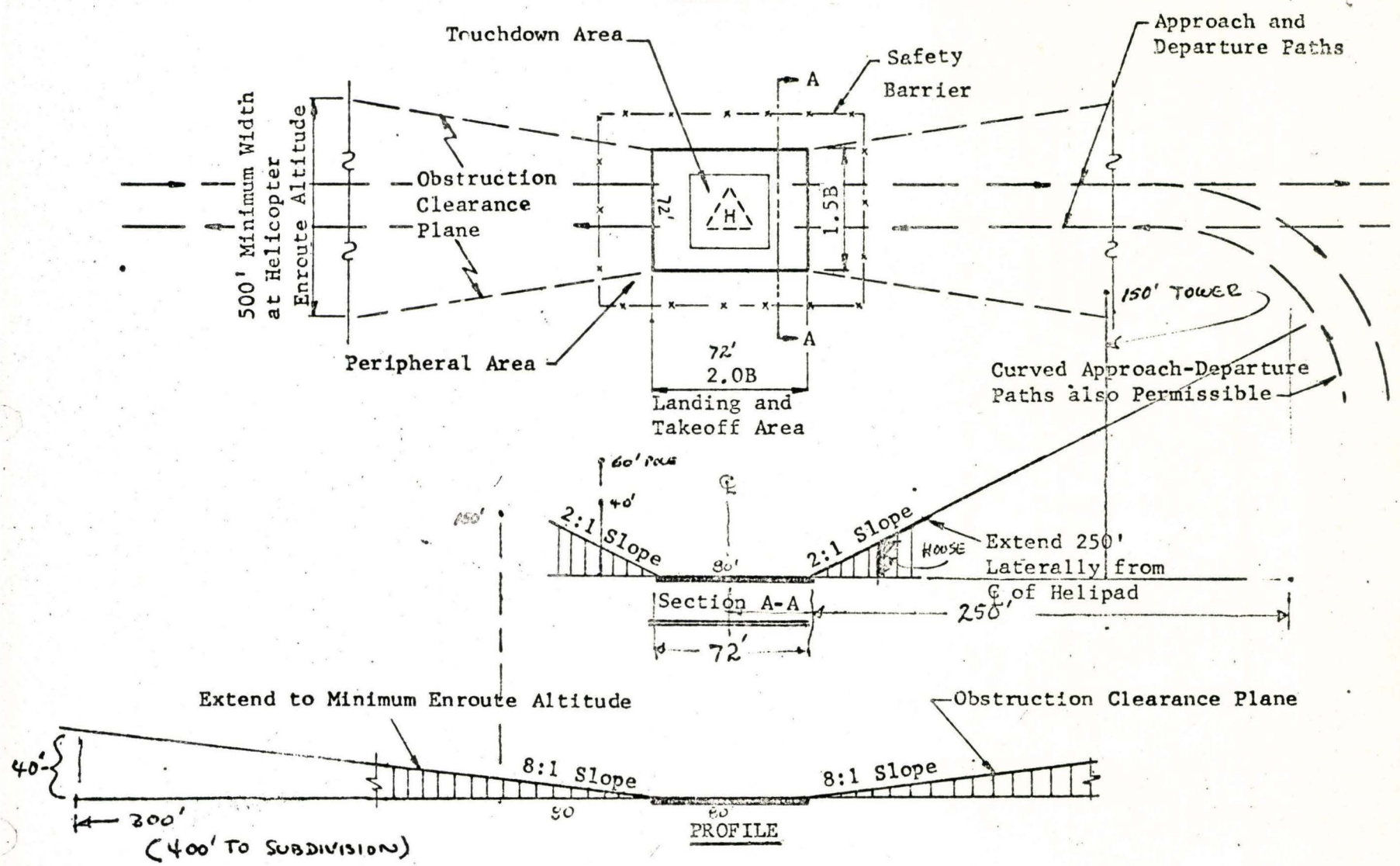
Any consideration extended to Kauai Helicopters will be greatly appreciated.

Sincerely,

/s/ Tad Eto

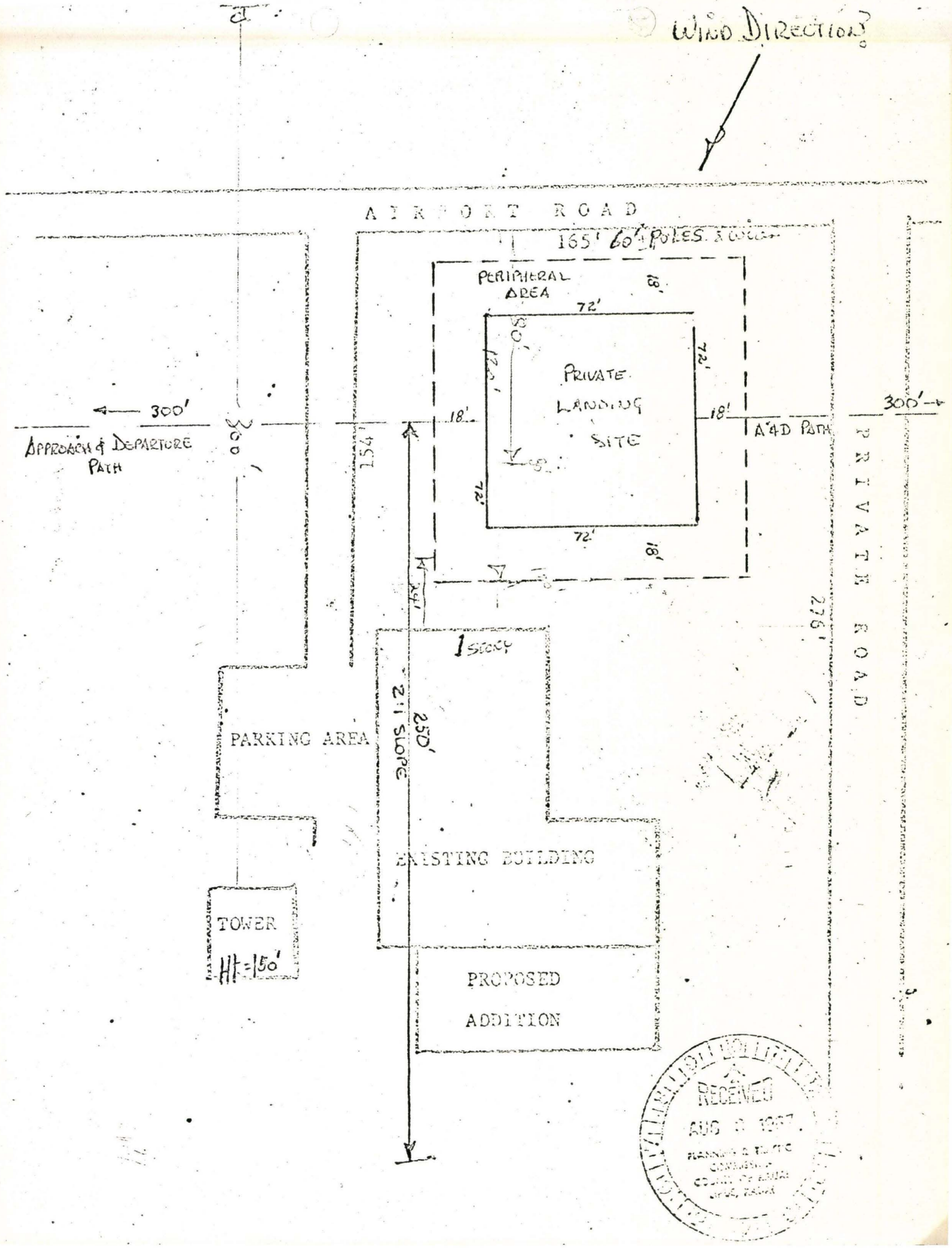
Tad Eto, Mgr.

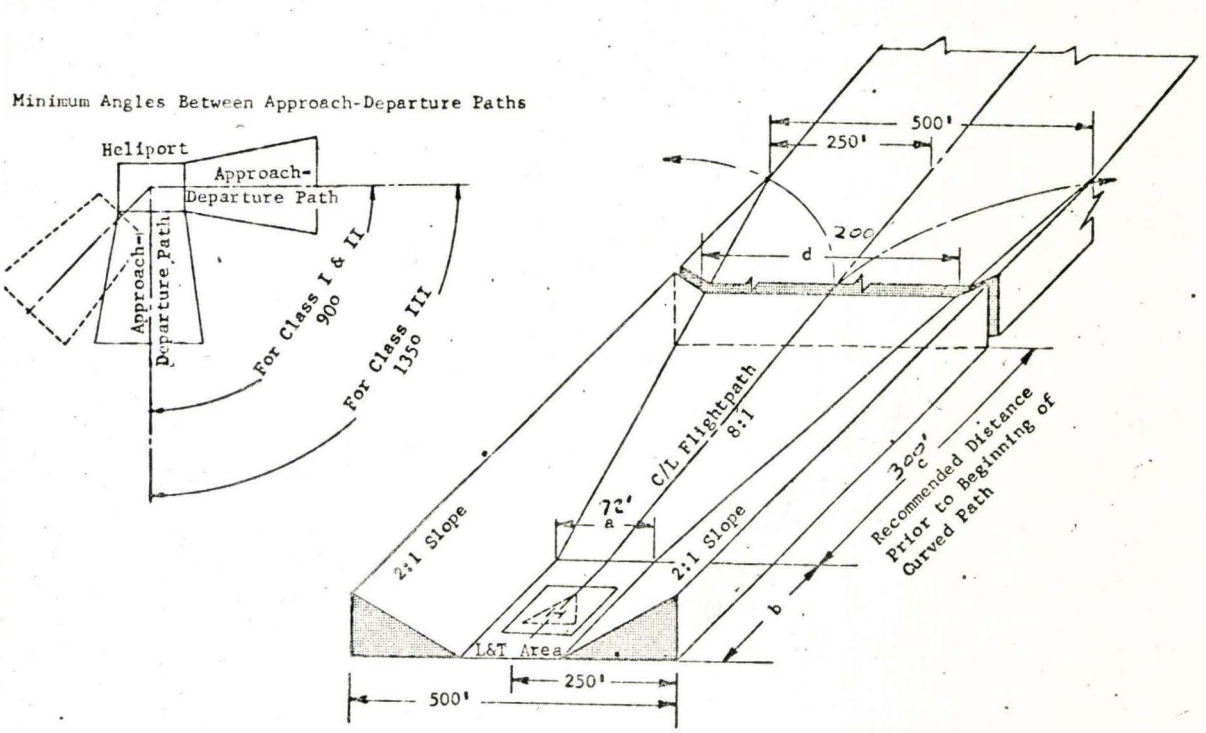
G-6



NOTE: Dimension B Equals Overall Length of Helicopter

FIGURE 9. SMALL HELIPORT LAYOUT


WIND DIRECTION
AIRPORT ROAD
165'
60' POLES
PERIPHERAL AREA
18'
72'
80'
122'
PRIVATE LANDING SITE
72'
72'
72'
18'
18'
18'
300'
300'
APPROACH & DEPARTURE PATH
300'
A'4D PATH
PRIVATE ROAD
276'
154'
24'
1 STORY
2:1 SLOPE
250'
PARKING AREA
EXISTING BUILDING
TOWER
Ht=150'
PROPOSED ADDITION
RECEIVED
AUG



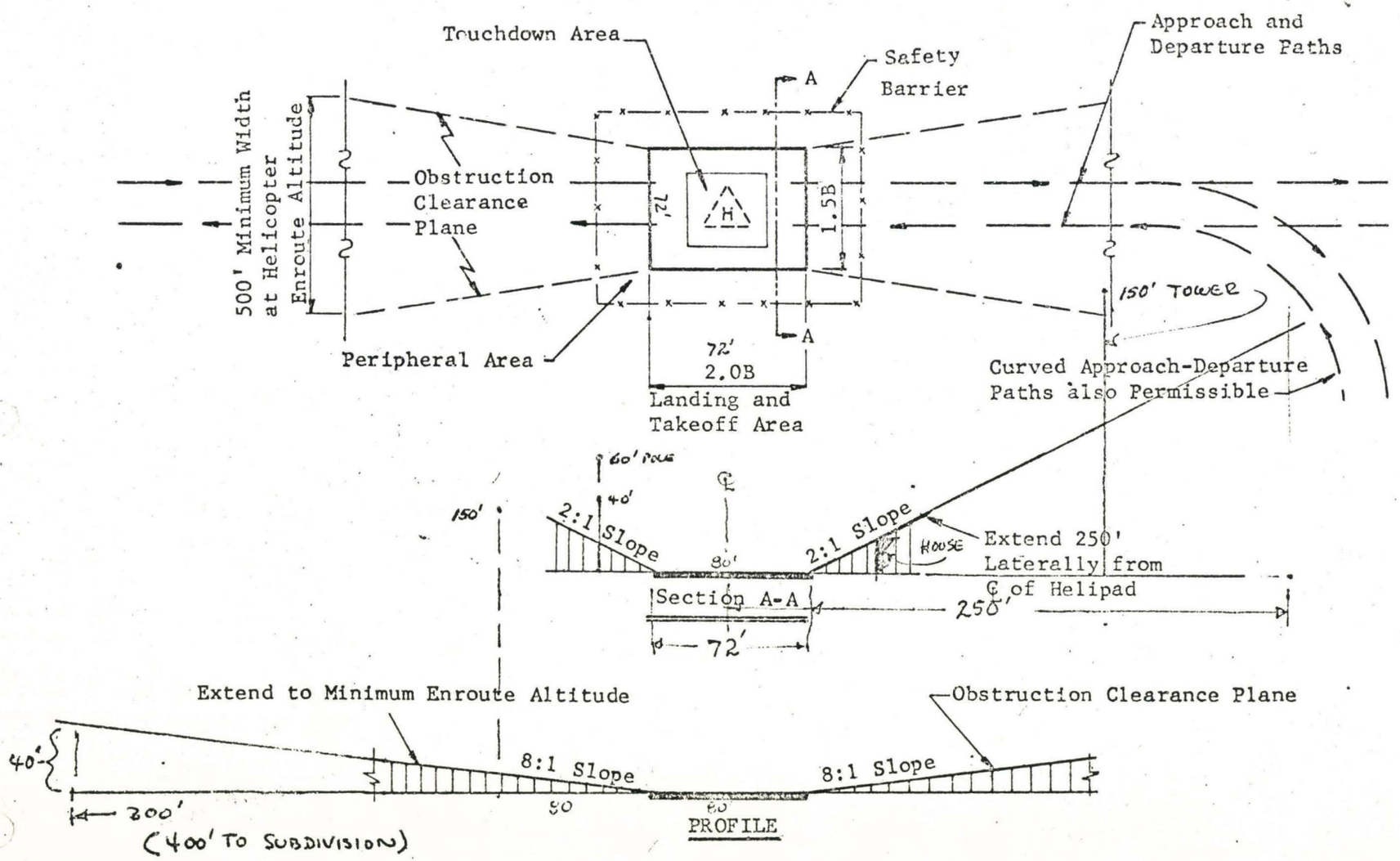
PERSPECTIVE VIEW OF APPROACH-DEPARTURE PATH

Heliport Class	FAR Category Helicopter	a	b	c	d	Minimum Angle Between Approach-Departure Paths
I Private	FAR Part 27, 29 (CAR 6 & 7)	1.5	1.5	300'	200'	90°
II Small Public	FAR Part 27 (CAR 6)	1.5	2.0	300'	300'	90°
III Large Public	FAR Part 27, 29 (CAR 6 & 7)	* 1.5	* 2.0	400'	300'	135°

Dimensions a and b:
(1) are expressed as multiples of overall helicopter length.
(2) may be increased or decreased upon evaluation of the site by FAA.

*For scheduled airline operations, other factors, related to a specific site would need to be considered.

FIGURE 11. APPROACH-DEPARTURE PATH AND OBSTRUCTION CLEARANCE DIAGRAMS



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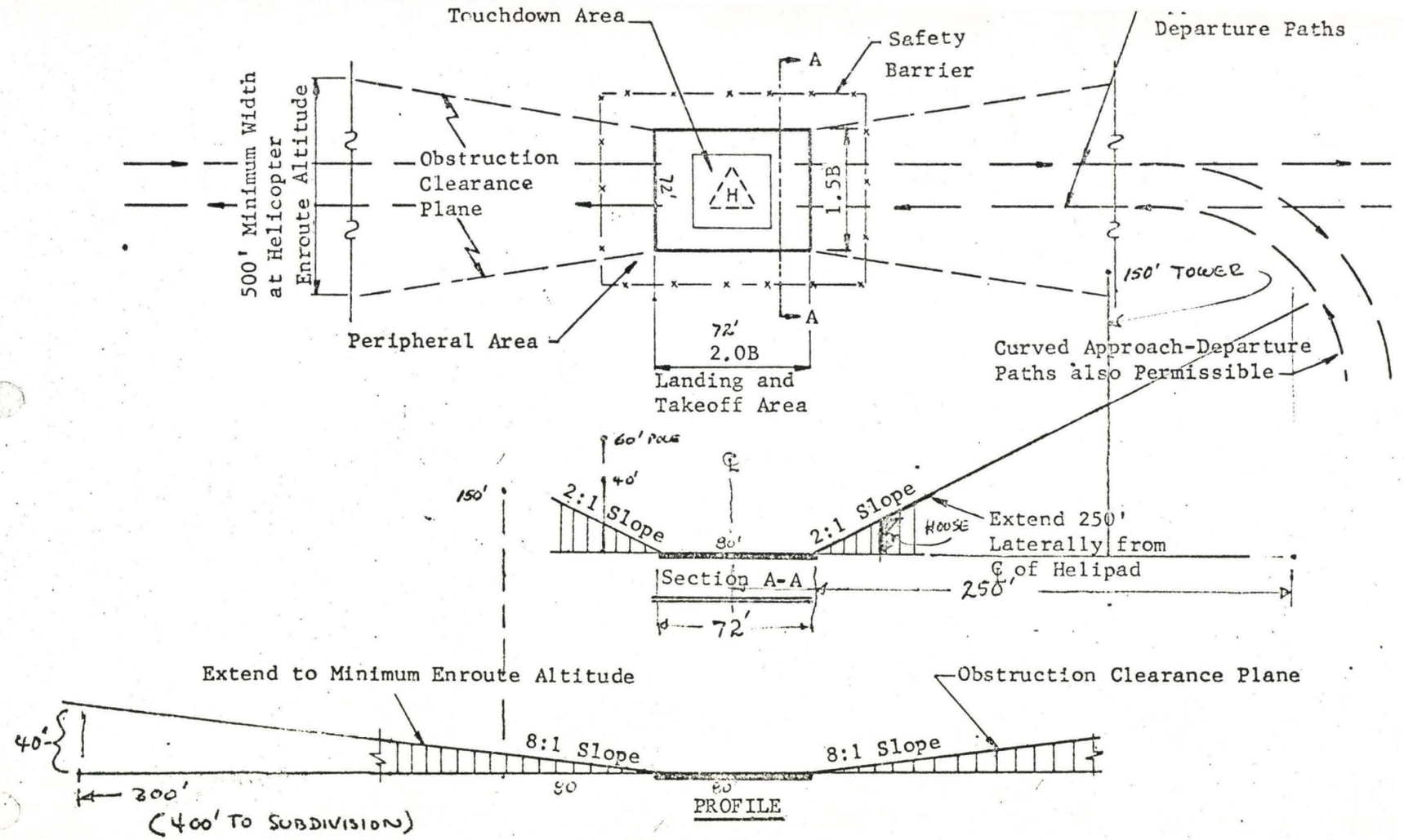

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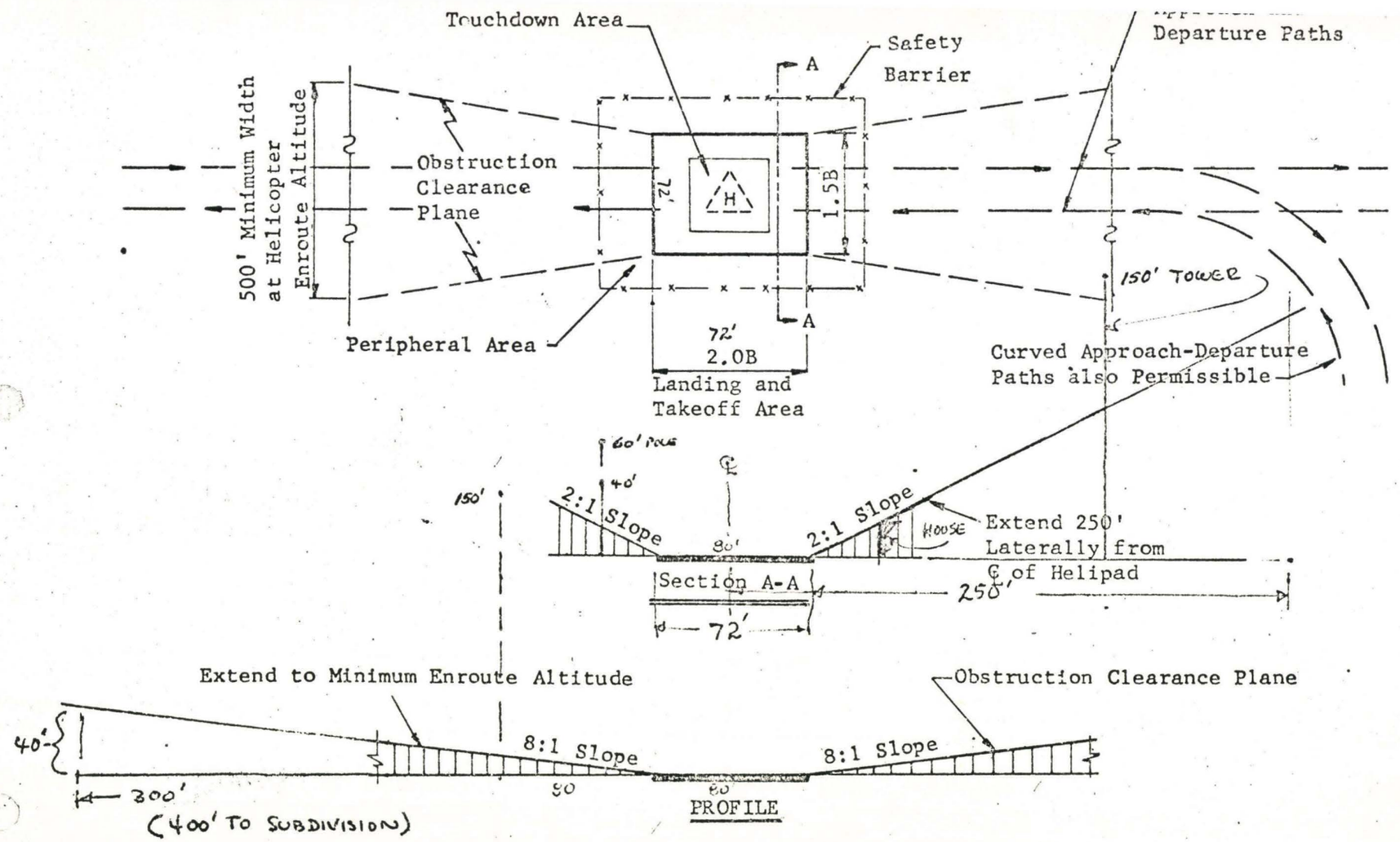

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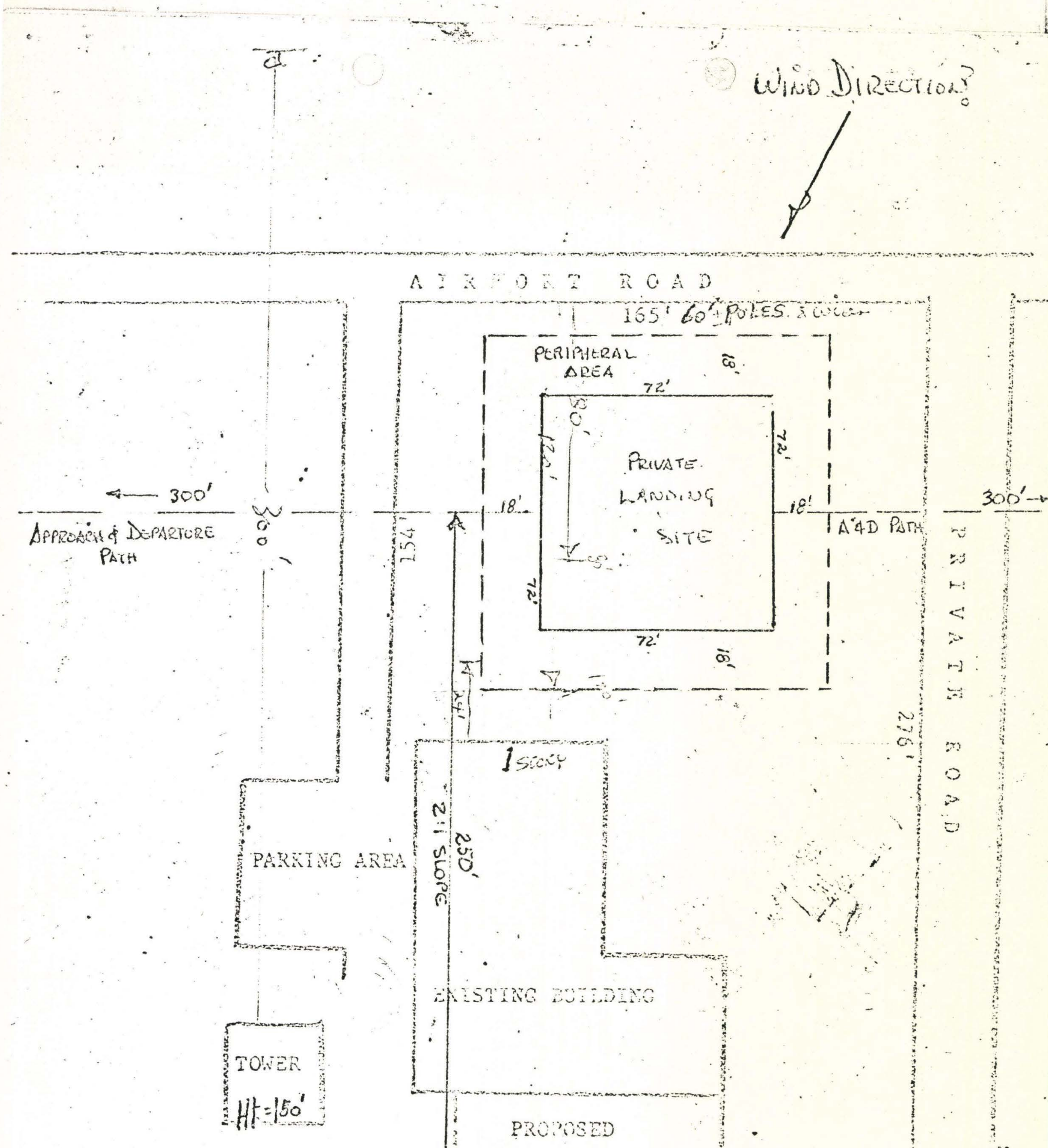

WIND DIRECTION
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165' 60' POLES
PERIPHERAL AREA
18'
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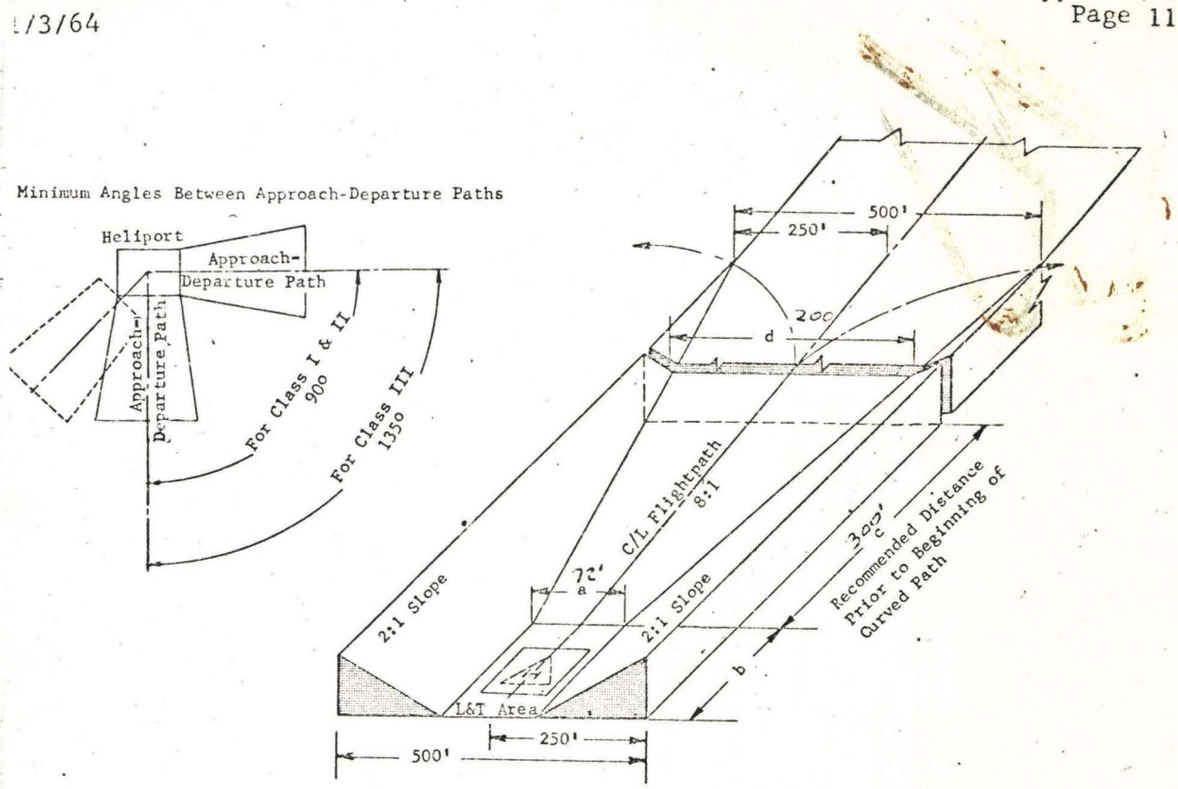

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(1) are expressed as multiples of overall helicopter length.
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*For scheduled airline operations, other factors, related to a specific site would need to be considered.

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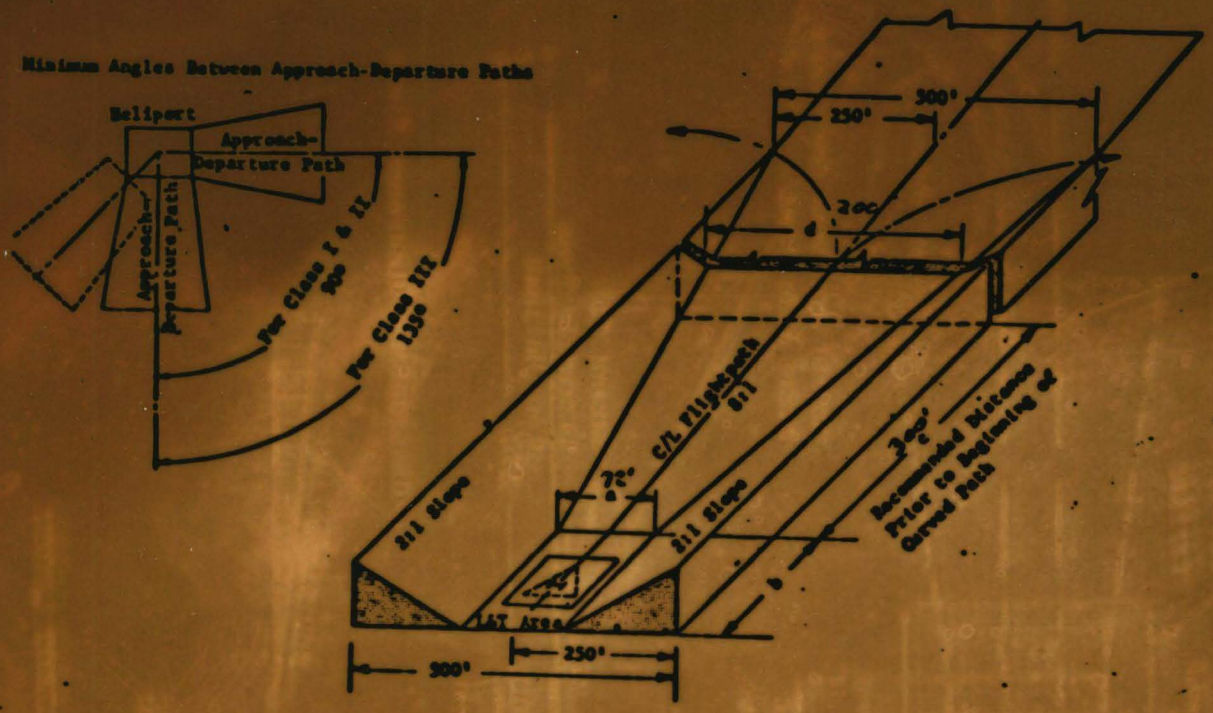
Material submitted by

FAA



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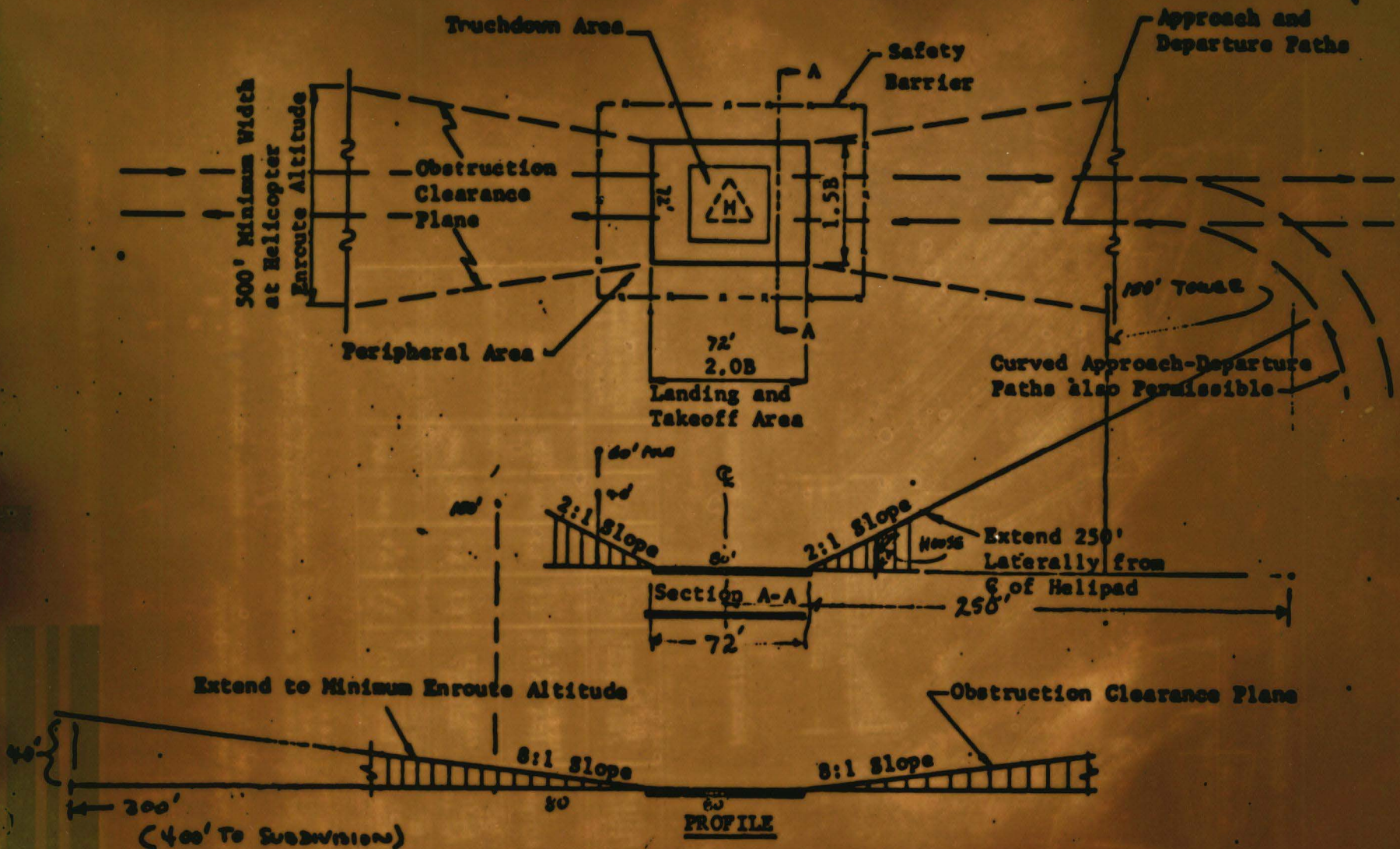

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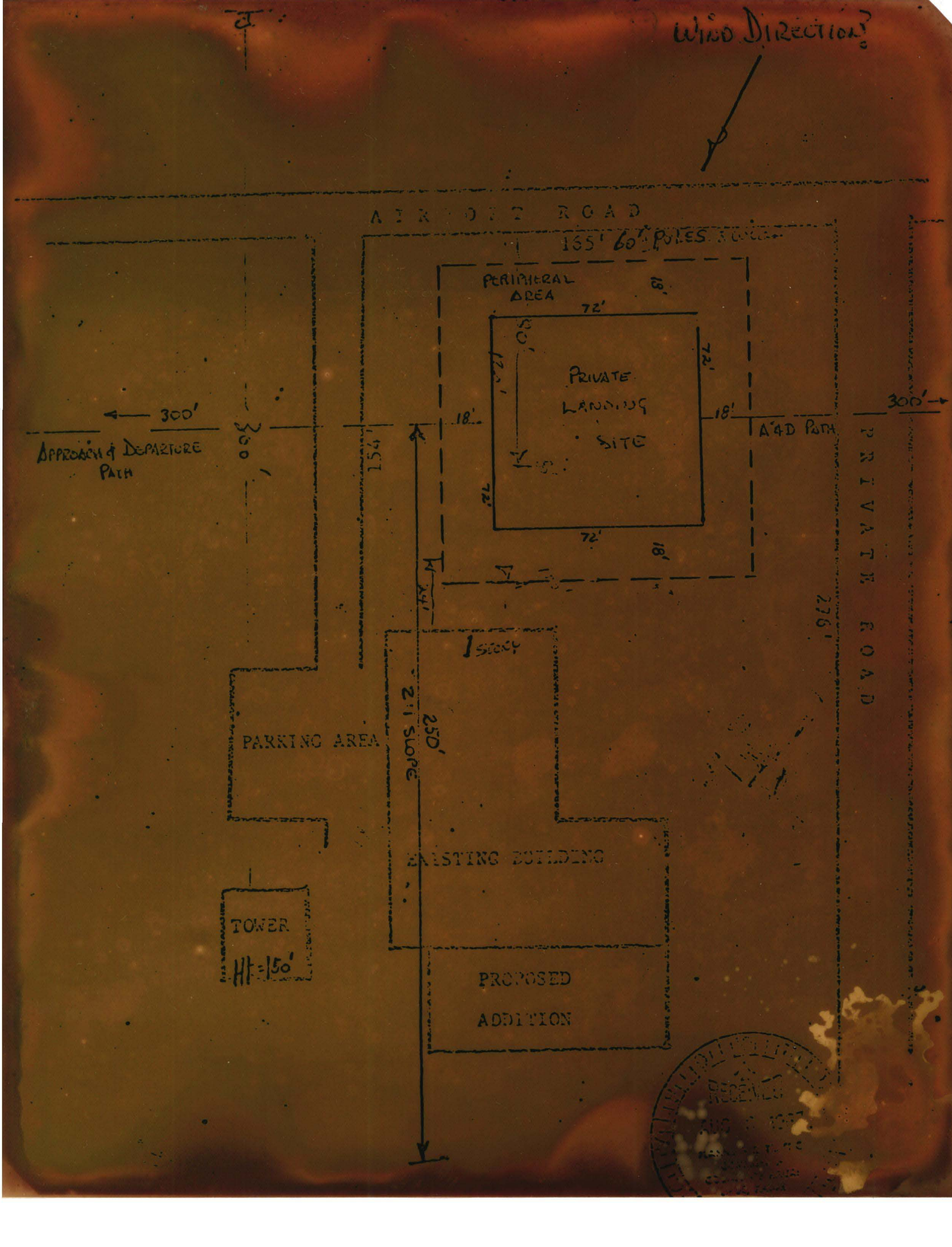
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250'
2:1 SLOPE
PARKING AREA
EXISTING BUILDING
TOWER
HT=150'
PROPOSED ADDITION

FEDERAL AVIATION REGULATIONS

PART 157

NOTICE OF CONSTRUCTION, ALTERATION, ACTIVATION, AND DEACTIVATION OF AIRPORTS

Revised March 2, 1966

Federal Aviation Agency

NOTICE TO PURCHASERS

This is the current Part 157 including all, if any, Changes published to the date of purchase.

If you complete the order form below and forward it to FAA, you will be placed on the mailing list to receive any future Changes to this Part.

Distribution of these Changes within the Federal Aviation Agency and other U.S. Government Agencies will be made automatically, in the same manner as distribution of the basic Part. Therefore, FAA and other U.S. Government personnel are not to use this form.

ORDER FORM

PART 157

To: FEDERAL AVIATION AGENCY
Distribution Unit, HQ–438
Washington, D.C. 20553

Please send me _____ copies of all Changes to Part 157, Notice of Construction, Alteration, Activation, and Deactivation of Airports, of the Federal Aviation Regulations, beginning with Change No. _____.

Name _____

Address _____
(Street)

_____
(City) (State) (Zip Code)

Title 14—Aeronautics and Space
Chapter I—Federal Aviation Agency
Subchapter I—Airports

Part 157—Notice of Construction, Alteration, Activation, and Deactivation of Airports

Contents

Title 14, Chapter I
Code of Federal Regulations

Revision of Part 157—Notice of Construction, Alteration, Activation, and Deactivation of Airports

Adopted: January 27, 1966 **Effective: March 2, 1966**

(Published in 31 F.R. 1269, February 2, 1966)

On June 30, 1965 the Agency published a notice of proposed rule making proposing a revision of Part 157 of the Federal Aviation Regulations (30 F.R. 8342) (Notice No. 65–14). The revision proposed to establish new reporting procedures, provide categories for airspace determinations, and to clarify the regulation in general.

Interested persons were afforded an opportunity to participate in the rule making through the submission of comments. Due consideration was given to all material submitted.

Analysis of the comments indicated a general misunderstanding of the purpose of the regulation. It is not the purpose of the revision to deprive appropriate political bodies of their prerogatives with respect to approving the physical sites of airports or related matters. The FAA has always encouraged State and local governing bodies to actively develop civil aviation by planning and building an orderly system of airports and has recognized their authority in matters involving land use, zoning, and airport site selection. The FAA does not select airport sites nor does it approve them except in the case of requests for and under the Federal-aid Airport Program. In the discharge of its statutory functions it studies airport proposals so as to advise proponents as to the effect on the safe and efficient use of airspace by aircraft. This regulation is the means by which the Agency acquires the necessary information to make these determinations. To clarify this point, certain editorial changes have been made in the final rule which indicate the limits of the Agency's interest.

Several commentators stated that the 90-day and 30-day notice requirements were excessive. The Agency does not consider these periods to be excessive in the light of the necessity for a 30-day comment period in those cases where the proposal is circularized and considering the time needed to conduct the required technical airspace studies. In this regard, it should be noted that provision has been made for emergency notice and expeditious handling in any case involving essential public services, public health, or public safety, or where delay would result in an unreasonable hardship.

In § 157.1, the statement that the Part does not apply to projects for which Federal aid has been "allocated" has been changed to apply to those for which Federal aid has been "requested," under the Federal Airport Act, to eliminate the possibility of duplication of notice for these projects.

The State Departments of Aeronautics recommended that appropriate State aviation officials be notified of all FAA determinations under the revised Part. In the interests of promoting more effective State airport programs and to provide for the exchange of aeronautical information, this recommendation has been adopted.

Two comments recommended that a finding of "no objection" under the rule should automatically qualify an airport for listing in the *Airman's Information Manual (Airport Directory)*. The recommendation cannot be accepted, as the Agency's policy is to list only public use airports and the revision covers both personal use and private use airports.

Several comments indicated some doubts as to whether helicopters are covered by the revision. The definition of "airport" in § 1.1 of the FARs states that "airport" means

any area of land or water that is used or intended to be used for the landing or takeoff of "aircraft." Therefore, the revised Part applies to areas used for any aircraft, including helicopters. However, at this time the Agency is making a further study to determine whether separate reporting standards are required for heliports.

In § 157.3(b), the word "activate" has been substituted for the word "reactivate" to make it clear that the construcion of any new runway at an existing airport covered by this Part falls within the meaning of the section. The word "activate" would also cover the reopening of former runway, landing strip, or associated taxiway.

Section 157.7 has been amended to provide that notices concerning certain personal use or private use airports used solely under VFR conditions and located more than 20 miles from an airport for which an instrument approach procedure is authorized and more than five miles from any airport open to the public will be submitted in abbreviated form and for record purposes only.

Several comments stated that taxiways not associated with runways would have little effect on the safe and efficient use of airspace and suggested that only those taxiways associated with runways be subject to the notice requirements. This suggestion has been adopted.

One comment suggested the combining of Part 157 and Part 77 relating to objects affecting navigable airspace, on the ground that there is a similarity in notice requirements. This suggestion was not adopted because the facts which are to be reported under each Part differ considerably and would tend to confuse the public.

The reporting and/or recordkeeping requirements contained herein have been approved by the Bureau of the Budget in accordance with the Federal Reports Act of 1942.

In consideration of the foregoing and for the reasons stated in Notice No. 65–14, Part 157 of the Federal Aviation Regulations is revised to read as hereinafter set forth, effective March 2, 1966.

The revision is made under the autority of sections 309, 313(a), and 314 of the Federal Aviation Act of 1958 (49 U.S.C. 1350, 1354(a), and 1355).

Part 157—Notice of Construction, Alteration, Activation, and Deactivation of Airports

§ 157.1 Applicability.

This Part applies to persons proposing to construct, alter, activate, or deactivate a civil or joint-use (civil-military) airport, and sets forth requirements for notice to the Administrator as prescribed in § 157.3. This Part does not apply to any project for which Federal aid has been requested under the Federal Airport Act or to any project involving a temporary airport which is intended to be used solely under VFR conditions for a period of less than 30 consecutive days with no more than 10 operations a day.

§ 157.3 Projects requiring notice.

Except as provided in § 157.1, each person who intends to do any of the following shall notify the Administrator in the manner prescribed in § 157.5:

(a) Construct or otherwise establish a new airport or activate an airport.

(b) Construct, realign, alter, or activate any runway, landing strip, or associated taxiway.

(c) Deactivate, discontinue using, or abandon an airport, runway, landing strip, or associated taxiway for a period of one year or more.

(d) Change the status of an airport from personal use (exclusive use by the owner), or private use (use by the owner or other persons authorized by the owner), to an airport open to the public.

§ 157.5 Notice of intent.

Except as provided in paragraphs (a) and (b) of this section, the notice required by § 157.3 shall be submitted, in triplicate, on Form FAA 2681, to the nearest FAA Area Manager's Office or FAA Regional Office at least 90 days before work is to begin. However, in an emergency involving essential public service, public health, or public safety, or when delay would result in an unreasonable hardship, a proponent may notify the FAA by telephone, or any other expeditious means, and send Form FAA 2681 within five days thereafter.

(a) Information concerning a personal or private use airport used solely under VFR conditions and located more than 20 nautical miles from an airport for which an instrument approach procedure is authorized, and more than five nautical miles from any airport open to the public, shall be submitted on Form FAA 2681 for record purposes at least 30 days before work is to begin. After stating whether the project is one of alteration or establishment, only Items A, B, D, and I of the Form need be filled out.

(b) Information concerning the deactivation, discontinued use, or abandonment of an airport, runway, landing strip, or associated taxiway may be submitted by letter, or on Form FAA 2681, and prior notice is not required. Copies of Form FAA 2681 may be obtained from the nearest FAA Area Manager's Office or Regional Office.

§ 157.7 FAA determination.

The Federal Aviation Agency makes aeronautical studies of airport proposals and after consultations are held with interested persons, as appropriate, advises those concerned of the Agency determination. This determination will be based exclusively on considerations of the safe and efficient use of airspace by aircraft. In making the determination, the Agency will consider matters such as the effects it would have on existing or contemplated traffic patterns of neighboring airports and the effects it would have on the existing airspace structure and projected programs of the Agency. These

determinations will fall within one of the following categories:

(a) No objection to the proposal.

(b) No objection to the proposal if certain conditions are met, such as the execution of VFR operations only, the establishment of traffic patterns compatible with those of adjacent airports, and the exclusive use of the airport by the owner.

(c) Objectionable, including reasons for the objections.

The FAA may establish void dates for certain determinations to permit orderly planning. Determinations are furnished to the proponent, aviation officials of the State concerned, and, when appropriate, local political bodies and other interested persons.

REGULATIONS OF THE ADMINISTRATOR—PART 625

LANDING AREA, NOTICE OF PROPOSED ESTABLISHMENT, ALTERATION, OR DEACTIVATION

Effective Date, November 15, 1961

Sec.

AUTHORITY: §§ 625.1 to 625.6 issued under secs. 307, 309, 311, 312, 313; 72 Stat. 749, 751, 752, 49 U.S.C. 1348, 1350, 1352, 1353, 1354.

§ 625.1 Basis and purpose.

(a) The basis of this part is found in sections 307, 309, 312, and 313 of the Federal Aviation Act of 1958 as amended.

(b) The purpose of this part is to require all persons to give adequate notice of the proposed establishment, alteration or deactivation of landing areas for civil or joint civil-military use and to prescribe the form and manner of such notice.

§ 625.2 Explanation of terms.

As used in this part, terms are defined as follows:

(a) "Administrator" means the Administrator of the Federal Aviation Agency.

(b) "Alteration" means realignment, modification, enlargement, or deactivation of any runway layout and/or associated taxiways, or other substantial change to the surface of that part of a landing area which is used or intended to be used for the landing and taking off of aircraft.

(c) "Deactivation" means the discontinuance of use of a landing area permanently or for a temporary period of one (1) year or more.

(d) "Establishment" means the construction, reactivation, laying out or otherwise setting apart of a new landing area.

(e) "Landing Area" means any locality, either of land or water, including airports, heliports and intermediate landing fields, which is used, or intended to be used, for the landing and take-off of aircraft, whether or not facilities are provided for the shelter, servicing, or repair of aircraft, or for receiving or discharging passengers or cargo.

(f) "Person" means any individual, firm, copartnership, corporation, company, association, joint-stock association or body politic; and includes any trustee, receiver, assignee, or other similar representative thereof.

§ 625.3 Projects requiring notice.

Except as otherwise provided in § 625.4 all persons proposing to establish, alter or deactivate a landing area are required to give prior notice thereof to the Administrator in the form and manner prescribed herein.

§ 625.4 Projects exempt from notice.

Any person proposing an establishment, alteration or deactivation project of a type listed in this section is not required to give prior notice thereof to the Administrator:

(a) Military projects on military landing areas used exclusively by the military.

(b) Projects for which a request for Federal aid has been filed pursuant to the provisions of the Federal Airport Act (60 Stat. 170; 49 U.S.C. 1101).

(c) Projects involving landing surfaces intended for one-time or short-term use not exceeding a period of 30 days provided daily aircraft operations shall not exceed a total of 10.

(d) Projects involving privately owned landing areas not open to the public, located or proposed to be located, more than 5 miles from any other landing area and 20 miles from any landing area for which a civil or military instrument approach procedure is authorized by the Federal Aviation Agency: *Provided,* That (1) aircraft operations at the proposed location are confined to Visual Flight Rules as prescribed in Part 60 of this title (Civil Air Regulations) and (2) the project is reported to the Federal Aviation Agency for record keeping purposes within 30 days following each such establishment, alteration or deactivation of the landing area.

§ 625.5 Submission of notice.

(a) Notices required in compliance with § 625.3 shall be submitted to the nearest District Airport Engineer's Office or Regional Office of the Federal Aviation Agency, in triplicate on Form FAA–2681, Notice of Proposed Establishment, Alteration or Deactivation of Landing Area, not less than 90 days prior to the date on which action is to begin: *Provided,* That in case of an emergency requiring immediate action, such notice may be communicated to an authorized representative of the Administrator by telephone, telegraph, or other expeditious means, and the executed Form FAA–2681 shall be submitted within 5 days thereafter.

(b) The District Airport Engineer's Office or the Regional Office of the Federal Aviation Agency shall be notified of any delay in excess of 6 months in the date upon which the establishment, construction or alteration is to begin, or of any other change in the data contained in the original Form FAA–2681.

NOTE: Copies of Form–2681 may be obtained from the Federal Aviation Agency, Washington 25, D.C., or from the nearest Regional Office or District Airport Engineer's Office of the Federal Aviation Agency.

§ 625.6 Determination of effect of proposed establishment, alteration or deactivation upon use of airspace by aircraft.

(a) Upon receipt of notice submitted in compliance with § 625.5 the Agency will study the proposal from the standpoint of its effect upon the efficient utilization of airspace and safety of aircraft, consulting with other interested persons when appropriate.

(b) As a result of such study, the Agency will issue its determination as to the effect the proposal would have upon the safe, efficient use of airspace.

(c) Such determination will be furnished to the proponent and state aviation officials, and made available to other interested persons.

The reporting requirements contained in this Regulation have been approved by the Bureau of the Budget.

This amendment shall become effective November 15, 1961.

Issued in Washington, D.C., on October 9, 1961.

N. E. HALABY,
Administrator.

[F.R. Doc. 61–9763; Filed, Oct. 12, 1961; 8:45 a.m.]

FEDERAL AVIATION AGENCY

NOTICE OF LANDING AREA

☐ ESTABLISHMENT
☐ ALTERATION } *Complete All Sections*

☐ DEACTIVATION *Complete Sections A and I only*

NAME OF PROPONENT *(Individual or Organization)*

ADDRESS *(Number, Street, City, Zone and State)*

A. LOCATION OF LANDING AREA *(Attach aeronautical chart showing plotted position)*

1. NEAREST CITY OR TOWN	2. COUNTY	3. STATE	4. DISTANCE AND DIRECTION FROM NEAREST CITY OR TOWN
5. NAME OF LANDING AREA	6. LATITUDE ° ' "	7. LONGITUDE ° ' "	8. ELEVATION

4. DISTANCE AND DIRECTION FROM NEAREST CITY OR TOWN: Miles | Direction

B. PURPOSE *(If new landing area – state if landing area is for public or limited private use; list localities to be served. If alteration – briefly describe proposed changes and reasons therefor.)*

DATE CONSTRUCTION: To Begin: | Estimated to be Completed

C. OTHER LANDING AREAS WITHIN 20 MILES

1. NAME	2. MILES TO	3. DIREC. TO

D. LANDING AREA DATA

INDICATE MAG. BRG. OF R/WAYS ▶					
1. LENGTH OF RUNWAY (Feet)	Actual				
	Proposed				
2. WIDTH OF RUNWAY (Feet)	Actual				
	Proposed				
3. TYPE OF SURFACE	Actual				
	Proposed				

4. DIRECTION OF PRINCIPAL APPROACH

5. DIRECTION OF PREVAILING WIND

6. DESCRIBE LIGHTING AVAILABLE, IF ANY

E. NOISE ABATEMENT FACTORS *(Distance and direction to schools, hospitals, churches and residential areas within 2 miles)*

1. IDENTIFY	2. MILES TO	3. DIREC. TO

F. OBSTRUCTIONS WITHIN 5 MILES *(If available, attach U.S. Geological Survey quad sheet or equivalent; show obstructions in accordance with applicable obstruction criteria. Also attach master plan if available.)*

1. TYPE OF OBSTRUCTION	2. MILES TO	3. DIREC. TO

G. OPERATIONAL DATA

	PRESENT *Append Letter E if estimated.*	ANTICIPATED 5 YEARS HENCE
1. NO. AND TYPE OF BASED AIRCRAFT *(Annually)* Multi-engine		
Single engine		
2. NO. AND TYPE OF LANDINGS *(Monthly)* Air Carrier		
General Aviation		

3. ARE IFR OPERATIONS ANTICIPATED ☐ NO ☐ YES, WITHIN YRS.

H. LICENSING *(Check applicable boxes)*

Application for airport licensing

☐ has been made to ☐ will be made to ☐ not required

☐ State ☐ County ☐ Municipal Authority

I. CERTIFICATION

I hereby certify that all of the above statements made by me are true, complete and correct to the best of my knowledge.

SIGNATURE OF PERSON MAKING CERTIFICATION

Date | Title

REGULATIONS OF THE ADMINISTRATOR—PART 625

LANDING AREA, NOTICE OF PROPOSED ESTABLISHMENT, ALTERATION, OR DEACTIVATION

Effective Date, November 15, 1961

Sec.
625.1 Basis and purpose.
625.2 Explanation of terms.
625.3 Projects requiring notice.
625.4 Projects exempt from notice.
625.5 Submission of notice.
625.6 Determination of effect of proposed establishment, alteration or deactivation upon use of airspace by aircraft.

AUTHORITY: §§ 625.1 to 625.6 issued under secs. 307, 309, 311, 312, 313; 72 Stat. 749, 751, 752, 49 U.S.C. 1348, 1350, 1352, 1353, 1354.

§ 625.1 Basis and purpose.

(a) The basis of this part is found in sections 307, 309, 312, and 313 of the Federal Aviation Act of 1958 as amended.

(b) The purpose of this part is to require all persons to give adequate notice of the proposed establishment, alteration or deactivation of landing areas for civil or joint civil-military use and to prescribe the form and manner of such notice.

§ 625.2 Explanation of terms.

As used in this part, terms are defined as follows:

(a) "Administrator" means the Administrator of the Federal Aviation Agency.

(b) "Alteration" means realignment, modification, enlargement, or deactivation of any runway layout and/or associated taxiways, or other substantial change to the surface of that part of a landing area which is used or intended to be used for the landing and taking off of aircraft.

(c) "Deactivation" means the discontinuance of use of a landing area permanently or for a temporary period of one (1) year or more.

(d) "Establishment" means the construction, reactivation, laying out or otherwise setting apart of a new landing area.

(e) "Landing Area" means any locality, either of land or water, including airports, heliports and intermediate landing fields, which is used, or intended to be used, for the landing and take-off of aircraft, whether or not facilities are provided for the shelter, servicing, or repair of aircraft, or for receiving or discharging passengers or cargo.

(f) "Person" means any individual, firm, copartnership, corporation, company, association, joint-stock association or body politic; and includes any trustee, receiver, assignee, or other similar representative thereof.

§ 625.3 Projects requiring notice.

Except as otherwise provided in § 625.4 all persons proposing to establish, alter or deactivate a landing area are required to give prior notice thereof to the Administrator in the form and manner prescribed herein.

§ 625.4 Projects exempt from notice.

Any person proposing an establishment, alteration or deactivation project of a type listed in this section is not required to give prior notice thereof to the Administrator:

(a) Military projects on military landing areas used exclusively by the military.

(b) Projects for which a request for Federal aid has been filed pursuant to the provisions of the Federal Airport Act (60 Stat. 170; 49 U.S.C. 1101).

(c) Projects involving landing surfaces intended for one-time or short-term use not exceeding a period of 30 days provided daily aircraft operations shall not exceed a total of 10.

(d) Projects involving privately owned landing areas not open to the public, located or proposed to be located, more than 5 miles from any other landing area and 20 miles from any landing area for which a civil or military instrument approach procedure is authorized by the Federal Aviation Agency: *Provided,* That (1) aircraft operations at the proposed location are confined to Visual Flight Rules as prescribed in Part 60 of this title (Civil Air Regulations) and (2) the project is reported to the Federal Aviation Agency for record keeping purposes within 30 days following each such establishment, alteration or deactivation of the landing area.

§ 625.5 Submission of notice.

(a) Notices required in compliance with § 625.3 shall be submitted to the nearest District Airport Engineer's Office or Regional Office of the Federal Aviation Agency, in triplicate on Form FAA–2681, Notice of Proposed Establishment, Alteration or Deactivation of Landing Area, not less than 90 days prior to the date on which action is to begin: *Provided,* That in case of an emergency requiring immediate action, such notice may be communicated to an authorized representative of the Administrator by telephone, telegraph, or other expeditious means, and the executed Form FAA–2681 shall be submitted within 5 days thereafter.

(b) The District Airport Engineer's Office or the Regional Office of the Federal Aviation Agency shall be notified of any delay in excess of 6 months in the date upon which the establishment, construction or alteration is to begin, or of any other change in the data contained in the original Form FAA–2681.

NOTE: Copies of Form–2681 may be obtained from the Federal Aviation Agency, Washington 25, D.C., or from the nearest Regional Office or District Airport Engineer's Office of the Federal Aviation Agency.

§ 625.6 Determination of effect of proposed establishment, alteration or deactivation upon use of airspace by aircraft.

(a) Upon receipt of notice submitted in compliance with § 625.5 the Agency will study the proposal from the standpoint of its effect upon the efficient utilization of airspace and safety of aircraft, consulting with other interested persons when appropriate.

(b) As a result of such study, the Agency will issue its determination as to the effect the proposal would have upon the safe, efficient use of airspace.

(c) Such determination will be furnished to the proponent and state aviation officials, and made available to other interested persons.

The reporting requirements contained in this Regulation have been approved by the Bureau of the Budget.

This amendment shall become effective November 15, 1961.

Issued in Washington, D.C., on October 9, 1961.

N. E. HALABY,
Administrator.

[F.R. Doc. 61–9763; Filed, Oct. 12, 1961; 8:45 a.m.]

Budget Bureau No. 04—R094

FEDERAL AVIATION AGENCY

NOTICE OF LANDING AREA

☐ ESTABLISHMENT
☐ ALTERATION } *Complete All Sections*

☐ DEACTIVATION *Complete Sections A and I only*

NAME OF PROPONENT *(Individual or Organization)*

ADDRESS *(Number, Street, City, Zone and State)*

A. LOCATION OF LANDING AREA *(Attach aeronautical chart showing plotted position)*

1. NEAREST CITY OR TOWN	2. COUNTY	3. STATE	4. DISTANCE AND DIRECTION FROM NEAREST CITY OR TOWN
			Miles / Direction
5. NAME OF LANDING AREA	6. LATITUDE ° ' "	7. LONGITUDE ° ' "	8. ELEVATION

B. PURPOSE *(If new landing area – state if landing area is for public or limited private use; list localities to be served. If alteration – briefly describe proposed changes and reasons therefor.)*

DATE CONSTRUCTION
To Begin:
Estimated to be Completed

C. OTHER LANDING AREAS WITHIN 20 MILES

1. NAME	2. MILES TO	3. DIREC. TO

D. LANDING AREA DATA

INDICATE MAG. BRG. OF R/WAYS ▶					
1. LENGTH OF RUNWAY (Feet)	Actual				
	Proposed				
2. WIDTH OF RUNWAY (Feet)	Actual				
	Proposed				
3. TYPE OF SURFACE	Actual				
	Proposed				

4. DIRECTION OF PRINCIPAL APPROACH

5. DIRECTION OF PREVAILING WIND

6. DESCRIBE LIGHTING AVAILABLE, IF ANY

E. NOISE ABATEMENT FACTORS *(Distance and direction to schools, hospitals, churches and residential areas within 2 miles)*

1. IDENTIFY	2. MILES TO	3. DIREC. TO

F. OBSTRUCTIONS WITHIN 5 MILES *(If available, attach U.S. Geological Survey quad sheet or equivalent; show obstructions in accordance with applicable obstruction criteria. Also attach master plan if available.)*

1. TYPE OF OBSTRUCTION	2. MILES TO	3. DIREC. TO

G. OPERATIONAL DATA

	PRESENT *Append Letter E if estimated.*	ANTICIPATED 5 YEARS HENCE
1. NO. AND TYPE OF BASED AIRCRAFT *(Annually)*		
Multi-engine		
Single engine		
2. NO. AND TYPE OF LANDINGS *(Monthly)*		
Air Carrier		
General Aviation		

3. ARE IFR OPERATIONS ANTICIPATED ☐ NO ☐ YES, WITHIN YRS.

H. LICENSING *(Check applicable boxes)*

Application for airport licensing

☐ has been made to ☐ will be made to ☐ not required

☐ State ☐ County ☐ Municipal Authority

I. CERTIFICATION

I hereby certify that all of the above statements made by me are true, complete and correct to the best of my knowledge.

SIGNATURE OF PERSON MAKING CERTIFICATION

Date | Title

REGULATIONS OF THE ADMINISTRATOR—PART 625

LANDING AREA, NOTICE OF PROPOSED ESTABLISHMENT, ALTERATION, OR DEACTIVATION

Effective Date, November 15, 1961

Sec.

AUTHORITY: §§ 625.1 to 625.6 issued under secs. 307, 309, 311, 312, 313; 72 Stat. 749, 751, 752, 49 U.S.C. 1348, 1350, 1352, 1353, 1354.

§ 625.1 Basis and purpose.

(a) The basis of this part is found in sections 307, 309, 312, and 313 of the Federal Aviation Act of 1958 as amended.

(b) The purpose of this part is to require all persons to give adequate notice of the proposed establishment, alteration or deactivation of landing areas for civil or joint civil-military use and to prescribe the form and manner of such notice.

§ 625.2 Explanation of terms.

As used in this part, terms are defined as follows:

(a) "Administrator" means the Administrator of the Federal Aviation Agency.

(b) "Alteration" means realignment, modification, enlargement, or deactivation of any runway layout and/or associated taxiways, or other substantial change to the surface of that part of a landing area which is used or intended to be used for the landing and taking off of aircraft.

(c) "Deactivation" means the discontinuance of use of a landing area permanently or for a temporary period of one (1) year or more.

(d) "Establishment" means the construction, reactivation, laying out or otherwise setting apart of a new landing area.

(e) "Landing Area" means any locality, either of land or water, including airports, heliports and intermediate landing fields, which is used, or intended to be used, for the landing and take-off of aircraft, whether or not facilities are provided for the shelter, servicing, or repair of aircraft, or for receiving or discharging passengers or cargo.

(f) "Person" means any individual, firm, copartnership, corporation, company, association, joint-stock association or body politic; and includes any trustee, receiver, assignee, or other similar representative thereof.

§ 625.3 Projects requiring notice.

Except as otherwise provided in § 625.4 all persons proposing to establish, alter or deactivate a landing area are required to give prior notice thereof to the Administrator in the form and manner prescribed herein.

§ 625.4 Projects exempt from notice.

Any person proposing an establishment, alteration or deactivation project of a type listed in this section is not required to give prior notice thereof to the Administrator:

(a) Military projects on military landing areas used exclusively by the military.

(b) Projects for which a request for Federal aid has been filed pursuant to the provisions of the Federal Airport Act (60 Stat. 170; 49 U.S.C. 1101).

(c) Projects involving landing surfaces intended for one-time or short-term use not exceeding a period of 30 days provided daily aircraft operations shall not exceed a total of 10.

(d) Projects involving privately owned landing areas not open to the public, located or proposed to be located, more than 5 miles from any other landing area and 20 miles from any landing area for which a civil or military instrument approach procedure is authorized by the Federal Aviation Agency: *Provided,* That (1) aircraft operations at the proposed location are confined to Visual Flight Rules as prescribed in Part 60 of this title (Civil Air Regulations) and (2) the project is reported to the Federal Aviation Agency for record keeping purposes within 30 days following each such establishment, alteration or deactivation of the landing area.

§ 625.5 Submission of notice.

(a) Notices required in compliance with § 625.3 shall be submitted to the nearest District Airport Engineer's Office or Regional Office of the Federal Aviation Agency, in triplicate on Form FAA–2681, Notice of Proposed Establishment, Alteration or Deactivation of Landing Area, not less than 90 days prior to the date on which action is to begin: *Provided,* That in case of an emergency requiring immediate action, such notice may be communicated to an authorized representative of the Administrator by telephone, telegraph, or other expeditious means, and the executed Form FAA–2681 shall be submitted within 5 days thereafter.

(b) The District Airport Engineer's Office or the Regional Office of the Federal Aviation Agency shall be notified of any delay in excess of 6 months in the date upon which the establishment, construction or alteration is to begin, or of any other change in the data contained in the original Form FAA–2681.

NOTE: Copies of Form–2681 may be obtained from the Federal Aviation Agency, Washington 25, D.C., or from the nearest Regional Office or District Airport Engineer's Office of the Federal Aviation Agency.

§ 625.6 Determination of effect of proposed establishment, alteration or deactivation upon use of airspace by aircraft.

(a) Upon receipt of notice submitted in compliance with § 625.5 the Agency will study the proposal from the standpoint of its effect upon the efficient utilization of airspace and safety of aircraft, consulting with other interested persons when appropriate.

(b) As a result of such study, the Agency will issue its determination as to the effect the proposal would have upon the safe, efficient use of airspace.

(c) Such determination will be furnished to the proponent and state aviation officials, and made available to other interested persons.

The reporting requirements contained in this Regulation have been approved by the Bureau of the Budget.

This amendment shall become effective November 15, 1961.

Issued in Washington, D.C., on October 9, 1961.

N. E. HALABY,
Administrator.

[F.R. Doc. 61–9763; Filed, Oct. 12, 1961; 8:45 a.m.]

Budget Bureau No. 04—R094

FEDERAL AVIATION AGENCY

NOTICE OF LANDING AREA

☐ ESTABLISHMENT
☐ ALTERATION } *Complete All Sections*

☐ DEACTIVATION *Complete Sections A and I only*

NAME OF PROPONENT *(Individual or Organization)*

ADDRESS *(Number, Street, City, Zone and State)*

A. LOCATION OF LANDING AREA *(Attach aeronautical chart showing plotted position)*

1. NEAREST CITY OR TOWN	2. COUNTY	3. STATE	4. DISTANCE AND DIRECTION FROM NEAREST CITY OR TOWN	
			Miles	Direction
5. NAME OF LANDING AREA	6. LATITUDE ° ' "	7. LONGITUDE ° ' "	8. ELEVATION	

B. PURPOSE *(If new landing area – state if landing area is for public or limited private use; list localities to be served. If alteration – briefly describe proposed changes and reasons therefor.)*

DATE CONSTRUCTION

To Begin:

Estimated to be Completed

C. OTHER LANDING AREAS WITHIN 20 MILES

1. NAME	2. MILES TO	3. DIREC. TO

D. LANDING AREA DATA

INDICATE MAG. BRG. OF R/WAYS ▶					
1. LENGTH OF RUNWAY (Feet) — Actual					
1. LENGTH OF RUNWAY (Feet) — Proposed					
2. WIDTH OF RUNWAY (Feet) — Actual					
2. WIDTH OF RUNWAY (Feet) — Proposed					
3. TYPE OF SURFACE — Actual					
3. TYPE OF SURFACE — Proposed					

4. DIRECTION OF PRINCIPAL APPROACH	5. DIRECTION OF PREVAILING WIND

6. DESCRIBE LIGHTING AVAILABLE, IF ANY

E. NOISE ABATEMENT FACTORS *(Distance and direction to schools, hospitals, churches and residential areas within 2 miles)*

1. IDENTIFY	2. MILES TO	3. DIREC. TO

F. OBSTRUCTIONS WITHIN 5 MILES *(If available, attach U.S. Geological Survey quad sheet or equivalent; show obstructions in accordance with applicable obstruction criteria. Also attach master plan if available.)*

1. TYPE OF OBSTRUCTION	2. MILES TO	3. DIREC. TO

G. OPERATIONAL DATA

	PRESENT *Append Letter E if estimated.*	ANTICIPATED 5 YEARS HENCE
1. NO. AND TYPE OF BASED AIRCRAFT *(Annually)* Multi-engine		
Single engine		
2. NO. AND TYPE OF LANDINGS *(Monthly)* Air Carrier		
General Aviation		

3. ARE IFR OPERATIONS ANTICIPATED ☐ NO ☐ YES, WITHIN YRS.

H. LICENSING *(Check applicable boxes)*

Application for airport licensing

☐ has been made to ☐ will be made to ☐ not required

☐ State ☐ County ☐ Municipal Authority

I. CERTIFICATION

I hereby certify that all of the above statements made by me are true, complete and correct to the best of my knowledge.

SIGNATURE OF PERSON MAKING CERTIFICATION

Date | Title

AC 150/5390-1

HELIPORT DESIGN GUIDE

November 1964

FEDERAL AVIATION AGENCY

Federal Aviation Agency

ADVISORY CIRCULAR

AC NO:	AC 150/5390-1
	AIRPORTS
EFFECTIVE:	11/3/64

SUBJECT: HELIPORT DESIGN GUIDE

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1. PURPOSE. This advisory circular contains design guidance material for the development of heliports, both surface and elevated, to serve single and multiengine helicopters operating under visual flight rules (VFR). The provisions of this Guide are for the advice of the public. The guidance material described is acceptable in accomplishing a project meeting the eligibility requirements of the Federal-aid Airport Program.

2. CANCELLATION. This advisory circular cancels the FAA publication, "Heliport Design Guide," dated December 1959.

3. REFERENCES.

   a. "Administration Buildings for General Aviation Airports," 1960.

   b. "Airport Design," 1961, and Supplement No. 1, 1962.

4. HOW TO GET THIS PUBLICATION. To obtain additional copies of this circular, AC 150/5390-1, "Heliport Design Guide," send request to the Federal Aviation Agency, Distribution Section, HQ-438, Washington, D. C. 20553.

Cole Morrow

Cole Morrow, Director
Airports Service

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Appendix 1.

HELIPORT DESIGN GUIDE

CHAPTER 1. INTRODUCTION

1. GENERAL. This advisory circular is issued as a guide for the preparation and construction of heliports of various types and to assist public and private groups to understand the need for heliport development. The Federal Aviation Agency (FAA) has prepared this material in cooperation with industry groups in order to provide a centralized source of heliport design criteria for those desiring this information. The guide is also intended to encourage the development of heliports as part of the national transportation system. It will help to acquaint heliport owners and developers with the Federal Government's responsibilities in this field.

2. SCOPE.

   a. The guide outlines the basic physical, technical, and public interest factors which should be considered in establishing heliport sites. The heliports considered range from modest exclusive use types (the vast majority in use today) to fully developed facilities suitable for multiple operations. The information offered here is based on known helicopter performance and sound operating practices. It is a summation of many years of experience at helicopter landing sites representing the varied types in use in the United States.

   b. The information provided is advisory in nature and does not establish regulatory requirements. Furthermore, the specific recommendations presented are for the average or usual situation and may not be appropriate in every case. To assist in the interpretation of this information, it is suggested that technical advice be obtained from helicopter operators, helicopter manufacturers and FAA District Office technical personnel. Through consultations, the community can be assured of professional assistance in developing a heliport that is safe, practical, and useful. Information about many of the items mentioned throughout the circular is referenced in the Bibliography.

3. TERMINOLOGY. The following are definitions of terms as they are used in this advisory circular:

   a. Airport. This term means an area that is used or intended to be used for the landing and takeoff of aircraft.

b. Approach-Departure Path. An approach-departure path is a clear path selected for flight, extending upward and outward from the edge of the landing and takeoff area.

c. Ground Effect. Ground effect or "ground cushion" is an improvement in flight capability that develops whenever the helicopter flies or hovers near the ground or other surface. It is produced by the reaction of the rotor downwash against the surface that increases the lifting pressure of that section of air.

d. Heliport. A heliport is an area, either at ground level or elevated on a structure, that is used or intended to be used for the landing and takeoff of helicopters and includes some or all of the various facilities useful to helicopter operation such as helicopter parking, waiting room, fueling, and maintenance equipment.

e. Helistop. A helistop is a heliport, either at ground level or elevated on a structure, for the landing and takeoff of helicopters but without auxiliary facilities such as waiting room, hangar, parking, maintenance, or fueling equipment.

f. Landing and Takeoff Area. The landing and takeoff area is that area of the heliport where the helicopter actually lands and takes off and includes the touchdown area.

g. Obstruction Clearance Surface. Obstruction clearance surfaces are planes extending outward and upward from the landing and takeoff area at angles compatible with the flight characteristics of the helicopter. They are used by the FAA to evaluate approach-departure paths for clearance of obstructions.

h. Off-Heliport Landing Site. An off-heliport landing site is a takeoff and landing area intended for temporary or occasional helicopter use.

i. Taxiing. Taxiing is a powered movement of an aircraft from one area to another usually just before takeoff or after landing. Helicopters equipped with skid-type landing gear are taxied in a hovering position a few feet above the ground, and this is referred to as "air taxiing" or "hover taxiing." Larger helicopters usually are equipped with wheel landing gear, and these frequently ground taxi as well as air taxi.

j. Touchdown Area (Helipad). The touchdown area is that part of the landing and takeoff area where it is preferred that the helicopter alight.

4. BACKGROUND.

a. Helicopter Operations. The first practical helicopter was developed in the United States just prior to World War II and was placed into operation by the military services in 1943. Civilian helicopters were introduced in 1946 and immediately found their way into a wide range of uses. Helicopter operations have expanded rapidly since that time, and a large part of this activity is performed by commercial operators. In recent years, there has been a notable increase in the number of helicopters flown for personal use and as private business aircraft.

b. Public Transportation Service. Scheduled helicopter airline service was initiated in 1947 to expedite mail delivery in the Los Angeles area. Scheduled passenger service was added there in 1954 after being inaugurated in New York City the year before. Similar services were begun in Chicago in 1956 and in San Francisco/Oakland in 1961. Scheduled passenger traffic has shown rapid increases since these beginnings. At present, passenger transportation also is being provided by helicopter air taxi operators in many cities and towns throughout the country on a charter and contract basis.

c. Heliport Development. The helicopter's growing position as an important element in the national transportation system has brought about a keen awareness of the enthusiasm for this versatile aircraft. A major factor in developing the full potential of the helicopter is the provision of an adequate system of heliports.

(1) By January 1964, nearly 800 heliports in the United States and possessions had been listed in industry publications, and hundreds of temporary or occasional landing sites are being used. In selecting future locations for helicopter landing sites, it must be borne in mind that the function served by the helicopter is not the same as that served by other aircraft. Instead, it is more akin to the taxicab or the delivery truck and is capable of going where passengers or shippers require.

(2) The helicopter cannot serve effectively if it is limited to edge-of-town heliports, for example, but must have landing areas located near the actual origins and destinations of traffic. This fact means that heliports, whether for private, commercial, or airline use, definitely will be needed in certain of the congested and highly developed areas of a community.

d. Heliport Construction.

(1) Heliport facilities do not require a large area and usually are inexpensive to construct because they need not be elaborate installations. Experience has shown that safe and useful heliports can be established using a small sod or paved plot, fenced to exclude unauthorized personnel, and marked as to use. Rooftop or elevated heliports can be economically advantageous in some areas because they minimize the cost of land acquisition and usually do not involve high additional structural expense expecially if included in the original structural design of the building.

(2) The need for facilities such as waiting rooms, parking lots, etc., is determined by the type of service to be provided. Prospective heliport developers will find valuable assistance available from the helicopter industry. Before proceeding with heliport development and construction, expert advice should be sought.

e. Local Authority.

(1) In those communities seeking a heliport facility, a careful study of the community's local laws, rules, and regulations should be made to determine whether they permit or properly provide for the establishment of a permanently located heliport. It is important that local regulations also permit off-heliport landings on a temporary or occasional basis. Since helicopters do not require prepared runways, etc., landings can be made safely in a variety of clear sites without formally declaring the site a "heliport." Federal Aviation Regulations (FAR) and most state jurisdictions permit this type of operation in order to allow for accomplishment of many valuable helicopter services. For instance, rescue and ambulance missions often require such off-heliport landings.

(2) The main difference between a heliport and an off-heliport landing site is that the heliport has been formally approved for continual use at the permanent location whereas use of the off-heliport site is for a limited time period.

CHAPTER 2. THE ROLE OF GOVERNMENT

5. FEDERAL AND LOCAL GOVERNMENTS. Federal and local governments have similar objectives in the field of heliport development, not only to ensure that public interests are protected but also to assist the public in understanding helicopter operations as an important part of the transportation system. The Federal Government through the FAA has established safety rules for aircraft and helicopter operations. These regulations concern such matters as minimum safe altitudes, weather ceiling and visibility limitations, right of way in the air, and related standards needed for safety of persons and property both in the air and on the ground. The Federal safety regulations are comprehensive. The premise for such broad Federal regulation of the navigable airspace is to achieve safety through uniform and centralized control of aviation operations. Most State and local jurisdictions find their safety-of-flight requirements covered by the Federal regulations. It is quite common, however, for State and local authorities to have detailed rules governing the establishment and licensing of heliports.

6. FEDERAL AVIATION REGULATIONS. The FAA does not license heliports. However, the Agency does prescribe through its regulations various requirements which must be observed by the user which indirectly affect the heliport design. Under certain conditions, through the Federal-aid Airport Program, the FAA may be able to assist in the development of specific heliports designed for public use. Specific regulations of interest to heliport developers are as follows:

   a. FAR Part 157. Part 157, "Notice of Construction, Alteration, or Deactivation of Airports," requires that any proposal to establish, reactivate, alter, or deactivate a heliport be submitted in the form of a notice to the nearest FAA Airports District Office at least 90 days before the date on which work is to begin on the project. A facsimile of the form, FAA Form 2681, used for this purpose is contained in Figure 1. This Regulation does not apply to a privately owned heliport limited to VFR operations that is not open to the public and is located more than 5 miles from any other airport or heliport, or to one which is more than 20 miles from any airport or heliport for which an instrument approach procedure is authorized by FAA. However, the FAA must be notified of the project for record purposes within 30 days after completion.

   b. FAR Part 77. Part 77, "Notice of Construction or Alteration Affecting the Navigable Airspace," sets forth the requirements for notice to the FAA Administrator for certain proposed construction or alteration of structures that would affect the navigable airspace. Part 77 requires persons intending to erect certain structures near a heliport to notify the FAA of their intentions. The notice form, FAA Form 117, used in connection with this Regulation is shown in Figure 2.

c. FAR Parts 27 and 29. These Parts of the FAR set forth the airworthiness standards for the manufacture of helicopters. Part 27 (formerly CAR 6), "Rotorcraft Airworthiness; Normal Category," covers helicopters up to a maximum size of 6,000 pounds gross weight, and Part 29 (formerly CAR 7), "Rotorcraft Airworthiness; Transport Categories," covers those of larger size.

d. Operating Regulations. FAR Part 91 prescribes general operating rules for all aircraft. FAR Parts 125, 133, and 135 set forth the requirements for various types of commercial operations, and FAR 127 contains the operating rules for scheduled air carrier service by helicopters. FAR Part 61 pertains to certification requirements of pilots and flight instructors.

e. FAR Part 151. FAR Part 151 prescribes the policies and procedures for administering the Federal-aid Airport Program under the Federal Airport Act. Under this Program, the FAA provides financial assistance for needed heliport as well as airport development. Such assistance is available to local public agencies such as States, municipalities, and other political subdivisions on a matching basis. Normally, Federal participation in the allowable cost of such development is 50 percent. In order to be eligible, the land comprising the site of the heliport must be publicly owned and be under the control of a public agency. In addition, the site must not be found objectionable from an airspace utilization standpoint. FAA policy does not require that a location be served by scheduled air carriers to be eligible for Federal assistance under this Program.

7. STATE REQUIREMENTS. The establishment of a heliport usually will require prior approval or the issuance of a license from the appropriate State Aeronautics Commission or similar authority. In some instances, State licensing requirements apply only to airports and heliports open to the public; others, however, apply to all airports and heliports within the State.

8. LOCAL REQUIREMENTS. Some local jurisdictions have rules and regulations governing the establishment of a heliport. Zoning laws and the related provisions of building codes, fire regulations, and similar ordinances should be taken into account by the heliport planner.

9. GOVERNMENT ASSISTANCE. In view of the above, it is apparent that heliport developers should seek the cooperation and assistance of the FAA, State, and local authorities in the early stage of planning in order to proceed with full knowledge of both the regulatory and economic needs. The FAA is prepared to give technical advice on request. Preliminary coordination may be accomplished with the FAA District Airport Engineer. Most State aviation authorities have established procedures for handling airport and heliport applications and are experienced in aviation matters. Local governmental authorities often do not have an

established procedure for handling heliport applications, and it may be necessary to explain to them the special nature of helicopter operations. In some communities, education of the public, particularly of the immediate neighbors of the heliport, may be needed to point out the advantages of helicopter services to a community and to clarify any misunderstandings related to the services.

10. PROCURING LOCAL APPROVAL. Heliport developers may find the following checklist helpful in pursuing their objectives. In some instances, all of these listed steps will not be necessary because circumstances vary in different parts of the country. In certain cases, additional steps may be necessary.

a. Review local rules and regulations (city and county) regarding zoning, city planning, building requirements, ordinances, etc., to determine local compliances required.

b. Select a suitable heliport site.

c. Contact a local helicopter operator or helicopter manufacturer's representative to check the operational feasibility of the site being considered.

d. Submit prior notice of heliport development to the FAA Airports District Office.

e. Refer to subsequent sections of this guide for information on the technical criteria for construction of heliports. Discuss with helicopter operators and FAA representatives the selection of routes and operating procedures.

f. Submit application with information summary on proposed operating procedures to State and/or local authorities for license or approval of heliport including request for local request for local rezoning if needed. Information summary should be in sufficient detail to answer pertinent questions about intended heliport operations.

CHAPTER 3. HELICOPTER CHARACTERISTICS

11. HELICOPTER DESIGN. Helicopter designs vary considerably, but all helicopters achieve flight by approximately the same means. The rotor blades serve as a rotary wing for the helicopter, eliminating the need for a fixed wing such as is used on airplanes. The helicopter gains direct, upward lift from the rotor blade system. Change in direction is achieved by tilting the rotor disc (tip-path-plane) in the desired direction of turn.

    a. Helicopter Airworthiness. All civil helicopters manufactured or operated in the United States must meet the airworthiness requirements of the FAA before being certificated for operation. A flight manual is supplied by the manufacturer for every approved model helicopter certificated by the FAA. In addition, every operating aircraft must at all times possess a valid Airworthiness Certificate indicating that the aircraft continues to meet the safety standards prescribed by the regulations. Airworthiness Certificates are reissued periodically by FAA inspectors following a maintenance inspection of the aircraft. The FAA maintains field offices in numerous locations throughout the country to ensure adequate inspection and surveillance of the civil aircraft fleet.

    b. Helicopter Types. Helicopters currently in civil use vary in the number of main rotors, the number and type of engines, and in size and weight.

        (1) Early helicopter designers experimented with a variety of configurations. However, the only designs found suitable for production have been those using either one or two main rotors. Most small helicopters under 3,500 pounds maximum gross weight employ a single main rotor system. Larger helicopters are manufactured in various designs: single main rotor, tandem rotor (one main rotor forward and one aft), and intermeshing rotors (two rotors mounted side by side). Various advantages accrue to each type and all have effective uses. At present, the intermeshing main rotor design is used only for military helicopters, but the single and tandem rotor designs are flown by both civil and military users.

        (2) Before 1962, all civil helicopters were of the single-engine design; but during that year, two new twin-engine types went into service with the helicopter airlines. These new designs have gas turbine engines which provide greater power per pound of engine weight than conventional, reciprocating engines. At the same time, other new helicopters came into operation featuring a single gas turbine engine.

c. Helicopter Configuration. Helicopter dimensions and photographs appear in Figures 3, 4, and 5. Although subject to change whenever modifications are made or new models are introduced, this information is helpful in providing a general picture of the size and configuration of helicopters in current use. It should be noted that the 2-, 3-, and 4-place helicopters comprise 95 percent of the civil helicopter fleet, and that the large transport type helicopters are used primarily by the scheduled helicopter airlines. Commercial helicopter services and private and business helicopter owners are located in nearly every State and comprise the bulk of helicopter activity; scheduled helicopter airline services constitute a small portion of the total activity.

12. HELICOPTER PERFORMANCE.

a. Operation. The characteristics of helicopters with their capability of essentially vertical flight make it possible for them to takeoff safely from areas only slightly larger than the craft itself. On takeoff, the helicopter usually rises vertically a few feet above the heliport surface then accelerates forward and upward on a sloping path to climb-out speed and on to the enroute altitude. On landing, the helicopter usually descends from enroute altitude at reduced speed to a hovering condition (zero forward speed) several feet above the surface. The actual landing is then made by a vertical descent to a selected point on the heliport or on the parking apron of the heliport. Sideward flight can be performed easily during the final landing phase to place the helicopter in the most desirable position.

b. Speeds. Normal speeds for the helicopter range from zero (in hovering flight) to 90+ knots (nautical miles per hour) for the small helicopters and from zero to 120-145 knots for the larger types. Helicopters seldom have need to fly more than 1,000 to 1,500 feet above the ground although many have the ability to fly more than 10,000 feet above ground.

c. Safety Features. The helicopter has several unique safety features not possessed by other aircraft, a major one being the ability to hover a few feet above the ground and perform a number of important safety checks prior to committing the helicopter to full takeoff. A helicopter uses almost full power to hover, and the pilot is able to hold the aircraft in this position while he checks all instruments to ensure that the engine and other accessories are functioning properly. Also, he can easily determine that all flight controls are operating properly and that the aircraft is loaded within safe control limits of weight and balance. Other aircraft can make only simulated checks of these items on the ground, but the helicopter can be checked for each item in flight in a hovering position before flying from the landing site. Another key advantage

of the helicopter is that a precautionary landing can be made when a pilot receives any indication that a component is not functioning exactly as it should. It is not necessary to locate and fly to an airport as is the case with fixed-wing types of aircraft.

d. Emergency Operation. In the event of engine stoppage or other emergency conditions in flight, the helicopter can glide to a safe landing by means of autorotation. During this maneuver, the main rotor continues to turn free of the engine and produces sufficient lift to enable the helicopter to glide to a satisfactory landing. Single-engine helicopters are not able to continue level flight if engine stoppage occurs and must perform an immediate autorotation landing. Under most conditions, today's multiengine helicopters can continue level flight with one engine inoperative. There are certain times, however, when they cannot continue level flight but must descend gradually to a clear landing area. It is necessary that flight routes for all single-engine and some multiengine helicopters be selected so as to provide adequate enroute emergency landing sites.

CHAPTER 4. CLASSES OF HELIPORTS/HELISTOPS

13. GENERAL. Classification of heliports/helistops is provided to indicate the major differences between kinds of installations for helicopter operations. The differences lie mainly in use, types of helicopters served, and the nature of supporting facilities included on the heliport. Classification is helpful in planning and zoning for heliports and serves to relate the operational factors involved to land use considerations.

a. Use. A heliport/helistop is either a privately operated exclusive use facility, on which the operator has control over the type and number of helicopters which may use it, or it is a publicly owned and operated facility open to any helicopter operator.

b. Size. A heliport/helistop may be any size down to the minimum recommended in this chapter and defined in Chapter 6. The size refers to the dimensions of the landing and takeoff area.

c. Helicopter Types. Helicopter types refer to those in the normal category as defined in FAR Part 27 or those in the transport category as defined in FAR Part 29.

(1) Normal category helicopters are machines 6,000 pounds or less maximum gross weight operated principally in private, business, charter, or commercial flying other than air carrier operations.

(2) Transport category helicopters are single-engine or multi-engine machines of unlimited weight operated in scheduled or nonscheduled passenger service.

d. Supporting Facilities. These refer to passenger and/or cargo facilities, helicopter parking, fueling, and maintenance provisions on the heliport. A helistop has none of these facilities except that it may be a pickup and discharge point for passengers or cargo.

14. HELIPORT CLASSIFICATION. Heliports are classified in accordance with uses, as follows:

Class I - Private
Class II - Public (Small)
Class III - Public (Large)

They are further subclassified in accordance with their available support facilities, as follows:

Subclass A - Minimum support facilities - no buildings, maintenance or fueling (a helistop).

Subclass B - Limited support facilities- no maintenance or fueling.
Subclass C - Complete support facilities.

Note: Any heliport may be either privately or publicly owned or operated. Whether it is private or public does not affect its subclassification.

CHAPTER 5. SITE SELECTION

15. GENERAL. The selection of a heliport site involves consideration of four major elements: (1) the desired location and physical layout; (2) operational safety; (3) the effect on navigable airspace; and (4) the effect on the surrounding community. Each of these elements is discussed briefly to provide a general background for site selection.

16. LOCATION AND PHYSICAL LAYOUT.

a. Heliports may be sited on the ground or on suitable structures on land or over water. Ground level sites usually are the easiest sites to prepare and normally provide the most convenient access for individuals using the heliport (Figure 6). In comparison, rooftop or other elevated structures can reduce or eliminate the factor of land cost and frequently provide better flight access to the heliport.

b. The layout of the heliport is primarily dependent on the operating characteristics of the helicopters and the type of support facilities desired. Thus, if a minimum landing facility for a single helicopter is desired and no support facilities are required, a relatively small site will suffice.

17. OPERATIONAL SAFETY. The major safety consideration of a heliport lies in the availability of suitable approach-departure paths leading to and from the heliport. The routes to heliports should be over terrain which affords suitable emergency landing areas no farther away than a glide angle of one foot vertically to two feet horizontally from the proposed altitude (unless the manufacturer's autorotative performance data indicate other than such a glide angle). This provision is necessary for all but multiengine helicopters capable of continued flight on one engine. Heliport approach-departure routes usually are sought over waterways, beaches, parks, golf courses, industrial yards, and vacant land. Usually avoided are routes over residential developments, playgrounds, shopping districts, and other highly populated areas. An accurate evaluation of a heliport site and its routes and possible obstacles to flight is best determined by a helicopter flight check coupled with a detailed on-site inspection.

18. EFFECT ON NAVIGABLE AIRSPACE. It is necessary to study most proposed heliport sites to determine what effect their operation might have on other users of the navigable airspace. This type of study is conducted by the FAA following the submittal of a notice of construction under the requirements of FAR Part 157. This element of site selection is mainly of concern only when the proposed site is near an active airport or other established aeronautical activity. Heliport locations that would interfere with landing and takeoff operations at an established airport or would conflict with instrument approach patterns are

generally considered unsuitable. Except for these operations, other aircraft normally operate well above the altitudes utilized by helicopters.

19. EFFECT ON SURROUNDING COMMUNITY. The fact that helicopters can operate safely at sites of limited size means that heliports frequently will be planned for areas that previously have not experienced any degree of aviation activity. Consequently, if the heliport plan is to be successful, the developer most likely will have to take a substantial part in educating the public, especially the neighboring property owners, about the specialized characteristics of the helicopter that make it acceptable at close-in locations.

a. Zoning.

(1) As might be expected, few existing zoning ordinances contain provisions for heliports. Some zoning ordinances deal with airports, but this normally provides for more restrictive zoning criteria than are appropriate for heliports. Consequently, a revision to the zoning regulations is one of the most obvious and necessary steps in pursuing a sound heliport development plan (see Chapter 2, Paragraph 8).

(2) In general, zoning regulations should treat heliports as a permitted use in industrial, manufacturing, agricultural, or unzoned areas. In addition, some heliports (especially those without support facilities or with limited facilities) should be a permitted use in certain commercial, retail, and business districts (Figure 6). Heliports also should be eligible for consideration in other zones (including residential) under conditional use procedures. Provisions for the occasional or infrequent use of off-heliport landing sites on short notice also should be covered in a reasonable manner by appropriate ordinances.

b. Sound Levels. Sound caused by helicopter operations within or adjacent to populated areas is an important factor in planning for heliports. A heliport should be located so that the noise generated by helicopters will not cause excessive disturbance to surrounding neighbors. Helicopter sound is greatest directly underneath the flight path on takeoff and landing but is of short duration because a takeoff or landing involves only a few seconds. Engineering studies made by the FAA and private organizations indicate that outside the immediate vicinity of the heliport, people are routinely exposed to higher noise levels in a normal city environment than those produced by helicopter flight. Many people will give special notice to helicopter sound initially since it is a different type of sound than they are accustomed to hearing. Once people become familiar with this new sound, it usually goes unnoticed at distances beyond the immediate area

surrounding the heliport. It is within this adjacent area, therefore, that consideration must be given to the sound levels involved. Each situation should be evaluated according to its particular circumstances. If in a particular area the helicopter noise from ground operations persists in being a problem, lessening of the noise may be achieved by erecting special sound-deadening fences, shrubbery, or other sound absorbent material.

20. HELIPORTS AT AIRPORTS.

a. Large and medium sized communities are beginning to recognize the need for helicopter services. If such services warrant the operation of a substantial number of helicopters into airports, designated heliport areas should be established at the airports. The helicopters, in shuttling traffic to and from downtown areas and the surrounding communities, should land and takeoff at locations convenient to the terminal facilities.

b. The landing and takeoff area should be located so as to:

(1) Provide adequate separation from fixed-wing traffic. The recommended clearances between runway centerline and building line are contained in current FAA airport design criteria.

(2) Be as close as possible to passenger check-in areas for fixed-wing aircraft.

(3) Avoid as much as possible the mixing of taxiing fixed-wing aircraft and helicopters.

c. Alternative locations for heliports at an airport are:

(1) The roof of the terminal building.

(2) The apron adjacent to the terminal building used by the fixed-wing aircraft.

(3) A roof over the auto parking area.

(4) Other ground level areas near the terminal building separated from the fixed-wing aircraft apron.

d. There are advantages and disadvantages to all four locations. Normally, a ground level site is preferred. The most convenient and least expensive way to obtain this type of site is to reserve a part of the fixed-wing terminal apron for the landing and takeoff of helicopters. Another plan is to build a special pad for helicopter operations on the airside of the terminal building.

21. ORIENTATION. Although helicopters can maneuver in relatively high crosswinds, the landing and takeoff areas should be oriented preferably to permit operation into the wind. Other considerations affecting orientation are adjacent populated areas, restricted areas, topography, and obstructions.

CHAPTER 6. PHYSICAL CHARACTERISTICS OF HELIPORTS

22. GENERAL. A heliport is recognized and defined as an area for the landing and takeoff of helicopters, but not every site used for this purpose need be designated a heliport. Many clear areas normally used for other purposes can accommodate occasional or infrequent helicopter operations. To differentiate these sites from heliports, they are termed "off-heliport landing areas." The distinction is explained to emphasize that it is neither necessary nor feasible to establish a heliport for all helicopter operations. To restrict helicopters solely to areas officially designated as heliports would limit unnecessarily the usefulness of these versatile aircraft.

a. Application. It is impractical to recommend criteria for landing sites which would be used infrequently. This guide applies only to sites that are developed to serve helicopters regularly during the foreseeable future.

b. Stage Development. Stage development of heliports is encouraged when it is deemed unnecessary or uneconomical to construct a facility to its full potential in the beginning. Heliports developed on a modest scale for present needs can usually be enlarged or modified to meet increased future requirements provided sufficient ground space is available. In the case of privately owned facilities, the greatest anticipated need is for more new sites; the expansion of initial sites is secondary. If space is available to meet present needs but does not provide for future expansion, additional sites should be planned so that the overall community heliport plan can be kept responsive to developing needs.

23. HELIPORT LAYOUT. The size, shape, and appurtenances of heliports are determined by a variety of interrelated factors--principally the nature of the site available, size and performance of the helicopter, and the buildings or other objects in the surrounding area. Although heliports may be square, rectangular, or circular, an irregular-shaped site may be equally functional. Minimum operational safety requirements will not vary from one design to another (Figures 6 and 7).

a. Landing and Takeoff Area. Since landing and takeoff areas should provide sufficient space for the helicopter to maneuver, size depends to a large extent on the overall length of the helicopter, i.e., the tip to tip dimension of the rotor system. These dimensions vary considerably according to the type of helicopter (Figures 3 and 4).

b. Heliport Dimensions. Heliport landing and takeoff area dimensions are influenced by heliport usage (private or public), category of helicopters served, and their corresponding operational requirements. A private heliport could be developed by an individual or corporation to accommodate a small or large helicopter; therefore, recommendations as to private heliport size are expressed in terms of the size of the helicopter. A public heliport developed by a municipality or individual should be related to the various types of helicopters that will be served. This distinction is reflected in the following heliport dimensional recommendations.

(1) Private Heliport (Class I). The landing and takeoff area dimensions are selected by the owner and are based on the overall length of the helicopter. Minimum length of the area should be at least 1.5 times the overall length of the helicopter and the width equal to the length. For example, if the largest helicopter to be served has an overall length of 60 feet, the minimum dimensions would be 90 feet by 90 feet (Figure 8).

(2) Small Public Heliport (Class II). The landing and takeoff area dimensions should be sufficient to accommodate any of the various models of helicopters in the normal category, the airworthiness requirements of which are defined in FAR Part 27 (formerly CAR 6). These heliports should have a minimum landing and takeoff area length of 2.0 times the overall length of the helicopter and a width of 1.5 times the overall helicopter length (Figure 9).

(3) Large Public Heliport (Class III). The landing and takeoff area dimensions should be sufficient to accommodate any model helicopter in the normal and transport categories, the airworthiness requirements of which are defined in FAR Parts 27 and 29 (formerly CARs 6 and 7). These heliports should have a minimum landing and takeoff area length of 2.0 times the overall length of the helicopter and a width of 1.5 times the overall helicopter length (Figure 10).

(4) Exceptions to Landing and Takeoff Area Recommendations. Lesser dimensions than are indicated for the three classes of heliports described above may be acceptable upon thorough FAA evaluation of the proposed site if it is one where an unusually extensive peripheral area surrounds the heliport. An example of such a heliport is a waterfront pier which may project out into the water and has unobstructed approaches on three sides.

(5) Circular Heliports. For circular heliports, the diameter of the landing and takeoff area should be equal to the larger dimension recommended above for each of the heliport classes.

(6) Heliports at Elevations Less Than 1,000 Feet Above Sea Level. Minimum recommended landing and takeoff area dimensions shown above are applicable to all heliports 1,000 feet above sea level or less.

(7) Heliports at Elevations More Than 1,000 Feet Above Sea Level. For elevations of more than 1,000 feet above sea level, it is recommended that consideration be given to increasing the length of the landing and takeoff area or diameter (if circular) by 15 percent per 1,000 feet of sea level elevation above 1,000 feet or that part thereof, in order to prevent drastic off-loading of non-supercharged helicopters. For example, on a heliport 3,000 feet above sea level, the minimum length would be increased by 30 percent.

24. APPROACH-DEPARTURE PATHS.

a. General. Approach-departure paths are selected to provide the most advantageous lines of flight to and from the landing and takeoff area. These paths are considered as beginning at the edge of the landing and takeoff area and usually are aligned as directly as possible into the prevailing winds. It is generally necessary to have at least two paths which should be separated by an arc of at least 90 degrees for Class I and Class II heliports and 135 degrees for Class III heliports (Figure 11). Curved paths are quite practical and are necessary in many cases to provide a suitable route. Emergency landing areas must be available along all approach-departure paths for all heliports except those heliports serving multiengine helicopters able to continue flight and meet certain climb performance on one engine.

b. FAA Study. Where an FAA study is required, approach-departure paths will be examined to determine the availability of suitable emergency landing areas. If there is any doubt as to landing area availability along the proposed approach-departure paths, it is advisable to contact the FAA or an experienced helicopter operator in the early stages of planning.

25. OBSTRUCTION CLEARANCES.

a. General. Imaginary obstruction clearance planes are established for each heliport that is subject to the notice (paragraph 6a) for the purpose of identifying those objects that may be obstructions to helicopter flight. These planes define vertical and

transitional clearances above the ground surface in the vicinity of the heliport (Figure 11).

b. Approach-Departure Clearance Surfaces. Obstruction clearance planes in the direction of the approach-departure paths extend outward and upward from the edge of the landing and takeoff area to the enroute altitude at an angle of eight feet horizontally to one foot vertically (8:1). The width of the sloping plane surface coincides with the dimension of the landing and takeoff area at the heliport boundary and flares uniformly to a width of 500 feet at the enroute altitude. The planes are symmetrical about the centerlines of the approach-departure paths.

c. Transitional Surfaces. Obstruction clearance planes normal to the centerline of the approach-departure clearance surfaces are transitional surfaces or "side slopes" to identify those objects that penetrate the planes as obstructions. Such obstructions may or may not be compatible with safety of flight depending upon a study of the site. The side slopes extend outward and upward from the edges of the landing and takeoff area and approach-departure clearance planes at an angle of two feet horizontally to one foot vertically (2:1) to a distance of 250 feet from the center of the landing and takeoff area and 250 feet from the centerline of the approach-departure clearance surfaces.

26. PERIPHERAL AREA. A peripheral area surrounding the landing and takeoff area, with a width not less than one-quarter the overall length of the helicopter, is recommended as an obstruction free safety zone. For ground heliports, a safety barrier along the outside edge of the peripheral area is recommended to exclude unauthorized persons from the helicopter operational surface. The area should be kept free of hazardous objects and operations not compatible with the safe operation of the helicopters maneuvering on the heliport.

27. HELICOPTER PARKING AREA. The need for a parking area is dependent upon the operational requirement of a particular heliport and the needs of the users. Helicopter parking positions normally are adjacent to the landing and takeoff area. The length and width of each position is equal to the overall length of the helicopter, and five-foot clearance between adjacent positions is suggested.

28. ADMINISTRATION BUILDING AND SERVICE AREAS. An administration building and service area, if needed, includes an apron which provides space for helicopter maneuvering and parking. In some locations, service and storage hangars and a maintenance building also may be required. The need for these various facilities, their size, and the space required for them is dependent upon the overall purpose of the heliport, the frequency of present and anticipated operations, and the volume of

passengers, mail, and cargo. Many of the principles and procedures presently employed in the planning and development of airports can be used in planning for the above requirements. The FAA publication, "Administration Buildings for General Aviation Airports," is a recommended reference.

29. CONSTRUCTION OF HELIPORT SURFACE. Briefly outlined below are the basic requirements for constructing the landing and takeoff area, taxiway, and apron for ground surface heliports.

a. Grading and Drainage. The purpose of grading is to provide areas on which aircraft can operate safely and to ensure adequate drainage control. Helicopter operating areas should be free of abrupt grade changes and excessive grades. The grading should be planned to provide for runoff of surface water to the fullest extent possible in order to minimize ponding and saturation. When grading alone cannot provide satisfactory drainage, some system of ditches and/or an underground drainage system may be utilized to prevent surface and subsurface water from inconveniencing helicopter operations.

b. Pavement Construction. The effects of rotor downwash and turbine engine ingestion suggest some kind of stabilization of the landing and parking surfaces if the heliport is not turfed. If the facilities will be utilized frequently, most sites will require paving. The pavements may consist of stabilized local soil or aggregate with a bituminous surface treatment. The pavement thickness varies with the type of soil and climatic conditions. A type of surface should be selected that will serve the needs of the heliport most economically from the standpoint of initial cost and maintenance required.

CHAPTER 7. ELEVATED HELIPORTS

30. DESIGN CONSIDERATIONS.

a. Whenever ground level sites are not available or are generally unsuitable, an elevated site may be practical. Privacy of the heliport site, quick access to upper floor building areas, and more open flight routes are some of the reasons why rooftop or other elevated sites may be preferred.

b. Elevated heliports may be located on piers (Figure 12) and other structures over water as well as on buildings. As in ground level heliports, the landing area dimensions are keyed to the size of the helicopter; but in most cases, the natural open areas around a roof or elevated platform permit smaller elevated landing and takeoff areas without the usual peripheral area associated with ground level sites. Approximately the same requirements for approach-departure paths apply to both elevated and ground level heliports.

c. In planning rooftop heliports, it is important to consider local building codes regarding construction, occupancy, use, egress, and fire regulations. Furthermore, designers should consider the effect of rooftop construction such as elevator-shafts, penthouses, air conditioning towers, etc., on the approaches to the heliport (Figure 13). For any rooftop operation, particularly scheduled operations, an FAA study of the site and operational procedures will be necessary in accordance with FAR Parts 127 and 157 (Figure 14).

31. LANDING AND TAKEOFF AREA.

a. Area Configuration. The landing and takeoff area may cover the entire area of the elevated or roof surface, or it may be only a part of that area specifically marked as a helicopter operational site. Also, the entire landing and takeoff area may be the same size as the touchdown area, or it may include more space than the touchdown area. If the heliport is other than square or round in shape, it is usually desirable to orient the long axis of the landing and takeoff area into the direction of the approach-departure paths.

b. Dimensions.

(1) The dimensions of the landing and takeoff areas recommended for elevated or rooftop heliports are the same as for the comparable class of ground heliport, see paragraphs 23b (1) through (7).

(2) The dimensions referenced above represent minimum clear areas. Where a load distribution pad (Figures 15 and 16) is utilized, the pad (actually the touchdown area) may be smaller, commensurate with the configuration of the landing gear dimensions and spacing, but the clear area recommended above should be maintained. Load distribution pads as small as 20 feet by 20 feet have been found satisfactory in a number of instances.

32. STRUCTURAL DESIGN. The landing and takeoff area must be designed for the aircraft that will use it and the added loads incident to the personnel traffic to and from the helicopter. In the case of small craft, the live loads other than the helicopter (i.e., snow, crowds of people, or freight) may govern. With larger craft, the loads from the helicopter normally will be the governing factor.

a. Strength. The strength requirements for an elevated surface are determined through consideration of the helicopter's gross weight and landing-gear strength. Most small- and some medium-sized helicopters are equipped with skid- or float-type landing gear. Large helicopters are equipped with wheel landing gear consisting of two main gear of one or two wheels each and one tail or nose gear of one or two wheels each. Each main gear assembly supports 40 to 45 percent of the weight of the helicopter, and the tail or the nose gear the remainder. Sometimes a helicopter is equipped with a four-wheel landing gear assembly. In this instance, each main gear supports a maximum of about 35 percent of the gross weight of the helicopter. Gross weight is the total weight of the helicopter fully loaded and for which it is certificated for operation under FAA regulations.

b. Support.

(1) In general, the operation of small helicopters has not required the modification of existing roof structures except to strengthen the actual landing surface to resist the concentrated load applied by the landing gear. Existing buildings with roofs designed for normal live loads often can be adapted to receive helicopters by merely installing a simple load distributing pad to spread the concentrated loads over the existing structures. Such a pad may be of wood or metal or a combination of these materials. The superimposed loads will be limited by existing conditions of the building's structure, but most helicopters can be accommodated in this way without major reconstruction. Figure 15 illustrates an installation of this type which has been used satisfactorily for some years.

(2) If a load distribution pad or other platform is constructed, it is recommended that the height of the finished structure be at least as high as the surrounding parapet walls or roof coping to assure adequate clearance for the helicopter on takeoff and landing (Figure 16). In some cases, however, the roof may be sufficiently large to make this unnecessary.

33. IMPACT LOAD.

a. Normal landings and takeoffs impose loads on the roof that are not more than the static loads of the helicopter at rest. In the case of a hard landing, however, it is conceivable that loads up to the buckling load of the helicopter landing gear may be imposed on the roof. The roof should be designed so that it will not fail under these impact loads. The impact load is expressed in terms of a percent of the gross weight of the helicopter. The landing surface will have an adequate margin of safety if it is designed to support a concentrated load equal to 75 percent of the gross weight of the helicopter on any one square foot of the surface (Figure 16). This does not mean that an impact load is imposed upon every square foot of the roof surface simultaneously; but the load is concentrated only at the points of contact under each main landing gear. It is assumed that helicopters will land so that two separate points of the pad receive impact simultaneously. This concentrated loading allows for the worst condition that could develop if a helicopter makes a hard landing following power failure. In this case, the roof structure should remain intact if the landing gear fails.

b. Live loads due to snow and traffic of personnel and equipment will be accounted for in accordance with local building codes. Judgment must be exercised in deciding whether these loads are applied simultaneously with the concentrated load due to the helicopter. In general, it is recommended that heavily snowladen roofs be cleared prior to helicopter operations to eliminate extra weight and guard against reduced visibility due to the blowing of snow.

34. LANDING SURFACE.

a. Elevated heliport surfaces of various kinds of materials have been used successfully. Portland cement top surface over concrete slab, asphalt surfacing, and treated wood surfaces are among those most frequently employed. In general, where night operations will be conducted, a light-colored surface is suggested to aid depth perception in landing.

b. If a wooden load-distribution pad or other platform is used, it is recommended that the materials be treated to be weather and fire resistive. If a metal surface is used, it is suggested that areas used for walkways have an abrasive surface applied. Except for roof drains, it is preferred that the surface be solid so that the rotor downwash will produce the maximum ground effect or ground cushion. An open metal grating, for example, may cause too great a dissipation of the rotor downwash.

35. TURBULENCE AND VISIBILITY.

a. If a heliport site is in proximity to other buildings or to other structures on a rooftop, it may be necessary to conduct flight tests to determine whether any adverse turbulence will unduly affect the operation. Occasional high wind conditions may create a flight problem at some elevated sites during certain periods, even though the site may be quite satisfactory most of the time. Under these circumstances, it is suggested that the heliport be approved for use up to a predetermined wind velocity limit. This is a generally accepted procedure in many aviation activities and would permit the use of an otherwise acceptable site except during periods when high winds might produce adverse turbulence.

b. Flight visibility is another factor to consider for sites on buildings 100 feet or more in height. The cloud deck seldom reaches the ground, or even down to 100 feet, but at the higher levels the heliport might be obscured when the ground level is clear.

CHAPTER 8. VISUAL AIDS

36. GENERAL. The suggestions for marking and lighting outlined here are based on the best information currently available, and they are set forth as suggestions only. Coordinated Government and industry efforts are now underway which will eventually establish optimum requirements for methods of marking and lighting heliports.

37. MARKING.

a. The primary marking for a landing and takeoff area is one which clearly identifies the area as a facility for helicopters. The standard marker shown in Figure 17 is recommended for all ground level and elevated helicopter landing facilities. It is described in greater detail in the FAA Technical Standard Order (TSO) N22, "Heliport Day Marker."

b. For rooftop sites, particularly relatively small ones, it is suggested that the standard marker be circumscribed by a circle as shown in Figure 18. Experienced pilots of large helicopters attest that the addition of a circle provides improved reference to the touchdown area.

c. A marker to indicate a hospital helistop has been suggested by members of the medical profession. The marker illustrated in Figure 19 is recommended as an acceptable substitute for those markers described above.

d. Markings on the takeoff and landing area should be white. Taxiway and service area markings should be yellow. Experiments with all white markings in cases where there is no possibility of confusing the landing and taxi areas have been initiated. Use of retroreflective paint is desirable for heliports which do not have lighting and which may be used for occasional night landings. Retroreflective paint or markers reflect only back to the light source; thus, to be effective a source of light must be on the helicopter.

e. Guide and position lines for helicopters are of primary value to assist pilots in judging clearance between rapidly turning rotors and adjacent aircraft or fixed facilities. Painted taxiway guidelines and apron position lines may be desirable where operations are numerous.

f. Conspicuous boundary day markers are recommended to enable pilots to identify the outlines of the landing and takeoff area. These are particularly desirable where the area is unpaved. Boundary markers to outline the area should be placed at intervals of not over 100 feet. Spacing down to 25-foot intervals may be necessary in some instances, depending upon the size and configuration of the landing and takeoff area. The markers should not constitute an operational hazard. Individual boundary markers can be constructed of locally available materials. In some cases, a hedge or fence may be sufficient to provide adequate boundary marking.

38. WIND DIRECTION INDICATOR. A wind indicator, such as a wind cone, flag, or other suitable device adjacent to the landing area, is usually desirable. This should be so located that it will be prominent but will not be a hazard to flight. In addition, the wind indicator should be located so that possibility of it being blocked by any building or structure is eliminated.

39. HELIPORT LIGHTING.

a. If operations are planned during the hours of darkness, the takeoff and landing area should be provided with distinctive lighting to define the area and to permit positive identification during landing operations. Yellow lights spaced about 25 feet apart around the periphery of the landing and takeoff area provide satisfactory lighting in most locations. These lights should have hemispherical light distribution.

b. Another type of boundary lighting which has been used produces a linear effect around the landing and takeoff area. The lights are a fluorescent or cold cathode lamp in a suitable, weather-proof horizontal fixture. A yellow plastic cover is used. In some settings, these lights are spaced less than 25 feet apart.

40. OBSTRUCTION LIGHTING. All objects in the immediate vicinity of the heliport that penetrate the prescribed obstruction clearance surfaces should be obstruction marked and lighted if there are to be night operations. In the case of rooftop heliports, such obstructions as flagpoles and elevator housing, etc., should be lighted.

41. FLOODLIGHTING.

a. Floodlighting has proved effective for night operations where the touchdown area was not more than 200 feet wide. Where floodlighting is employed, the touchdown marking configuration should be designed to provide good contrast. In addition, a slight roughness of the surface will help the pilot's depth perception.

It is advisable that good shielding of the floodlighting be provided, either by location or by equipment design, so that the pilot is not blinded by the source of light when landing or taxiing.

b. Floodlighting may be needed for ramps and aprons used for loading and unloading operations. These floodlights can be of standard commercial types, portable or mounted on poles or on the administration building. The floodlights should be shielded or focused to prevent stray light from disturbing the pilot during landing, takeoff, and taxiing operations. These floodlights may be similar to those used on aprons at fixed-wing airports.

c. The intensity of lights in the landing and takeoff area lighting systems should be controllable. These lighting controls and the switches for other lights should be readily accessible to ground personnel.

CHAPTER 9. SAFETY CONSIDERATIONS

42. SAFETY BARRIERS.

a. Landing and takeoff areas or the peripheral areas, if any, should be surrounded by barriers to restrict unauthorized persons from these areas. If the barrier is a fence, it should be approximately three feet high.

b. Elevated touchdown areas which do not have the protection of parapet walls should be provided with a safety device extending horizontally from the edges of the areas (Figure 13). Fabricated walkways on rooftops to provide access to the operational areas should be equipped with handrails as necessary (Figure 15).

43. FIRE PROTECTION.

a. General.

(1) The criteria in this chapter outline the minimums suggested to provide a reasonable degree of fire and rescue protection to the aeronautical operations on the landing and takeoff areas. To the extent of their capabilities, these facilities can also be used in fighting a fire that might occur near these areas.

(2) When a heliport is located on an airport, the fire and rescue protection available to the airport may be used for the heliport as well.

(3) It is advisable to have emergency communications available between the heliport/helistop and the fire department having local jurisdiction. These facilities may consist of a standard fire alarm box or a direct-line telephone.

(4) When portable fire extinguishers are provided, they should be installed in weather-proof boxes painted red and adequately labeled. These boxes should have a break glass front which would permit ready access in an emergency and, to an extent, reduce the unauthorized use and pilferage of or damage to the fire extinguishers.

(5) Fueling and maintenance facilities are not recommended for rooftop heliports/helistops.

(6) Rooftop heliports/helistops should be provided with a means to prevent possible helicopter fuel spillage from flowing on to other areas of the roof. This may be accomplished by constructing a raised lip approximately six inches in height around the periphery of the landing and takeoff area. In those instances where access openings are required in this area, these openings should be protected by a similar lip.

b. Fire Equipment Recommendations for Landing and Takeoff Areas Not Located on Airports.

(1) For ground level landing and takeoff areas.

	Helicopter Gross Weight	Protection Recommended
(a)	Under 3,500 lb.	Two 20-lb. dry chemical extinguishers.
(b)	3,500 to 10,000 lb.	Four 20-lb. dry chemical extinguishers.
(c)	Over 10,000 lb.	Two 20-lb. and one 150-lb. dry chemical extinguishers.

(2) For rooftop landing and takeoff areas.

	Helicopter Gross Weight	Protection Recommended
(a)	Under 3,500 lb.	Two 20-lb. dry chemical extinguishers.
(b)	3,500 to 10,000 lb.	Two 20-lb. and one 150-lb. dry chemical extinguishers.
(c)	Over 10,000 lb.	Two 20-lb. dry chemical extinguishers and an installed foam system capable of discharging 200 gpm through two 100 gpm nozzles for 15 minutes.

(3) When fueling and maintenance facilities are included at ground level landing and takeoff areas, it is recommended that two 20-lb. dry chemical extinguishers and an installed or mobile foam system capable of discharging 200 gpm through two 100 gpm nozzles for eight minutes should be provided.

(4) Where installed or mobile foam systems are provided, sufficient manpower should be available to man the two hose lines during those periods when aeronautical operations are being conducted on the landing and takeoff areas.

(5) Guide specifications for both the installed and mobile foam systems will be available at an early date and may be secured from the FAA upon request.

44. ROOFTOP EGRESS. Egress should be provided in accordance with local building codes. It is suggested that rooftop landing and takeoff areas have at least two exits at opposite sides of the area. Stairways should be at least 30 inches wide and be provided with handrails. They should be constructed of noncombustible materials.

45. COMMUNICATIONS. Although there is no requirement for radio communication facilities at a heliport, it is occasionally desirable to establish radio communications between the heliport and helicopter for advisory or dispatching purposes. For this reason, a table model radio system known as "Unicom" may be employed using the assigned frequency of 122.8 mc or 123.0 mc. Most aircraft radios are equipped to operate on this frequency, and the Unicom system can be easily adapted to any heliport operation unless the heliport is located at an airport that already has a Unicom station.

CHAPTER 10. BIBLIOGRAPHY

46. SELECTED REFERENCES. The following selected references are recommended:

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d. Vertical Lift Aircraft Council, Aerospace Industries Association of America, Inc.,: Directory, Heliports-Helistops in the United States, Canada, and Puerto Rico. Washington, D. C., November 1963.

e. Aerospace Industries Association of America, Inc.,: 1964 Directory of the Helicopter-Operators, Commercial-Exclusive-Government and the Helicopter Flight Schools in the United States and Canada. Washington, D. C., 1964.

f. National Fire Protection Association, Building Exits Code, Pamphlet No. 101, 60 Batterymarch Street, Boston 10, Massachusetts, 1963.

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Budget Bureau No. 04—R094

FEDERAL AVIATION AGENCY

NOTICE OF LANDING AREA

☐ **ESTABLISHMENT** } *Complete All Sections*
☐ **ALTERATION** }

☐ **DEACTIVATION** *Complete Sections A and I only*

NAME OF PROPONENT *(Individual or Organization)*

ADDRESS *(Number, Street, City, Zone and State)*

A. LOCATION OF LANDING AREA *(Attach aeronautical chart showing plotted position)*

1. NEAREST CITY OR TOWN	2. COUNTY	3. STATE	4. DISTANCE AND DIRECTION FROM NEAREST CITY OR TOWN
			Miles / Direction
5. NAME OF LANDING AREA	6. LATITUDE ° ' "	7. LONGITUDE ° ' "	8. ELEVATION

B. PURPOSE *(If new landing area – state if landing area is for public or limited private use; list localities to be served. If alteration – briefly describe proposed changes and reasons therefor.)*

DATE CONSTRUCTION: To Begin: / Estimated to be Completed

C. OTHER LANDING AREAS WITHIN 20 MILES

1. NAME	2. MILES TO	3. DIREC. TO

D. LANDING AREA DATA

INDICATE MAG. BRG. OF R/WAYS ▶					
1. LENGTH OF RUNWAY (Feet)	Actual				
	Proposed				
2. WIDTH OF RUNWAY (Feet)	Actual				
	Proposed				
3. TYPE OF SURFACE	Actual				
	Proposed				

4. DIRECTION OF PRINCIPAL APPROACH

5. DIRECTION OF PREVAILING WIND

6. DESCRIBE LIGHTING AVAILABLE, IF ANY

E. NOISE ABATEMENT FACTORS *(Distance and direction to schools, hospitals, churches and residential areas within 2 miles)*

1. IDENTIFY	2. MILES TO	3. DIREC. TO

F. OBSTRUCTIONS WITHIN 5 MILES *(If available, attach U.S. Geological Survey quad sheet or equivalent; show obstructions in accordance with applicable obstruction criteria. Also attach master plan if available.)*

1. TYPE OF OBSTRUCTION	2. MILES TO	3. DIREC. TO

G. OPERATIONAL DATA

	PRESENT *Append Letter E if estimated.*	ANTICIPATED 5 YEARS HENCE
1. NO. AND TYPE OF BASED AIRCRAFT *(Annually)* Multi-engine		
Single engine		
2. NO. AND TYPE OF LANDINGS *(Monthly)* Air Carrier		
General Aviation		

3. ARE IFR OPERATIONS ANTICIPATED ☐ NO ☐ YES, WITHIN YRS.

H. LICENSING *(Check applicable boxes)*

Application for airport licensing
☐ has been made to ☐ will be made to ☐ not required
☐ State ☐ County ☐ Municipal Authority

I. CERTIFICATION

I hereby certify that all of the above statements made by me are true, complete and correct to the best of my knowledge.

SIGNATURE OF PERSON MAKING CERTIFICATION

Date / Title

Form FAA–2681 (10–61)

GPO 920488

FIGURE 1. FORM FAA-2681, "NOTICE OF LANDING AREA ESTABLISHMENT, ALTERATION OR DEACTIVATION"

Form approved; Bureau of Budget No. 04-R001.1

FEDERAL AVIATION AGENCY

NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION

PART 626, REGULATIONS OF THE ADMINISTRATOR

NAME OF INDIVIDUAL, COMPANY, CORPORATION, ETC., PROPOSING CONSTRUCTION OR ALTERATION DESCRIBED BELOW

ADDRESS *(Number, Street, City, Zone, State)*

A. TYPE OF STRUCTURE

1. CHECK APPLICABLE ITEM

☐ NEW CONSTRUCTION ☐ ALTERATION *(Change in height only)* ☐ PERMANENT ☐ TEMPORARY

2. NATURE AND COMPLETE DESCRIPTION

B. LOCATION OF STRUCTURE *(Submit a map or sketch)*

1. LATITUDE *(To nearest second)*	2. LONGITUDE	3. NEAREST CITY OR TOWN, AND STATE	4. RELATION TO NEAREST TOWN OR CITY	
			DIRECTION	DISTANCE

5. NAME OF NEAREST LANDING AREA	6. RELATION TO NEAREST BOUNDARY OF LANDING AREA	
	DIRECTION	DISTANCE

7. PROVIDE THE LAND RECORDER'S MAP DESCRIPTION AND/OR LEGAL DESCRIPTION BY METES AND BOUNDS OF PROPERTY ON WHICH STRUCTURE WILL BE OR IS LOCATED *(If more space is necessary, use reverse side or continue on a separate sheet of paper and attach to this notice.)*

8. DATE WORK WILL BE STARTED	9. DATE WORK WILL BE COMPLETED	10. OVERALL HEIGHT (IN FEET) OF COMPLETED STRUCTURE ABOVE		
		A. GROUND LEVEL	B. MEAN WATER LEVEL (IF SO SITUATED)	C. MEAN SEA LEVEL

11. CHECK WHETHER COMPLETED STRUCTURE WILL BE	YES	NO
A. MARKED FOR THE PROTECTION OF AIR NAVIGATION		
B. PAINTED AS SPECIFIED IN OBSTRUCTION MARKING MANUAL		
C. LIGHTED AS SPECIFIED IN OBSTRUCTION MARKING MANUAL		

C. CERTIFICATION: I hereby certify that all of the above statements made by me are true, complete, and correct to the best of my knowledge.

DATE	SIGNATURE OF PERSON MAKING CERTIFICATION	TITLE

GPO 908234

Form FAA-117 (11-60)

FIGURE 2. FORM FAA-117, "NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION"

Manufacturer	Model	A Main Rotor Diameter (Feet)	B Overall Length (Feet)	C Overall Height (Feet)	D Tread of Main Gear (Feet)	E Wheel Base (Feet)	F Gross Weight (Pounds)	G Number Seats Crew/Pass.	H Fuel Capacity (Gallons)
Bell Helicopter Co.	204B	48'	57'	14.5'	8.4'	skid	8,500	1-9	165
P. O. Box 482	47G	37'	43'	9.3'	7.5'	skid	2,950	1-2	60
Fort Worth, Texas	47J-2	37'	43'	9.5'	7.0'	skid	2,950	1-3	47.5
Brantly Helicopter Corp. Frederick, Oklahoma	B2	23.7'	28'	7'	5.6'	skid	1,600	1-1	30
Hiller Aircraft Co. 1350 Willow Road	UH-12E	35.4'	40.7'	9.8'	7.1'	skid/ 7.5	2,800	1-2	46
Palo Alto, California	E4	35.4'	40.7'	9.8'	7.1'	skid/ 7.5	2,800	1-3	46
Hughes Tool Co.	269	25'	28'	8'	6.5'	skid	1,670	1-1	25
Culver City, California	300	25'	28'	8'	6.5'	skid	1,670	1-2	25
Sikorsky Aircraft Div.	S-55	53'	62.3'	15.3'	11'	10.5'	7,200	2 7-10	185
United Aircraft Corp.	S-58	56'	65.8'	16'	12'	28.3'	13,000	1-2 12	283
Stratford, Connecticut	S-61L	62'	72.6'	16.8'	13'	23.5'	19,000	3 28	410
	S-62A	53'	62.3'	16'	12'	18'	7,500	1-2 10	187
Boeing Vertol Div.	44	44'	86.3'	15'5"	14.3'	24.5'	15,000	2 19	300
Morton, Pennsylvania	107 II	50'	83.5"	16'10"	14.5'	25'	19,000	2 25	360

Note: This incomplete listing of helicopter models gives some indication of the range in helicopter size and weight. Measurements are subject to change with new models.

FIGURE 3. HELICOPTER DATA CHART

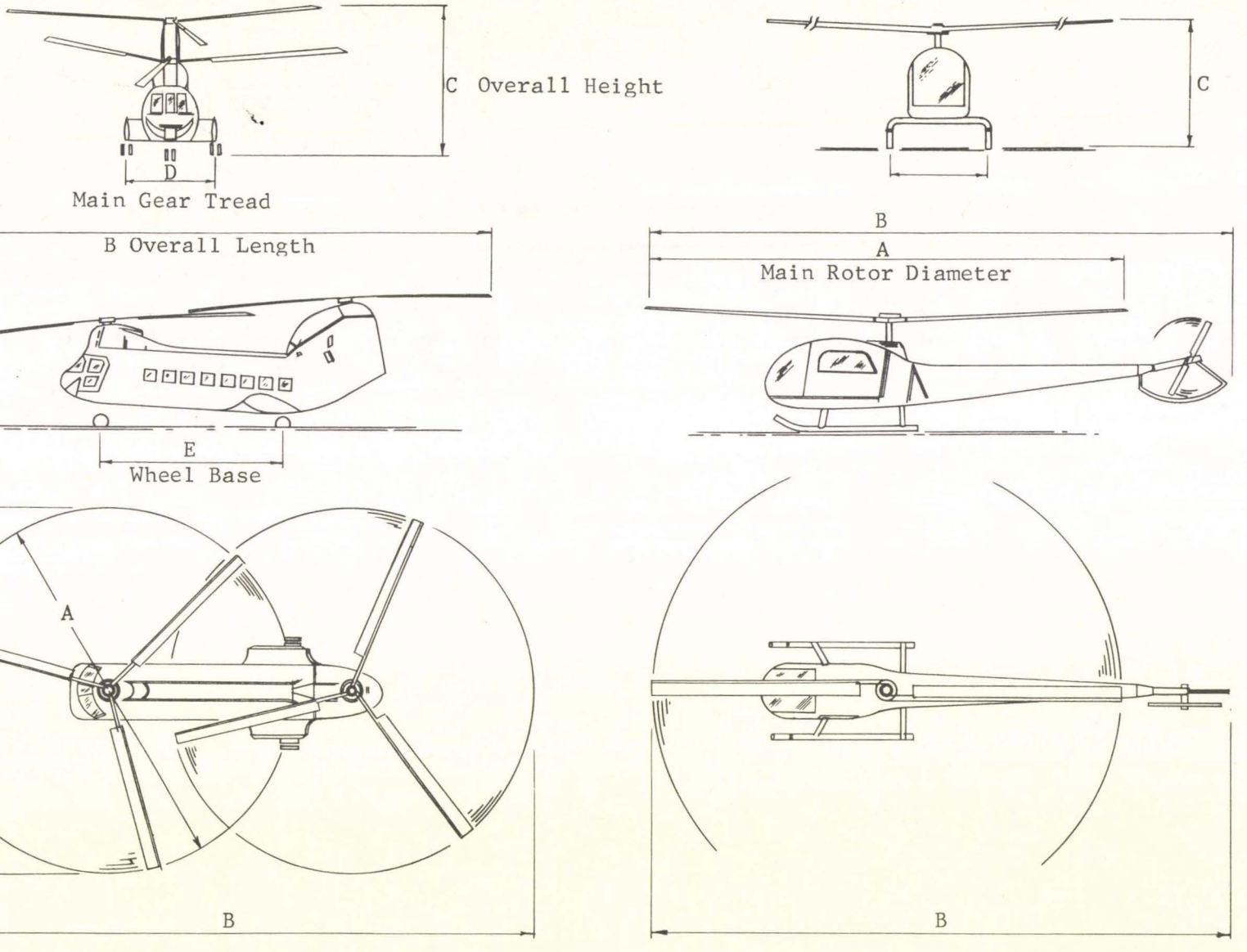


FIGURE 4. HELICOPTER CONFIGURATIONS

BELL 204B

HILLER 12E

BELL 47J

HUGHES 269

SIKORSKY S55

BOEING VERTOL 107

FIGURE 5. TYPICAL HELICOPTERS IN CURRENT USE.

FIGURE 6. HELIPORT, RADIO STATION WGN, CHICAGO, ILLINOIS
SHOWING PRIVATE HELIPORT IN URBAN AREA

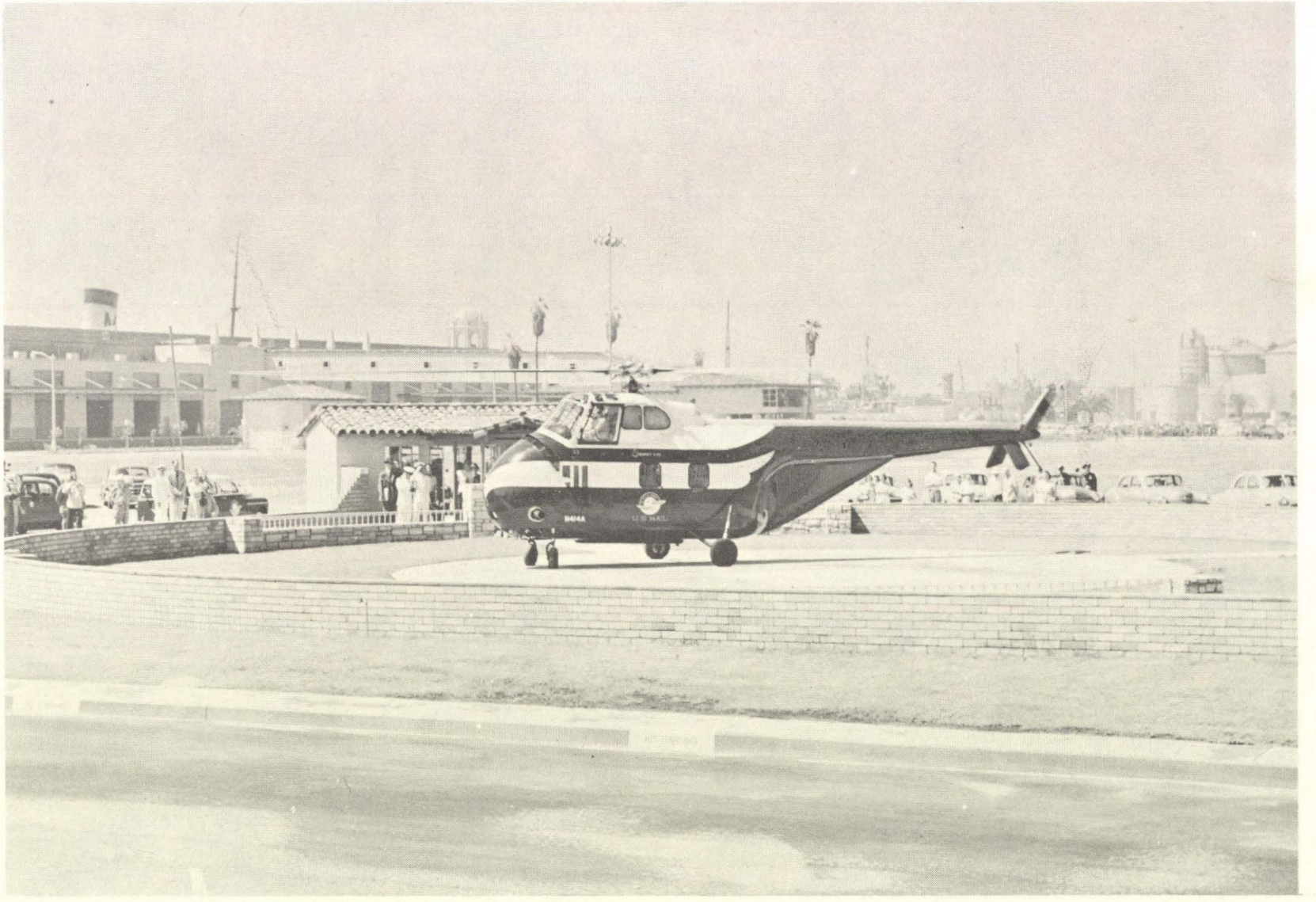
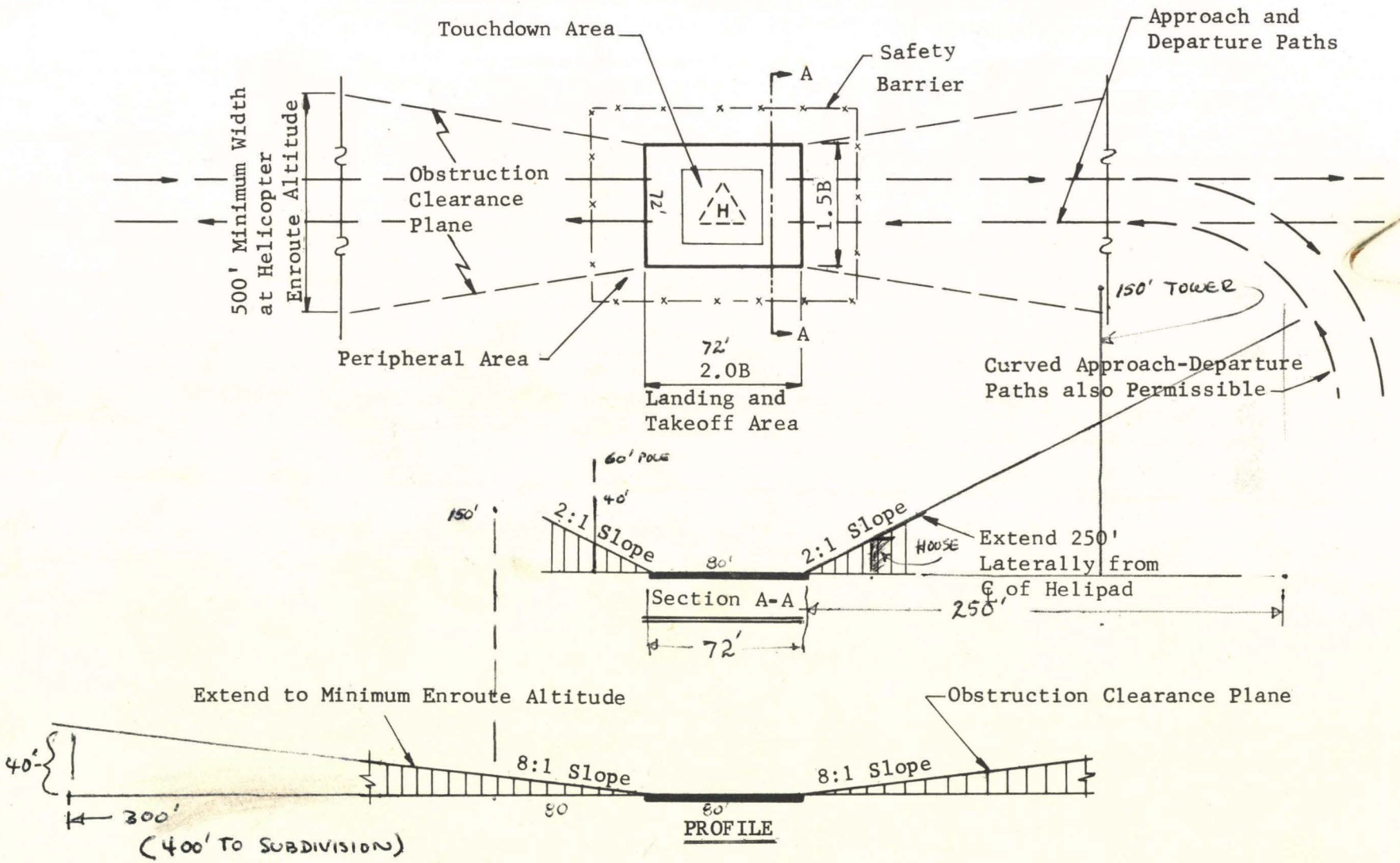


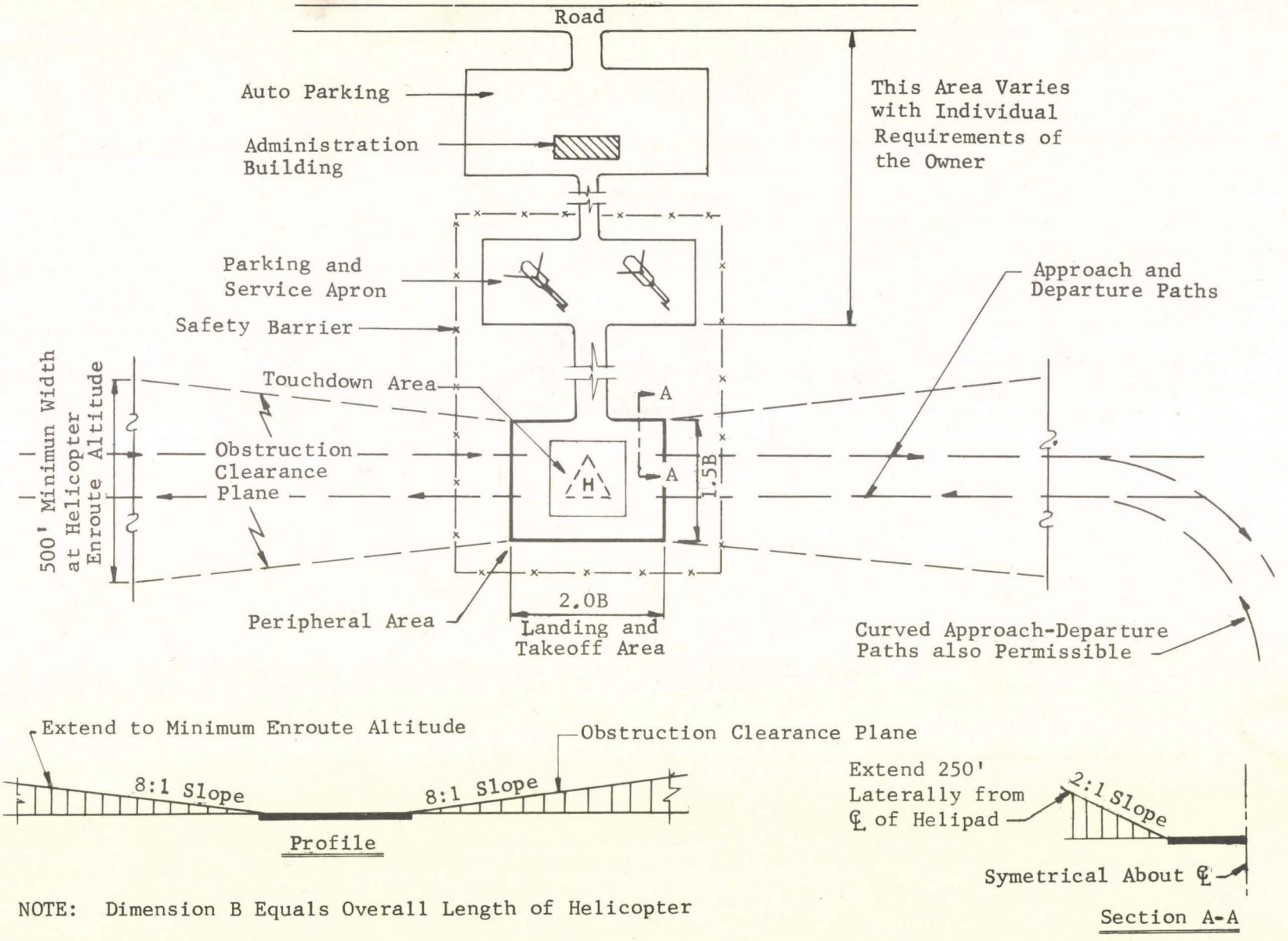
FIGURE 7. CIRCULAR HELIPORT, SAN PEDRO, CALIFORNIA, 55' DIAMETER TOUCHDOWN AREA

FIGURE 8. PRIVATE HELIPORT, LOS ANGELES, CALIFORNIA, SHOWING LANDING AND TAKEOFF AREA APPROXIMATELY 100' x 100'



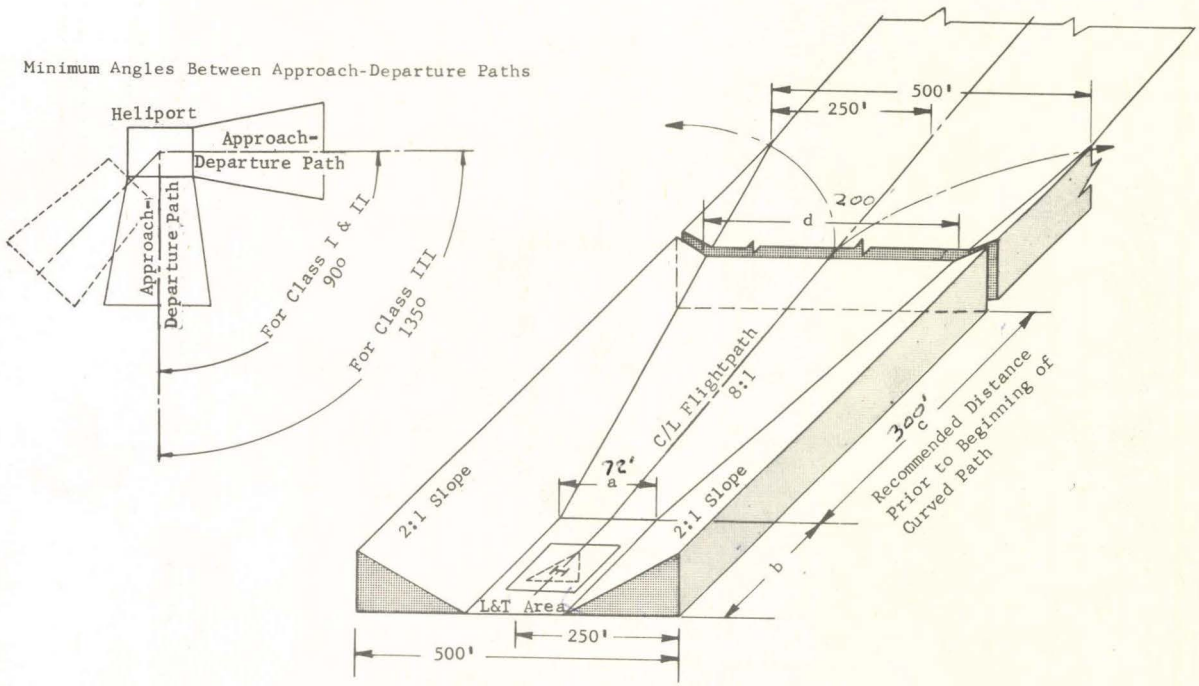
NOTE: Dimension B Equals Overall Length of Helicopter

FIGURE 9. SMALL HELIPORT LAYOUT



NOTE: Dimension B Equals Overall Length of Helicopter

FIGURE 10. LARGE HELIPORT LAYOUT



PERSPECTIVE VIEW OF APPROACH-DEPARTURE PATH

Heliport Class	FAR Category Helicopter	a	b	c	d	Minimum Angle Between Approach-Departure Paths
I Private	FAR Part 27, 29 (CAR 6 & 7)	1.5	1.5	300'	200'	90°
II Small Public	FAR Part 27 (CAR 6)	1.5	2.0	300'	300'	90°
III Large Public	FAR Part 27, 29 (CAR 6 & 7)	* 1.5	* 2.0	400'	300'	135°

Dimensions a and b:
(1) are expressed as multiples of overall helicopter length.
(2) may be increased or decreased upon evaluation of the site by FAA.

*For scheduled airline operations, other factors, related to a specific site would need to be considered.

FIGURE 11. APPROACH-DEPARTURE PATH AND OBSTRUCTION CLEARANCE DIAGRAMS

FIGURE 12. ELEVATED HELIPORT ON PIER IN EAST RIVER, NEW YORK, NEW YORK, ADMINISTRATION BUILDING AND AUTO PARKING ARE LOCATED AT SHORE LINE

FIGURE 13. ROOFTOP HELIPORT, SIGNAL OIL AND GAS COMPANY, LOS ANGELES, CALIFORNIA, SHOWING CIRCLE MARKING AND HORIZONTAL SAFETY DEVICE EXTENDING FROM EDGES OF ROOFTOP

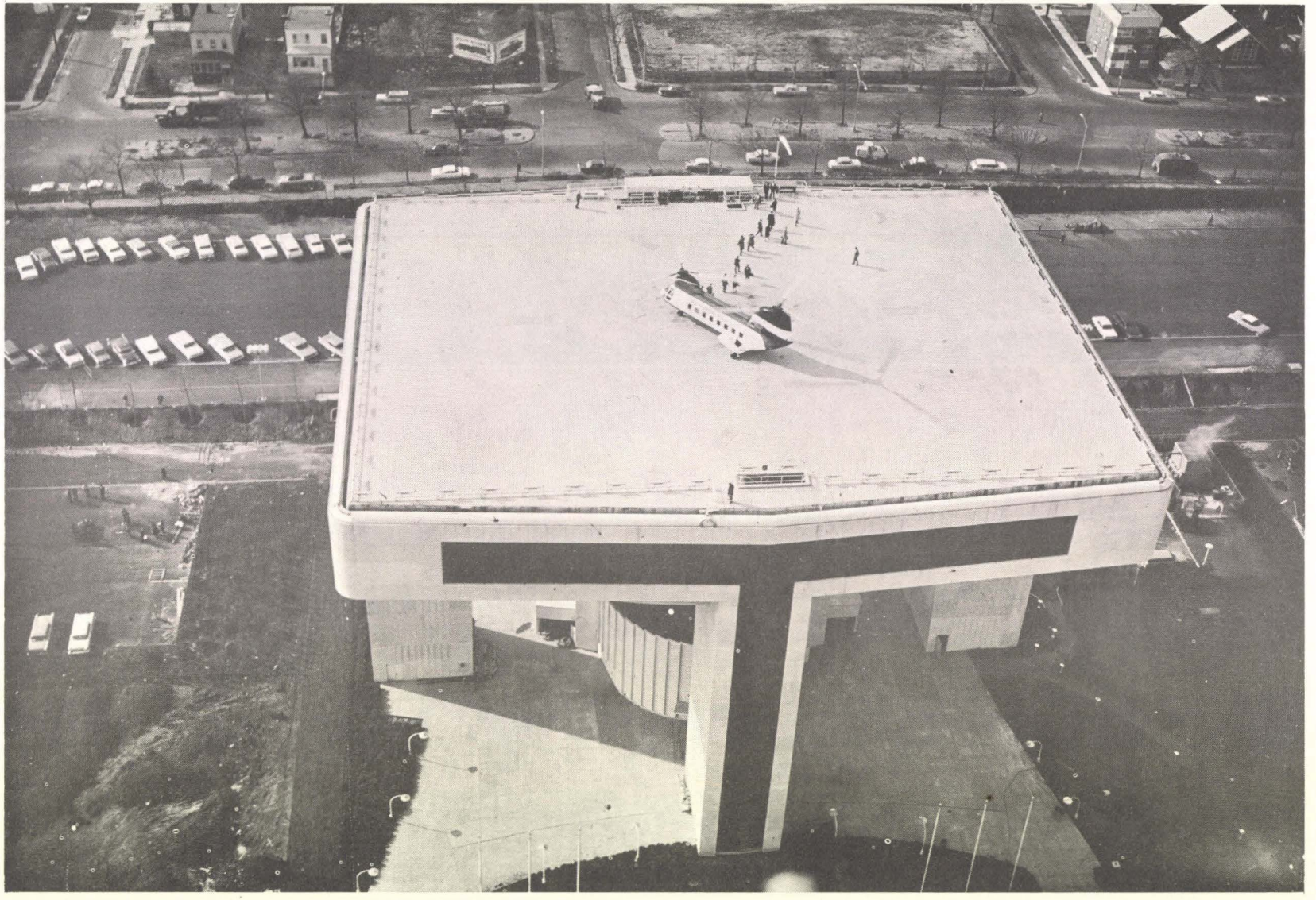
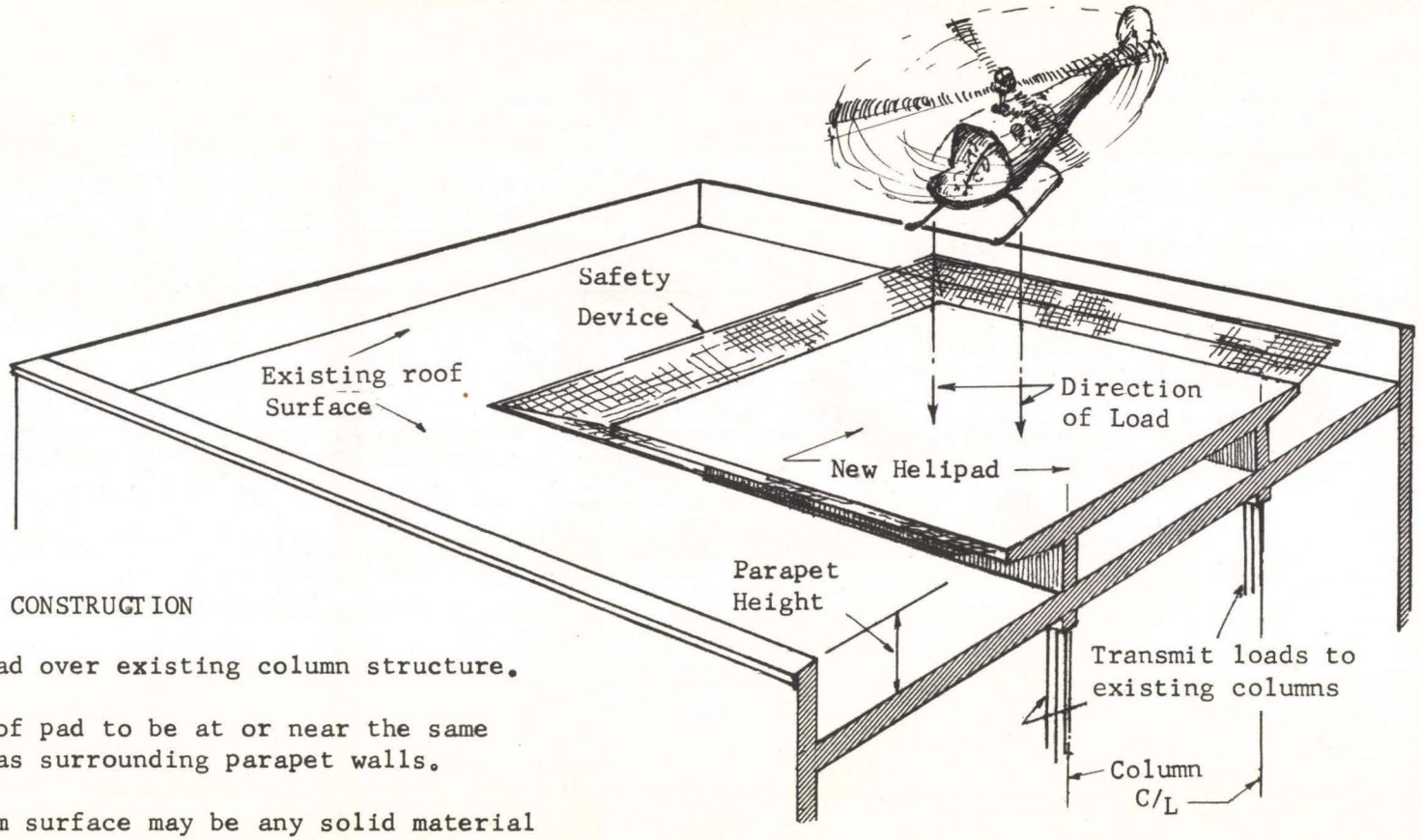


FIGURE 14. ROOFTOP HELIPORT, WORLD'S FAIR 1964, NEW YORK, NEW YORK. LANDING AND TAKEOFF AREA IS 200' x 150' AND IS 120' ABOVE THE GROUND.

FIGURE 15. ROOFTOP HELIPORT, BELLEVUE, WASHINGTON, SHOWING 24' x 24' LOAD DISTRIBUTION PAD ON BUILT-UP ROOF AND HANDRAILS OR SAFETY BARRIERS



HELIPAD CONSTRUCTION

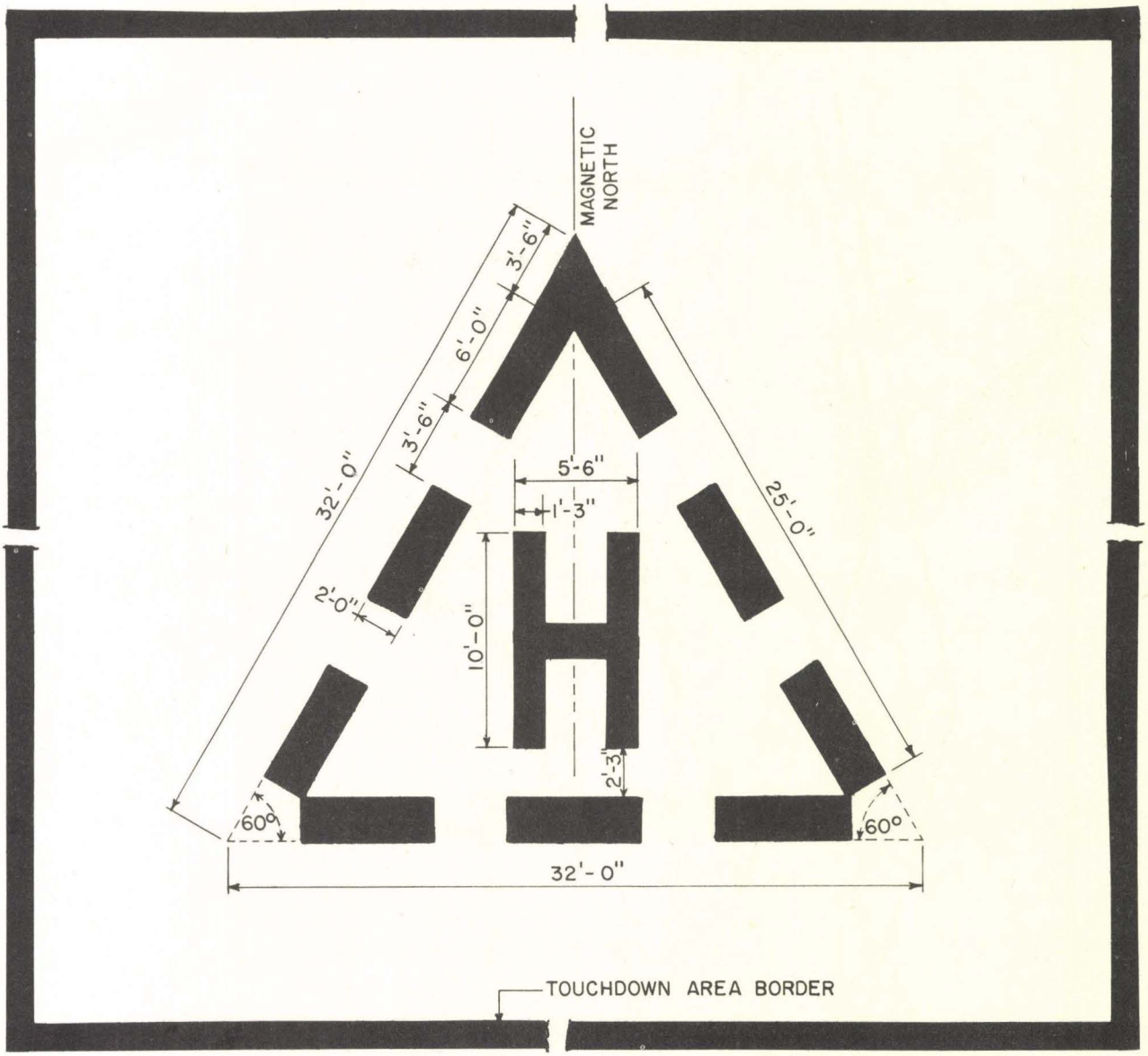
Erect pad over existing column structure.

Height of pad to be at or near the same height as surrounding parapet walls.

Platform surface may be any solid material that will resist puncture shear and provide "Ground Effect."

Structure should have sufficient strength to withstand a concentrated load of 75 percent of certificated gross weight of the helicopter on any one square foot of surface.

FIGURE 16. HELIPAD LOAD DISTRIBUTION ON ELEVATED SURFACE SHOWING RAISED HELIPAD AND PERSONAL SAFETY DEVICE



NOTES

The standard 32' triangular marker shall be placed in the approximate center of the touchdown area. The letter "H" shall be centered in the triangle as shown. The triangle shall always be oriented so that solid apex is pointed magnetic north.

Where necessary or desirable to confine the actual touchdown area of the helicopter landing area to a comparatively small area, as on roof tops, or specific portions of landing areas, the touchdown area should be clearly defined by a solid or segmented border at least 1' wide.

FIGURE 17. STANDARD HELIPORT MARKER

Circumscribe standard heliport triangle marker with circle marking 2' wide.

Allowable gross weight of helicopter can be indicated (in thousands of pounds) by numbers painted conspicuously in the center of the triangle or on another point on the landing area. Number markings should be similar in height and thickness of line to the letter H on the standard marker.

FIGURE 18. SUGGESTED MARKER FOR ROOFTOP SITE

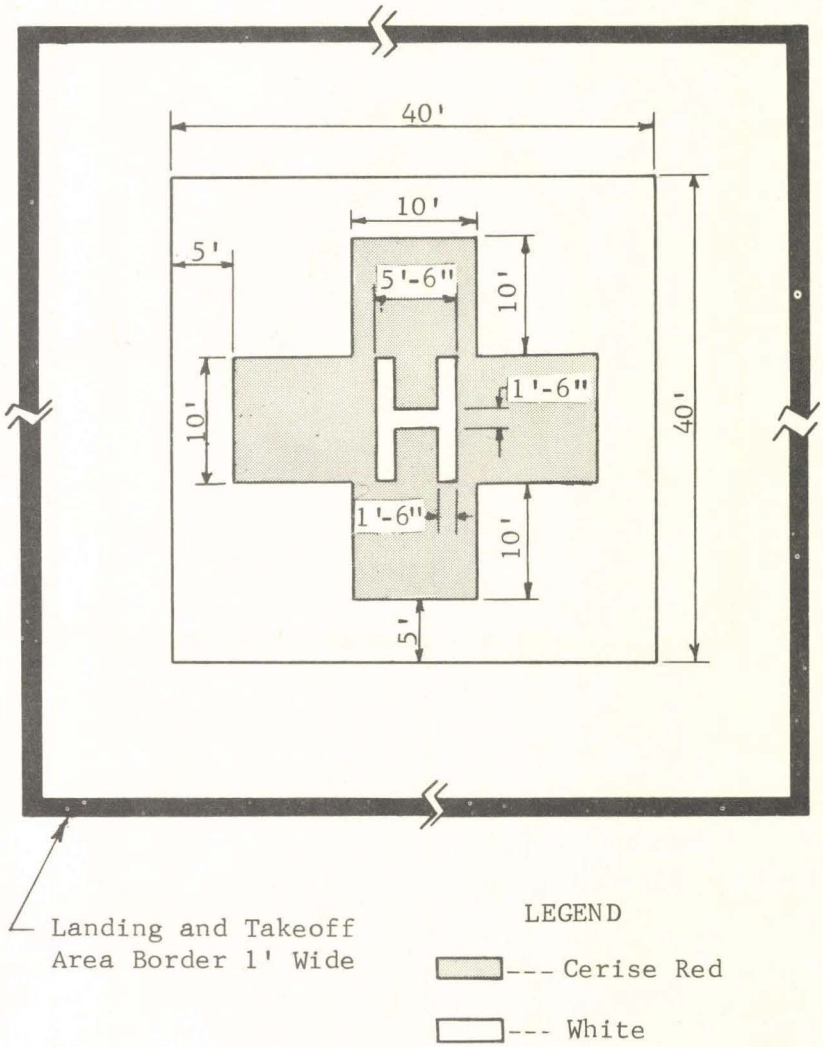


FIGURE 19. HOSPITAL HELISTOP MARKER

☆ U.S. GOVERNMENT PRINTING OFFICE : 1965 O—757-616

SP67-45 KNUI BROADCAST.

Note: All parcels owned by Alexander & Baldwin, Inc. unless otherwise noted.

FIELD L

FIELD M

FIELD K-M

FIELD 13

FIELD 14

FIELD 16

FIELD 17

FIELD 18

FIELD 19

FIELD 20 PASTURE

PASTURE

Kealia Pond

MAALAEA BAY

PLAT 8 NEW MAUI AIRPORT

MEHAMEHA LOOP HIGHWAY

MOKULELE HIGHWAY

KIHEI ROAD

UWAPO ROAD

MOKULELE ROAD

KIHEI PARK LOT 1

INSET A

INSET

ZONE 2 SEC. 2 A K O A I A W

ZONE 3 SEC. 2

Kihei Camp 3

Kihei Camp I

Kihei Store (Kihei Stores, Inc.) 1e.

Kihei Farms, Inc.

Maui Factors, Inc.) 1e.

Pump 3-K

Res. 4-K

Res. 5-K

Lowrie Ditch

Lowrie Ditch Glade Line

Kihei Wharf

Kihei School

Kihei Beach Lots

Wailuku Land

Pond 2

Pond 3

Pond 4

Pond 5

Pond 6

Pond 7

Pond 8

Pond 9

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SECTION 8
Old Lihue Grammar School
To Koloa
Lihue Mill
KAUMUALII HWY.
To Kapaa
KUHIO HWY
LIHUE SHOPPING CENTER
188:1
HALEKO RD.
Grant
Bank of Hawaii
Post Office
Kauai Public Library
LIHUE TOWN TRACT
AKAHI ST
ELUA ST
HARDY ST
EIWA ST.
Lihue Armory
County Bldg.
State Office Bldg.
Lihue Courthouse
MOLOKOA SUB'D
HOMES UNIT "1"
UMI STREET
ULUMUI STREET
F. P. 881
UMI ST.
Police Courthouse
Lihue Park
NEW LIHUE GRAMMAR SCHOOL
KAUAI WAR MEMORIAL AUDITORIUM SITE (Proposed)
KALENA ST.
Part 1
L. C. Aw. 7713:2
True North
1"=300'
SECTION 1
Radio Station KTOH
AHUKINI ROAD (FASP No. S-0570(1))
Reservoir
L. C. Aw. 7713:2 Part 7
To Lihue Airport
HANAMAULU
KALAPAKI
SECTION 3
NAWILIWILI ROAD
FASP No. S-254 (1)
Gr. 250
App.
STREAM
NAWILIWILI
Ct.
Ld.
L. C. Aw 7713:2 Part 2
NAWILIWILI
FAIRVIEW BUSINESS TRACT
F.P. 364
Ld. Ct. App. 1204
Lots
Residence
Lihue
RICE ST.
I.L.W.U.
TRACT BLK "B" F.P. 80
KAUAI INN
HOLAKA ST.
LIHUE INDUSTRIAL PARK UNIT 1
F. P. 793
OIHANA STREET
HALAU STREET
KUPOLO TRACT F.P. 260
MOXOI ST.
KALENA ST.
To Nawiliwili
SECTION 2
SECTION 5
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16
Dwg. No: I
By: S.O. Aug. 25, 1932
Source: Tax Maps Bureau & Survey Dept.
Appr. By: H.S. August 1965
Revised By:
Appr. By:
LIHUE TOWN, LIHUE, KAUAI
SUBJECT TO CHANGE
TAXATION MAPS BUREAU
TERRITORY OF HAWAII
TAX MAP
FOURTH DIVISION
ZONE 3
SEC. 6
CONTAINING PLATS
Scale 1in=300 ft.
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