SAN MATEO COUNTY COMPREHENSIVE AIRPORT LAND USE PLAN

CHAPTER III. HALF MOON BAY AIRPORT LAND USE PLAN

CHAPTER III. HALF MOON BAY AIRPORT LAND USE PLAN

A. INTRODUCTION

The Half Moon Bay Airport Land Use Plan applies to the geographic areas in the unincorporated communities in the vicinity of the airport that are impacted by aircraft noise, restrictions on the height of structures and/or objects near the airport, and safety compatibility criteria. The Plan includes policies, standards, and criteria to address each of these issues to assist local agencies to achieve land use compatibility with existing and future airport development and operations.

B. AIRPORT OVERVIEW

Half Moon Bay Airport is a general aviation, single runway airport, owned and operated by the County of San Mateo. The airport is administered by the San Mateo County Department of Public Works, through the County Airport Manager. The governing body of the airport is the County of San Mateo Board of Supervisors. A copy of the Half Moon Bay Airport Layout Plan (ALP), as approved by the FAA in May 1991, is shown on Map HMB-1 on page III.-3.

The airport property consists of 345 acres. The on-airport facilities are generally divided into three distinct groups: airside, landside, and aviation support facilities. The airside facilities consist of the runway and taxiway system, as well as lighting aids and navigational aids. The landside facilities consist of terminal area buildings, hangars, tiedowns, auto parking, etc. Aviation support facilities include utilities, maintenance, and fuel storage areas.

Half Moon Bay Airport is situated at an elevation of 67 feet above mean sea level (AMSL). Runway 12-30 is oriented northwest-southeast and is 5,000 feet long (physical length) and 150 feet wide. Both runway ends have a threshold displacement of 763 feet. The operational length of Runway 12-30 is 3,474 feet. Aircraft that are compatible with the facilities and constraints at Half Moon Bay Airport, as defined by the County of San Mateo, are aircraft that weigh 12,500 pounds or less. However, heavier aircraft may operate at the airport with prior approval from the County Airport Manager.

Flights in and out of the airport are currently conducted using Visual Flight Rules (VFR). VFR conditions exist when flight visibility is three miles or greater and the cloud ceiling is at least 1,000 feet above the surface. The airport does not have an air traffic control tower and no formal terminal air traffic control services are available. Air traffic advisories and weather information are provided by the Unicom operator. The terminal and air traffic control services are provided through the FAA Bay Terminal Radar Approach Control (TRACON) and the FAA Oakland Air Route Traffic Control Center (ARTCC).

Currently, Half Moon Bay Airport is classified by the FAA as a Reliever Airport for San Francisco International Airport. General aviation reliever airports are those airports which provide air traffic relief to a commercial service airport in the nearby area, thereby reducing congestion at the neighboring commercial service airport.

C. GENERAL AVIATION

Half Moon Bay Airport is a general aviation facility. General aviation includes every type of civil flying other than FAA-certificated air carrier aircraft and military aircraft. General aviation flying or usage falls into four major categories:

- * Business use of an aircraft for executive or business transportation.
- * Commercial use of an aircraft for commercial purposes (other than commuter and air carrier), including air taxi, aerial applications, special industrial usage, aerial surveys, advertising, aerial photography, and emergency medical transportation.
- * Instructional use of an aircraft for flight training under the supervision of an instructor.
- * Personal use of a aircraft for a variety of personal reasons.

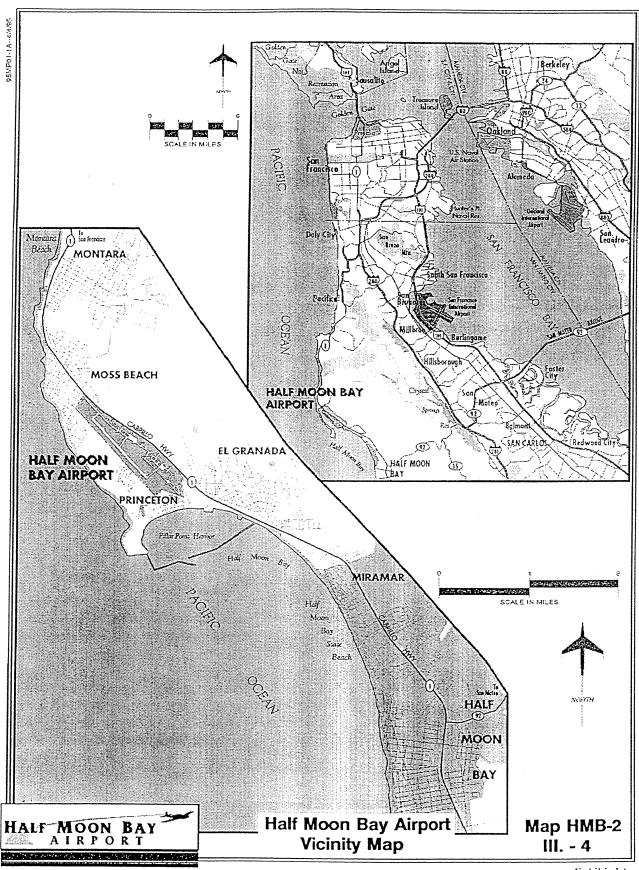
D. <u>AIRPORT SETTING AND LAND USE PLANNING CONSIDERATIONS</u>

1. Location

Half Moon Bay Airport is situated on the San Mateo County coast, between California Highway 1 and the Pacific Ocean. The airport is located approximately four miles north of the City of Half Moon Bay, in the vicinity of the unincorporated areas of Montara, Moss Beach, El Granada, and Princeton-by-the-Sea (see Map HMB-2 on page III.-4). El Granada, Moss Beach, and Montara are primarily residential areas. Princeton-by-the-Sea is comprised of mostly commercial and light industrial uses. The James V. Fitzgerald Marine Reserve is located along the Pacific Ocean coastline, due west of the airport (see Map HMB-3 on page III.-5)

2. County of San Mateo Planning and Zoning Provisions

The County of San Mateo has adopted General Plan policies and Zoning Regulations to address airport noise, safety, and height issues related to aircraft operations at Hal Moon Bay Airport. Each of these provisions is described elsewhere in this Chapter.



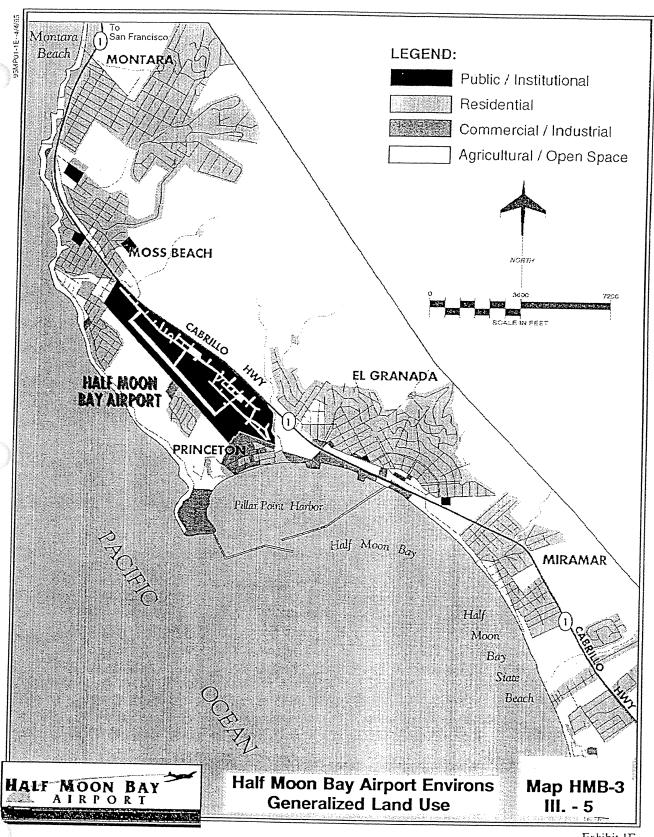
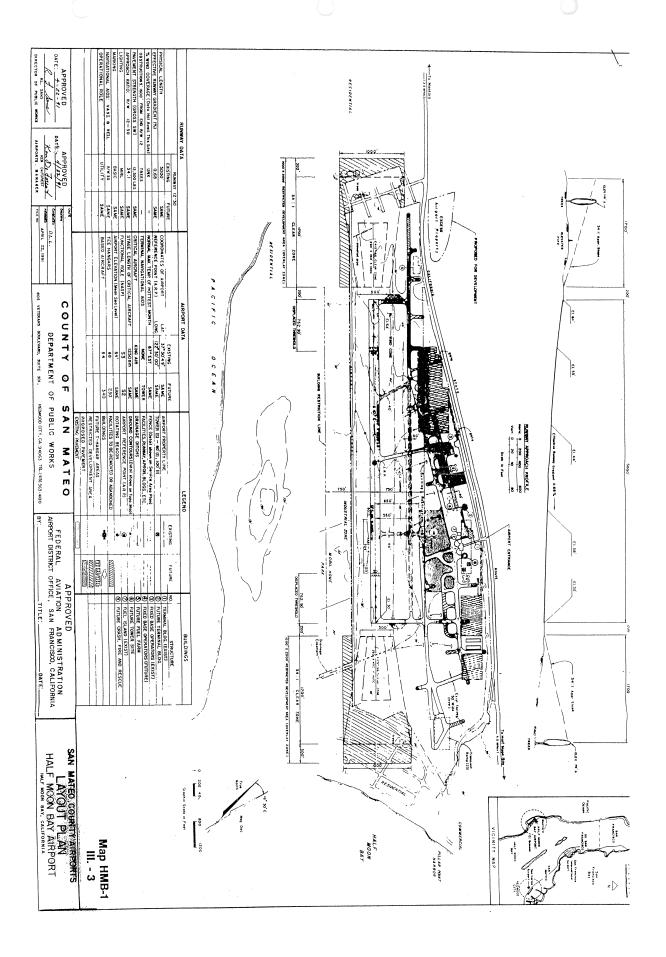


Exhibit IE GENERALIZED EXISTING LAND USE



3. Montara-Moss Beach-El Granada Community Plan

In 1978, the County Planning Commission and the Board of Supervisors approved the Montara-Moss Beach-El Granada Community Plan. Half Moon Bay Airport is identified as a community facility in the Plan. The Community Plan emphasizes the preservation of the residential character of the Plan area. It also includes a section that recognizes and discusses land use conflicts that exist between Half Moon Bay Airport and surrounding residential development. In 1980, the Montara-Moss Beach-El Granada Community Plan was incorporated into the adopted San Mateo County Local Coastal Program (LCP) (see LCP Policy 1.5).

4. The California Coastal Zone and the 1980 San Mateo County Local Coastal Program (LCP), as amended

The California Coastal Act was adopted by the State Legislature in 1976 and became effective on January 1, 1977. The Act established the California Coastal Zone to preserve and protect coastal resources. In San Mateo County, the Coastal Zone stretches for approximately 55 miles along the coast from San Francisco County to the Santa Cruz County line. It includes approximately 88,000 acres of land area. The Half Moon Bay Airport is located within the Coastal Zone boundary (see Map HMB-4 on page III.-8).

The Coastal Act required the County of San Mateo to prepare a Local Coastal Program (LCP) to guide existing and future development in the Coastal Zone. The County adopted an LCP in 1980. Future development of the Half Moon Bay Airport will be subject to relevant LCP policies.

E. <u>AIRPORT/AIRCRAFT NOISE REDUCTION</u>

As noted in the previous section, Half Moon Bay Airport is located in a noise sensitive area that consists of predominately residential land uses. Therefore, airport noise impacts are of concern to the County of San Mateo, both as the airport proprietor <u>and</u> as the local land use and zoning authority. Such impacts are also of concern to residents who live in the airport environs.

To address airport noise/land use compatibility issues in the Half Moon Bay Airport environs area, the county has adopted both general plan and zoning provisions related to airport/aircraft noise issues. In addition, the county has implemented noise abatement procedures at Half Moon Bay Airport to further reduce aircraft noise impacts in the surrounding noise sensitive areas. This Half Moon Bay Airport Land Use Plan also contains aircraft noise contours and aircraft noise/land use compatibility criteria to address airport/aircraft noise reduction. Each of these elements is described in the following sections.

1. <u>1986 County of San Mateo General Plan, as amended, Chapter 16 Man-Made</u> Hazards

This chapter of the County General Plan addresses noise issues related to a variety of sources, including aircraft. The text provides a comprehensive discussion of noise issues and contains numerous policies to specifically address aircraft noise impacts. General Plan Policy 16.27 directly relates to airport/land use compatibility at Half Moon Bay Airport and to the on-going efforts of the Airport Land Use Commission (C/CAG) to achieve such compatibility. General Plan Policy 16.27 is stated as follows:

"16.27 Airport Land Use Commission (ALUC) Noise Planning Efforts

Encourage and support the Airport Land Use Commission to continue existing efforts toward promoting noise compatible development surrounding the County's airports."

A copy of the airport noise and safety related policies contained in Chapter 16 Man-Made Hazards is included in Appendix H.

2. 1994 County of San Mateo Zoning Regulations, as amended

a. Chapter 18.6. Airport Overlay (A-O) District

The Airport Overlay (A-O) District was adopted by the County Board of Supervisors in July 1980 and amended in March 1991. The A-O District includes noise insulation requirements to mitigate aircraft noise impacts from aircraft operating at Half Moon Bay Airport. These requirements are stated as follows:

"SECTION 6288.5 NOISE INSULATION REQUIREMENTS All new development shall be subject to the following requirements:

a. Submit an acoustical analysis, prepared by a qualified acoustical consultant, demonstrating that the new construction has been designed to comply with the following standard:

Interior community noise levels (CNEL) with windows closed, attributable to exterior sources shall not exceed an annual CNEL of 55 dB.

b. Construct buildings in accordance with the recommendations of the acoustical analysis."

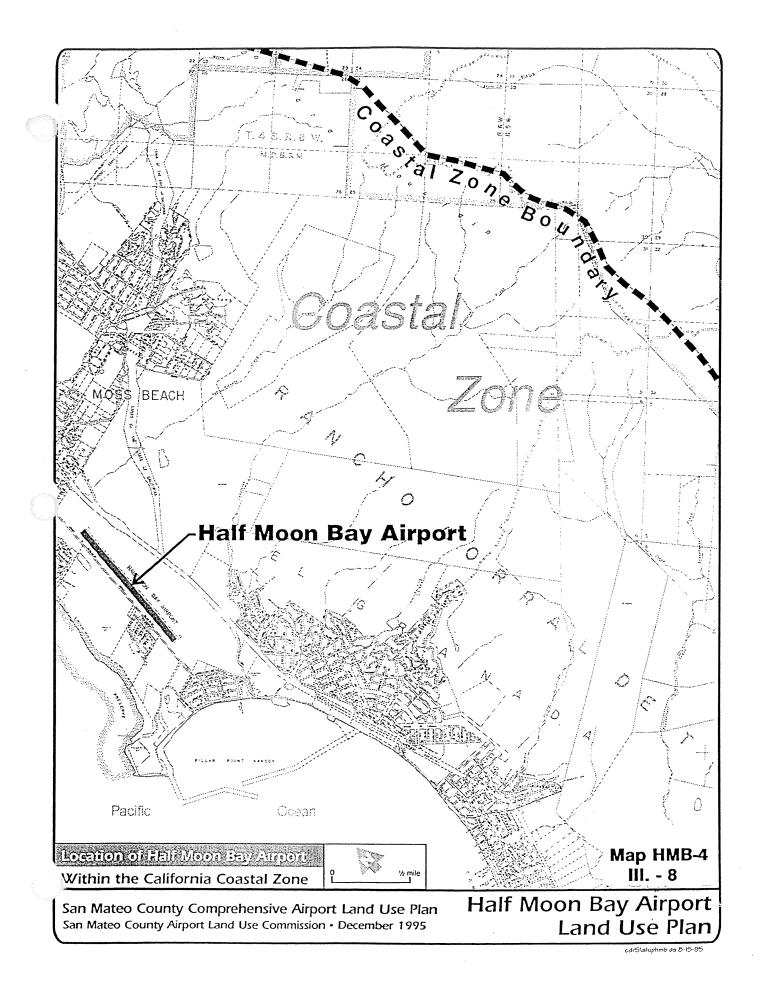


Table III. - 2SAN MATEO COUNTY COMPREHENSIVE AIRPORT
HALF MOON BAY AIRPORTAIRCRAFT NOISE/LAND USE COMPATIBILITY CRITERIA

| | | COF | COMPATIBILITY WITH | /ITH | |
|--|------------------------------|---|---|------------------------------|--|
| 1.AND USE CATEGORY | Less Than 55 CNEL | 55-60 CNEL | 60-65 CNEL | 65-70 CNEL | Greater Than 70 CNEL |
| | Yes¹ Yes¹ Yes¹ Yes¹ | Yes ^{2,3,4} Yes ^{2,3,4} Yes ^{2,3,4} Yes ^{2,3,4} | Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z | | 20 Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z |
| COMMERCIAL Wholesale Trade Facilities/Activities Retall Trade Establishments Eating and Drinking Establishments Neighborhood/Community/Regional Shopping Centers Miscellaneous Commercial | Yes Yes Yes | Yes Yes Yes Yes | Yes Yes Yes Yes | Yes² Yes² Yes² Yes² | Yes ² Yes ² Yes ² Yes ² |
| BUSINESS AND PROFESSIONAL SERVICES Professional Offices Banks, Credit Unions, Financial Institutions Hotels, Motels, Inns, Bed and Breakfast Business and Vocation Schools Automobile Repair Miscellaneous Personal Services | Yes Yes Yes Yes | Yes Yes ^{2,3} Yes ² Yes Yes | Yes Yes ^{2,3} Yes ² Yes Yes | Yes² Yes² Yes² Yes² Yes² Yes | Yes² Yes² Yes² Yes² Yes² |

SAN MATEO COUNTY COMPREHENSIVE AIRPORT LAND USE PLAN HALF MOON BAY AIRPORT
AIRCRAFT NOISE/LAND USE COMPATIBILITY CRITERIA

| | | 00 | COMPATIBILITY WITH | WITH | |
|---|----------------------|---------------|--------------------|--------------------|-------------------------|
| LAND USE CATEGORY | Less Than 55 GNEL | 55-60 CNEL | 60-65 CNEL | 65-70 CNEL | Greater Than 70 GNEL |
| PUBLIC AND QUASI PUBLIC SERVICES | | | | | |
| Government Offices | Yes | Yes | Yes | Yes ² | Yes² |
| Schools, Colleges and Universities | Yes | Yes | Yes | Yes ^{2,3} | Yes ^{2,3} |
| Hospitals, Nursing Care Facilities, Medical Offices | Yes | Yes | Yes | Yes ^{2,3} | Yes ^{2,3} |
| Libraries | Yes | Yes | Yes | Yes ^{2,3} | Yes ^{2,3} |
| Churches | Yes | Yes | Yes | Yes ^{2,3} | Yes ^{2,3} |
| Cemeterles | Yes | Yes | Yes | Yes | Yes |
| Jalls and Detention Facilities | Yes | Yes | Yes | Yes | Yes |
| Child Care Facilities | Yes | Yes | Yes | Yes ^{2,3} | Yes ^{2,3} |
| RECREATION | | | | | |
| Public Parks/Open Space/Camping Facilities | Yes | Yes | Yes | Yes | Yes |
| Golf Courses | Yes | Yes | Yes | Yes | Yes |
| Motlon Picture Theater (Single or Complex) | Yes | Yes | Yes | Yes ² | Yes ² . |
| Auditorlums, Concert Halls, Amphitheaters | Yes | Yes | Yes | Yes ² | Yes ² . |
| Stadlums, Arenas, Outdoor Sports Facilities | Yes | Yes | Yes | Yes | Yes |
| INDUSTRIAL | | | | | |
| Manufacturing | Yes | Yes | Yes | Yes | Yes |
| Transportation | Yes | Yes | Yes | Yes | Yes |
| Communications | Yes | Yes | Yes | Yes | Yes |
| Utilities | Yes | Yes | Yes | Yes | Yes |
| | | | | | |

II. 20

Table III. - 2, continued

SAN MATEO COUNTY COMPREHENSIVE AIRPORT LAND USE PLAN HALF MOON BAY AIRPORT AIRCRAFT NOISE/LAND USE COMPATIBILITY CRITERIA

| | | COI | COMPATIBILITY WITH | /ITH | |
|---------------------------------|----------------------|---------------|--------------------|---------------|-------------------------|
| LAND USE CATEGORY | Less Than 55 GNEL | 55-60 CNEL | 60-65 CNEL | 65-70 CNEL | Greater Than 70 GNEL |
| AGRICULTURE AND MINING | | | | | |
| Crop Production | Yes | Yes | Yes | Yes | Yes |
| Livestock - Pasture and Grazing | Yes | Yes | Yes | Yes | Yes |
| Mining and Quarrying | Yes | Yes | Yes | Yes | Yes |
| Oll and Gas Extraction | Yes | Yes | Yes | Yes | Yes |
| | | | | | |

FOOTNOTES:

- 1. No special noise insulation or acoustic attenuation is required; however, the proposed development may be subject to aircraft noise and/or overflight.
- approval of the proposed action should require the Identified noise attenuation measures to achieve an interior noise level of 45 dB CNEL An acoustic study should be prepared to identify aircraft noise impacts and recommended noise attenuation measures. Local agency with all windows closed. ci
- If the proposed action is located within the County of San Mateo Airport Overlay Zone (A-O), all new development should be subject to the noise insulation requirements of Chapter 18.6, Section 6288.5 of the County of San Mateo Zoning Regulations, as amended. က
- If the proposed action is located within the County of San Mateo S-17 Combining District, all new development should be subject to the provisions of Chapter 20, Section 6300.2.7 of the County of San Mateo Zoning Regulations, as amended. 4.
- 5. New construction or development should not be approved.

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NOTE: Airport/land use compatibility is determined by comparing a proposed land use policy action with the aircraft noise/land use compatibility criteria, the relevant FAR Part 77 height restrictions, and safety criteria contained in this Plan. A proposed land use policy action must be compatible with each of these elements for the Airport Land Use Commission (C/CAG) to determine that the proposed action is consistent with the relevant policies, standards, and criteria contained in the Comprehensive Airport Land Use Plan (CLUP).

F. SAFETY CRITERIA

Areas around airports are continually exposed to the possibility of aircraft accidents, even with well-maintained aircraft and highly trained pilots. Despite stringent maintenance requirements and countless hours of training, history makes it clear that aircraft accidents will occur.

The risk of people on the ground being killed or injured by a falling plane is small; however, an aircraft crash is a high consequence event. When a crash does occur, the result is often catastrophic. Because of this, most attempts to establish safety criteria to protect persons on the ground have not estimated accident probabilities. They have, instead, approached safety criteria by determining compatible land uses, assuming a crash would occur. The safety criteria in this Plan are based on that approach.

To address safety compatibility issues related to aircraft operations at Half Moon Bay Airport, the County of San Mateo has adopted both general plan and zoning provisions related to safety and land use compatibility. These provisions are further explained below.

1. <u>1986 County of San Mateo General Plan, as amended - Chapter 16 Man-Made Hazards</u>

This chapter of the County General Plan contains a discussion on safety related to aircraft operations. The text explains Airport Land Use Commission (C/CAG) and FAA policies regarding approach zones, clear zones (now called Runway Protection Zones (RPZs) by the FAA), and approach surfaces at both Half Moon Bay Airport and San Carlos Airport.

In addition to the text discussion on aircraft-related safety, the General Plan contains 12 policies that address safety issues related to aircraft operations at Half Moon Bay Airport. Three of those policies (16.41, 16.42, and 16.43) address the regulation of land development in at each end of Runway 12-30. The General Plan also contains two additional policies (16.44 and 16.45) that specify the role of the county, regarding aircraft-related safety and land use protection. A copy of the airport noise and safety-related policies contained in Chapter 16 Man-Made Hazards is included in Appendix H.

2. <u>1994 County of San Mateo Zoning Regulations, as amended - Chapter 18.6 Airport Overlay (A-O) District</u>

As indicated in Section E.2. of this Plan, the Airport Overlay (A-O) District was adopted by the County Board of Supervisors in July 1980 and amended in March 1991. The A-O District applies to properties near both ends of Runway 12-30 at Half Moon Bay Airport. In addition to noise insulation requirements, the A-O District includes specific aircraft-related safety regulations. These regulations are stated below.

"SECTION 6288.1. INTENT. The intent of the Airport Overlay (A-O) District is to provide a margin of safety at the ends of airport runways by limiting the concentration of people where hazards from aircraft are considered to be greatest."

"SECTION 6288.2. USES PERMITTED. All uses permitted by the underlying district shall be permitted in the A-O District except residential or uses with more than three (3) persons occupying the site at any one time. Permitted uses shall be subject to a use permit."

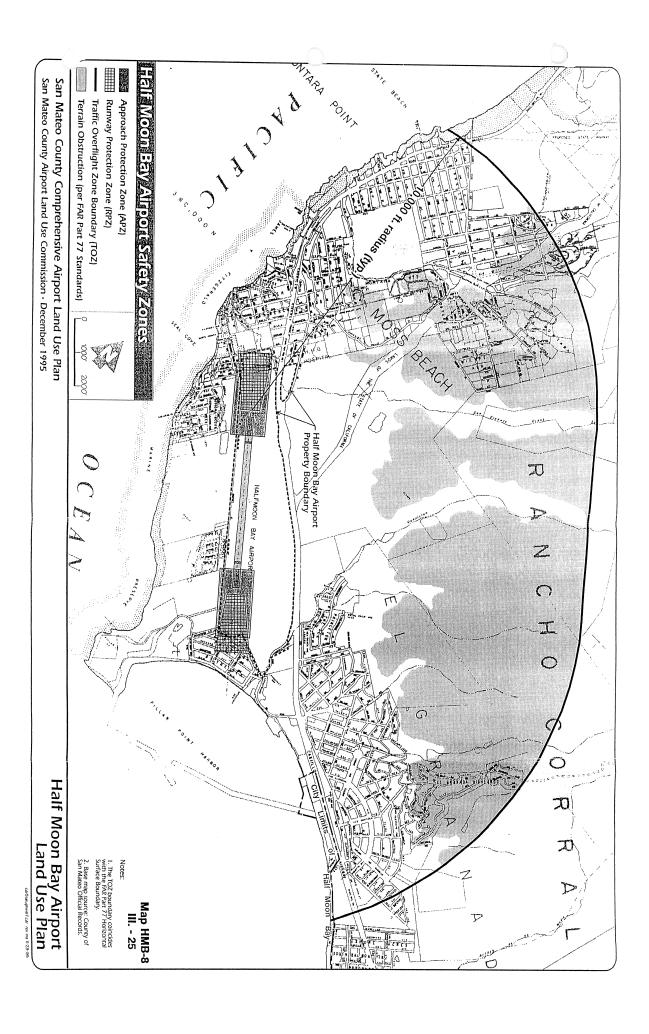
The configuration of the A-O District at each end of Runway 12-30 is shown on Map HMB-5 on page III.-9 and Map HMB-6 on page III.-10. The complete text of Chapter 18.6 Airport Overlay (A-O) District is shown in Appendix I.

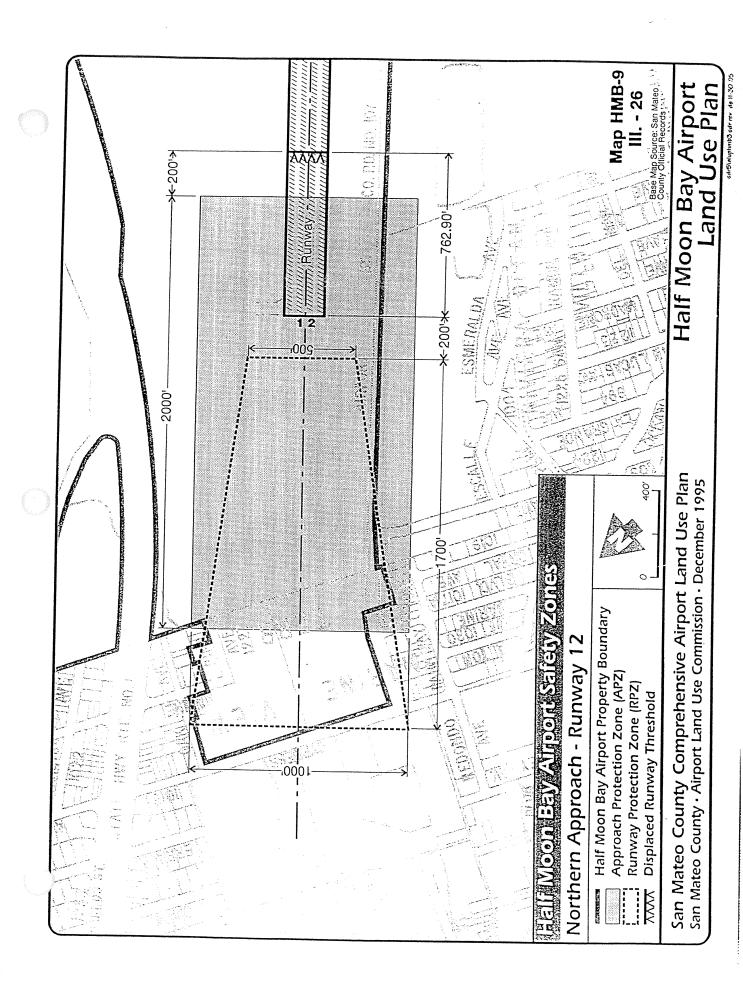
3. Airport Safety Zones

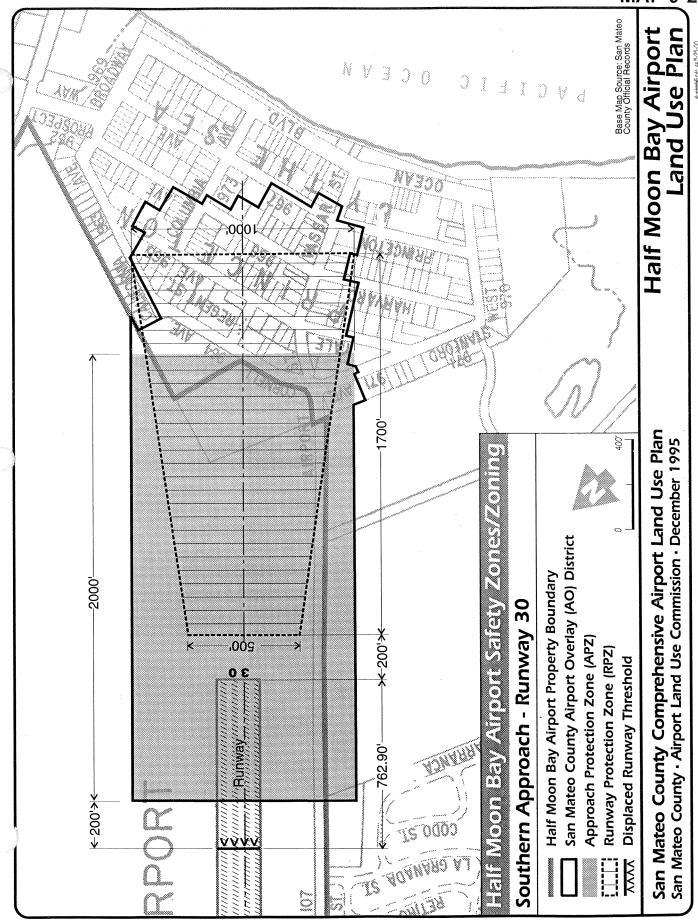
Airport safety zones are used as airport/land use compatibility tools to help minimize the number of people exposed to potential aircraft accidents. This is accomplished by placing restrictions on land uses in safety zone areas (see Section 4.) This Plan designates three airport safety zones for Half Moon Bay Airport: (1) the Runway Protection Zone (RPZ) (formerly identified by the FAA as the Clear Zone), (2) the Approach Protection Zone (APZ), and (3) the Traffic Overflight Zone (TOZ).

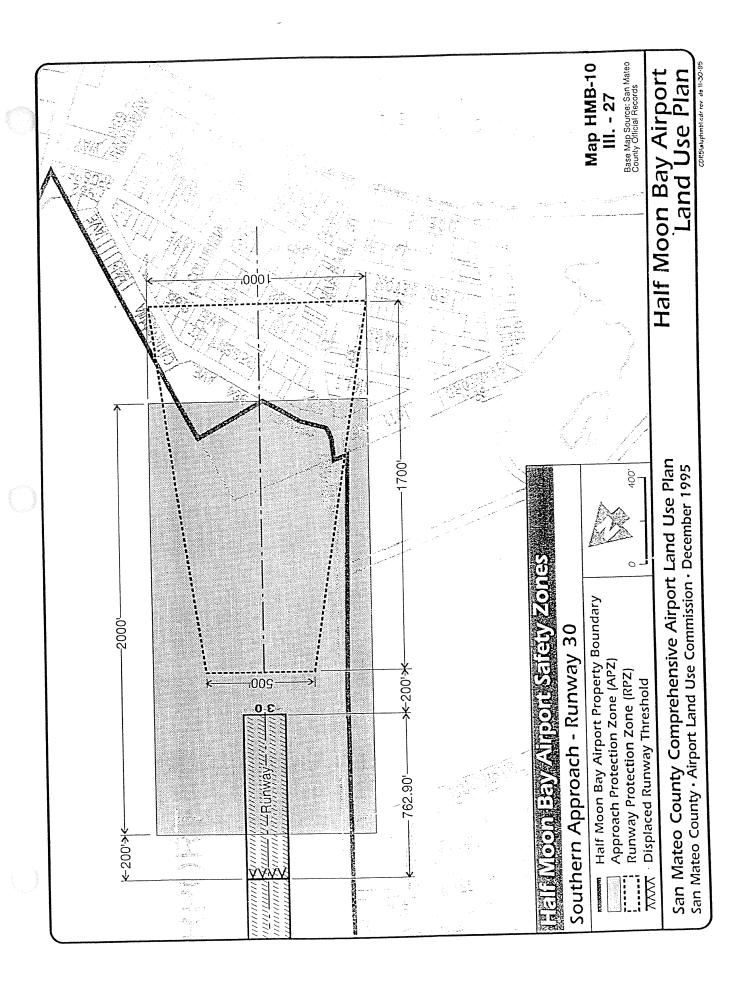
The Runway Protection Zone (RPZ) begins 200 feet from the end of Runway 12-30 and is the most restrictive, in terms of safety compatibility criteria. The Approach Protection Zone (APZ) is located under the FAR Part 77 Approach Surface (see Section F) and is less restrictive. The Traffic Overflight Zone (TOZ) is a large area under the airport traffic pattern and is even less restrictive. The configuration of the TOZ coincides with the boundary of the Horizontal Surface for Half Moon Bay Airport, as defined in FAR Part 77 (see Section F.). The airport safety zones for Half Moon Bay Airport are shown on Map HMB-8, Map HMB-9, and Map HMB-10 on pages III.-25, III.-26, and III.-27.

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It is the policy of the Airport Land Use Commission (C/CAG) to keep Approach Protection Zones (APZs) free of structures. Non-structural uses may be permitted in APZs if they do not cause a concentration of more than 10 people per net acre. Motor vehicle parking and open storage uses that generate up to 25 persons per net acre are also permitted.

4. Safety/Land Use Compatibility Criteria

Because aircraft accidents happen infrequently and the time, place, and consequence of their occurrence cannot be predicted, the concept of risk is central to the assessment of safety compatibility. From a land use planning perspective, two variables determine the degree of risk posed by potential aircraft accidents: (1) accident frequency - where and when do aircraft accidents occur and (2) accident severity - what land use characteristics contribute to the consequences of an accident.

The objective of safety compatibility criteria is to <u>minimize</u> the risks associated with potential aircraft accidents. The most fundamental safety compatibility component is to increase the safety of people and property on the ground in the event of an aircraft accident near an airport. Another important component is to enhance the chances of survival of the occupants of an aircraft involved in an accident.

The safety/land use compatibility criteria for the Half Moon Bay Airport environs area are shown in Table III.-3 on pages III.-29, III.-30, and III.-31. These criteria are designed to minimize the risks associated with potential aircraft accidents. The criteria indicate the compatibility of the specified land uses with the three safety zones that are designated in this Plan for Half Moon Bay Airport. The criteria are not intended to be a specific development plan, do not set forth specific land uses for any particular parcel(s), and are not retroactive with respect to existing land uses.

NOTE: Airport/land use compatibility is determined by comparing a proposed land use policy action with the Aircraft Noise/Land Use Compatibility Standards, the relevant FAR Part 77 height restrictions, and safety criteria contained in this Plan. A proposed land use policy action must be compatible with each of these elements for the Airport Land Use Commission (C/CAG) to determine that the proposed action is consistent with the relevant policies, standards, and/or criteria contained in the relevant Comprehensive Airport Land Use Plan (CLUP).

Table - 3

SAN MATEO COUNTY COMPREHENSIVE AIRPORT LAND USE PLAN HALF MOON BAY AIRPORT SAFETY/LAND USE COMPATIBILITY CRITERIA

| | | СОМРАТІВІЦІТУ WITH | |
|--|---------------------------------|-----------------------------------|---------------------------------|
| LAND USE CATEGORY | Runway Protection Zone (RPZ) | Approach Protection Zone (APZ) | Traffic Overnight Zone (TOZ) |
| RESIDENTIAL | | | |
| Single-Family Detached | o _N | o Z | Yes |
| Two-Family Dwelling | S _S | o N | Yes |
| Multi-Family Dwelling (3 + Families) | No | 0 Z | Yes |
| Group Quarters and Rooming Houses | ° Z | 0 Z | , se X |
| Mobile Homes and Mobile Home Parks | OZ | 0 N | Yes |
| COMMERCIAL | | | |
| Wholesale Trade Facilities/Activities | N _O | o _N | Se/ |
| Retail Trade Establishments | No | <u>0</u> | X S |
| Eating and Drinking Establishments | oN | No V | , Yes |
| Neighborhood/Community/Regional Shopping Centers | No | oN | Yes |
| Miscellaneous Commercial | ON. | ON. | Yes |
| BUSINESS AND PROFESSIONAL SERVICES | | | |
| Professional Offices | oN o | o Z | Yes |
| Banks, Credit Unions, Financial Institutions | o _N | o _N | Yes |
| Hotels, Motels, Inns, Bed and Breakfast | ON | o _N | Yes |
| Business and Vocation Schools | No | o _N | Yes |
| Automobile Repair | o _N | ON. | Yes |
| Miscellaneous Personal Services | O N | No | Yes |
| | | | |

III.-29

Page 1

Page 2

III.-30

Table III. - 3, continued
SAN MATEO COUNTY COMPREHENSIVE AIRPORT LAND USE PLAN
HALF MOON BAY AIRPORT
SAFETY/LAND USE COMPATIBILITY CRITERIA

| | | COMPATIBILITY WITH | |
|---|---------------------------------|-----------------------------------|---------------------------------|
| LAND USE CATEGORY | Runway Protection Zone (RPZ) | Approach Protection Zone (APZ) | Traffic Overnight Zone (TOZ) |
| PUBLIC AND QUASI PUBLIC SERVICES | | | |
| Government Offices | o _N | No No | Yes |
| Schools, Colleges and Universities | o _N | o _N | Yes ⁴ |
| Hospitals, Nursing Care Facilities, Medical Offices | ON | N _O | Yes |
| Libraries | oN | o _N | Yes |
| Churches | o _N | 0N | Yes |
| Cemeteries | oN O | Yes ^{1,7} | Yes |
| Jails and Detention Facilities | o N | 0 <u>N</u> | Yes |
| Child Care Facilities | No | 0 N | Yes |
| | | | |
| RECREATION | | | |
| Public Parks/Open Space/Camping Facilities | No | o N | Yes |
| Golf Courses | No | Yes ² | Yes |
| Motion Picture Theater (Single or Complex) | o _N | o N | Yes |
| Auditoriums, Concert Halls, Amphitheaters | No | o _N | Yes |
| Stadiums, Arenas, Outdoor Sports Facilities | o N | o Z | Yes |
| INDUSTRIAL | | | |
| Manufacturing | ON. | Yes ^{3,7} | Yes |
| Transportation | ON. | Yes | Yes |
| Communications | ON. | Yes | Yes5 |
| Utilitles | No | 0 2 | Yes |
| | | | |

Table III. - 3, continued SAN MATEO COUNTY COMPREHENSIVE AIRPORT LAND USE PLAN HALF MOON BAY AIRPORT SAFETY/LAND USE COMPATIBILITY CRITERIA

| | | COMPATIBILITY WITH | |
|---------------------------------|---------------------------------|-----------------------------------|-------------------|
| LAND USE CATEGORY | Runway Protection Zone (RPZ) | Approach Protection Zone (APZ) | Traffic Overnight |
| AGRICULTURE AND MINING | | | (F) (F) (F) |
| Crop Production | Yes ⁶ | 9897 | 950 |
| Livestock - Pasture and Grazing | 0 Z | 989 > | - es - > |
| Mining and Quarrying | 0 N | ? <u>2</u> | - es - > |
| Oil and Gas Extraction | o Z |) O | s S |
| | | | |

FOOTNOTES:

- 1. Chapels and/or funeral homes are not permitted.
- permitted. New course layouts and revisions to existing courses shall be submitted to the Airport Land Use Commission (C/CAG) for an Club houses, bars, restaurants, and/or banquet facilitles are not permitted. Ancillary uses such as pro shops and snack bars are evaluation of safety Impacts.
- 3. Storage of bulk petroleum products or chemicals is not permitted.
- School facilities are compatible only if the requirements of the California Education Code, Sections 39005.7, 81036, and 81038, as amended, are fulfilled. 4.
- Uses that would cause interference with aircraft communications and/or instrumentation are not permitted. Ď.
- Compatible only if it does not result in a possibility that a water area may cause ground fog or result in bird hazard. 6
- 7. No uses resulting in a gathering of more than 10 persons per acre at any time.

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G. HEIGHT OF STRUCTURES, USE OF AIRSPACE, AND AIRSPACE COMPATIBILITY

The height of structures and the use of airspace are key safety elements related to airspace compatibility. There are three key objectives related to the preservation and maintenance of airspace compatibility, as follows:

- * to avoid airspace impacts that may require significant changes in existing air traffic patterns
- * to avoid airspace impacts that may result in a shifting of aircraft noise from one area to another
- to avoid the creation of land use conditions which, by posing hazards to aircraft in flight, can increase the risk of an accident occurring. These hazards include: airspace obstructions and land use characteristics, which pose other potential hazards to aircraft in flight, by attracting birds or creating visual and/or electronic interference with air navigation.

1. <u>Federal Aviation Regulations (FAR) Part 77, "Objects Affecting Navigable Airspace", As Amended</u>

The Airport Land Use Commission (C/CAG) has adopted the provisions in FAR Part 77, "Objects Affecting Navigable Airspace", as amended, to establish height restrictions and federal notification requirements for project sponsors, related to proposed development within the FAR Part 77 airspace boundaries for Half Moon Bay Airport. The FAR Part 77 regulations contain three key elements: (1.) they establish standards for determining obstructions in the navigable airspace and designate and define imaginary surfaces for airspace protection, (2.) they set forth the requirements for project sponsors to provide notice to the FAA Administrator of certain proposed construction of alterations that may adversely affect the airspace in the airport environs, and (3.) they initiate aeronautical studies conducted by FAA staff, to determine the potential effect of proposed construction or alterations on the safe and efficient use of the affected airspace.

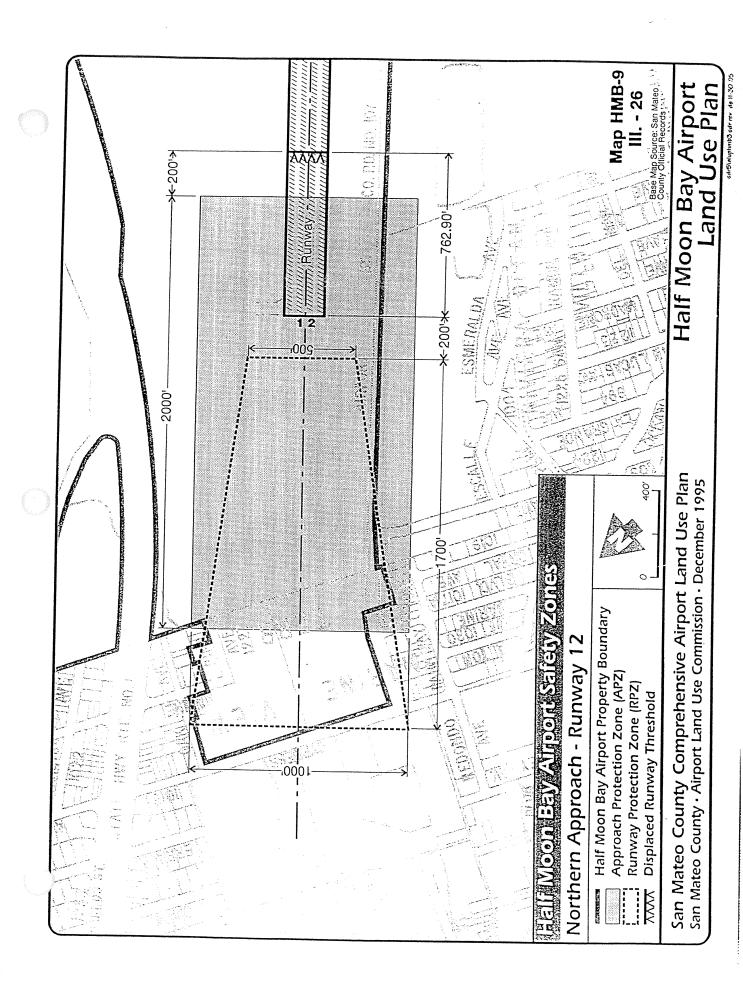
a. Imaginary Surfaces

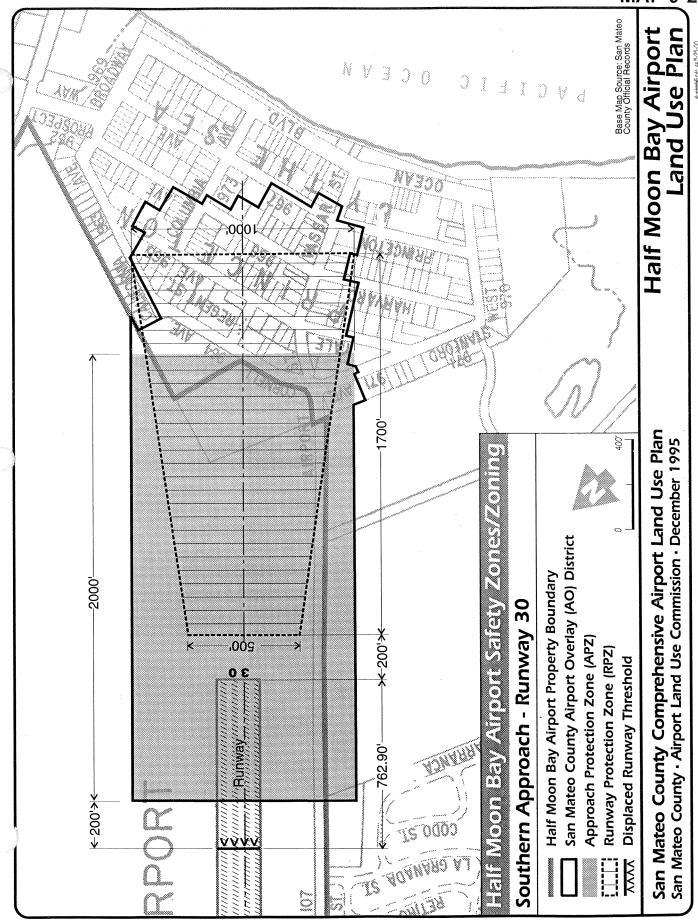
The Airport Land Use Commission (C/CAG) has adopted the provisions in FAR Part 77 for civil airport imaginary surfaces for airspace protection and to establish height restrictions for natural and man-made objects in the vicinity of Half Moon Bay Airport. These imaginary surfaces are described as follows:

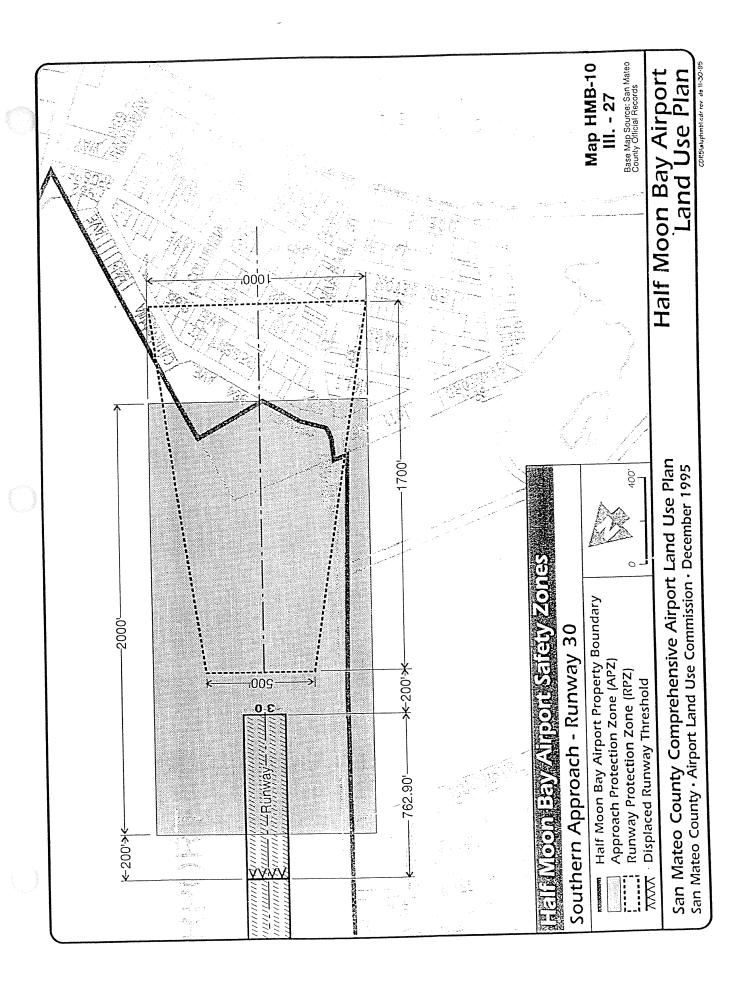
- * Primary Surface: A surface longitudinally centered along the runway, extending 200 feet beyond each end of the paved runway and having a total width of 250 feet.
- * Horizontal Surface: A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by scribing an arc 10,000 feet out from the center of each end of the primary surface and connecting the arcs with tangents.
- * <u>Conical Surface</u>: A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.
- * Approach Surface: A surface longitudinally centered on the extended runway centerline, extending outward and upward from each end of the primary surface at a slope of 34 to 1 for a length of 10,000 feet. The width of this surface starts the same as the Primary Surface, 250 feet, and flares to 1,250 feet at 5,000 feet.
- * Transitional Surface: A surface extending outward and upward from the sides of the primary surface and from the sides of the approach surfaces at a slope of 7 to 1.

Where imaginary surfaces overlap, such as in the case where the Approach Surface penetrates and continues upward and outward from the Horizontal Surface, the lowest surface is used to determine if an object would be an obstruction to air navigation. Any proposed new construction or expansion of existing structures that would penetrate any of the FAR Part 77 imaginary surfaces for Half Moon Bay Airport, as adopted by the Airport Land Use Commission (C/CAG), is deemed to be an incompatible land use, unless either the FAA has determined that the proposed structure does not constitute a hazard to air navigation or the State Aeronautics Program has issued a permit to allow construction of the proposed structure.

A map that illustrates the configuration of the FAR Part 77 imaginary surfaces for Half Moon Bay Airport is shown on Map HMB-11 on page III.-34. An example of the FAR Part 77 imaginary surfaces at Half Moon Bay Airport, in an isometric view, is shown in Figure HMB-3 on page III.-35. A diagram of the runway approach profile for Runway 12-30 and the height restrictions at Half Moon Bay Airport, based on the configuration of the FAR Part 77 34:1 Approach Surface, is shown on Figure HMB-4 on page III.-36.







It is the policy of the Airport Land Use Commission (C/CAG) to keep Approach Protection Zones (APZs) free of structures. Non-structural uses may be permitted in APZs if they do not cause a concentration of more than 10 people per net acre. Motor vehicle parking and open storage uses that generate up to 25 persons per net acre are also permitted.

4. Safety/Land Use Compatibility Criteria

Because aircraft accidents happen infrequently and the time, place, and consequence of their occurrence cannot be predicted, the concept of risk is central to the assessment of safety compatibility. From a land use planning perspective, two variables determine the degree of risk posed by potential aircraft accidents: (1) accident frequency - where and when do aircraft accidents occur and (2) accident severity - what land use characteristics contribute to the consequences of an accident.

The objective of safety compatibility criteria is to <u>minimize</u> the risks associated with potential aircraft accidents. The most fundamental safety compatibility component is to increase the safety of people and property on the ground in the event of an aircraft accident near an airport. Another important component is to enhance the chances of survival of the occupants of an aircraft involved in an accident.

The safety/land use compatibility criteria for the Half Moon Bay Airport environs area are shown in Table III.-3 on pages III.-29, III.-30, and III.-31. These criteria are designed to minimize the risks associated with potential aircraft accidents. The criteria indicate the compatibility of the specified land uses with the three safety zones that are designated in this Plan for Half Moon Bay Airport. The criteria are not intended to be a specific development plan, do not set forth specific land uses for any particular parcel(s), and are not retroactive with respect to existing land uses.

NOTE: Airport/land use compatibility is determined by comparing a proposed land use policy action with the Aircraft Noise/Land Use Compatibility Standards, the relevant FAR Part 77 height restrictions, and safety criteria contained in this Plan. A proposed land use policy action must be compatible with each of these elements for the Airport Land Use Commission (C/CAG) to determine that the proposed action is consistent with the relevant policies, standards, and/or criteria contained in the relevant Comprehensive Airport Land Use Plan (CLUP).

Table - 3

SAN MATEO COUNTY COMPREHENSIVE AIRPORT LAND USE PLAN HALF MOON BAY AIRPORT SAFETY/LAND USE COMPATIBILITY CRITERIA

| | | СОМРАТІВІЦІТУ WITH | |
|--|---------------------------------|-----------------------------------|---------------------------------|
| LAND USE CATEGORY | Runway Protection Zone (RPZ) | Approach Protection Zone (APZ) | Traffic Overnight Zone (TOZ) |
| RESIDENTIAL | | | |
| Single-Family Detached | o _N | o Z | Yes |
| Two-Family Dwelling | S _S | o N | Yes |
| Multi-Family Dwelling (3 + Families) | No | 0 Z | Yes |
| Group Quarters and Rooming Houses | °Z | 0 Z | , se X |
| Mobile Homes and Mobile Home Parks | OZ | 0 N | Yes |
| COMMERCIAL | | | |
| Wholesale Trade Facilities/Activities | N _O | o _N | Se/ |
| Retail Trade Establishments | No | <u>0</u> | X S |
| Eating and Drinking Establishments | oN | No V | , Yes |
| Neighborhood/Community/Regional Shopping Centers | No | oN | Yes |
| Miscellaneous Commercial | ON. | ON. | Yes |
| BUSINESS AND PROFESSIONAL SERVICES | | | |
| Professional Offices | oN o | o Z | Yes |
| Banks, Credit Unions, Financial Institutions | o _N | o _N | Yes |
| Hotels, Motels, Inns, Bed and Breakfast | ON | o _N | Yes |
| Business and Vocation Schools | No | o _N | Yes |
| Automobile Repair | o _N | ON. | Yes |
| Miscellaneous Personal Services | O N | No | Yes |
| | | | |

III.-29

Page 1

Page 2

III.-30

Table III. - 3, continued
SAN MATEO COUNTY COMPREHENSIVE AIRPORT LAND USE PLAN
HALF MOON BAY AIRPORT
SAFETY/LAND USE COMPATIBILITY CRITERIA

| | | COMPATIBILITY WITH | |
|---|---------------------------------|-----------------------------------|---------------------------------|
| LAND USE CATEGORY | Runway Protection Zone (RPZ) | Approach Protection Zone (APZ) | Traffic Overnight Zone (TOZ) |
| PUBLIC AND QUASI PUBLIC SERVICES | | | |
| Government Offices | o _N | No No | Yes |
| Schools, Colleges and Universities | o _N | o _N | Yes ⁴ |
| Hospitals, Nursing Care Facilities, Medical Offices | ON | N _O | Yes |
| Libraries | oN | o _N | Yes |
| Churches | o _N | 0N | Yes |
| Cemeteries | oN O | Yes ^{1,7} | Yes |
| Jails and Detention Facilities | o N | 0 <u>N</u> | Yes |
| Child Care Facilities | No | 0 N | Yes |
| | | | |
| RECREATION | | | |
| Public Parks/Open Space/Camping Facilities | No | o N | Yes |
| Golf Courses | No | Yes ² | Yes |
| Motion Picture Theater (Single or Complex) | o _N | o N | Yes |
| Auditoriums, Concert Halls, Amphitheaters | No | o _N | Yes |
| Stadiums, Arenas, Outdoor Sports Facilities | o N | o Z | Yes |
| INDUSTRIAL | | | |
| Manufacturing | ON. | Yes ^{3,7} | Yes |
| Transportation | ON. | Yes | Yes |
| Communications | ON. | Yes | Yes5 |
| Utilitles | No | 0 2 | Yes |
| | | | |

Table III. - 3, continued SAN MATEO COUNTY COMPREHENSIVE AIRPORT LAND USE PLAN HALF MOON BAY AIRPORT SAFETY/LAND USE COMPATIBILITY CRITERIA

| | | COMPATIBILITY WITH | |
|---------------------------------|---------------------------------|-----------------------------------|-------------------|
| LAND USE CATEGORY | Runway Protection Zone (RPZ) | Approach Protection Zone (APZ) | Traffic Overnight |
| AGRICULTURE AND MINING | | | (F) (F) (F) |
| Crop Production | Yes ⁶ | 9897 | 950 |
| Livestock - Pasture and Grazing | 0 Z | 989 > | - es - > |
| Mining and Quarrying | 0 N | ? <u>2</u> | - es - > |
| Oil and Gas Extraction | o Z |) O | s S |
| | | | |

FOOTNOTES:

- 1. Chapels and/or funeral homes are not permitted.
- permitted. New course layouts and revisions to existing courses shall be submitted to the Airport Land Use Commission (C/CAG) for an Club houses, bars, restaurants, and/or banquet facilitles are not permitted. Ancillary uses such as pro shops and snack bars are evaluation of safety Impacts.
- 3. Storage of bulk petroleum products or chemicals is not permitted.
- School facilities are compatible only if the requirements of the California Education Code, Sections 39005.7, 81036, and 81038, as amended, are fulfilled. 4.
- Uses that would cause interference with aircraft communications and/or instrumentation are not permitted. Ď.
- Compatible only if it does not result in a possibility that a water area may cause ground fog or result in bird hazard. 6
- 7. No uses resulting in a gathering of more than 10 persons per acre at any time.

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G. HEIGHT OF STRUCTURES, USE OF AIRSPACE, AND AIRSPACE COMPATIBILITY

The height of structures and the use of airspace are key safety elements related to airspace compatibility. There are three key objectives related to the preservation and maintenance of airspace compatibility, as follows:

- * to avoid airspace impacts that may require significant changes in existing air traffic patterns
- * to avoid airspace impacts that may result in a shifting of aircraft noise from one area to another
- to avoid the creation of land use conditions which, by posing hazards to aircraft in flight, can increase the risk of an accident occurring. These hazards include: airspace obstructions and land use characteristics, which pose other potential hazards to aircraft in flight, by attracting birds or creating visual and/or electronic interference with air navigation.

1. <u>Federal Aviation Regulations (FAR) Part 77, "Objects Affecting Navigable Airspace", As Amended</u>

The Airport Land Use Commission (C/CAG) has adopted the provisions in FAR Part 77, "Objects Affecting Navigable Airspace", as amended, to establish height restrictions and federal notification requirements for project sponsors, related to proposed development within the FAR Part 77 airspace boundaries for Half Moon Bay Airport. The FAR Part 77 regulations contain three key elements: (1.) they establish standards for determining obstructions in the navigable airspace and designate and define imaginary surfaces for airspace protection, (2.) they set forth the requirements for project sponsors to provide notice to the FAA Administrator of certain proposed construction of alterations that may adversely affect the airspace in the airport environs, and (3.) they initiate aeronautical studies conducted by FAA staff, to determine the potential effect of proposed construction or alterations on the safe and efficient use of the affected airspace.

a. Imaginary Surfaces

The Airport Land Use Commission (C/CAG) has adopted the provisions in FAR Part 77 for civil airport imaginary surfaces for airspace protection and to establish height restrictions for natural and man-made objects in the vicinity of Half Moon Bay Airport. These imaginary surfaces are described as follows:

- * Primary Surface: A surface longitudinally centered along the runway, extending 200 feet beyond each end of the paved runway and having a total width of 250 feet.
- * Horizontal Surface: A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by scribing an arc 10,000 feet out from the center of each end of the primary surface and connecting the arcs with tangents.
- * <u>Conical Surface</u>: A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.
- * Approach Surface: A surface longitudinally centered on the extended runway centerline, extending outward and upward from each end of the primary surface at a slope of 34 to 1 for a length of 10,000 feet. The width of this surface starts the same as the Primary Surface, 250 feet, and flares to 1,250 feet at 5,000 feet.
- * Transitional Surface: A surface extending outward and upward from the sides of the primary surface and from the sides of the approach surfaces at a slope of 7 to 1.

Where imaginary surfaces overlap, such as in the case where the Approach Surface penetrates and continues upward and outward from the Horizontal Surface, the lowest surface is used to determine if an object would be an obstruction to air navigation. Any proposed new construction or expansion of existing structures that would penetrate any of the FAR Part 77 imaginary surfaces for Half Moon Bay Airport, as adopted by the Airport Land Use Commission (C/CAG), is deemed to be an incompatible land use, unless either the FAA has determined that the proposed structure does not constitute a hazard to air navigation or the State Aeronautics Program has issued a permit to allow construction of the proposed structure.

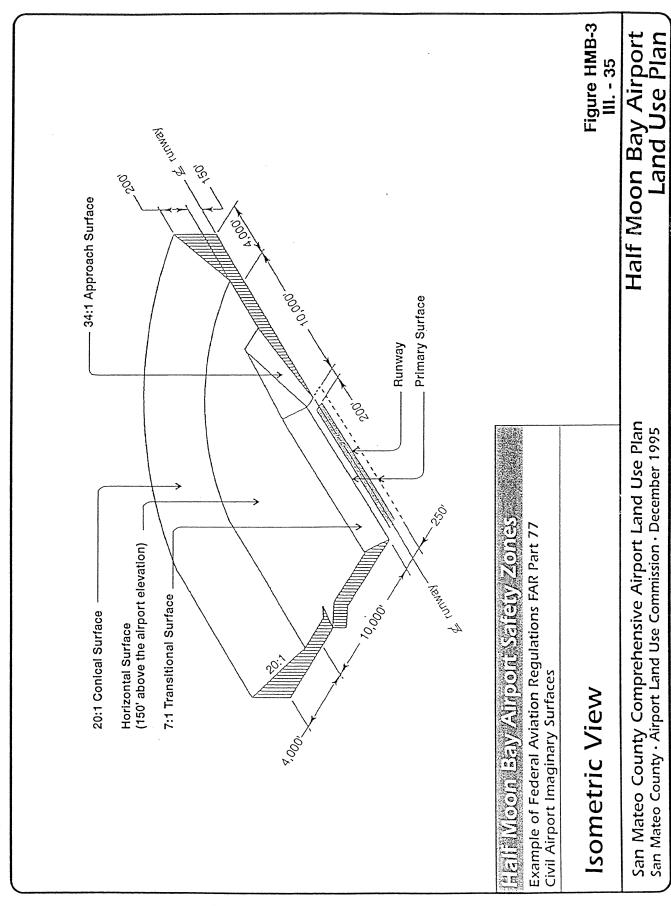
A map that illustrates the configuration of the FAR Part 77 imaginary surfaces for Half Moon Bay Airport is shown on Map HMB-11 on page III.-34. An example of the FAR Part 77 imaginary surfaces at Half Moon Bay Airport, in an isometric view, is shown in Figure HMB-3 on page III.-35. A diagram of the runway approach profile for Runway 12-30 and the height restrictions at Half Moon Bay Airport, based on the configuration of the FAR Part 77 34:1 Approach Surface, is shown on Figure HMB-4 on page III.-36.

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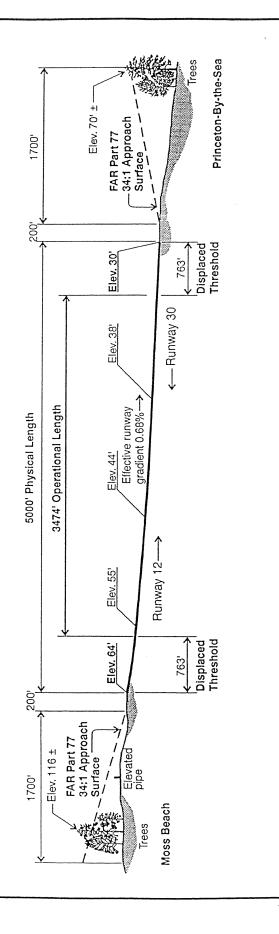
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Runway 12-30 Approach Profile

Source:

Half Moon Bay Airport Layout Plan Approved by FAA Airports District Office 5/7/91 San Mateo County Comprehensive Airport Land Use Plan San Mateo County · Airport Land Use Commission · December 1995

Runway Approach Profile

Figure HMB-4 III. - 36

Half Moon Bay Airport Land Use Plan cdr5\aluphmb9 rp rex. 9-15

b. Notice of Proposed Construction or Alteration of Objects that May Affect the Navigable Airspace (FAA Advisory Circular AC No. 70/7460-2I)

In administering FAR Part 77, the prime objective of the FAA is to ensure the safety of aircraft in flight and the efficient use of navigable airspace by aircraft. The FAA recognizes that there are varied demands for the use of airspace, by both aviation and non-aviation interests. When conflicts arise out of construction proposals, the FAA emphasizes the need for conserving and protecting the navigable airspace. Therefore, early notice of proposed construction or alteration provides the FAA with the opportunity to review development proposals to evaluate the potential aviation and airspace effects.

Upon completion of its evaluation, the FAA informs the project sponsor, the airport proprietor, and the local land use and zoning authority of its findings. The FAA has no authority to approve, modify, or prohibit the proposed construction or alteration. It is up to the local land use and zoning authority to consider the FAA's findings, regarding airspace impacts of the proposed action, as part of its review and final action on the proposed development.

The Airport Land Use Commission (C/CAG) supports the FAR Part 77 notification process related to proposed construction or alterations in the Half Moon Bay Airport airspace and advises project sponsors to comply with such notice requirements. Persons failing to comply with the federal notice provisions of FAR Part 77 may be subject to a criminal penalty under Section 902 of the Federal Aviation Act of 1958, as amended. A copy of FAA Advisory Circular AC No. 70/7460-2I is included in Appendix J.

2. <u>State of California Airport Approaches Zoning, California Government Code, Chapter 2., Article 6.5, as amended</u>

The State of California adopted the "Approaches Zoning Law" in 1953. The purpose of the law is stated in Section 50485.3, as follows:

"50485.3 In order to prevent the creation or establishment of airport hazards, every city or county having an airport hazard area within its territorial limits may adopt, administer, and enforce, under the police power and in the manner and upon the conditions hereinafter prescribed, airport zoning regulations for such airport hazard area, which regulations may divide such area into zones, specify the land uses permitted, and regulate and restrict the height to which structures and trees may be erected or allowed to grow."

The complete text of Chapter 2., Article 6.5, is shown in Appendix K.

3. 1994 County of San Mateo Zoning Regulations, as amended - Chapter 32. Height of Structures and Use of Airspace Near Half Moon Bay Airport

The County of San Mateo has adopted zoning provisions to regulate the height of structures and the use of the airspace in the vicinity of Half Moon Bay Airport. These provisions are based on the authority granted to the county by the Airport Approaches Zoning Law and incorporate the provisions and restrictions contained in FAR Part 77, as applicable to Half Moon Bay Airport. The purpose of the airspace zoning provisions for Half Moon Bay Airport is described in Section 6600 of the County of San Mateo Zoning Regulations, as follows:

"SECTION 6600. PURPOSE. Pursuant to the authority conferred by the Airport Approaches Zoning Law of the State of California and in conformity with Sections 50485 to 50485.13 of the Government Code, the Board of Supervisors of the County of San Mateo, State of California, deem it necessary to regulate the use of airspace for the purposes of promoting the public health, safety, and general welfare of the inhabitants of the County of San Mateo, by preventing the creation or establishment of airport hazards, thereby protecting the lives and property of the users of the Half Moon Bay Airport and the occupants of the land in the vicinity and preventing destruction and impairment of the utility of the airport and the public investment therein."

The complete text of Chapter 32 of the County of San Mateo Zoning Regulations, as amended, is included in Appendix L.

4. Hazards to Aircraft in Flight

Certain land use characteristics are recognized by the Airport Land Use Commission (C/CAG) as hazards to air navigation in the vicinity of Half Moon Bay Airport. These include the following:

- * Any use that would direct a steady or flashing light of white, red, green, or amber color toward an aircraft engaged in an initial straight climb following take-off or toward an aircraft engaged in straight final approach toward a landing, other than FAA-approved navigational lights.
- * Any use that would cause sunlight to be reflected toward an aircraft engaged in a straight climb following take-off or toward an aircraft engaged in a straight final approach toward a landing.

- * Any use that would generate smoke or rising columns of air.
- * Any use that would attract large concentrations of birds within approach-climbout areas.
- * Any use that would generate electrical/electronic interference that may interfere with aircraft communication equipment and/or aircraft instrumentation.

NOTE: Airport/land use compatibility is determined by comparing a proposed land use policy action with the aircraft noise/land use compatibility standards, the relevant FAR Part 77 height restrictions, and safety criteria contained in this Plan. A proposed land use policy action must be compatible with each of these elements for the Airport Land Use Commission (C/CAG) to determine that the proposed action is consistent with the relevant policies, standards, and/or criteria contained in the Comprehensive Airport Land Use Plan (CLUP).

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