

**THE INVERNESS RIDGE COMMUNITIES PLAN**

**1983 EDITION**

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This document was cooperatively prepared by the volunteer members of the Inverness Ridge Communities Planning Group and the Staff of the Marin County Planning Department.

## CONTRIBUTORS

### INVERNESS RIDGE COMMUNITIES PLANNING GROUP

Lorie Chase, Chairperson

Gordon Ashby  
Sally Behr  
Harold Bucklin  
Barbara Garfien  
Kay Holbrook  
Wade Holland  
Bill Howe  
Alan Johnstone  
John Robbins  
Kerb Kutchins  
Gregg Mann  
Connie Morse  
Paddy Schweitzer  
Howard Waite

Sue Baty  
Ted Boutny  
Marcia Fox  
Bob Hildreth  
Brad Holbrook  
Barbara Kahn  
Vivienne Howe  
Dorothy Johnstone  
John Kaufman  
Sue Jacob  
Corwin Mocine  
Carl Munger  
Yan Slattery

### MARIN COUNTY PLANNING DEPARTMENT

Mark J. Riesenfeld, Planning Director

H. Eric Borgwardt, Principal Planner  
Larry Smith, Graphics  
Alexandra Morales, Word Processor  
Parkash Latchman, Word Processor  
Mary Bloom, Word Processor

### PREVIOUS PLANNING DEPARTMENT CONTRIBUTORS

Marjorie W. Macris, Former Planning Director  
Sol Silver, Former Chief Advance Planning  
Lasta Tomasevich, Former Coastal Planner  
Ellis Gans, Former Principal Planner  
Warren Baker, Former Senior Planner

### OTHER WHO HELPED

The history of the Inverness Ridge area was furnished through the courtesy of Mr. Peter Whitney.

## OVERVIEW

Within the past five years, the Inverness Ridge area has been the subject of numerous planning and technical studies including the Inverness Ridge Communities Plan (1979), the Inverness Ridge Septic Tank Cumulative Impact Report (1978), the Paradise Ranch Estates Resoration Plan (1981), the Local Coastal Plan Unit #2 (1981), and the Woodward-Clyde Consultants report (1982).

Experienced professionals and lay persons alike frequently have serious difficulty in determining the degree and applicability of each of these studies with their frequently disparate and sometimes overlapping standards and regulations.

Therefore, one of the important purposes of this revised Community Plan for the Inverness Ridge Communities is to synthesize and amalgamate all applicable standards, policies and regulation into one comprehensive document.

## INTRODUCTION

After many years of cooperative effort residents of the Inverness Ridge communities and the staff of the Marin County Planning Department, a Community Plan which advanced area wide goals, objectives and policies was formally adopted by the Marin County Board of Supervisors on March 20, 1979. The life expectancy of the Plan was intended to extend over a period of five (5) to seven years. However, on January 4, 1982, the forces of nature proved so destructive that an interim review and re-elevation of the 1979 Plan was deemed prudent and necessary.

On January 4, 1982, the physical components of the Inverness Ridge communities experienced vast devastation from flooding, debris flows, and landslides. It was not until several days after the storm that the full extent of the damage was realized when the sole roadway which links the communities together - Sir Francis Drake Boulevard - was reopened to permit limited traffic movements. In some areas such as Redwood Canyon, the landform was drastically changed. Homes previously sited on the hill side above Sir Francis Drake had been swept bayward across the roadway. Stacks of battered kindling

were all that remained of the former abodes. Mudflows in Inverness Park swept downhill and bayward and literally travelled through local business establishments. In old Inverness, dozens of homes were damaged. Nearly completed water system improvements owned by the *Inverness Public Utilities District* were swept away. And along the shores of Tomales Bay, huge deltas had been formed.

Because the magnitude of the damage was so great and in order to promptly comply with Federal Emergency Management Agency (FEMA) requirements, the County engaged the services of *Woodward-Clyde Consultants* to perform two important tasks - to prepare damage assessment reports to facilitate reimbursement of costs associated with repairing public facilities such as roadways and culverts, and to develop a mitigation package for consideration by Marin County.

Concurrent with the efforts of *Woodward-Clyde Consultants*, residents of the communities re-established the *Inverness Ridge Planning Group* which had been disbanded upon adoption of the 1979 Plan. The Group determined that the conduct of a community wide public opinion survey would provide partial basis for possibly re-evaluating the 1979 Plan. The *Woodward-Clyde* report would provide the balance of the needed information. Lastly, the Board of Supervisors provided funding within the County Planning Departments budget for Community Plan amendment studies during the 1982-1983 fiscal year.

This Plan endeavors to represent the views of community residents, to take cognizance of the *Woodward-Clyde Consultants* report, and to generally update the *Inverness Ridge Communities Plan* including a second unit element.

## STATEMENT OF GOALS

The Statement of Goals, which influenced and determined the general and specific recommendations contained within this Plan, is cited as follows:

- 1) Preserve, to the extent possible, the Inverness Ridge for both viewshed and watershed purposes.
- 2) Retain and maintain the established characters of neighborhood components located within the Planning Area.
- 3) Recognize the diversity of the individual lifestyles and provide means for their continuance.
- 4) Provide reasonable opportunities for further residential and commercial development.
- 5) Conserve the land and water areas along the shores of Tomales Bay.
- 6) Recognize the unique physical setting of the Planning Area and design development in a fashion consistent with such character.
- 7) Provide opportunities for pedestrian, equestrian, bicycle and transit uses to minimize reliance on the use of the private automobile.
- 8) Recognize natural hazards from seismic, flood and soil instability factors and provide mitigations against future property damage and to assure personal safety.

HISTORY OF  
INVERNESS

## HISTORY OF INVERNESS

James McMillan Shafter, a Superior Court Judge, who came to San Francisco from Vermont in 1858 to join his brother Oscar in a law firm and in the ownership of most of Point Reyes, founded the Village of Inverness in 1889 in an attempt to rebuild his fortunes, seriously embarrassed by the early failures of the North Pacific Coast Railroad, a narrow-gauge line that snaked through the redwoods in what is now Samuel P. Taylor State Park, and emerged to follow the shores of Tomales Bay. It brought the redwood lumber that went into the building of San Francisco, but it had cost a great deal more than expected.

The Village of Inverness was from the beginning a planned community. Judge Shafter, who owned much of the west shore of Tomales Bay, hired civil engineers and land agents to divide the little valleys and mesa into lots/parcels so tiny that few present Inverness homes are built on less than two of them. A grand hotel, rivaling that of Del Monte, was outlined in a prospectus for "The Brighton of the Pacific Coast."

The town was planned for the well-to-do, but it never became a fashionable Del Monte. Instead, a sober, unpretentious colony of ministers, professors and other professionals put their stamp on the village whose name reflected the Shafter family pride in its Scots ancestry. "Presbyterian Inverness" was among other things a temperance community; no liquor might be sold or publicly consumed there.

Judge Shafter died in 1892; of his three children the most competent and most interested in Inverness was his daughter, Julia Hamilton. She took over the regulation of the estate's debts, selling off several of the ranches, and enlarging the Inverness subdivision back into the Inverness Ridge and northward toward the Oscar Shafter properties. The original subdivision was between the First and



Second Valley's creeks; the present "Downtown" was created by sale of lots for stores and workshops along the road then called "Bayside", now Sir Francis Drake Boulevard.

Inverness continued as a summer colony and, to service ranches out on the Point, ranch hands would retire or winter in the sheltered valleys. A linkage of interest with Berkeley, particularly University families, was a feature from the beginning, and has remained a strong thread in the community's life. When the Inverness Yacht Club directors accepted their building, it was at a meeting in a member's Berkeley home. The first Master Plan in Marin County (and some say in the State) was made for Inverness by a group of University of California planning students in 1949, and adopted by the Inverness Improvement Association, whose directors at times have had a majority of Berkeley residents.

The village survived the 1906 earthquake with surprising good fortune - some injured, no known dead; many house destroyed, but others easily jacked up and realigned, as was the Inverness Store, standing today. One after-effect was a sharp increase in silting of the Bay. Inverness, once a landing place for shallow draft vessels, soon was approachable only on higher tides.

The great Depression ended rail service on the coastline, then a branch of the Northwestern Pacific. It also bankrupted Julia Hamilton's daughter, Bertha, throwing much of her property, including tideland, on the market. It caused the other branch of the Shafter family to liquidate, at bargain prices, the O.L. Shafter Estate Company: one result being the creation of Seaheaven; initially a subdivision of modest homes on small lots, but upgraded over time into some of the finer homes in the Inverness area. Old Inverness, which at first turned a glassy eye on the new subdivision, eventually accepted it as de facto part of the village. During the 1960's the Pine Hill subdivision, on steep land from the O.L. Shafter estate, grew up between Inverness and Seaheaven.

The community now known as Inverness Park was promoted by Isaac Freeman, on 500 acres given him by Mrs. Julia Hamilton, apparently in lieu of payment for his services on her Inverness enterprise. Freeman, though, lacked capital and the site, superficially like Inverness, lacked the four perennial creeks, the charming folds and promontories and, above all, the access to the navigable waters of the Bay.

The community now is distinguished for its quasi-agricultural life patterns, its gardens, and close relationship to the once salt meadows where herds of Holsteins graze. Inverness Park was an enclave for the Swiss-Italians who made their way to the Tomales Bay neighborhood in the last years of the 19th Century and the first decade of the 20th, now include among their descendants some of the more prosperous and distinguished families of Marin County.

With the opening of the Golden Gate Bridge, the pace in Inverness, as in all of Marin County, quickened. By rail it had taken an all-day trip to reach Inverness from San Francisco. When automobiles had to labor over the grades and wind through the tortuous canyons, only to wait for hours for space on a ferry, families thought twice about using up a mere weekend on Inverness. But with the bridge, Inverness changed from a summer to a weekend town.

World War II, gas rationing (and to some extent, actual fear of Japanese invasion) checked development in the village. For years, lots hardly sold at all, and actual building was impossible. Post-war Inverness was soon caught up in two strong and conflicting pressures; that of development and that of the newly burgeoning conservation movement. At first, events seemed to the advantage of the former. The water company, owned by Bertha Hamilton, was ramshackle and under constant criticism by the State Public Utilities Commission. Three times the community failed to approve proposals to acquire it and its thousands of acres of watershed for \$20,000. It was sold for \$30,000 to a local land speculator who

held it for a year and turned it over, less half the watershed, to an impersonal Eastern corporation. The detached acreage immediately enticed development pressure, which persists today.

Similar pressures involved the tidelands. Old English law, followed by California and many other states, makes those lands which lie between high and low tide and thus are exposed and flooded twice daily - accessible to the public for navigation and commerce, including fishing. Those who bought tidelands in the 1870's, when California briefly sold them to private purchasers, were aware of this limitation on their ownership; most acquired these mud flats because they needed control over reclamation for agriculture through dikes and drains. But latter-day purchasers had forgotten the law, or else hoped to alter it. Unfortunately, the Tax Assessor followed the real estate industry's lead, and began to tax "waterfront" properties heavily. The tidelands' issue was Statewide, but because the same speculator who bought the waterworks also pressed the issue of how he could use his tidelands, the Inverness community was racked with new controversy. The State Supreme Court, in its unanimous, widely discussed decisions on Marks vs. Whitney, reaffirmed the public trust over tidelands. More significantly, it enlarged the conventional right of navigation and commerce to include recreational activities and the choice of leaving the shoreline in its natural state, if that were the considered decision of the State.

Shell Beach had always been put at the disposal of the community by the C.L. Shafter and Howard Estates, which maintained toilets and a dressing room for a modest key rental. The germ of Inverness self-government began with the committees which maintained the swimming raft at the beach, maintained trails, foot-bridges and stiles across the ranch properties on permitted access; and policed the towns garbage dump.

In the late 1940's, the conservationists in the County, led by public-spirited residents of the Inverness Ridge area, saw to it that Shell Beach was not turned into an elegant private club by a developer; instead it was acquired for the County, and eventually became a State Park. This accomplishment began the idea of the Point Reyes National Seashore.

The principal influence on the village's future was the establishment of the Point Reyes National Seashore. Hotly contested by many West Marin residents, who saw the doom of ranching with government exercising only dilettantish care of the land removed from grazing or hunting; the Seashore was originally pushed by a majority of Invernessians, who made up their lack of numbers by their devotion and acumen.

The Seashore was a triumph for the conservation movement which was gaining strength by leaps and bounds. The creation of the Golden Gate National Recreational Area was the next big achievement. Invernessian's commitment to conservation continues, and they secured the support of Assemblyman William Bagley to have the State expand Tomales Bay State Park southward along the Inverness Ridge. And now the State has purchased several hundred more acres along the east shore of Tomales Bay for public use.

In 1971, Inverness residents joined with other conservationists in getting the Board of Supervisors to recind the pro-growth West Marin Master Plan which would have encouraged suburban style development up and down Western Marin. Inverness residents were also active in defeating the State Highway Commission Plan to turn Route One, Shoreline Highway, into a six-lane freeway, ruining the cliffs between Muir Beach and Stinson Beach, encroaching upon Bolinas Lagoon, and bringing daily commuting to many communities, including Inverness.

PHYSICAL SETTING

## PHYSICAL SETTING

The Inverness Ridge Planning Area, sometimes known as the Inverness pocket, is bounded on the north by Tomales Bay State Park, on the west and south by the Point Reyes National Seashore, and on the east by Tomales Bay and Lagunitas (or Papermill) Creek. The total planning area contains 3,505.7 acres, including 205 acres of tidelands lying west of Sir Francis Drake Boulevard.

The two major centers are Inverness and Inverness Park, the former being the older and best known of the communities. Going from north to south, the communities are: Seahaven, Pine Hill, Inverness, Paradise Ranch Estates, Drakes Highlands, Inverness Park, Silver Hills, and Noren Estates. Maps of the Planning Area are located on Pages 80 thru 88 as well as Pages F-1 thru F-8.

### Landscape:

The Inverness Ridge extending from the shore of Tomales Bay is characterized by fairly steep slopes broken up by knolls, gentle swales, and streams - some with steep side walls. The dominant feature of the Ridge is Mt. Vision, rising to an elevation of 1,356 feet. The general steepness of the terrain is a natural constraint to intensive urban residential development. However, the face of the Ridge is not uniform nor consistent. Upland meadows are found throughout the Ridge and, as land forms, offer enhanced development potentials. A series of year round and seasonal streams also prevail along the Ridge. A detailed explanation of their importance will be found on Page 10. The Ridge is almost completely tree covered with Douglas Fir, Bishop Pine, Laurel, Tan Oak and Live Oak dominating. When viewed from a distance, the dark green color and shadows hide many houses and roads, and the eastern face of the Ridge is not likely to show new housing on roads as long as the present density of trees is maintained.

### Geologic Setting:

The San Andreas fault divides the Point Reyes peninsula from the Marin mainland. The peninsula, consisting mostly of decomposed granite whose upper layers have been weathered and extensively fractured, is quite different from the clay, sandstone, chert, shale Franciscan formation on the mainland. Unlike the Franciscan, the decomposed granite offers good percolation for septic tank systems. The San Andreas is an active fault; the west side displaces about one-half inch per year in a northwesterly direction, with respect to the east side. In the Inverness area, the fault appears to be locked so that the sides do not readily slip past each other. Under these conditions, the strain builds until it overcomes the frictional force locking the two sides; the result is an earthquake. The last major quake along this part of the fault was April 18, 1906, with an epicenter at Olema. Previously, an earthquake occurred in 1838. The potential for an earthquake steadily increases each year. A great earthquake (magnitude 7-8) can be expected here every 75-300 years; during the last 243 million years, there was an earthquake an average every 230 years.

### Earthquake Hazard:

The Inverness community is about 1800 to 5400 feet from the fault line. Development should take into account that a major quake will occur and that damage will result from: Vibration, fracturing and sliding of the ground, and lurching, cracking, and lateral spreading of poorly consolidated sediment.

A report of 1906 earthquake results in the Inverness area indicated these effects: Extensive bedrock cracks throughout the Point Reyes peninsula, slipping along some subsidiary faults on Inverness Ridge; unconsolidated material on hillsides was extensively cracked and moved downslope, especially on hills west of the fault; marshes and bottomlands were extensively cracked; extensive changes in the flow of springs; at least one pond drained by subterranean flow. The changes in water

drainage are ascribed to newly-formed cracks in the bedrock which appear to have been important and extensive throughout a belt four or five miles broad along the earthquake fault.

Landslides were common, mainly west of the fault, especially along road cuts. There were many dry type landslides, the largest seen were in the vicinity of the old Sunshine Ranch along the Inverness Ridge. Closely related to these were small falls of earth and rock from the low cliffs created during road construction; all the County roads were more or less obstructed.

### Slope Failures

When the Inverness Ridge Communities Plan was first adopted in 1979, the following text was included: "Not too much is known about the danger of slope failure in decomposed granite. Steep road cuts have stood for years as long as the material was dry. Shear tests of this material indicate a good degree of stability as cut or fill. However, when saturated by water (during heavy rain storm or from leaking water and sewer/septic tank lines), the safety factor can be reduced to a point where landsliding occurs." During December 1981, the hillsides within the Planning Area did in fact become super-saturated with water from virtually incessant rainfall. During the first days of January 1982, rainfall continued. On January 4, 1982, the intensity of rainfall accelerated to record levels. The upper reaches of the Inverness Ridge had become fully saturated beyond the safety point noted in the 1979 Plan. The landslides which took place released countless tons of materials which combined with water turned into a deluge of cascading mud. In the Redwood Canyon and Inverness areas, the mud flow collected debris (logs, boulders, butane tanks, etc.) which literally ripped through residential neighborhoods. Plugged culverts caused the diversion of water from normal channels, further exacerbating flooding problems. Localized slides along the face of Sir Francis Drake Boulevard also gave way, completely blocking access to and



from neighborhoods and communities. Ironically, the location of the landslides along the ridge line were in the main not located on private property. Rather, they were situated on lands largely held by the State and Federal governments as preserved open space and park lands.

#### Water Source:

Present water supply is either diverted from Lagunitas (Papermill) Creek and delivered by the North Marin County Water District to Point Reyes Station and Inverness Park, or from water systems which derive water from wells, tunnels, and springs on the east side of Inverness Ridge.

The well in Lagunitas Creek supplying water to Point Reyes Station and Inverness Park is located about 6,000 feet upstream from the Highway 1 crossing, and derives water from gravel at depths of 20 to 65 feet below the well head, which is 16 feet above sea level. This gravel is a body filling the creek bed cut to the low sea levels of glacial times. It is presently sealed off from the water of Tomales Bay by deposits of silt and clay on the delta front and Bay floor.

Water for the remaining communities comes from springs and wells into groundwater reservoirs within the disintegrated granite. The recharge area is assumed to be the upper parts of the canyons from Sir Francis Drake Boulevard south to the new Park Service Road, and totals about 3.5 square miles. The bulk of this area is now free from dwellings (and should be kept so, if it is to be a water supply catchment), although there are encroachments at Paradise Estates and to the south. Annual precipitation on this area is about 36 inches, but much is lost in storm runoff.

The character and extent of groundwater beneath the Inverness Ridge has long been speculated. While several long time residents have stated that sub-surface sources are bountiful, a thorough investigation of this issue was not

undertaken until 1978 when the State Department of Water Resources (DWR) sent a team to the Planning Area to conduct a study. The conclusion and findings of the report are summarized as follows:

1. The potential for development of municipal wells is virtually nil in the granitic rocks on Inverness Ridge.
2. Small domestic wells can continue to be developed along the Ridge.
3. Substantial supplies of potable ground water can be developed from properly located and constructed wells in the alluvial fan deposits between Inverness and Fish Hatchery Creek.
4. The potential for additional groundwater development in the Olema Valley (beyond the Planning Area study limits) south of Tomales Bay appear to be good.
5. Detailed exploration programs must precede any ground water development.

In recent years when droughts were experienced, individuals within the Planning Area who sought to develop their property and who were unable to secure connections to existing piped water sources attempted to instead rely on well sources. The wisdom and propriety of such new wells was challenged by the Coastal Commission on the bases that local groundwater supplies could be depleted and potentially be degraded by septic tank leachates. The DWR report cited above affirms concerns regarding groundwater resources. The implications of the report are further addressed on Page 111, Water Supply and Distribution.

#### Creeks and Streams

A number of creeks and streams originate along the upper reaches of the Inverness Ridge, flow downhill and ultimately enter Tomales Bay. Such streams serve several important functions. From an environmental perspective, these streams may serve as primary habitat, i.e., spawning grounds for steel head in Fish Hatchery Creek. Similarly, the streams themselves and surrounding vegetation

serve as habitat for a wide variety of animal and bird life. Secondly, such streams tend to separate neighborhood community units from one another, thereby creating a sense of individual community identity. Lastly, such streams offer the potential of diversion for domestic and fire protection purposes when it is clearly demonstrated that the use of such waters will not prove detrimental to their primary function as a natural system. As development continues to occur within the Planning Area, these largely unprotected water courses are experiencing the intrusion of both physical improvements, i.e., dwellings, driveways, roads, etc., as well as the intrepid exploration of mankind. Both forms of intrusion are causing the gradual but inexorable degradation of the water courses and surrounding habitat. It was not until recently that local residents have keenly resisted man's intrusion into local water courses. Attempts to draw water from Fish Hatchery Creek for domestic purposes for the Paradise Ranch Estates development met with stiff local and State resistance is one example, while a locally advanced proposal to have the undeveloped lands along Haggerty Gulch included in the Point Reyes National Seashore to fully protect this environmentally sensitive area from further development and human intrusion is another example.

The Revised 1982 Countywide Plan as well as the Unit 2 Local Coastal Program advanced specific policies for the conservation of streamside areas. Previous to that time, development could occur within sensitive riparian zones. Today, a minimum development setback of 100 feet is applicable unless special circumstances prevail which necessitate a closer encroachment. A formal ordinance to further achieve the goals of the Countywide Plan is pending review by Marin County.

#### Sewage Disposal:

Until recent years little information was available regarding the physical ability of lands located within the Planning Area to accept additional loadings

from septic tanks, the only currently available means of sanitation disposal for residential and commercial improvements. Through the cooperation of the State Coastal Commission, funding was provided to the County of Marin for the conduct of a Cumulative Impact Study regarding this issue. While the focus of the study related to four primary components of the Planning Area - Inverness Park, Paradise Ranch Estates, Inverness and the Tidelands - the relatively homogenous physical characteristics of the Planning Area permit the use and application of the findings and recommendations of that study prepared by Cooper Clark & Associates in cooperation with J. Warren Nute, Inc., and Peter Warshall throughout the Planning Area. The essence of that report reveals that the use of septic tanks can be continued without adverse environmental detriment. A more fully detailed discussion of the Study, its recommendations and findings, can be found commencing on Page 98 of this Plan.

Erosion:

The slopes west of Tomales Bay are relatively straight and steep, and many ridge crests are narrow. The presence of straight slopes suggests that gullying and landslides are probably major processes responsible for landscape sculpture, and that creep and earthflows are relatively unimportant. Erosion may have taken place under natural conditions as local catastrophies - during exceptionally heavy storms that may occur only once every fifty or hundred years or more on the average, during earthquakes, or after intense fire - and that for most of the time and over most of the area at any one time, erosion has been negligible. Observations on undisturbed, forested hillsides, in this area, suggest that under natural conditions of dense vegetation and forest cover, erosion rates are very slow. A minimum rate of erosion for the last 5,000 years would be given by the filling of the small valley mouths at the foot of each canyon on the west side of the Bay. Magnitude for natural rates of erosion in these canyons over the last

10,000 years are: 1.4 feet (First Valley); 1.8 feet (Vision Road); and 1.8 feet (Sir Francis Drake Boulevard). This is equivalent to an erosion rate of between 300 and 400 tons per square mile per year.

However, when vegetation is removed from the sandy soils of the Inverness pocket, these soils are extremely susceptible to gullying and sheet erosion. If not trapped by downslope vegetation, it will enter the streams and ultimately flow into the waters of Tomales Bay. Site clearing, preparatory to home construction and the construction of new roadways and driveways, contribute to this problem.

THE JANUARY  
STORM

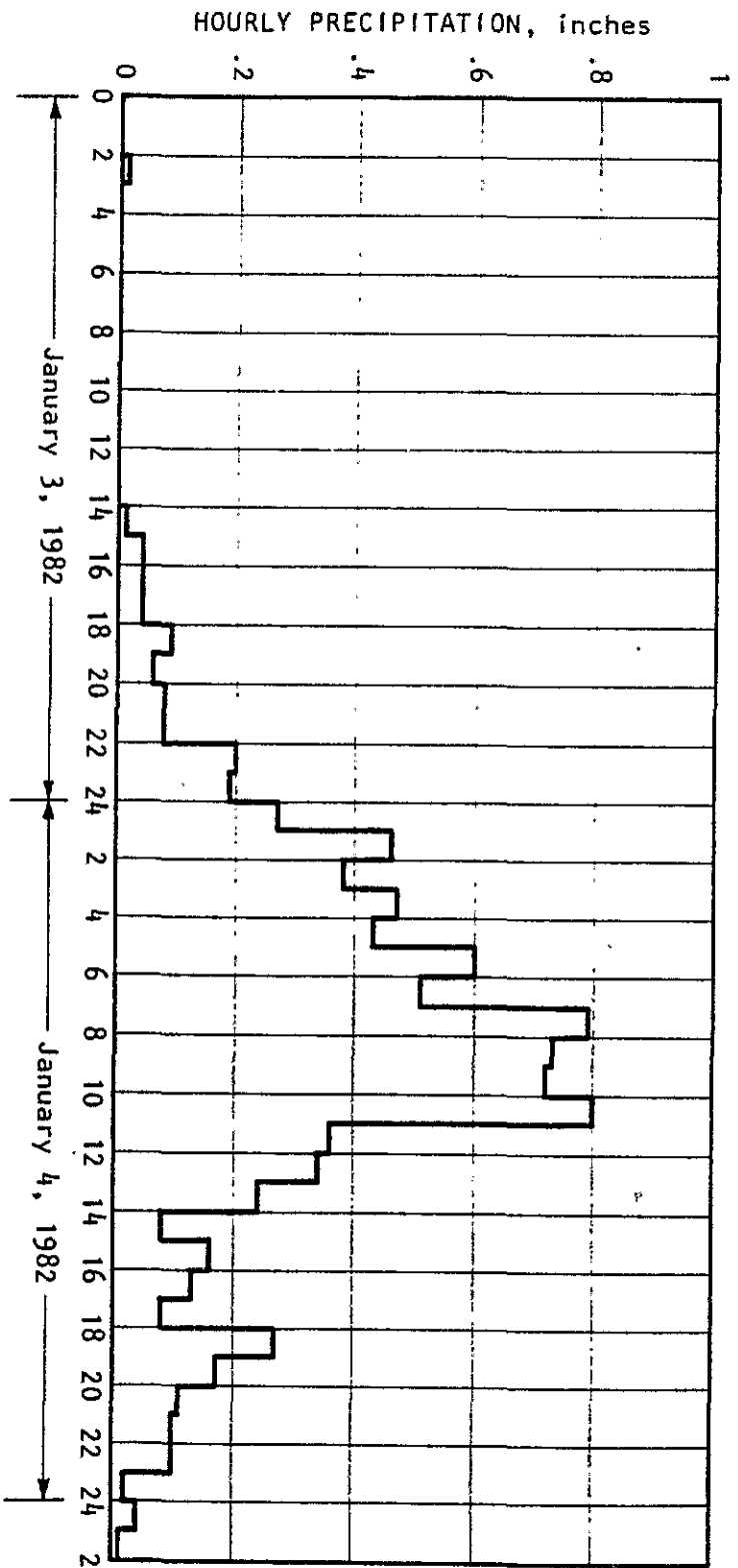
## THE JANUARY STORM

### Hydrometeorological Features

The 1981-1982 winter season in Northern California experienced rainfall well above normal. While substantial variations existed throughout the region, the total rainfall was about 50 percent above normal for Inverness, and specifically the area received about 10 inches of rain during the month prior to the January storm.

Inverness received a total of about 11 inches; however, there was substantial variability reported with the range from 13 inches in Bodega to 5 inches in Santa Rosa. Within the Inverness Community itself data collected by local residents indicated that the rainfall was between a 9 to 14 inches. The U.S. Army Corps of Engineers made a preliminary determination of the recurrence frequency of the January storm and found a large variability from about a 10-year period in the Bodega Bay area. In most cases, including Inverness, the Corps of Engineers has estimated the storm to have an average return period of about 100 to 200 years. Available records for Inverness provide only daily total rainfall amounts. However, a continuous rainfall record was obtained from Pt. Reyes Station, which is located directly across Tomales Bay from Inverness and is the nearest location where detailed rain data are collected. Figure 1 is a hypetograph of the hourly rainfall information for Pt. Reyes Station. Key features of the storm include:

- o A total of 9.2 inches occurred over about a 36-hour period beginning about 2 pm January 3rd.
- o Most of the rain (6.6 inches) fell during a 12-hour period beginning around midnight of January 3rd.
- o A particularly severe 4 hour period occurred on the morning of January 4th, with an average intensity of about 0.75 inches per hour.



**SUMMARY OF RAINFALL STATISTICS:**

TOTAL RAINFALL DURING MONTH PRIOR TO STORM = 10.4 inches

TOTAL STORM RAINFALL = 9.2 inches

TOTAL STORM DURATION = 36 hours

AVERAGE INTENSITY = 0.25 inches per hour

INTENSITY FOR MAXIMUM 24 HOUR PERIOD = 0.35 inches per hour

INTENSITY FOR MAXIMUM 12 HOUR PERIOD = 0.55 inches per hour

INTENSITY FOR MAXIMUM 6 HOUR PERIOD = 0.69 inches per hour

INTENSITY FOR MAXIMUM 3 HOUR PERIOD = 0.75 inches per hour

INTENSITY FOR MAXIMUM 1 HOUR PERIOD = 0.80 inches per hour

**NOTE:**

RAINFALL RECORD FROM MARIN COUNTY  
FLOOD CONTROL AND WATER CONSERVA-  
TION DISTRICT GAGE LOCATED IN  
PT. REYES STATION



The temporal pattern at Pt. Reyes Station was quite similar to a station in San Rafael where hourly data were also recorded. The Pt. Reyes Station behavior is believed to be representative of the temporal features which occurred in Inverness, though probably not as severe since Inverness received almost 2 inches more rainfall during the same storm period.

Based on the storm statistics cited above, four key factors were identified which are believed to have contributed to the storm severity and the physical responses of the creeks causing damage to the community of Inverness. These are:

- o Higher than normal rainfall occurred during the season and specifically during the month prior to the storm.
- o The storm was long and steady with an average intensity of 0.25 inches per hour over a 36 hour period.
- o The total rainfall of 11 inches was extremely large with a return period estimated to be between 100 and 200 years.
- o High intensity rainfall occurred over a 4-hour period on the morning of January 4, 1982 (between about 7:00 and 11:00 am) with peak hourly intensities of about 0.8 to 1.0 inches.

#### Storm Damage

Valleys. The particularly severe storm damage occurred in the valley areas adjacent to the creeks. The watersheds in Inverness have similar physical, geologic, and hydrologic characteristics, and therefore, their behavior during the storm was fairly uniform. However, since only three of the valleys are heavily developed and two are moderately developed, the major portion of the damage to public and private property was confined to these areas which included: (1)

Inverness Park, (2) First Valley, and (3) Second Valley, (4) Third Valley, and (5) Redwood Canyon. The other valleys are either undeveloped or only sparsely developed and correspondingly less damage occurred.

Damage to homes, roads, and drainage facilities was due to a combination of water, sediment, and debris. Extensive earth sliding occurred along the steep canyons in the upper reaches of the watersheds. These slides contributed substantial volumes of sediment and debris to the stream flow. In addition to the more isolated earth slides along the canyon walls, several valleys experienced large mud flows which swept through the valleys in a sudden surge of water, sediment, and debris. The debris, which included large trees as well as brush, caused extensive damage to structures adjacent to the creeks. This mud flow phenomenon occurred in First, Second, and Third Valleys and in several other less developed valleys. No large mud and/or debris flows occurred in Vallejo Canyon, Inverness Park.

Based on conversations with residents in Inverness, it appears that the large mud and debris flows that swept through the area occurred during the morning of January 4th. This time corresponds closely with the period of intensive rainfall recorded at Pt. Reyes Station.

Ridge Areas. The ridge areas received much less damage than the valleys. Most of the damage in the developed ridge areas consisted of relatively small, isolated slides and downhill washouts along the roadways. In many cases, washouts were caused by redirected flow of surface water resulting from blocked culverts or drainage ditches. The uphill slides on roadway cut slopes were generally small and shallow, though some isolated severe incidences did occur.

Sir Francis Drake Boulevard. Sir Francis Drake Boulevard was flooded where the streams cross under the roadway. The sediment carried by the flood waters also filled the stream crossing and adjacent culverts. Sediment and debris carried

own from the upper valleys were deposited on the roadway and along the shoreline of Tomales Bay and added substantially to the deltas extending out into the bay.

The roadway cut slopes along the uphill side of Sir Francis Drake Boulevard experienced considerable sliding. At many locations the slide material flowed across the pavement and blocked the road. It took several days for equipment to remove the slide material and to reopen the road to traffic. During this period the community was essentially isolated from the rest of the County.

Environmental Effects. In the valleys, substantial loss of vegetation cover (trees and other vegetation) occurred due to rill and gully erosion, earth slides on the valley slopes, and bank erosion along the creeks. There were numerous fallen trees and areas of disturbed vegetation.

The creeks in the valleys suffered particularly severe damage as large quantities of sediment and debris from the valley slopes were transported by the flood waters. In the upper narrow canyons, the channels became blocked by sediment and debris. At certain locations, the debris accumulated and formed dam-like structures which trapped sediment carried by the storm flows and caused a terrace-type profile to develop along the creek channel. In other locations, earth slides from adjacent slopes partially blocked or redirected creek flows. Fallen trees and other materials formed a tangle of debris lying in or across the creek channels throughout the watersheds.

In many of the valleys, major mud and debris flows occurred in the upper watershed areas. The released material, acting like a fluid, surged down the stream channels as an avalanche of water, sediment, and debris. In addition to the slide material, debris dams which previously formed in the canyons were knocked down and swept downstream. In the lower portions of the watersheds, where the

creeks are wider and have flatter gradients, the sediment and debris carried from the upper canyons were deposited and partially or totally filled the creek channels. In many locations this material was several feet thick.

Riparian habitat along most of the streams was completely removed as were fauna living in the streams. In essence, the main streams in the area were literally flushed clean of both flora and fauna or the habitat was buried in deposited sediment. Debris, gravel, and coarse sand constitute much of what remains in this habitat.

### Storm-Related Hazards

The January storm revealed that very real and severe storm-related hazards exist in the community of Inverness. While the community was aware of the general problems of slope stability and nuisance flooding, the catastrophic events of the January storm clearly demonstrated inadequacies of the present emergency systems. In assessing appropriate measures to mitigate against future occurrences, a required first step was to clearly define the storm-related hazards facing the community. Based on careful consideration of available information, a number of clear patterns and circumstances were identified which were important to recognize. Specifically and simply stated, the January storm demonstrated that rainstorm-induced landslides combined with flooding poses a severe hazard. This phenomenon, to varying extents, occurred in a number of the main creek and drainage areas of Inverness.

Based on field reconnaissance and discussions with local residents by Woodward-Clyde Consultants, five hazard components were identified as follows:

Flood flows. These were high flows in response to rainfall on the watershed.

Sediment and debris loads from erosion. Sediment loads were carried downstream due to rill, gully, and stream bank erosion.

Sediment and debris from isolated slides. This included substantial sediment and debris from landslides adjacent to the creeks. This debris often blocked the narrow creek channels as well as drainage culverts, and thereby aggravated the flooding.

Major mud flows down the creeks. This was a sudden flow of soil and debris initiated by landslides which behaved much like a liquid. The mud flow consisted of water, sediment, and debris and essentially scoured the creek channel of all vegetation during its course downstream and deposited several feet of material in the flood plain.

Slumping of roadside banks. Due to super saturated soil conditions, many slope failures along the inboard side of Sir Francis Drake Boulevard were experienced. These slope failures caused the closure of the roadway in many areas, thus isolating neighborhood areas and prevented prompt disaster relief.

As illustrated schematically in Figure 2, each of the four flooding components generally acted in progression. Some areas received largely high flows; other areas received high flows plus sediment loads, etc. In general, as additional component contributes to flooding, the corresponding hazard to life and property as well as the difficulty in providing mitigation measures increases. Mud flows, which surge down the creeks carrying large amounts of sediment and debris, represented a particularly severe hazard.

There are a number of cases which illustrate interactions of the various flooding components. For example, in First and Second Valleys all four flood components occurred. In other areas such as Inverness Park, only the first three components (flood flows, sediment, and debris) were present.

There are 11 main creeks and streams which originate along the Inverness ridge, flow down the fall line, cross under Sir Francis Drake Boulevard, and enter Tomales Bay. For these watersheds an important step in developing a mitigation

plan was to identify the general conditions and locations where storm-related hazards are likely to occur. Based on a close examination of available information and detailed field reconnaissance, in addition to hazard components, four distinct hazard areas were identified for the watersheds in Inverness. These hazard areas are illustrated on Figure 2 and are described below.

Area 1: Upper Watershed. This region generally extends from the ridge down to the flood plain and consists of the largest portion of the watershed. It is characterized by steep, narrow stream banks as well as a steep gradients along the stream fall line, and is the major source of water, sediment, debris, and mud flows.

Area 2: Upper Flood Plain. This is the beginning of the Flood Plain and is characterized by wider, more gradual channel bank and overbank areas and flatter fall line gradients. Flood flows through this area may transport large amounts of sediment and medium-to-small debris; however, due to the wider channels, flatter slopes, and natural obstructions, much of the energy of the mud flows is dissipated in this area and the large sediment and debris is deposited.

Area 3: Lower Flood Plain. This area extends down to Tomales Bay, and is the widest, most gradual portion of the creek and valley floor. Flood flows deposit a substantial sediment load and medium-to-small debris in this area.

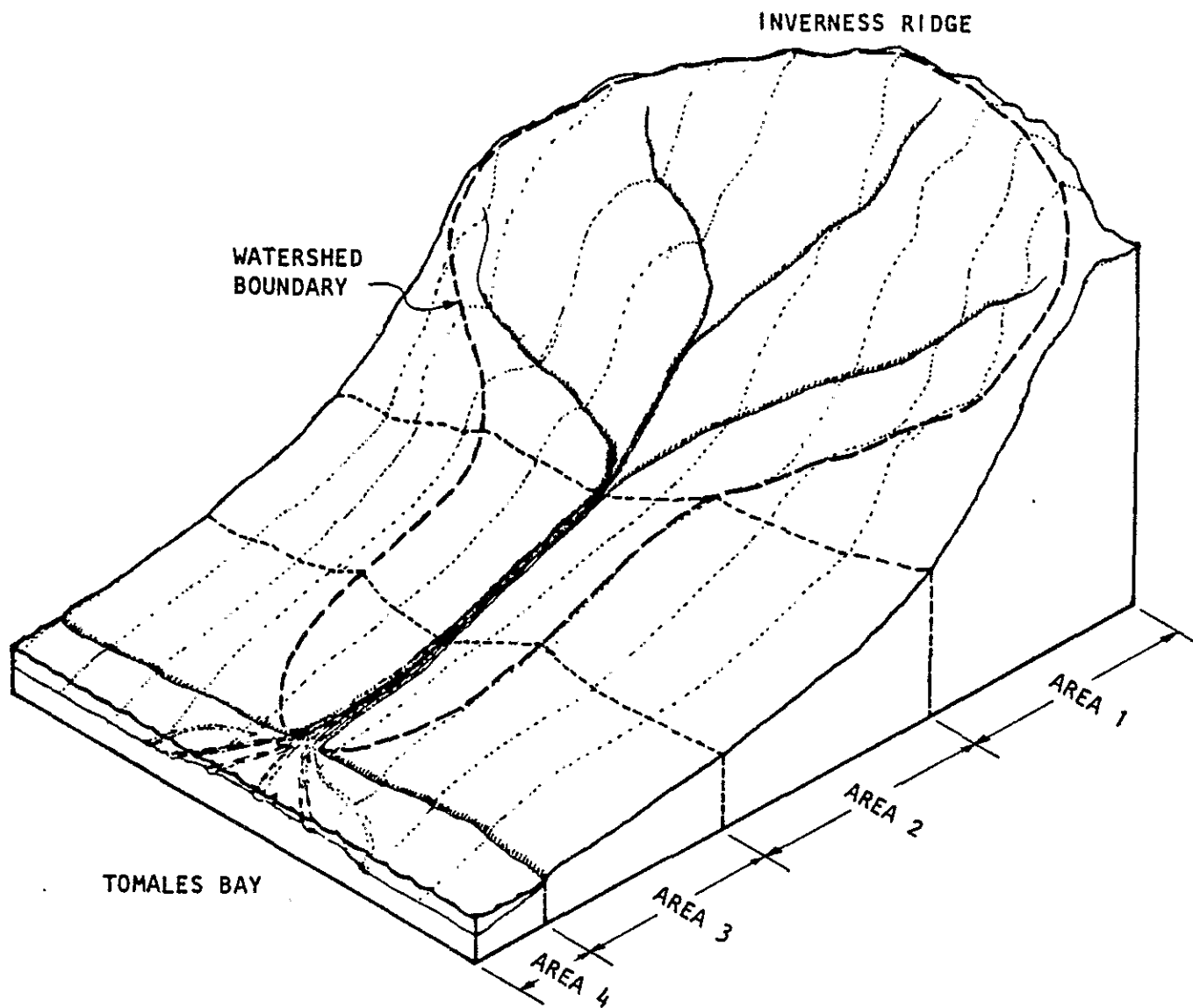
Area 4: Delta. The delta is formed where the creek enter Tomales Bay. Flow velocities rapidly drop off and final sediment deposition takes place.

In each of the areas above, the hazards to public and private facilities occurred adjacent to the creeks and drainage system and generally consist of a relatively small portion of the entire watershed. The relative hazard (demonstrated or potential) decreases from the Upper Watershed to the Lower Flood Plain as the potential flooding components are progressively dissipated

downstream. While the Upper Watershed was the most hazardous area, only minor development adjacent to creeks exists in this area. The Upper Flood Plain, also a very hazardous area due to the impacts of mud flows, is particularly noteworthy because in a number of valleys development exists adjacent to the creeks.

The events which occurred in First and Second Valleys during the January storm correspond very closely to the conceptual watershed view shown in Figure 2. In these areas the hazard consisted of water, sediment, debris, and mud flows which produced the highest hazard level. Four distinct flood areas occurred, though clearly the boundaries cannot be precisely defined. Other watersheds such as Inverness Park, are hydrologically and geologically very similar to First and Second valleys, and therefore similar hazard areas are believed to exist; however for Inverness Park and other cases a major mud flow did not take place during the storm and thus less hazardous conditions were exhibited. One lesson from this storm is that future storms could initiate mud flows in these watersheds and thus the upper watershed and flood plain areas should be considered just as hazardous as those in First and Second Valleys.

Due to the topography, stream morphology, and other factors, some watersheds may not consist of all four hazard areas. A number of the smaller stream valleys consist of only three areas -- Upper Watershed, Upper Flood Plain, and Delta. These smaller valleys were demonstrated to be very hazardous since mud flows could affect essentially the entire valley. In other cases, a clear distinction between the various flood areas may not be appropriate.



**EXPLANATION:**

- AREA 1, UPPER WATERSHED:  
SOURCE OF FLOODWATERS, SEDIMENT,  
DEBRIS, MUD FLOWS
- AREA 2, UPPER FLOOD PLAIN:  
DISSIPATION OF MUD FLOWS, DEPOSITION  
OF LARGE DEBRIS AND SEDIMENT
- AREA 3, LOWER FLOOD PLAIN:  
DEPOSITION OF DEBRIS AND SEDIMENT
- AREA 4, DELTA:  
SEDIMENT DEPOSITION IN BAY



## POST-STORM POLICIES

- 1.00 In addition to other development standards previously required by the Inverness Ridge Communities Plan and the Unit 2 Local Coastal Plan, the following special standards shall prevail:
1. The construction of any new structure or substantial improvement of any existing structure located within a flood prone area as determined by the County Flood Control District shall conform to the requirements of Marin County Code Chapter 23.09 and Marin County Resolution 82-161, including but not limited to:
    - a. Anchoring of structures.
    - b. Use of materials and utility equipment to resist flood damage.
    - c. Maintaining the elevation of the lowest habitable floor above base floor elevation.
    - d. Anchoring butane tanks.
    - e. Requiring that preliminary subdivisions/land divisions identify the flood hazard area and the elevation of the base flood.
- 1.01 Should the necessary funding become available in the future to precisely map floodways extending from the Inverness Ridge to Tomales Bay (estimated to cost between \$50,000.00 to \$100,000.00) by the Marin County Flood Control District), pursue the establishment of specific flood hazard zoning within the Planning Area.
- 1.02 Encourage the five major utilities (Inverness Public Utilities District, North Marin County Water District, Pacific Telephone and Telegraph, Pacific Gas And Electric, and West Marin Cablevision) and Marin County to jointly participate on the establishment of a community-wide warning system using sirens or horns as an audible aid to alert area residents of pending emergency situations.

- 1.03 In addition to prevailing County standards which require geotechnical reports as a precedent to the grant of development permits in Soils Stability Classes 3 and 4 (Soils stabilities are generally ranked in a series 1 thru 4. Class 1 is the most stable while Class 4 is the least stable.) based on upon existing mapping prepared by the Bureau of Mines & Geology, require similar geotechnical reporting for the following two identified high risk areas based upon performance of slopes during the storm of 1982:
1. The steep hill side slopes in the upper reaches of the larger valleys (Inverness Park, First and Second Valleys) and essentially the full length of the smaller valleys.
  2. Ridge area adjacent to the uphill cut slopes along Sir Francis Drake Boulevard.
- 1.04 Solicit the execution of a Memorandum of Understanding between the National Park Service, State Department of Parks and Recreation, Nature Conservancy, Inverness Public Utility District and the North Marin County Water District to permit referral of all major grading and related proposals within or adjacent to the Planning Area to Marin County for review and recommendation to avoid potential storm run-off problems. Maintain emergency access to Limantour.
- 1.05 Recognizing that Sir Francis Drake Boulevard is the main vehicular accessway to the various neighborhoods which are located within the Planning Area, and further recognizing that:
1. No alternative emergency vehicular accessway appears feasible in the event of another storm such as January, 1982, or a major seismic event, and
  2. There are no assurances that Sir Francis Drake Boulevard can be kept open in the event of a calamitous situation, and

3. Emergency boat access may similarly prove unfeasible given the limited number of piers into Tomales Bay and their post-event condition, tides and the relatively shallow nature of Tomales Bay in the Inverness Park area. Because of shallow drafts, marine access may prove feasible only through the use of inflatable types of boats. Moreover, the use of this type of craft is dependent on weather conditions.

Therefore, under worst possible conditions the only means of access to as well as regress from the Planning Area is by air. Accordingly, designate the the parking lot adjacent to the Inverness Store and the parking lot and shoulder of Sir Francis Drake Boulevard in front of the Inverness Park shopping areas as "Emergency Only" heliport sites or such other locations as deemed appropriated by the Marin County Disaster Coordinator.

Note: Additional mitigation measures which became effective prior to and subsequent to the January, 1982 storm and which will influence future new developments within the Inverness Ridge Communities Planning Area include:

1. A requirement that any property situated on soils with a stability rating of Class 3 or 4, as defined by the California Bureau of Mines and Geology, be fully assessed by a qualified geologist to determine the most appropriate siting of any proposed improvements. A similiary report may be required for properties situated in Class 1 and 2 ratings if in close proximity with Class 3 and 4 rated properties.
2. Both the Unit 2 Local Coastal Plan and the revised Marin Countywide Plan provide for Streamside Conservation zones which mandate a 100 foot setback for any proposed construction improvements along watercourses. Physical improvements may be located within this setback area only if it is demonstrated that no feasible alternative exists to the setback requirement.

This new standard will substantially inhibit the construction of homes and similar improvements in close association with watercourses where rising flood water and debris flows caused extensive damage during the January, 1982, event.

3. As part of the development permit process, detailed hydrological studies may be required by the County to assess and mitigate potential flooding hazards.
4. Since adoption of the Inverness Ridge Communities Plan and the Unit 2 Local Coastal Plan, not only has the overall development potential within the Planning Area been radically reduced, virtually all parcels have been reclassified to Planned District categories which carry no specific and rigid siting requirements, e.g., front, side and rear setback requirements. Instead, new improvements as well as additions to old are processed through Design Review procedure can be used most effectively to facilitate siting new improvements away from known and recognized risk areas.
5. The County's Grading Ordinance is presently being reviewed by the County; the proposed new standards for this Ordinance will provide greater controls for both minor and major grading proposals. Revisions to this code are harmonious with the general recommendations of Woodward-Clyde Consultants.
6. A recurrent complaint of the community has been the procedural failure on the part of the Department of Public Works to notify the community in advance of major projects such as brush clearing or repaving of local streets. The County should encourage that an advisory board be appointed by the Board of Supervisors or locally elected to give advance notice and a description of the work to be accomplished as well as an opportunity to comment. The County shall also issue such notice to the press.

Some of the measures advanced in the Woodward-Clyde Consultants report have not been included in the recommended list of additional mitigation policy recommendations. The concept of Transfer of Development Rights (TDR), for example, is not deemed workable within the Planning Area given the absence of an appropriate receiver site for development potentials which might be removed from high risk areas. It must be recognized that the Planning Area is highly constrained by the peripheral presence of State and Federal parklands as well as Tomales Bay. Moreover, the presently reduced development potential within the Planning Area is reflective of various types of constraints, and an increase in density through the use of TDR cannot reasonably be achieved. Similarly, the concept of land swaps advanced in the Woodward-Clyde Consultants report is deemed unfeasible for the same reasons as the use of TDR.

The plates found in Appendix F indicate the principal stream valleys within the Planning Area where potential risks to human safety and potential loss and/or destruction of property and improvements are greatest in the event of a recurrence of a January, 1982 event.

COMMUNITY DEVELOPMENT

## COMMUNITY DEVELOPMENT

### The Countywide Plan

First adopted in 1973, the Marin Countywide Plan received its first major revisions after extensive review in 1981 and 1982. In the main, the revised Countywide Plan of 1982 differed little with respect to the West Marin in general and the Inverness Ridge Planning Area in particular. Focus of the Plan revisions concentrated on the Eastern Urban Corridor. The original tenets of the 1973 Plan remain fully applicable for the study area a decade later.

The Marin Countywide Plan called for the establishment of boundaries around each village within which most of the all projected growth would be accommodated. Insofar as the Inverness Ridge Planning Area is concerned, several factors have influenced that Plan policy to the point where the issue is virtually moot. Since adoption of the 1973 Countywide Plan, the Federal Park Service has completed extensive land acquisitions expanding and enlarging the Point Reyes National Seashore. Several important parcels within the Paradise Ranch Estates subdivision as well as parcels along the Tomales Bayfront remain outstanding and await Congressional funding authorization. In addition to Federal purchases, the State Department of Parks and Recreation has similarly been engaged in land acquisitions within the Planning Area for public recreational purposes.

Withdrawal of privately held lands for public open space and recreational pursuits, together with the presence of Tomales Bay, has created a "hard edge" to the Planning Area. The development boundaries within the Planning Area are firmly fixed.

The further concept of clearly defining both primary village areas together with expansion areas was a major task of the first adopted Inverness Ridge Communities Plan. Drastic reduction in residential densities based upon slope conditions, slope stabilities, access, and service availabilities were undertaken. Moreover, adoption of the Unit 2 Local Coastal Plan reinforcing and strengthening development standards has placed additional restrictions on development within the Planning Area.

Although land divisions were previously actively sought and secured by owners of land within the Planning Area, current restrictions have all but brought an end to what some would consider "the good old days." What development is occurring is random and can be classed as in-filling. *Certain trends can be traced, however.* A decade ago, most new residential activity was taking place in old Inverness. Water moratoriums either indirectly enacted by the Coastal Commission or directly enacted by the California Public Utility Commission has caused new development to move in new directions. The successful takeover and rehabilitation of the former Adams Water Company by the North Marin County Water District within Paradise Ranch Estates eliminated a major and long standing impediment to development. *In the past year or so, numerous permits and many new homes have been built.* However, even within the Paradise Ranch Estates area the original development potential has been reduced as a result of density reductions emanating with adoption of the Inverness Ridge Communities Plan and the subsequent rezoning actions of the County. Completion of Federal park purchases within that subdivision will even further reduce development potential.



LANDMARKS PRESERVATION

## LANDMARK PRESERVATION

Historic buildings contributed to a sense of place. A number of buildings within the Planning Area deserve recognition as landmarks because of age, physical appearance and long public enjoyment.

Since adoption of the Inverness Ridge Communities Plan, a study was undertaken based in part upon the recommendations of that Plan and the necessity to comply with State requirements to gain local certification for the processing of Coastal Permits. Towards that end, a special and separate study was undertaken by a consulting team which assessed historic structures within the Coastal Zone (including properties and improvements within the Inverness Ridge Planning Area). As a result of that study, boundaries circumscribing historic areas were advanced and ultimately approved. Several important structures within the Inverness area are included within a "historic zone" and which includes such structures as the Inverness Post Office, the old Inverness Store, and the Honeymoon Cottage located next to the Post Office. Other important local structures such as Brock's Boathouse and the Inverness Yacht Club were not included at that time.

The following policies drawn from the Unit 2 Local Coastal Program are applicable to Inverness.

### 1. Historic Resources

- a. In order to protect the unique qualities and character of coastal communities in the Unit II Coastal Zone, historic structures shall be preserved and restored. The following means shall be used to protect and preserve historic structures:

- (1) "Historic areas" shall be established in Inverness. The boundaries of these areas are described in Appendix E and mapped on page 31. Within this historic area boundary, all new construction shall conform in scale, design, materials and texture with the surrounding community character.
  - (2) "Alterations and Additions." Alterations or additions to any structure built prior to 1930 shall require a coastal project permit; except that, maintenance or repair to restore any pre-1930s structure to its original architectural character shall be exempt from the requirement of a Coastal Permit. Alterations or additions to any pre-1930 structure shall retain the scale and original architectural features of the structure, especially for the front facade.
  - (3) "Demolitions." Demolitions of any structure built prior to 1930 shall require a Coastal Project Permit; except that, demolition of any secondary or agricultural building built prior to 1930, may be exempted from the requirement for a Coastal Permit upon a finding by the Planning Director or appropriate hearing body that such structure is not a significant historic resource. Issuance of a Coastal Project Permit for the demolition months. During this period, the property owner or local historic group or society may attempt to find a purchaser or alternate location for the structure. This six month period may be waived by the Planning Director or appropriate hearing body upon a finding that the structure is not historically significant or cannot be rehabilitated.
- b. All Coastal Project Permit for projects located within the boundaries of an historic area, and for projects involving pre-1930 buildings, shall be reviewed in accordance with:

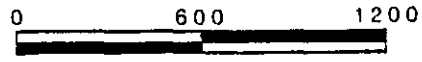
- (1) The "Design Guidelines for Construction in Historic Areas and for pre-1930 Structures" and,
  - (2) The "Historic Review Checklist", both located in Appendix E.
- c. All Coastal Project Permits for historic structures shall be reviewed by established local planning or design review groups.

Inverness

Boundaries of the historic area in Inverness are restricted to cohesive visual units within public view. The historic area in this community encompasses parcels along Sir Francis Drake Boulevard (SFD) in the vicinity of Inverness Store and parcels along Inverness Way from SFD to its junction with Hawthornden Road. parcels south of Hawthornden to Park Avenue are included.

MAP OF HISTORIC DISTRICT AREA

NORTH



Scale In Feet

INVERNESS



COMMERCIAL LAND USE

## COMMERCIAL LAND USE

Because of the dominant influence of nearby Point Reyes Station, which has historically served as the commercial hub for the general area, the development of locally serving commercial uses within the Inverness Ridge Planning Area has been limited. Basic neighborhood services are available in both Inverness Park and Inverness, and the majority of the existing uses are located on the southerly side of Sir Francis Drake Boulevard and are accessible to pedestrian traffic. As the population of the Planning Area increases in the years to come, further opportunities for additional resident-serving commercial opportunities may arise. Within the life span of this Plan, however, it is unlikely that any major demands for expanded local commercial development will occur.

Since the creation of the Point Reyes National Seashore, the neighborhoods which comprise the Planning Area have experienced a major increase in recreationally destined traffic. Because of the historic resort nature of the Planning Area, a visitor to the area is afforded a fairly broad range of services. Unlike nearby Point Reyes Station, where no places of overnight accomodation are available, with the Inverness Ridge Planning Area the visitor is afforded an interesting array of overnight accomodations as well as several restaurants. As the cost of fuel increases and supplies diminish, visitation to the nearby seashore is expected to accelerate due to its relatively close proximity of the population centers of the Bay Area. It is not known, however, whether increased visitation will precipitate increased demands for the more traditional visitor-serving uses, i.e., places of overnight accomodation, restaurants, taverns, etc., or whether those demands will relate more closely to day trip activities, i.e. general sightseeing, picnicking, etc. The most significant form of visitor form of visitor serving enterprises which has developed with the Planning Area in resent times

are "Bed and Breakfast" type of establishments which provide overnight accommodations and limited meal services within homes scattered through the area. Examples include Ten Inverness Way, the Blackthorne Inn, the McLean House, and the Holly Tree Inn. Additionally, a restaurant has been added at a local motel and a pizza style restaurant has been established in Old Inverness.

In addition to the traditional resident and visitor serving commercial enterprises which the Planning Area, a diverse form of activity exists generally known and referred to as cottage industries. Simply explained, cottage industries are low key commercial uses conducted within dwellings and residential accessory buildings by the occupants of the dwelling and by employees. Typical cottage industries relate to the design and creation of hand crafted products which are frequently offered at retail in locations other than the place of manufacture. The presence of this phenomena is attributed to the high number of creatively disposed individuals who have made their homes within the Planning Area. At present, the occupant of any residential property can engage in what the County Zoning Code defines as "Home Occupations", e.g., occupancies which are conducted solely by residents of the property and which are generally limited to specialized services such as dressmaking. In general, the conduct of such cottage industries has been devoid of the usually necessary land use approvals from the County of Marin. Many such uses are, from the perspective of the Zoning Code, patently illegal. Notwithstanding compliance or lack thereof with land use regulations, the cottage industries provide an important source of income and permit those engaged in this endeavor to maintain an alternative lifestyle generally countenanced by many residents. On the other hand, some residents are adverse to the conduct of cottage industries due to traffic and noise generated by such uses and are obliged to complain to the appropriate authorities to seek abatement. In an effort to recognize the importance of cottage industries as an unusual quasi-commercial



use as a compliment to the traditional resident and visitor serving commercial activities which prevail, suggested means by which such uses might be legally recognized and authorized are offered in this document as a vital element of the Planning Areas' commercial land use component.

In recent years, roadside vending operations have become increasingly prevalent along Sir Francis Drake Boulevard. In some instances, Encroachment Permits for such operations have first been secured from the County Department of Public Works; in other instances, no permits have been secured. In virtually all instances, no comment nor recommendations from local citizen groups have been solicited in advance of issuance of Encroachment Permits. The location of a number of roadside vendors has created traffic problems for both residents of the area as well as visitors passing through. Although the community does not necessarily object to the presence of roadside vendors per se, problems associated with this type of semi-regulated commercial use has created community concerns. Such uses should be regulated by the County in a manner which provides local community input before Encroachment Permits are granted. Vendors without such permits should be promptly abated by the County.

#### POLICY RECOMMENDATIONS

2.00 Recognize nearby Point Reyes Station as the commercial hub of West Marin for the majority of local shopping needs.

A. Additional new commercial development within the Inverness Ridge Planning Area should be limited principally to the two established codes of commercial activity located on the south side of Sir Francis Drake Boulevard in Inverness Park and Inverness. LCP compliance rezoning to C-P (Commercial, Planned) will assure this objective.

B. Undeveloped lands located on the bay side of Sir Francis Drake Boulevard presently zoned for neighborhood commercial occupancies in the Inverness Park area should be reclassified pursuant to the recommendations of the Tidelands section of this Plan and in conformity with the LCP.

2.01 Recognize and support established visitor serving enterprises within the Planning Area.

A. Retain existing C-R-C-R (Coastal, Resort and Commercial Recreation) District Zoning for the Inverness Valley Inn to its planned capacity of 30 units providing overnight accommodation.

B. Retain existing C-R-C-R (Coastal, Resort and Commercial Recreation) District zoning for the Inverness Motel and the Golden Hinde Boatel.

C. Visitor serving enterprises, particularly those which offer and provide places of overnight accomodation, shall remain available to any prospective guest on a space available basis; conversion of such places of overnight accomodations into time sharing, club, condominium or any similar restricted or limited type of occupancy shall be prohibited.

2.02 Expand local commercial enterprises only within established village centers.

A. Expansion of locally serving uses should occur only in close proximity to the established commercial entities of Inverness Park and Inverness on the southside of Sir Francis Drake, rather than establishing new commercial codes in different locations.

2.03 Provide policy guidance to be used should new visitor serving enterprises be proposed within the Planning Area.

A. Proposed new visitor serving uses shall be evaluated against the following policy guides:

- I. Although the Planning Area is considered to be providing its share of visitor enterprise at present, should additional lodging facilities be proposed, the following criteria should be applied:
  - a. The degree to which such facilities would become destinations in their own right, thereby creating their own demand.
  - b. The degree to which such facilities would disrupt immediate neighbors and the community at large.
  - c. The availability of waste disposal and water supply services.
  - d. That access can be provided without unreasonable disturbance of residential traffic patterns.
  - e. The degree of environmental impact of the project on all natural systems.
  - f. The degree to which the architectural and landscape proposals conform to village scale and character.
  - g. Because of the nature of such occupancies, new or expanded places of overnight accommodations should provide off-street parking commensurate with the typical needs and demands for such facilities.

2.04 Recognize cottage industries and an alternative form of quasi-commercial form of land use and provide means for their recognition and legalization.

A. Amend the provisions of the Marin County Zoning Ordinance such as the following:

- I. Define "Cottage Industry" to mean a use conducted with a dwelling or within a detached accessory building on the same site as the dwelling by the inhabitants of the dwelling and not more than one non-resident employee who are engaged in the design, manufacture, and sale of the following products and services: Antique repair and refinishing,

Batik and tie dyeing, dress making, sewing and millinery, furniture and cabinet making, sculpture, small press, pottery, jewelry, weaving, woodworking, photography, holography, catering, baking and the preparation of food specialties for consumption at locations other than the place of preparation, and such similar uses as determined by the Zoning Administrator to be of the same general character and intensity. All such uses may use such mechanical equipment or processes as are necessary for the above listed uses, provided, however, that no such use shall be audible beyond the limits of the property upon which said use is conducted, shall comply with all applicable health, sanitary and fire codes, and shall not display any exterior sign which exceeds two (2) square feet in area.

2. Amend the Use Regulations of the Marin County Zoning Ordinance by adding a new Section (22.68.070) to permit the establishment of Cottage Industries in any residential zoning district upon the securing of a Use Permit in each instance. This proposed amendment should be accomplished after adoption of this Revised Community Plan as an implementation measure.

2.05 Locally encourage the establishment of non-traditional places of overnight accommodations within the Planning Area.

- A. Pursue the establishment of "Bed and Board" program wherein visitors to nearby recreational opportunities are furnished overnight accommodations and light meal service within existing dwellings. As the size and scale of such "Bed and Board" operations is limited to a maximum of five (5) paying guests, the type of impacts usually associated with the larger traditional places of overnight accommodations, i.e., motels and hotels, such as traffic, excessive water useage and heavy waste disposal loadings

should not prove problematical. Present codes permit the establishment of such uses.

2.06 Regulate the issuance of Encroachment Permits to roadside vendors; promptly abate roadside vendors which are conducting business without benefit of permits.

A. In addition to the necessity of securing Encroachment Permits from the County Department of Public Works for roadside vending operations, it shall also be required that roadside vendors seek and secure a Coastal Permit from the Marin County Planning Department prior to the issuance of Encroachment Permits. Upon receipt of any Coastal Permit application for roadside vending purposes, the Planning Department shall provide notice to elicit public comment prior to action and disposition of any such requested Coastal Permit.

B. Should any roadside vendor establish a use within the Planning Area without the benefit of a Coastal and Encroachment Permits, the County Sheriff's Office shall take immediate steps to abate the use.

LAND USE

## LAND USE

As noted elsewhere, after the Inverness Ridge Communities Plan was adopted in 1979, Marin County rezoned virtually every parcel within the Planning Area to bring consistency between Plan policies and actual zoning. The development potential for the Planning Area was drastically reduced in the process. In general, the 1979 Plan policies provided for very low residential densities along ridge area itself, generally not more than one dwelling unit per ten acres, with residential densities increasing to a minimum of one dwelling unit per acre within the established neighborhood areas such as Inverness Park and Inverness.

Although a storm of the magnitude experienced in January, 1982, could not be forecast nor could the ultimate consequences of the event, the wisdom of the 1979 Plan regarding residential densities was ultimately recognized. In their report of Marin County, Woodward-Clyde Consultants determined four levels of risk area which generally approximate the varying densities advanced in the 1979 Plan. The ridge area, for example, was cited by Woodward-Clyde Consultants as possessing the highest degree of risk; the 1979 Plan recommended that future development of this area not exceed one dwelling unit per ten acres.

Although further adjustments (decreases) to the development potential within the Planning Area could be considered, the ability to actually achieve density reduction becomes virtually moot recognizing that a change in density along the ridge area from the present one dwelling unit per ten acres to one dwelling per twenty acres would affect very few parcels, particularly at the heads of stream canyons where potential hazards are most pronounced. Moreover, most of the ridge properties have been acquired by the Federal and State governments for public open space and park purposes.

Additionally, the present residential densities within long established neighborhoods are generally less than prevailing pattern of legal residential lots. Within Inverness itself, for example, a residential density of one dwelling unit per acre prevails although most residential parcels typically contain one half acres or less.

Given this situation, further adjustments to residential densities beyond the modifications perfected by the 1979 Community Plan and the Unit 2 Local Coastal Plan are not recommended.

### RESIDENTIAL DEVELOPMENT POLICIES

3.00 Preserve and protect the Inverness Ridge watershed and viewshed.

- A. Within the Inverness Ridge band which extends along the length of the Planning Area, permit low density residential development.
  - 1. Provide means for the clustering of dwelling units along the Inverness Ridgeland to minimize road building and utility extensions.
  - 2. Generally provide for lower densities on lands which are adjacent to public parks, where view protection is critical, which are environmentally considered, which have poor access and limited utilities, or may have unstable soil conditions.

A general density of one dwelling unit per ten acres is appropriate for the Ridge area.

- B. Recognize that located within the ridgeland areas there exist plateaus and meadows which are physically capable of accepting a higher degree of residential development than the more steeply sloping lands which



surround these flatter areas in addition to the guidelines set forth in A(1)(2), above, the following shall apply:

- I. Upon submittal of any master plan covered by the Inverness Community Plan, an increase in density will be considered based upon the following criteria:
  - a. Water for domestic and fire protection purposes is available.
  - b. The majority of the building and septic sites are relatively flat.
  - c. The site has, or can be provided with, adequate access to and from as well as within the site for both normal residential traffic as well as for the passage of emergency services vehicles such as ambulances and fire trucks.
  - d. Proposed development will not adversely impact local streams, substantially eliminate native vegetation, nor be visually disruptive to the surrounding area.
  - e. Soil conditions are favorable to the utilization of septic tank waste disposal systems and are stable in nature, including soil testing to assure that land will accept a septic system.

3.01 Tailor residential densities within the Planning Area in a manner which takes into consideration such diverse factors and constraints as the maintenance of the distinctive indentities of the individual neighborhoods which aggregately form the Inverness Ridge communities, utility availability, access, topography, slope, soils conditions, vegetation, creeks and streams and other environmental constraints.

A. Noren Estates Enclave

Adjacent to Bear Valley Road is a small pocket of subdivided parcels abutting a large (97 acre) parcel. This enclave is virtually

surrounded by Federal park land and is traversed by a stream which flows to the Olema marsh lowlands across Bear Valley Road and ultimately to Tomales Bay. When the large parcel was divided into four parcels, road building activities during winter months caused substantial siltation of the stream. Although heavily wooded with native vegetation, a number of good building sites off the new introduced roadway are evident. Recognizing the presence of the important stream which traverses the property, the native vegetation, the steepness of slope, a reasonable development yield on this site should not exceed 9 to 19 dwelling units. Planned district land use regulations should be utilized to permit the creation of variable sized parcels to take advantage of building site areas in a manner consistent with the constraints which this 97 acre demonstrates.

As the relatively flat lands at the base of the 97 acre parcel have been subdivided and are lots of legal record, residential buildout of this subdivision can be expected. The introduction of planned district land use regulations would provide opportunities of siting of future residential improvements in a flexible manner through County Design Review procedures. General development densities: One dwelling per 7+ acres.

B. Silver Hills Road

This small neighborhood component is served by a narrow roadway of some 8 to 12 feet in paved width extending approximately one mile in length from Bear Valley Road. The steepness and narrowness of the road presents obvious problems for emergency service vehicular access. The southerly side of Silver Hills Road descends sharply to the Noren Estates Enclave previously described, while the northerly side

descends steeply to Haggerty Gulch, another important watercourse. The upper limit of this area terminates at the Federal park boundary, and includes additional lands acquired by the Federal government. Slope conditions range between 20 to 40 percent. Water service to the area is furnished by the North Marin County Water District. Future development of this area should recognize both topographic and access constraints and should not intrude upon or adversely impact the highly sensitive stream and habitat areas on its northerly and southerly flanks. The upper and more difficult reaches of this neighborhood component should be developed at a density of one dwelling unit per ten acres while the lower portion with greater accessibility to Bear Valley Road could accept additional development at a density of one dwelling unit per three acres.

Recommended densities: One dwelling unit per 10 acres on upper slopes; one dwelling unit per 3 acres on lower slopes.

C. Inverness Park

Inverness Park is situated immediately north of Haggerty Gulch, an important watercourse which drains into Tomales Bay and which services as critical habitat area. The value of Haggerty Gulch was sufficiently high to warrant much of its inclusion within Federal legislation to expand the Federal park land area. The core area of Inverness Park was subdivided many decades ago and the resulting parcels are relatively small in size.

While water for domestic and fire suppression purposes is provided by the North Marin County Water District, the small sites are not conducive to residential development due to the difficulty of installing septic tank drain fields and fail safe areas. As mentioned elsewhere in

this Plan, the Cumulative Impact Report prepared for the County cited this particular area as one which would benefit from lot consolidations to increase minimum parcel areas so as to better accommodate septic tanks. While drafts of this Plan prepared prior to this endorsed the concept of residential in-filling within the core area of Inverness Park, it is now evident that in-filling should only occur on the few remaining larger parcels with the remaining small lots to be used for leachfield expansion areas for adjoining improved parcels. The financial means for acquisition and redistribution of residual small sized parcels is unknown at this time, however, and the County's legal counsel has frequently advised that requests for building permits for any legal lot of record cannot be denied if the applicant can demonstrate compliance with all applicable County codes and regulations. One immediate means which might foster such parcel amalgamations in the interest of promoting and protecting public health considerations as well as the potential degradation of nearby Tomales Bay is to increase through zoning techniques the minimum parcel area requirements for this area. Such an approach should be considered an interim step until the means by which funding for parcel acquisitions is developed.

Recommended density: One dwelling unit per acre.

Lands located above the village core area demonstrate fairly steep topographical conditions and water supplies for domestic and fire suppression purposes are limited. Although land divisions have created a variety of parcel sizes, the area is considered Ridgeland and therefore should develop residentially at a relatively low density. Within this Ridgeland area some of the topographic anomalies cited in Section 3.00 - B. are located, and given compliance with the criteria set forth in

subsection l., a through e, increases in residential densities during implementation of this Plan would be warranted and appropriate.

Special mention must be made of Vallejo Street and its environs. The existing parcels along this roadway are typically small. Topographically, this area is perhaps best described as a canyon through which flows one of the most important streams within the Planning Area - Fish Hatchery Creek. This stream has been widely recognized at local, regional and State levels for its importance both to the health of Tomales Bay and as a critical habitat and spawning area. Further residential development of the existing stock of small lots could ultimately degrade water quality along the course of this stream due to septic tank leachate. Moreover, this area demonstrated unstable conditions during the 1982 storm.

Recommended density: One dwelling unit per ten acres.

D. North Inverness Park

Within the area immediately north of Inverness Park and south of Paradise Ranch Estates there exists a pocket of both vacant and residentially improved parcels. This is considered a transitional and expansion area for Inverness Park and could readily support additional residential development. The principal access means to this area is via either Laurel Street or Kylewood Place with many parcels directly abutting Sir Francis Drake Boulevard. Lands generally located below 200 feet in elevation are serviced by the North Marin County Water District while private wells provide water above that elevation. Future residential development would benefit from variable lot size

opportunities available through planned district zoning to permit the creation of optimum building sites with minimal environmental consequences.

Recommended density: One dwelling unit per 3 acres.

The Ridglands lying above the Inverness Park residential expansion area serve as the headwaters of Fish Hatchery Creek. Access to this area is extremely poor and utilities are but marginally available. In keeping with the overall Plan concept of maintaining the viewshed and watershed integrity of the Ridge, only low density residential development should be authorized within this area. Immediately northwest of the Inverness Park expansion area is a 50 plus acre site which is currently undeveloped. Access to this site is extremely limited and slopes are particularly acute. Unless access is materially improved this parcel will continue to remain isolated even though it is located near Sir Francis Drake Boulevard.

Any residential development of this site should be clustered to minimize road building activities and to protect the natural environment. This parcel also serves as a buffer between Inverness Park and its expansion area and the Paradise Ranch Estates development immediately north. A suitable density for both areas described should not exceed one dwelling unit per ten acres.

Recommended density: One dwelling unit per 10 acres.

E. Paradise Ranch Estates

Subdivided some years ago, this development extends westerly from Sir Francis Drake Boulevard upslope to the limits of the Point Reyes National Seashore on its westerly flank, Tomales Bay State Park to the north; while additional peripheral lots within the subdivision have

been included within the National park and awaiting Congressional funding authorizations.

The subdivision has been beset by a myriad number of problems which have necessitated the conduct of numerous special studies. A long standing domestic water availability and distribution system was finally resolved when the North Marin County Water District assumed management of the former Adams Water Company and substantially upgraded the system. However, there remain problems associated with Paradise Ranch Estates such as drainage and unimproved roadways. It is recognized that in 1972 property owners of the area financed a \$140,000.00 roadway improvement project which was utilized to improve Drakes View Drive, a steep narrow roadway which serves as principal access to the entire development.

Residential development within Paradise Ranch Estates was stymied for many years due to a moratorium due to the above noted water deficiencies. Upon resolution of that problem and the lifting of moratoriums, residential development commenced. When that occurred, however, a new issue arose. As noted, only the main roadway with Paradise Ranch Estates had been improved as an all-weather road. Other roads within the tract were simply graded lanes. In some areas, such lanes were underlain by native rock which provides a reasonably good base and is capable of supporting normal residential traffic. In other areas, such rock is not evidence; the roadways are dirt paths which are subject to erosion. The siltation and sediments from such roadways is transported down to Tomales Bay during the rainy season. The water quality of Tomales Bay is correspondingly degraded by the contribution of such materials.

Some years ago it was thought that improvements to the deficient roadway system could be accomplished through the development review process, i.e., requiring roadway frontage improvements when individual parcels were proposed for development. This method has not met with any material degree of success because of the potential financial burdens placed on individual property owners. Various alternatives to this issue have been advanced, ranging from permitting on a case by case basis the payment of in lieu fees commensurate with the estimated costs of such improvements downward to a flat in lieu fee of \$2,500.00 regardless of the extent, degree and cost of necessary improvements.

The County Land Development Engineer, working in cooperation with the Paradise Ranch Estates Permanent Road Division Advisory Board, has advanced the following draft standards for paving and drainage requirements:

I. Widths

- a. Eighteen feet minimum on Drakes View Drive to the point where the road serves less than 6 actual and/or potential building sites.
- b. Sixteen feet minimum on all other roads to the point where the road serves less than 6 actual and/or potential building sites.
- c. Sixteen feet or twelve feet with turnouts for all roads serving 3 to 6 actual and/or potential building sites.
- d. Twelve feet for all roads serving 1 or 2 actual and/or potential building sites.



Note: These widths are guidelines and may be adjusted in the event that circumstances in the field require, for public safety, either greater or lesser widths.

2. Paving

- a. Drakes View Drive from Sir Francis Drake Boulevard to the intersection of Drakes View Drive and Elizabeth Place shall be surfaced with a minimum of 2 inches of AC over a minimum of 6 inches of AB.
- b. All other roads will not require paving provided that the traveled surface is composed of well compacted decomposed granite or other approved surfacing material and have slopes less than those defined below.
- c. All road sections which have a slope of 12% or greater will require a minimum paved section consisting of 2 inches of AC over 6 inches of AB.

Note: These paving requirements are guidelines and may be adjusted in the event that circumstance in the field require for public safety, either greater or lesser standards.

3. These guidelines apply only to width and paving requirements, in all other respects the standards set forth in the County Code and in particular Title 24, Development Standards shall apply. It should also be noted that these standards and those in Title 24 are subject to interpretation by Department of Public Works staff.

The above standards are preliminary in nature and will be subject to further review.

Lot Consolidation Plan. The Paradise Ranch Estates Lot Consolidation Plan, map attached, is hereby incorporated in concept into the Marin County Local Coastal Program. This plan would consolidate 24 lots into 11 new building sites and reduce total build-out in the subdivision to 157 units. It is the intent of the Coastal Conservancy and the County of Marin to implement this plan as soon as funds are available. However, in the meantime, the County will process applications in accordance with other policies and standards of Local Coastal Program, and will notify the Coastal Conservancy whenever applications affecting these lots have been received.

A part of this lot consolidation plan would be a roadway and drainage plan, to address erosion and siltation control and provision of emergency services, as well as detailing needed roadway improvements. The County and the Coastal Conservancy will prepare this plan, in conjunction with local property owners, as soon as funds become available. Applicants for development permits in Paradise Ranch Estates will be informed that they may be required to make roadway and drainage improvements on their property in the future, in accordance with this plan.

Additional Park Acquisition. Twenty-eight lots in the subdivision have been authorized by the federal government for inclusion in the Point Reyes National Seashore, but funding for acquisition is not presently available. The County and the Coastal Conservancy will continue to seek sources of funds for acquisition. The County will process applications for development on these lots in accordance with policies of the Local Coastal Program, and will notify the Coastal Conservancy when applications have been received.

It should be noted that the federal government would not allow leasebacks on new development on these parcels if acquired.

Refer to Marin County Local Coastal Program Unit 2, page 60.

Design Review Guidelines. In addition to all other standards for development review in the Local Coastal Program, the following special Design Review Guidelines shall apply to the processing of all development applications in Paradise Ranch Estates:

1. Predevelopment Geotechnical Engineering Studies. Individual engineering studies will be required for building lots within the Class 3 and Class 4 slope stability zones as mapped in Wagner and Smith, Slope Stability of the Tomales Bay Study Area, 1977, to evaluate slope stability and to engineer foundations and structures to provide for proper grading, siting, structural stability and seismic design. These provisions are required by the LCP and Inverness Ridge Communities Plan, as well.
2. Protection of Visual Resources.
  - a. In areas where structures may be seen from the adjacent parklands (primarily the north, south and west sides of the subdivision) structures shall be screened by the existing vegetation to the maximum extent possible. Structures shall not be higher than the tree canopy, even if Section 22.47.024(2) (e) of the Zoning Ordinance would otherwise permit taller buildings. The purpose of this measure is to prevent the presently tree-covered silhouette of the ridgeline from being broken up. In addition, the structures will be better screened. It is noted that the west side is adjacent to the Park Wilderness area.

- b. In areas where structures may be visible, dark earthtones shall be used to ensure the least amount of visual intrusion into the landscape.
  - c. To minimize grading and visual impacts from the adjacent parkland, future structures along Pine Crest Road shall be located within 150 feet of the front property line.
  - d. To minimize visual impacts on the adjacent parkland, structures visible from the park on the northwest (Pine Crest and Upper Roberts) and southwest (Elizabeth Place, ends of Sunnyside and Dover) sides of the subdivision shall be oriented such that the shorter end of the structure faces the park, in order to ensure the maximum opportunity to take advantage of the existing tree cover.
  - e. Design Review of structures shall include an analysis of the visual impacts that might result from the siting and construction of the septic system. The septic system shall be designed and sited to minimize tree removal which could have a visual impact.
  - f. Use of colors and materials consistent with the woodland character of the subdivision and the vernacular building style of the area should be observed to avoid obtrusive visual impact.
3. Public Service Guidelines. On-site paving and drainage improvements may also be required for all new structures. Off-site improvements may also be required in areas where roadways presently do not meet County standards. These areas include, but may not be limited to, the following:

- a. Certain segments of Upper Roberts Road.
- b. Douglas Drive adjacent to AP 114-130-34 and 114-130-24.
- c. Dover Drive adjacent to AP 114-130-25.

If parcels that presently are not part of the Paradise Ranch Estates Permanent Division acquire access over the roadways in the subdivision in the future, joining the assessment district shall be made a condition of approval.

4. Watershed Protection.

- a. All policies in the LCP regarding blue line streams and adjacent lands shall be applicable in Paradise Ranch Estates. Streams affected by this policy include Tomlinson Creek, Fish Hatchery Creek, and the Central Drainage Channel.
- b. Silt traps or other necessary erosion control measures shall be required for all new grading and construction. (This measure has been suggested by the Department of Fish and Game). (Also see below).
- c. The policy of no waivers from requirements of the septic tank ordinance will apply in areas proposed for a septic system that exceed 40 percent slope or that are closer than 100 feet to a major drainage channel. This approach will probably prohibit development on some parcels, unless approval for a septic system were obtained from Regional Water Quality Control or a public agency accepted responsibility for monitoring and maintaining the system.

5. Grading and Erosion Control Guidelines. It is essential that grading be minimized in any building areas so that soils which are exposed during the construction process can be adequately revegetated and

cuts avoided to minimize erosion. Erosion control practices should address management of surface water run-off to prevent gullyng through improper discharge of storm water from downspouts and paved areas and down-stream transport of eroded sediments. Revegetation practices for erosion control should specify use of indigenous ground covers and seed mixes.

6. Protection of Trees.

- a. Structures and roads should be sited to avoid tree removal. However, where it is necessary to clear existing vegetation, ecological principles of natural plant success should be observed. For instance, in some situations, the oak and fir woodland communities have taken over older stands of Bishop Pine, and in some cases, Madrone. The latter may be diseased and dying, naturally giving way to successful change. In these circumstances, removal of the older diseased trees is desirable for siting purposes, thus promoting the succession of the younger, vigorous vegetation. However, dead trees also serve as valuable habitat for some species, so a complete removal should be avoided.
- b. Landscaping should make use of indigenous, drought resistant species to the maximum extent possible.

Community Participation.

The community should play a lead role in the establishment and operation of a local land trust. In addition, the community through one of its organizations, should serve an advisory role to the Planning Department in reviewing development applications. The local community will be responsible for implementation of the roadway and

drainage plan, once it is developed, most logically through continuation of the Permanent Road Division.

County's Regulatory Authority.

Strict application of the County's regulatory authority would include the design review guidelines recommended in the Design Review section. This approach also assumes strict implementation of LCP policies, including the policy of not allowing waivers from the septic ordinance.

Information on development constraints affecting lots in the subdivision is contained in Appendix C of the Paradise Ranch Estates Restoration Plan report, dated April 1981.

F. Redwood Canyon

Redwood Canyon is located inboard of Sir Francis Drake Boulevard and is accessed by Redwood Road. This area experienced substantial damage as a result of floodwater and debris flows during the January 4, 1982, storm event. Housing units were displaced and destroyed by the event. At least two homes were carried across the Boulevard and reduced to debris on the Tidelands. Another dwelling located on the outboard side of Sir Francis Drake Boulevard was dislodged from its foundations and moved Bayward.

Retention of a general density of one unit per three acres will inhibit land divisions within this area; construction or reconstruction of dwelling units within this sensitive and potentially hazardous area should only be accomplished after rigorous review and the highest possible flood proofing and construction standards.

G. Inverness

Inverness is typified by several distinctive neighborhood components which are described as follows:

I. Old Inverness

Located generally north of Inverness Way and extending toward Vision Road on the west side of Sir Francis Drake Boulevard upwards toward Trossach Way, this area has been developed close to its maximum potential. Like Inverness Park, Old Inverness was subdivided decades ago primarily as a place of summer occupancy. As an old development, lots are small in size, and roads are narrow and not conducive to additional traffic loadings.

Old Inverness is also typified by two topographic features which add special character to the neighborhood - First and Second Valleys. Within both of these valleys flow year-around streams which, like all others within the Planning Area, discharge into Tomales Bay. Like Inverness Park, previous versions of this Plan recommended that this area be considered as infilling area for further residential development. However, the results of the Cumulative Impact Study clearly indicate that the potential of ground and stream water degradation from septic tank leachates is a distinct possibility. Moreover, as this area was the first area within the Planning Area to experience residential development, the condition of septic tank systems installed years ago and not subject to bi-annual County inspection is clearly unknown. While infilling is still possible, such development should only occur on relatively large parcels, i.e., one (1) acre or larger in size.

Recommended density: One dwelling per acre.



2. South Inverness

Immediately south of Old Inverness and adjoining Tomales Bay State Park is a transitional and expansion area. In general, parcels fronting Sir Francis Drake Boulevard are capable of accepting additional residential development at a density of one (1) dwelling unit per two (2) acres, while the land south of Glen Way and Highland Way would not be developed at a density greater than one (1) dwelling unit per five (5) acres on a single family, detached, planned basis due to topographical and access constraints. This area sustained substantial damage from the January 4, 1982, storm; complete reconstruction and restoration of the area is still pending. Recommended density: One dwelling unit per 5 to 10 acres.

3. Stirling Way/Rannock/Woodhaven

Within the area north of Old Inverness generally bounded by Sir Francis Drake, Vision Road and Pine Hill Road exists a pocket of parcels, many of which offer division potential. Slopes within this area range between 20 and 40 percent with intervening flat areas. Additional limited development of this area served by the Inverness Public Utilities District could occur without undue detriment on a single family planned basis with dwelling units clustered on those parcels which topographically offer this design alternative. A general density of one dwelling unit per two (2) acres would permit reasonable build-out of this residential expansion area.

Recommended density: One dwelling per 2 acres.

4. Upper Vision and Kehoe Roads

This area is typified by slopes frequently exceeding 40 percent and marginally improved roadways. Moreover, this area is located outside of the primary village area and its expansion areas. Because of the physical and manmade features of this component, residential development could occur at a density of one (1) dwelling unit per two (2) or three (3) acres on a detached, planned basis. Clustering of new residential units to minimize further disruption of natural conditions is highly advisable within this component. Within this area are located additional meadow or plateau type parcels which by themselves are capable of accepting a higher density than their more steeply sloped neighbors. If the criteria set forth in Section 3.00 B. 1. a. through e. can be met, then favorable increases in densities for such sites should favorably be entertained.

Recommended density: One dwelling unit per 2 to 3 acres.

H. Seahaven

Seahaven, the only major residential neighborhood within the Planning Area located on the east side of Sir Francis Drake Boulevard, is divided into two distinct components. They are:

1. This subdivision consists of mostly one plus acre parcels, most of which are residentially improved. Parcels exceeding two acres in area are few in number. A residential build-out of this area could readily be accomplished at an overall density of one (1) dwelling unit per acre. Because of the limited number of 2 plus acres parcels, additional lot split activity would prove negligible except for the Calhoun property (10 acres) area next to the Park.

Recommended density: One dwelling unit per acre.

## 2. Upper Seahaven

In recent years, this component has experienced a fair number of land divisions. The upper reaches of Seahaven feature increasingly steep slopes - in some instances exceeding 30 percent. Vehicle is limited. An overall density of one (1) dwelling unit per three (3) acres should be established.

- A. It is anticipated that some time in the future the Federal government will provide the necessary funding for the acquisition of additional parcels within Paradise Ranch Estates and along the Tomales Bay shoreline. When such lands are withdrawn from private ownership, they should receive an O-A (Open Area) zoning designation to reflect public ownership.

3.05 Adopt specialized criteria for the review of residential project development within the Planning Area which are tailored to the characteristics of the area.

- A. Basic design criteria are specified by Chapter 22.47.024 of the Marin County Zoning Ordinance (Title 22) for development within Planned Districts. These development standards were adopted by the Marin County Planning Commission and Board of Supervisors particularly for use in areas designated "Ridge and Upland Greenbelt" on the Marin Countywide Plan. Although the lands within the Planning Area did not receive such a designation, the physical characteristics which prevail within the Inverness Ridge Planning area are extremely comparable to those so designated by the Countywide Plan. Although the original draft of this Plan recommended the establishment of special standards for development, utilization of the Ridge and Upland Greenbelt Development Standards & Criteria are highly applicable. They are therefore recommended for utilization.

HOUSING OPPORTUNITIES

## HOUSING OPPORTUNITIES

After adoption of the Inverness Ridge Communities Plan in 1979, the County undertook rezoning actions to bring compliance with Plan policies per the requirements of State law. Further rezoning actions were undertaken after County and State adoption of the Unit 2 Local Coastal Plan. Taken together, the development potential for the Planning Area was substantially reduced from a pre-1979 level of 3,589 housing units to less than 1,300. Census information reveals that within the Planning Area there exists a total of 781 dwelling units. Thus, under current plans and implementation measures, a total of 485 dwellings can be developed. Moreover, this number is a theoretical maximum and does not account for the varying degrees of constraints on land developments, e.g., utility limitations, steep slopes, soils instabilities, access, potential parcel merger nor current or future second units.

Current census information reveals that within the two Enumeration Districts which comprise the Inverness Ridge Planning Area, the mean per family income is \$25,502.00 while the median per family is \$22,262.00. Compared to Countywide census reporting information of \$35,961.00 mean per family income and \$29,721.00 median per family income, a disparity becomes very evident. Housing opportunities for individuals and families of relatively moderate income as noted within the Planning Area represents an important issue.

In recognition of the ever increasing short-fall of moderately priced housing units throughout Marin County, the Board of Supervisors adopted Ordinance Number 2681 in January 1982, which provides the framework for the establishment of new second units within single family residential zoning districts as well as for the legalization of second units existing within single family residential districts. The Findings set forth by the Board states as follows:

FINDINGS: The County finds some of the citizens of the County are experiencing a housing shortage particularly for low and moderate income households. It is a goal of the Countywide Plan to achieve a balanced community with housing available for households of all income levels. Accordingly, the County has adopted a policy in the Housing Element of the Countywide Plan to permit Residential Second Units in selected single-family areas. Therefore, the County finds it necessary for the public health, safety and welfare, in accordance with its housing policies that new and existing Residential Second Units are permitted under certain circumstances to make available an adequate supply of housing for low and moderate income persons of the community. Inasmuch as many areas of the County would benefit from permitting the legalization of Residential Second Units, the County will afford priority in applying provisions of this Chapter to areas in which adopted Community Plans call for the establishment of new second units or standardization of existing non-conforming second units.

In adopting the Ordinance, it was clearly the intent of the Board of Supervisors to establish a public participation forum before second units would be legally considered. The device for creating the forum is contained within the last sentence of the above Findings wherein such units are permitted when called for in adopted Community Plans.

As a prelude to the development of this revised Community Plan, a community attitude survey was undertaken by area residents who had interest in fostering a revised Plan. One section of that survey dealt with housing issues. The results of the poll are herein presented:

	Agree	Disagree	Undecided
44. Second units provide a good source of affordable housing.	282	39	41
45. A special county permit should be required for existing second units.	136	107	55
46. Existing second units should be legalized "as is".	135	108	67
47. Second units should meet standards developed by:			
a. local planning group	197	54	42
b. Marin County	121	68	45
48. Do you have a second unit on your property?			
Yes <u>47</u>			
No <u>273</u>			
49. Are you the renter of a second unit?			
Yes <u>10</u>			
No <u>307</u>			
50. If there are second units in your neighborhood, do you consider them:			
a. a problem?	69	129	53
b. an asset?	127	54	68

The above survey clearly indicates that residents within the Planning Area support the concept of second units, recognize their social worth, and are supportive of legalizing the existing stock of second units. Unfortunately, the survey made no clear distinction between existing second units versus future new second units. However, based upon fundamental community support of the second units concept, and recognizing that the enabling legislation adopted by the Board of Supervisors requires Use Permit applications with attendant public notice and public hearing before new second units can be established, those who have specific concerns regarding second units would have opportunity to make their views and objections known.

It is interesting to note that the Community Survey which enjoyed a respectable 35% return rate revealed the existence of 47 such units. A review of

recent County tax assessment records reveals the presence of some 70+ second units within the Planning Area; all second units are deemed to be nonconforming, i.e., established prior to the enactment of zoning, or are simply "bootlegged" and which enjoy no legal standing. Regardless of the legal standing of such units, the *Community Survey* clearly reveals that those completing the Survey agree that second units provide a good source of affordable housing and that a clear majority of those polled believe that second units are an asset to their neighborhood. The *Community Survey* suggests that residents of the area have provided the County a clear mandate to proceed with more formalized legislation for such housing accommodations. The complete Ordinance adopted by the Marin County Board of Supervisors which represents the enabling legislation for the varying types of second units, e.g., legalization of established units, opportunity to create new second units, is found in Appendix C.

#### HOUSING POLICIES & PROGRAMS

- 4.00 All existing second units within the Inverness Ridge Planning Area may be legalized pursuant to the provisions set forth by the Marin County Board of Supervisors in January, 1982, as set forth in Appendix C.
- 4.01 Additional new second units may be established within Inverness Ridge Planning Area pursuant to the terms and conditions of the above referenced Ordinance of Marin County, and subject to the following specific local standards:
  - A. The local water district serving the subject property (Inverness Public Utilities District or the North Marin County Water District) certifies in advance of the granting of such a Permit that adequate water supplies exist to support the proposed second unit.



- B. At least one (1) additional parking space can be provided for each new second unit. Such parking shall be located either on-site, provided, however, that if it is necessary to remove mature vegetation or cause extensive grading, the parking requirement may be satisfied on the street frontage abutting the site of the proposed second unit.
- C. The proposed second unit shall meet the minimum floor area as prescribed by the latest edition of the Uniform Building Code.
- D. Second units shall be offered to prospective occupants solely on a rental basis; condominium conversions of primary and second units is expressly prohibited unless this Community Plan is amended to the contrary.
- E. The County Director of Environmental Health certifies and approves that the existing on-site waste disposal system is capable of accomodating additional loadings from the proposed second units or that the site of the proposed second units is capable of supporting either modifications to the existing on-site waste disposal system or an additional on-site disposal sytem for the second unit.
- F. The proposed second unit will be visually integrated within the primary dwelling unit or, if detached, will be visually compatible with the primary dwelling unit.
- G. In recognition of high risks to life and property associated with flooding such as that experienced by the Inverness Ridge communities in 1982, no proposed second unit which is sought for establishment within flood hazard areas identified by the Marin County Flood Control District shall be authorized unless specific mitigations satisfactory to the District can be accomplished.

THE TIDELANDS

## THE TIDELANDS

Within the Planning Area, those lands generally located east of Sir Francis Drake Boulevard, extending along the Bay front between Willow Point and White House Pool, where Tomales Bay shrinks to a meandering channel, are considered as tidelands. The interest in these lands was conveyed to private interests many decades ago; a few years ago, however, a landmark decision was rendered by the State Supreme Court which held that the State still held interest in those tidelands (former and present) for public trust.

Since the rendering of that decision, the owners of such potentially impacted parcels, many narrow in width and afforded by 75 feet of roadway frontage of Sir Francis Drake Boulevard, have been required to seek tideland permit approvals from both the County of Marin and the State. As much of this land has been filled since conveyance of interest by the State years ago, no precise boundaries have been confirmed to fully determine the extent to which the State, as a result of the Marks-Whitney decision, has interest. The primary responsibility for determining the extent of remaining State interest has rested with the State Lands Commission. This agency has heretofore been unable to comprehensively survey and actually determine the State's interest within the tidelands along Tomales Bay. At present, prospective developers are handled on a case basis. In an absence of any pre-determination of State interest, plans and proposals are frequently subject to substantive modification when, upon individual review, the actual line of demarkation is reasonably defined. In the limited number of instances where such tideland permits have been granted, offers of dedications of public rights of ways alongside and outboard (Bay side) of the proposed improvements has been required to assure that the public may ultimately be afforded public access to the Bay. However, none of the public right of way access points have actually been developed for public use. Moreover, although

public access easements have been required through the development process, none have been accepted by a public agency to date. Absent any public acceptance of such easements, enhanced public access to Tomales Bay has not been achieved.

The tidelands are considered an environmentally fragile area for many reasons. The Countywide Plan, for example, designates the tidelands along Tomales Bay within the Planning Area as "Conservation Zones" for the application of special development policies and procedures. The tidelands within the Planning Area are also in close proximity to the San Andreas seismic fault which is located about 300 feet off-shore. And, as the streams and creeks provide habitat along their water courses within the Planning Area, so too do the tidelands. In the event of a major earthquake, liquefaction of bay mud beneath tideland improvements could result causing differential settlement. Additionally, disposal of septic tank effluent in close proximity to Tomales Bay is particularly difficult.

As previously noted, some of the tidelands have been filled. State interest is vested with all tidelands whether filled a decade or so ago or whether in a totally natural state. Moreover, it has been suggested that there are instances where the tidelands actually extended inland on the opposite side of Sir Francis Drake Boulevard, but the absence of any detailed surveys renders this suggestion as conjecturally possible.

Development of the lands outboard of Sir Francis Drake Boulevard can create potential traffic hazards as vehicles entering this artery are afforded limited sight distance due to the curving nature of the roadway and the presence of heavy vegetation. This problem is compounded by fairly high travel speeds which prevail on the roadway. Such problems could be mitigated through a realignment program on Sir Francis Drake eliminating or reducing curves and by the elimination of much of the vegetation which prevails. Such a program would undoubtedly prove destructive to the habitat quality of the surrounding lands and,

in the opinion of many, would have equally disastrous visual impacts. The visual character of the presently undeveloped lands outboard of Sir Francis Drake is of considerable importance to both residents of the Planning Area and presumably of equal value to the thousands of visitors who travel Sir Francis Drake Boulevard en route to various recreational destinations. In their present state, the lands outboard of Sir Francis Drake are considered both a local and Regional resource.

A survey was conducted to determine the extent of development along the tidelands band, and the following statistics are provided:

Total Number of Tideland Parcels .....	123
Total Number of Developed Tideland Parcels.....	54
Total Number of Developable Tideland Parcels .....	55
Total Number of Preserved Tideland Parcels .....	14

Review of current Assessor's information, the undeveloped and vacant parcels carry a fair market value of \$397,605.00. The actual full cash value could prove substantially higher after the conduct of individual parcel appraisals recognizing that many parcels carry assessment values dating back many years.

Although many of the tideland parcels were included in a Federally approved expansion of the National Seashore boundaries, Congress has not provided the necessary funding to accomplish acquisition of the parcels. So long as these parcels remain in private ownership, development opportunities remain. This situation provides an excellent opportunity for collective financial assistance to acquire the subject parcels and to hold the parcels in a protected manner until such time as Federal funding becomes available for purchase and transfer to the Seashore. Agencies and organizations which might participate in such a program include the Marin County Open Space District, the Coastal Conservancy and Trust for Public Lands. It is conceivable that the full and complete acquisition funding package need not be in place to commence such a program. Partial funding would permit acquisition of parcels on a site by site basis if such a parcel were proposed

for development.

## TIDELAND POLICIES

5.00 Seek clear resolution to long term issues and problems surrounding the undeveloped tidelands between Sir Francis Drake Boulevard and Tomales Bay.

- A. Until such time as Federal funding becomes available for the acquisition of undeveloped tideland parcels fronting Tomales Bay for inclusion within the National Seashore, form a joint enterprise amongst open space agencies and organizations for selected acquisitions of undeveloped tideland parcels which are threatened by development.
- B. When Federal funding does become available for acquisition of the tideland parcels, transfer ownership and reimburse the joint enterprise.
- C. Conduct a detailed study for the development of a linear walking and riding trail along the preserved shoreline band. Encourage participation in the study by the West Marin Paths Committee.
- D. Seek funding for implementation of the trail study.
- E. Should a total acquisition program prove unfeasible, or until such time as acquisition remains unfulfilled, the following specific policies of the Local Coastal Program shall be applicable to tidelands parcels.

Additionally, the following Local Coastal Plan Unit at 2 policies shall be applicable within the Inverness Ridge Planning Area:

5.01 West shore of Tomales Bay. Recommendations for the west shore are listed from north to south, in five segments.

- A. Location Tomales Bay State Park to Chicken Ranch Beach.

Description: Most of the lots between these two public parks have been developed with single-family dwellings as part of the Teacher's Beach Subdivision. The terrain in this area is generally steep and heavily

vegetated. Access is by a narrow winding side road off of Sir Francis Drake Boulevard, used by the public to reach the southern end of Tomales Bay State Park. There appears to be little if any public use of the shoreline in this area, except for Chicken Ranch Beach and the area adjacent to it. An offer of dedication of an easement was required as a condition of permit approval by the Regional Coastal Commission for AP #112-042-03, which abuts Chicken Ranch Beach.

LCP recommendations: Agricultural use of the public trust portion of AP #112-042-03, included in the offered easement, should be permitted to continue until such time as the public access offer is accepted by a public agency.

B. Location: Chicken Ranch Beach to the Inverness Yacht Club.

Description: Approximately 50% of the shoreline has been developed between these two points with single-family dwellings and the Golden Hinde Boatel. The Beach and the Boatel are the two formal accessways in this area; however, there is evidence of prescriptive rights on many of the undeveloped parcels, particularly those with sandy beach frontage. The three small parcels south of Chicken Ranch Beach are used by the public as an extension of the Beach, while those immediately south of the Boatel are used by visitors there. Trails and informal parking areas are evident on several undeveloped parcels. An offer of dedication of an easement was required by the Regional Coastal Commission for AP #112-101-16.

LCP recommendations: Lateral access shall be required on the three parcels south of Chicken Ranch Beach, AP #112-091-09, 04, and 06.

Lateral access shall be required on the two parcels south of the Golden Hinde Boatel, AP #112-101-05 and 06.

Vertical access shall be required where the existing trail is sited on AP #112-101-09, 10, or 11, Or #112-123-01. Lateral access shall be required on all of these parcels to accommodate existing public use. *Shoulder parking in this area shall be maintained.*

Lateral access shall be required in AP #112-123-04, 05, 06, and 07 to ensure public access to the sandy beach along the shoreline in this area. AP #112-151-01 to the south, owned by Audubon Canyon Ranch, should be maintained open to the public. If the use changes, easements shall be required to accommodate existing public use.

The offered easement on AP #112-101-16 should be accepted and opened to the public, unless the adjacent undeveloped parcel is acquired by the Federal government for public parkland.

C. Location: Inverness Yacht Club to the Inverness Store.

Description: Development in this section of the shoreline is concentrated primarily around Inverness Yacht Club to the north and Drake's Highway Garage and the Inverness Store to the south. Brock's Boathouse and a number of single-family dwellings are scattered in between. The shoreline south of the Yacht Club is relatively wide and marshy, while that in the vicinity of Brock's Boathouse is narrow and sandy. Formal public access exists at Children's Beach, adjacent to the Boathouse, and the Inverness Store. The area adjacent to the Inverness Library shows heavy use for both vertical and lateral access. Coastal Conservation funding for the Inverness Foundation purchase of the Mushet property, A.P. #112-310-25, at the foot of Brook Ness, is available but as yet no purchase agreement has been made.

LCP recommendations: Access shall be maintained at Children's Beach, AP #112-193-03, 112-256-03, and 112-310-04. If the use changes,



easements shall be required to accommodate existing public use. lateral access shall be provided on AP #112-310-25, adjacent to the Inverness Library, to accommodate existing public use.

D. Location: Inverness Store to the William Page Shields Salt Marsh.

Description: This section encompasses a very narrow portion of the shoreline between the Store and Willow Point and a wider area from the Point south. The narrow portion consists of a sandy beach, largely undeveloped, while that to the south includes numerous houses. The Inverness Foundation has acquired 112-31-20 just south of the Inverness Store to be used as village open space. Formal public access and parking are available at the William Page Shields Salt Marsh, owned and maintained by Audubon Canyon Ranch. An offer of dedication of an easement was required by the Regional Coastal Commission for AP #114-062-11, 12, a freshwater marsh now owned by Audubon Canyon Ranch.

LCP recommendations: Vertical and lateral access shall be provided on the parcel adjacent to the Inverness Store, AP #112-310-20.

The offered easement on AP #114-062-11, 12 is not suitable for access because it is located in an environmentally sensitive area, a marsh. In addition, the easement is not necessary due to the availability of public access on the adjacent parcel, Shields Salt Marsh.

E. Location: William Page Shields Salt Marsh to Inverness Park.

Description: This area is somewhat different from the other areas on the west shore in that it abuts the Tomales Bay Ecological Reserve, a marsh, rather than Tomales Bay itself. Most of the parcels in this section, particularly towards the northern end, are quite marshy; consequently, most of the existing structures have been built on earth

fill or pilings. This development is not readily visible from Sir Francis Drake Boulevard, due to heavy roadside vegetation. An old levee, running along the marsh or back side of these parcels, forms a viewing trail away from existing houses and separate from them by additional marsh area. There is no formal access south of the William Page Shields Salt Marsh; however, an offer of dedication of an easement was required by the Regional Coastal Commission for AP #114-072-23.

LCP recommendations: The offered easement on AP #114-072-23 should be accepted and opened to the public.

The levee trail running south from AP #114-072-23 to AP #119-040-13 should be opened to the public on a limited basis. The trail should be closed during the spring nesting season (March 1st - June 30th) to conform with the closure of the Tomales Bay Ecological Reserve. Undeveloped parcels shall be required to offer lateral easements, and such easements should be sought on developed parcels in this area.

A vertical access easement shall be provided on AP #114-082-02 and/or on undeveloped parcels adjacent to it, to connect with the levee trail.

#### 5.02 West side of Tomales Bay.

- A. The Golden Hinde Boatel, Inverness Yacht Club, and Inverness Motel shall be rezoned to RCR, in accordance with Policy 3(d) on Recreation and Visitor-Serving Facilities, page 47. Also in accordance with this policy, commercial parcels in Inverness and Inverness Park shall be modified to coincide with parcel boundaries and changed to planned commercial zones in order to provide for master plan review.
- B. County parklands and private nature preserves and beaches shall be rezoned to O-A (Open Area). This policy includes Chicken Ranch

Beach, owned by the County, the William Page Shields Salt Marsh and other nature preserve lands, owned by Audubon Canyon Ranch, and Children's Beach, former Martinelli Property, owned by the Inverness Foundation.

- C. All remaining lots not otherwise mentioned above, both developed and undeveloped, south of Chicken Ranch Beach up to and including AP #114-012-08 at Willow Point, shall be rezoned to RSP-1.0. Lots south of AP # 114-012-08 which are currently zoned A-2 shall be rezoned to RSP-0.33. Residential lots in Inverness Park, currently zoned R-1:B-1 and A-2:B-2, shall be rezoned to RSP-1.0.

5.03 LCP Standards for New Development on Public Trust Lands. Proposals for new development projects on patented or unpatented tidelands and submerged lands will be subject to careful scrutiny by the State Lands Commission. The Commission will determine the extent to which the proposed development extends onto public trust lands; the State's interest (i.e. fee or trust) in such lands; and, the consistency of the proposed development with public trust needs and with the objectives of the State Lands Commission for Tomales Bay.

In determining the consistency of a proposed development with public trust needs in Tomales Bay, the Commission has indicated that the development will be evaluated based on the following criteria, included here for information purposes:

Nature of use. Lands in Tomales Bay which are owned in fee by the State are subject to the common law public trust for commerce, navigation, and fisheries, must be used in a manner which is consistent with and furthers the purposes of the trust. New or expanded private uses of patented tidelands which are inconsistent with public trust needs shall not be permitted.

Environmental quality. Environmentally sensitive resource values shall not be threatened by the construction or location of new development. Water quality must be ensured through adequate waste disposal requirements. Removal of riparian vegetation shall be minimized during construction and wildlife habitats shall be preserved to the extent possible. Vegetation restoration schemes shall be required where necessary.

Residential development. Residential development is generally considered to be inconsistent with the purposes of the public trust because of the effect such private use has on public needs of State-owned tidelands. Therefore, new residential development shall only be permitted on patented tidelands where the Commission finds that such development will not interfere with trust needs. The goal shall be to protect the resource values of Tomales Bay and maintain the relatively undeveloped quality of the area as much as possible.

ZONING GLOSSARY

ZONING GLOSSARY

COASTAL RESIDENTIAL SINGLE-FAMILY PLANNED

C-RSP-0.1 .....	10 Acres per Dwelling Unit
C-RSP-0.144 .....	1 Acre per 0.144 Dwelling Units
C-RSP-0.16 .....	1 Acre per 0.160 Dwelling Units
C-RSP-0.2 .....	5 Acres per Dwelling Unit
C-RSP-0.25 .....	4 Acres per Dwelling Unit
C-RSP-0.33 .....	3 Acres per Dwelling Unit
C-RSP-0.5 .....	2 Acres per Dwelling Unit
C-RSP-1.0 .....	1 Acre per Dwelling Unit

COASTAL ONE-FAMILY RESIDENTIAL

C-R-1:B-5.....	2 Acres per Dwelling Unit
C-R-1:B-4.....	1 Acre per Dwelling Unit

COASTAL RESORT & COMMERCIAL RECREATION

C-RCR

COASTAL PLANNED COMMERCIAL

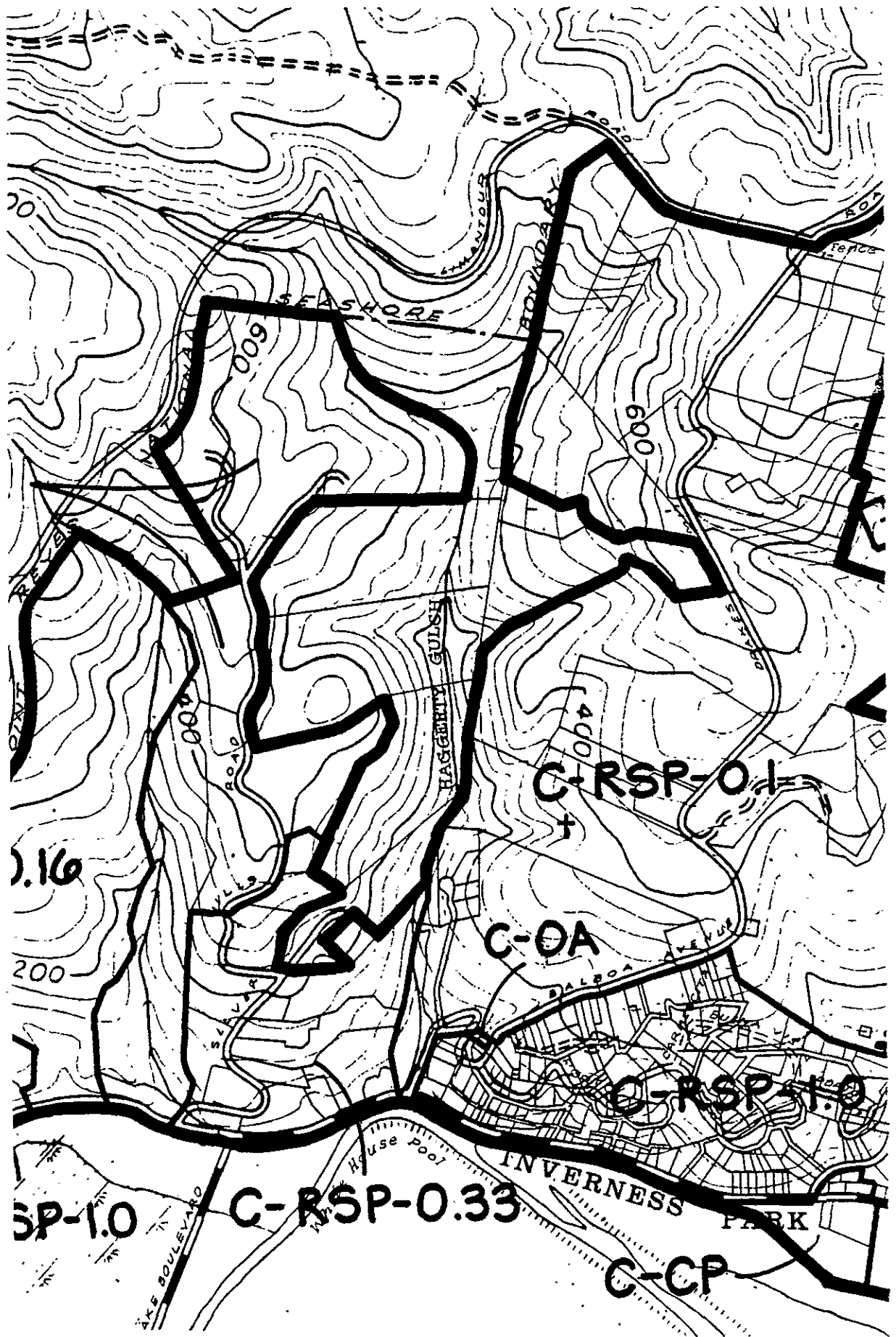
C-CP

COASTAL OPEN AREA

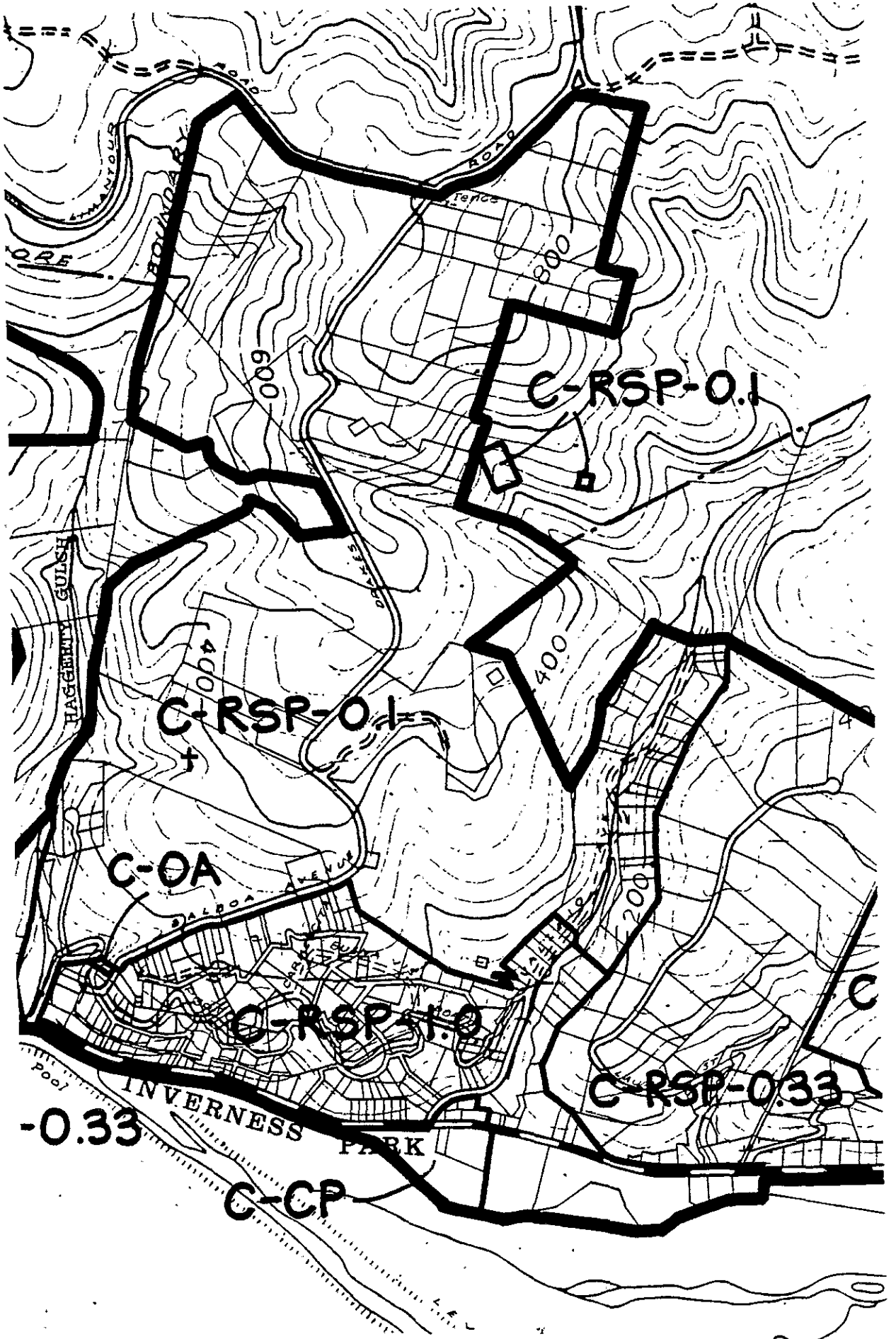
C-OA

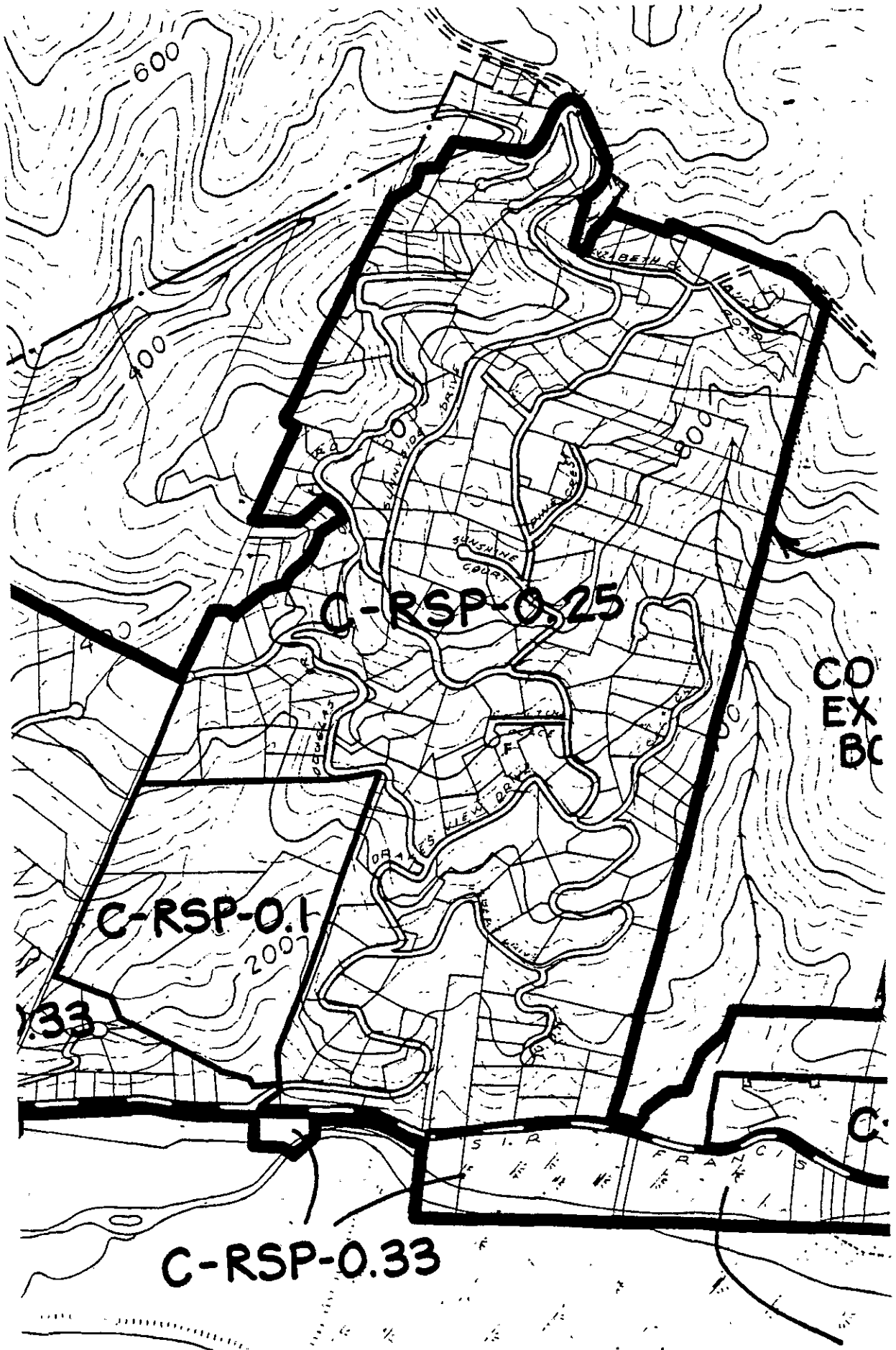
Note: Minimum lot areas defined above are applicable to divisions and subdivisions of larger parcels to that minimum parcel area. Pre-existing, legally created, parcel of record which are smaller in land area than presently prescribed may be improved to the use intended by the underlying zoning district (residential) provided that all present standards of development, e.g., setbacks, height, soils stability, sewage disposal, water supply, etc.) can be met and satisfied. Owners of such parcels should make inquiries directly to the Marin County Planning Department.

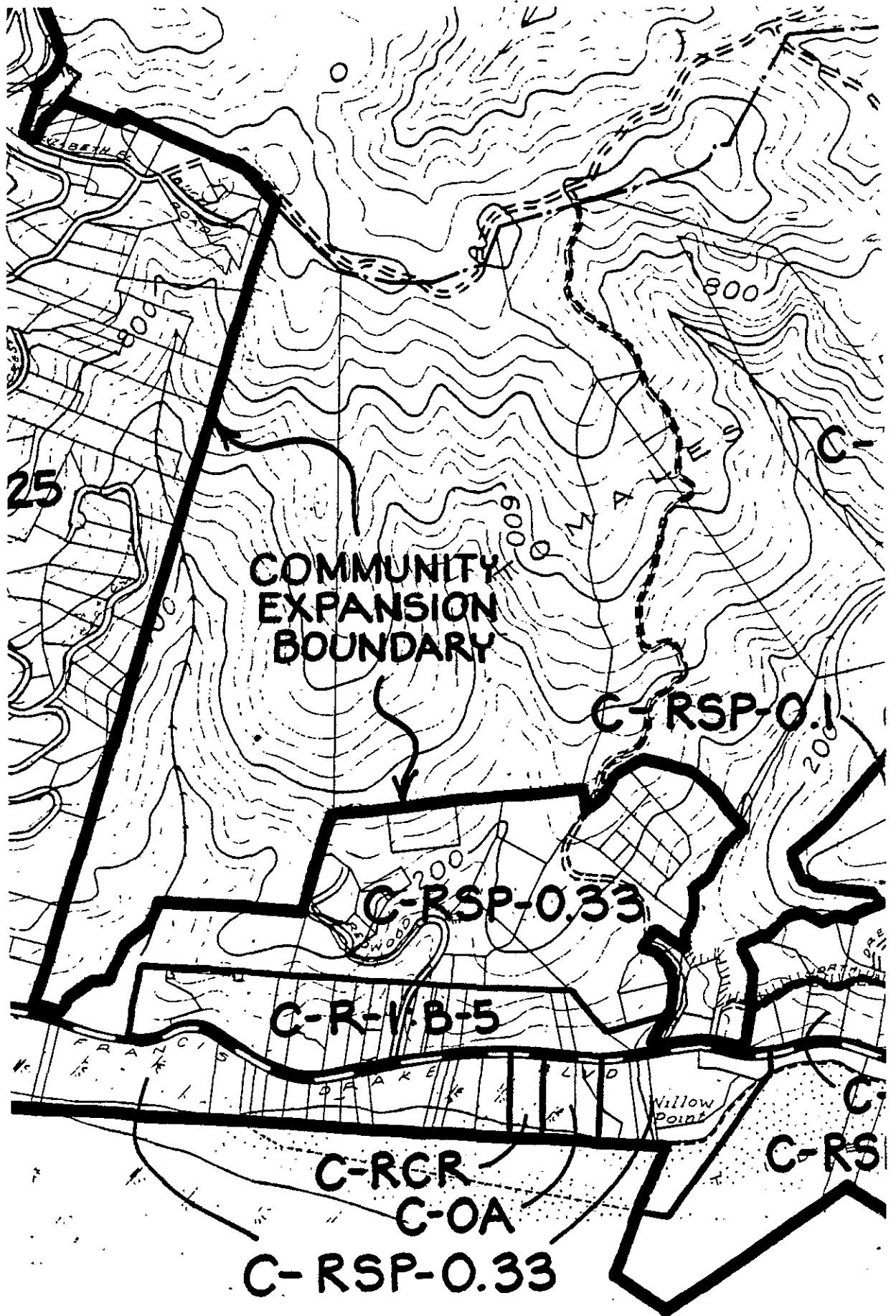
LAND USE PLATES

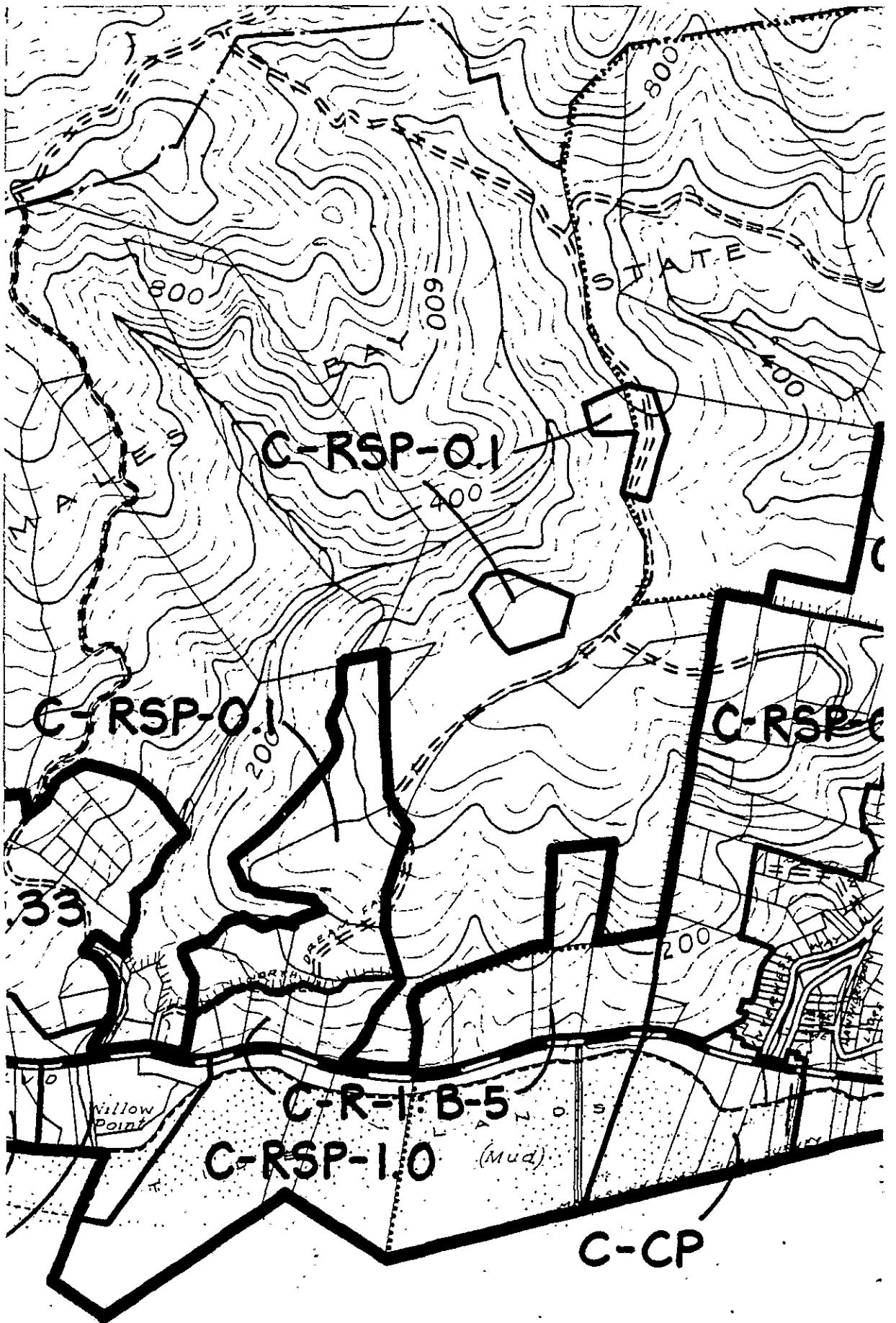




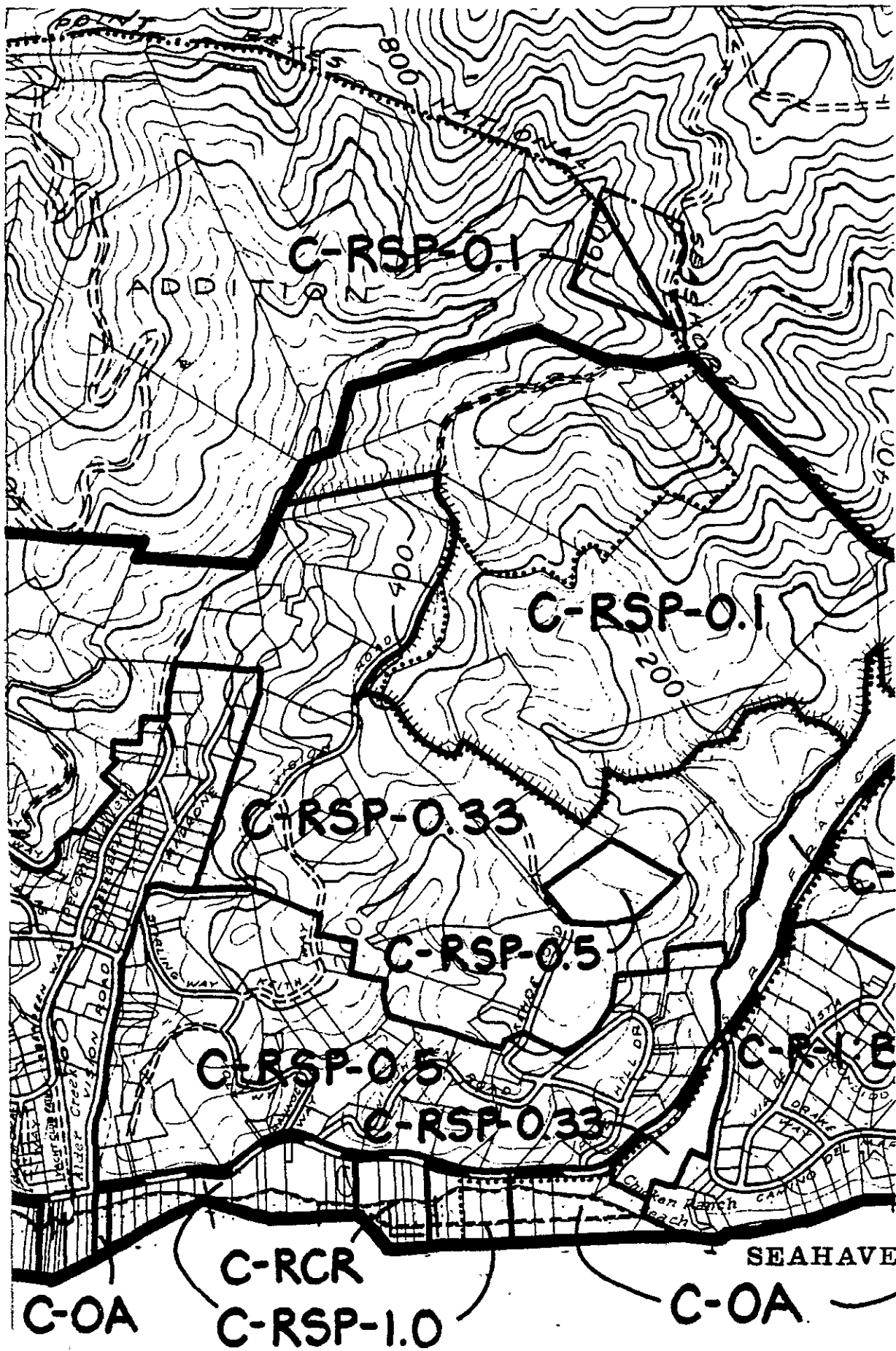


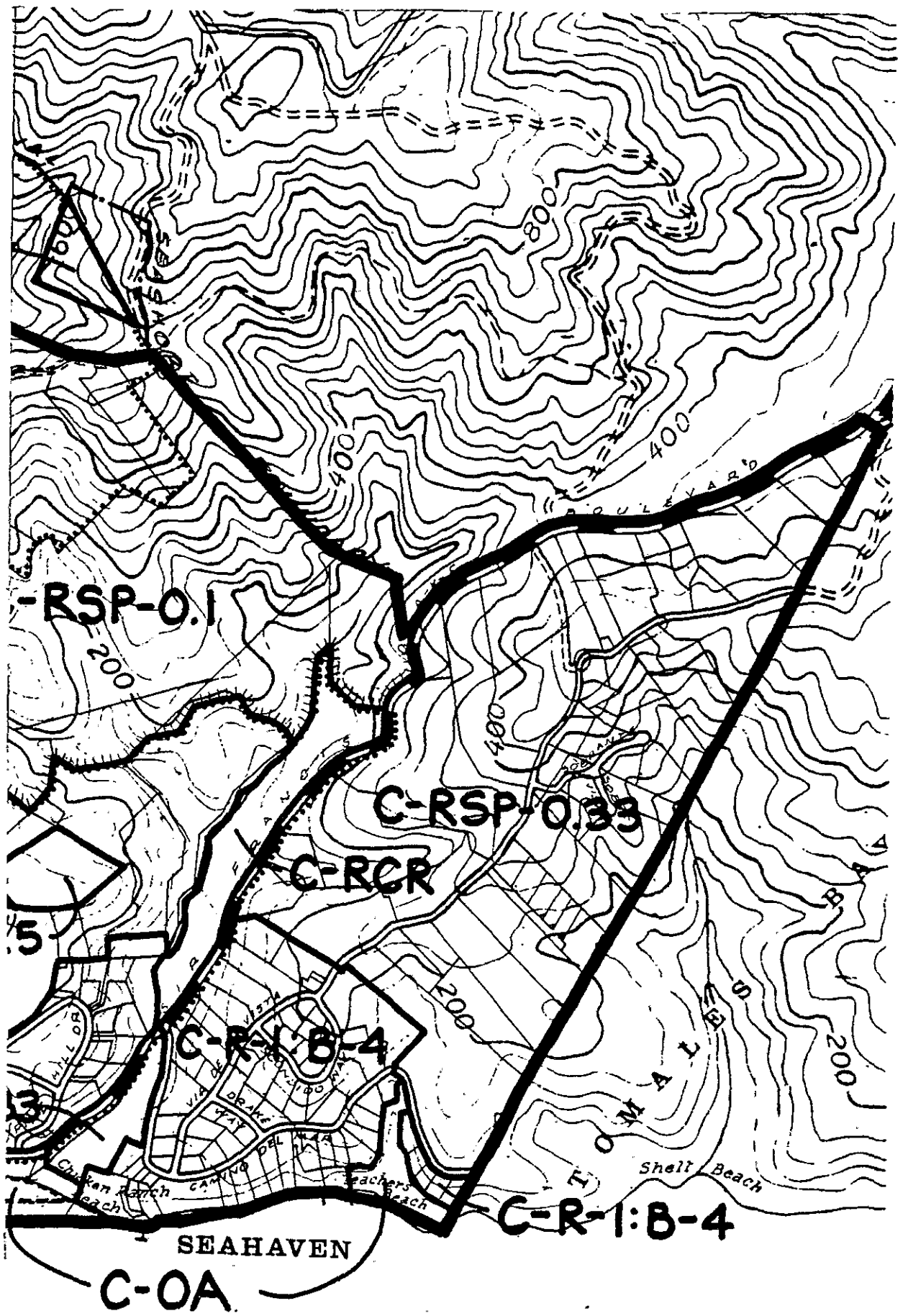












RECREATION



## RECREATION

The Planning Area is an unusual one from the perspective of recreational opportunities. Within or adjacent to the various neighborhoods are found lands held for public use maintained by the Federal government, the State of California, and, to a small extent, locally. The nature of these lands, the existing recreational opportunities, some of the problems associated with recreational activities, as well as future community needs are herewith presented.

### Tomales Bay:

The Bay has been well described - its biology, hydrology, health, use, problems and potential - in the 1972 Tomales Bay Environment Study prepared for the Conservation Foundation. The Bay is highly valued for its diverse uses and as a rare example of a pristine estuary.

Boating and fishing are favorite activities, although access and exit from Tomales Bay can be particularly dangerous. Clam diggers in great numbers pockmark the beaches during minus tides in the fall, winter and spring, and optimistic fishermen are frequently observed along the shore. The beaches of Tomales Bay give easy access to water and provide opportunity for sunbathing, swimming and small boat launching. Both nature and man have an effect on the Bay. Erosion and sedimentation are natural processes, which are still accelerated by poorly placed roads and culverts. The Bay is becoming increasingly shallow throughout its length, particularly at the southern end. The flow of fresh water from Lagunitas Creek has been reduced by impoundments and diversion for domestic use. The natural process of accumulated silt and sedimentation loadings was also increased vastly as a result of the January, 1982, storm. Huge deltas have been formed along the shoreline where hillside streams discharge into the Bay. It is anticipated that it will take several years before such streams are

cleansed of silts and sedimentations. The deltas formed by the 1982 storm will therefore likely increase in area. Remedial dredging of the deltas to open channels to the deeper waters of the Bay is a necessary action to minimize upland flooding due to clogged discharge areas. Several area residents have suggested that some of the dredge spoils might be deposited in upland canyons in a series of engineered terraces. Such a concept warrants further investigation due to the general constraints otherwise encountered in the disposal of such materials.

Due to strong tidal action, the Bay remains clean. In the past, local concentrations of fecal coliform due to animal waste runoff getting into the streams also contributed. In order to comply with Regional Water Quality Control Board requirements to end pollution, a new sewer system has been built in the town of Tomales, and ranchers have installed freestall barns and holding ponds to control animal waste. The monthly monitoring of creeks indicates only a small amount of pollution going into the Bay from the Planning area.

#### Tomales Bay State Park:

The thousand acre Tomales Bay State Park was established in late 1952. Inverness people had long enjoyed the beautiful pocket beaches, and when it appeared that development of the area was inevitable, spearheaded a successful effort to interest various organizations, and eventually the State, in purchasing the beaches and surrounding lands.

The five beaches - the two Shells, Pebble, Heart's Desire and Indian - offer picnicking, swimming, hiking, clamming, and small boat activities in the shallow and protected areas, and are the principal recreation attraction of the park. Swimming areas are well marked by buoys at all of them, and Rangers patrol Heart's Desire and Indian Beaches regularly, although there is no lifeguard service at any of them. The Inverness Association provides rafts for swimmers to use at the Shell Beaches.

One of the finest stands of Bishop Pines in the State is preserved in the Jepson Memorial Grove. The great variety of spring wildflowers, the many species of all types of wildlife, along with the marine environment of the shoreline, make the park a valuable and unique resource for Botanists, Ornithologists, Ichthyologists and Mammalogists.

The main entrance to the park is on the ride just west of Pebble, Heart's Desire and Indian beaches, with a check station about halfway down the road. A fee is charged for day or seasonal use. Only day use is permitted, and there are parking lots below the checkstation, just west of Heart's Desire Beach. On particularly fine days, they are often filled to capacity.

The Shell Beaches were the traditional favorites of Inverness people, with swimming lessons provided for many years by the community during the summer to all children in the area. However, with the increased popularity of recent years, many problems have arisen. There is no check station, the small parking area at the trailhead is inadequate for the more than 20 cars, and on pleasant summer weekends the narrow road becomes almost completely congested with cars parked illegally along the side. Campers and vans frequently use the parking area as a campsite. Pit toilets and garbage cans are the only facilities provided on the beaches, and the overuse during most of the summer is well demonstrated by the worn and dirty appearance of the area above the high-tide line. Lack of sufficient Rangers has also meant that fires are built on the beach, unleashed dogs are a constant nuisance, and sometimes a danger.

Pebble Beach, short walk from the parking lot at Heart's Desire, is small and quite shallow, has sanitary facilities and a garbage can, and receives far less use than the others. Heart's Desire receives quite heavy use, since the parking lot is

right there. There are dressing rooms, water available, garbage cans, and attractive picnic spots with barbecue facilities and tables and benches, scattered through the woods on the hill just above the beach.

Indian Beach can be reached from the parking lot by a short, nature trail, but because of this walk and its greater exposure to prevailing winds, does not receive such heavy use. It also has pit toilets and garbage cans. The small meadow area between the sand and the hill has beautiful wild flowers in the spring, and there is a great stand of lovely old ceanothus bushes extending up the hill. Many forms of small marine life can be observed in the lagoon just in back of the southern part of the beach.

The local Planning Group feels that Tomales Bay State Park fills an important need, but recognizing that the beaches are small, day use only should be permitted. Although parking areas are small, there is no apparent need to warrant the consideration of expanding parking facilities within the life span of this Plan. Residents within the Planning Area are satisfied with the management of the State's public use areas. Transfer of such Parklands to the Golden Gate National Recreation Area are therefore not recommended. No plans have been developed, at this time, for public use of the Tomales Bay State Park extension located on the Inverness Ridge. Local groups unanimously have recommended prohibition for overnight camping.

#### The Point Reyes Seashore - Short-Range Effect on Inverness:

The Point Reyes National Seashore is a unit of the National Park Service. A portion of the Seashore has been declared a Wilderness Area with minimum change in the environmental balance. A few small parking areas may be built, but currently the Park Service has no plans for expansion of tourist facilities. During the summer weekends, the visitor traffic increases the total traffic flow on Sir Francis Drake (through the Planning Area) by 200 percent. It is no wonder

that, with this much of a proportional increase, the one thing residents are most concerned about is the auto congestion and speed. Various ideas for dealing with this problem are discussed on Page 109 under "Transportation." The idea of doing nothing and letting congestion act as a natural limit is a non-answer of last resort. The present weekend traffic could double before the threshold of capacity is reached (undoubtedly many residents would feel saturated long before then).

SELECTED TRAFFIC COUNTS  
(Source: Marin County Department of Public Works)

	(1)	(2)	(3)
Summer, 1981	2,220	N.A.	4,306
Summer, 1975	1,864	N.A.	3,300
Summer, 1974	1,444	1,455	2,596
Summer, 1973	1,305	2,135	N.A.

1. Sir Francis Drake East of Camino Del Mar.
2. Sir Francis Drake South of Inverness
3. Sir Francis Drake North of Bear Valley Road

Note: All figures represent Average Daily Traffic

Local Recreation Facilities:

Even though the Planning Area is surrounded by State and National Parks and the Bay, these merely complement, but do not replace the need for neighborhood active recreation facilities. The need for an Inverness Community Center building has been periodically and inconclusively discussed over the years. Opinion in the 1973 community survey was evenly divided: 38% in favor and opposed; the rest undecided.

Chicken Ranch Beach, owned by the County, serves as a community beach. It is locally maintained. The Planning Group also recommends that nothing be

done here in the way of adding to the facilities and, in particular, recommends that Sir Francis Drake not be widened to provide additional parking. Horses and dogs should not be allowed on this beach.

Children's Beach, on both sides of the old Brock's Boathouse, is retained by the Inverness Foundation and can continue to serve as a small protected area, in easy walking distance of the village, where very small children can play happily. The undergrowth and shrubbery must be cut back periodically, the entrance steps kept in repair, and the beach cleaned of debris. This has historically been a function of the Inverness Association.

Inverness people have long felt a great need for a local park, which would serve a different purpose than the State and National Parks. Only the school yard is available now, but due to its small size and shape it is only good for quite young children who enjoy the minimum play equipment. Shafter Park, next to the Firehouse, also known as the Village Green, is too small for even a volley ball court. The single court belonging to the Tennis Club really only serves its members and their guests.

The Planning Group feels there is a need for at least a playfield and other recreation facilities for older youths and adults for baseball, and perhaps a tennis court(s) in the Second Valley part of Inverness. The flat land at Sir Francis Drake just south of Vision Road is ideally located. A separate playfield is suggested for the Inverness Park area. At this point specifications are undecided, depending a good deal on how much land is secured.

## POLICIES AND PROGRAMS

6.00 For those public lands currently owned and administered by the State of California, endorse such current administration. In addition to the present

facilities maintained by the State Department of Beaches and Parks, recommends:

- A. The development of a limited trail system within the Tomales Bay State Park enclave between Paradise Ranch Estates and Old Inverness as an extension of the trail system along the Tomales Bay shoreline as outlined in the Transportation Section of this Plan.
- B. No increase in off-street parking facilities within existing State Parks, particularly Tomales Bay State Park.

6.01 Maintain Chicken Ranch Beach in its configuration and intensity of use. In the future, give consideration to transfer this locally used recreation facility from County administration to local administration.

6.02 Within the continued aid of the Inverness Ridge Planning Group, attempt to clearly identify those sites which are appropriate for acquisition and development of active playfield areas within both the Inverness Park and Old Inverness neighborhoods. Funding for the actual acquisition and development of such sites (once determined) could potentially be borne by the Community Services District recommended in the section of this Plan dealing with Public Services.

6.03 Should Transportation Policy 7.00 A be implemented, design and construction are provided means to permit public access to the waters of Tomales Bay to improve and enhance opportunities for fishing as a local and regional recreational activity. The County of Marin, or other suitable agency, is strongly encouraged to accept offers of public access along and to the shores of Tomales Bay which have been required through the development review process.

6.04 LCP Policies for Recreation and Visitor Serving Facilities:

A. General policy. The County of Marin supports and encourages the enhancement of public recreational opportunities and the development of visitor-serving facilities in its coastal zone. Such development must, however, be undertaken in a manner which preserves the unique qualities of Marin's coast and which is consistent with the protection of natural resources and agriculture. Generally, recreational uses shall be low-intensity, such as hiking, camping, and fishing, in keeping with the character of existing uses in the coastal zone. New visitor-service commercial development shall be compatible in style, scale, and character with that of the community in which it is located and shall be sited and designed to minimize impacts on the environment and on other uses in the area. The County encourages that a diversity of recreational opportunities and facilities be provided, especially those of moderate cost. Facilities for water-oriented recreational uses such as clamming and boating, are preferred to those which do not require a coastal location.

B. Public parklands:

I. Role of public parklands. Federal, state, and county parks provide most of the existing opportunities for public recreation in Unit II, for both local residents and coastal visitors. The LCP assumes that most future recreational needs of the public will be met by those parks as well. The potential for additional recreational development on parklands is substantial and would, in concept, be consistent with the goals of the LCP. The policies listed below provide a framework within which such future development is to be evaluated. (Policies on federal lands are given in a separate section of the LCP on Page 61).



2. State parks. The State Department of Parks and Recreation has numerous holdings in Unit II, several of which have not yet been developed. The State will prepare detailed master plans for the development of these parks which shall be subject to review according to the following standards:
  - a. Inverness Ridge. Development of the 1,200-acre Inverness Ridge project should be limited to low-intensity uses such as hiking and nature study. Any camping is discouraged selected locations, where the constraints of slope, fire hazard, and water quality impacts can be adequately addressed. Development of the Inverness Ridge project should be integrated with that of Tomales Bay State Park and the Point Reyes National Seashore. The County encourages the transfer of State parklands on the Inverness Ridge, located between Paradise Ranch Estates and the Inverness Valley Inne, to the IPUD for management as part of the Point Reyes National Seashore, as authorized in Public Law 96-199.
  - b. Access on developed lots. Public access easements need not be required in a coastal permit for the replacement of, demolition or reconstruction of, or improvements to certain existing structures, as specified in Section 30212(b) of the Coastal Act.
  - c. Proximity to mariculture operations. In siting access easements, the County shall consider the location of mariculture operations offshore and the potential impacts of public access on those operations in terms of vandalism and

other disturbances. In siting new mariculture allotment, the county shall also consider its impact on boating.

- C. Specific recommendations for new accessways in Unit II. The recommendations for new accessways have been divided into three geographic areas: west shore of Tomales Bay, east shore of Tomales Bay and the area north of Walker Creek. If and when undeveloped parcels on the shoreline of Tomales Bay are purchased by the federal government, access easements by the County on those parcels will no longer be necessary.
1. West shore of Tomales Bay. Recommendations for the west shore are listed from north to south, in five segments, are found in Tideland Section commencing on Page 62.
- D. Inverness Ridge/west shore of Tomales Bay. This area currently provides 70 of the 82 motel rooms or 90% of all such overnight accommodations in the Unit II coastal zone, as well as numerous other commercial services. Very little commercially zoned land is available for further visitor-serving development; however, because of existing visitor-serving uses on the Inverness Ridge and the space provided in Point Reyes Station and Olema for such development, no significant expansion of commercial zoning on the Ridge is recommended. Expansion shall be limited to adjusting the boundaries of commercial zones in Inverness and Inverness Park to coincide with parcel boundaries. These zones shall be changed to planned commercial in order to allow master plan review. In addition, the Golden Hinde Boatel and Inverness Motel shall be rezoned to RCR so that any possible future expansion of these facilities will be subject to master plan review.

TRANSPORTATION

## TRANSPORTATION

Transportation recommendations are based on the philosophy of support for transit, encouragement of pedestrian and bicycle paths, and discouragement of excessive use of the automobile. World energy supplies are entering an era of shortage that makes such policies mandatory as well as being environmentally sound, even though the world price of crude oil is presently in a downward trend.

### Transit:

The most practical way to wean people from their automobiles is good transit service. The planning group believes that local as well as better inter-county service is needed. Currently the Inverness area is only served by a morning and evening commuter bus at Pt. Reyes Station.

For many years, the Marin County Transit District was responsible for local transit services within the County. Actual operation of the services was through contractual agreements with the Golden Gate Bridge, Highway and Transportation District (GGBH&TD). Reduced revenues and accelerating costs has precipitated the need for the County Transit District to increase fares and reduce route mileage. The likelihood of improved transit service to and from the Inverness Ridge Planning Area is remote at best. The (GGBH&TD) provides one daily round trip from Inverness to San Francisco and return.

One transit alternative which is operative is the "Over the Hill Stage." Utilizing a passenger type of van, limited service is provided to area residents. Even such limited service requires local support and patronage.

### Roads:

Many of the narrow roads in the planning area were laid out a long time ago and do not meet current standards. Often the pavement is only 12 feet and is not safe for two-way traffic, nor does it permit parking. Pedestrians are forced to

compete with cars, and there are tight curves. Notwithstanding these defects, the majority of residents prefer to retain the rural character and not improve the roads - 71% do not want dirt roads paved.

Within the built-up portions of Inverness and Inverness Park, to widen the roads would destroy much of the vegetation and aesthetic appeal. Therefore, no such widening or straightening is proposed, except to remedy dangerous curves, blind intersections and roads too narrow for fire trucks. However, in undeveloped areas when new roads are to be created or existing ones improved, then the current County road standards should be followed to the extent of allowing for two-way traffic and one lane of parking when the road cuts, vegetation removal, or resulting visual effects of the road are deemed not to be significantly disruptive.

All of the roads in Old Inverness, lower Seahaven and Vallejo, Portola and lower Balboa in Inverness Park are county maintained. In addition, Moll, Sterling, Keith, and Rannock (next to Old Inverness) and all the streets in Paradise Ranch Estates are in a Road Improvement District. In such a district the County Public Works Department takes care of maintenance and assesses each property owner through a charge on the property tax.

A majority of property owners can always form a road improvement district. Once created, the district continues. The Public Works Department believes that continued maintenance is a necessary service. However, there seem to be some land owners who are not willing to establish a permanent road improvement district. While neighbors could, of course, always get together and pay for their road improvements, it may be they are unwilling because not everyone will contribute their fair share.

### Recreational Traffic:

Planning Area residents desire that the visitors to the National Seashore enjoy its beauty, yet they are concerned about the weekend auto traffic which congests the roads and endangers pedestrians and bicyclists.

The goal of getting most visitors to West Marin parks and recreation areas by transit is still far from being achieved, and cannot be done by the County alone. During the next decade or longer, most of the visitors will come by car. For many years, a bypass within the Park was sought so that the Seashore traffic would not have to go through the villages. In the original community survey, 55% wanted a bypass, 71% wanted to limit cars entering the park, and 61% wanted Seashore access primarily by public transit. However, with much of the Seashore now in the Wilderness Area category, there is little probability of any new bypass road being developed within the park. Also, a park transit system in conjunction with prohibiting private cars within the park has little current possibility. In any event such a system would have to hold private vehicles at Park Headquarters (rather than at the entrance from Sir Francis Drake) in order to be effective in reducing the private vehicle traffic through the villages.

Traffic and pedestrian safety is needed along Sir Francis Drake Boulevard.

Options include:

1. The most effective control of traffic for the protection of pedestrians and vehicles entering or crossing Sir Francis Drake throughout the whole planning area would be an enforced speed zone and stop signs at the more dangerous intersections, but even a one man patrol, full time, would require 4+ deputies and cost about \$72,000 plus equipment.
2. Installation of a pedestrian operated stop light at the shopping area is estimated at approximately \$70,000.

3. Construction of a pedestrian overpass is estimated at \$50,000, but experience indicates that for such a short distance (two lanes) the pedestrian is more apt to take the chance.

A major element of local concern is the potential expansion of the commercial area outboard of Sir Francis Drake Boulevard. Increased recreational traffic along the Boulevard has generated concerns for pedestrian safety. A branch of the County library, a service station and a market are located outboard of Drake with pedestrians crossing the roadway en route to and from the market and library. Although some community members have expressed interest in the development of a bypass roadway outboard of the market, service station and library, no community consensus exists in this regard and it is unlikely that funding could be secured for such a project. There is consensus, however, that a specific plan should be prepared for the village core area which would include the "Village Green" concept, i.e., an open space area extending down the First Valley stream to the Bay. Local acquisition of one outboard parcel is an excellent step in the "Village Green" concept.

#### Paths and Trails:

The adopted County plan for a Cross Marin Trail (May, 1975) includes a bicycle route connecting Tomales Bay park via Point Reyes Station to the rest of Marin. The section through the planning area is scheduled in the third (last) phase of development and was estimated to cost \$38,000 in 1975 as a Rural Class III route. This Class III facility is established by means of striping a 4 foot lane on both sides of an existing street, and posting "Bike Route" signs. The estimate included some bridge and road improvements.

The Planning Group endorses the path as a needed facility for bicyclists and hikers, but questions whether a Class III route is suitable in all places. Sir Francis Drake is heavily traveled and should have a minimum of 22 or 24 feet for

automobiles alone. Widening of shoulders will be required for the two 4 foot "routes" and may be undesirable because of inducing slides and changing road character. A carefully studied plan will be necessary.

An alternative to the proposed Class III route can be found in the section of this Plan dealing with Tideland Properties.

Upslope from Sir Francis Drake, hiking trails predominate. The Planning Area residents are fortunate in having access to the trails of the State and Federal parklands.

Within the town pedestrian pathways will become increasingly necessary as the density increases, if the rural standard of street improvements is to be maintained. Old Inverness has some existing paths which have been maintained for years by the Inverness Association. Inverness Park has a number of easements which could be developed; but at present, there is no organization to handle this as a project.

## TRANSPORTATION POLICIES

7.00 Maintain the present roadway system within the Planning Area in its present capacity and configuration; provide alternative means of circulation within the Planning Area to complement the roadway system.

- A. Subsequent to the acquisition of the undeveloped lands outboard of Sir Francis Drake Boulevard as recommended on Page 71 of this Plan, seek the development of a shoreline riding and hiking trail extending to the National Park visitor reception facilities in Bear Valley and to downtown Point Reyes Station, both via the White House Pool area. Such a riding and hiking trail could provide non-auto access to the Tomales Bay State Park situated between the two primary residential



components of the Planning Area and which extends from Sir Francis Drake Boulevard to the top of the Inverness Ridge and which adjoins the National Seashore.

- B. Seek improved summer and weekend recreational bus service from either San Francisco and/or the Larkspur Ferry Terminal.
- C. Seek the installation of transit waiting shelters along Sir Francis Drake Boulevard. The approximate cost of each shelter is \$8,000.00 each. At least four such shelters are desirable within the Planning Area.
- D. Post transit schedules at transit stops; distribute transit schedules to residents of the Planning Area.
- E. Utilize the principle of "flag stops" to receive or discharge transit patrons anywhere along the transit route within the Planning Area as a further inducement to transit patronage.
- F. Existing streets within residential areas should be maintained at current improvement standards; unimproved residential roadways should be improved to minimal all-weather travel standards such as crushed rock by owners of land whose frontages abut such roadways.
- G. New streets developed in conjunction with new residential projects in low density areas should be designed and constructed in keeping with existing streets, i.e., two-lane roadways with soft shoulders.
- H. Continue to maintain existing paths and pedestrian ways existent within the Planning Area, and introduce new paths during the course of new development.
- I. Existing paths have been maintained by local volunteers. The maintenance of existing and future paths could ultimately be transferred to a local district (See Public Services & Utilities).

- I. The County shall explore with the Community all feasible means of discouraging unsafe traffic uses and practices in the 1st and 2nd Valleys.
  
- J. The installation of a stop sign at each end of the Inverness commercial area is encouraged on a trial basis to see if this alleviates the current dangerous problem as experienced by the community on Sir Francis Drake.

PUBLIC SERVICES  
AND UTILITIES

## PUBLIC SERVICES & UTILITIES

As an unincorporated place, the neighborhoods which comprise the Planning Area are generally devoid of the urban types of services usually provided by a municipality. Moreover, as the various neighborhood components were developed at varying time intervals, the nature of the services and utilities available to the components vary in nature as well. The reader of this Plan is invited to consider the following discussion and evaluation of the basic services and utilities furnished:

### Law Enforcement:

Primary responsibility for law enforcement is handled through the Marin County Sheriff's Department. Although a substation is not located within the Planning Area itself, such a facility is located in nearby Point Reyes Station. Response time to calls from within the Planning Area vary depending on the specific location of the call, but in general, the services rendered to the communities within the Planning Area are considered adequate by the residents and merchants of the area. Except for complaints regarding excessive vehicular speeding on Sir Francis Drake Boulevard, the neighborhoods have expressed no complaints regarding the type and extent of law enforcement services rendered to the area.

### Fire Protection:

Two distinct agencies are responsible for fire protection services within the Planning Area. Within Inverness, and now extending to the Seaheaven neighborhood, fire protection is provided by the Inverness Public Utilities District. Headquartered in Inverness and staffed by a volunteer crew, the IPUD has improved the level of fire protection service for the area it serves. Fire protection services within the Silver Hills - Inverness Park area is furnished by the

Marin County Fire Department from its facility (shared with the Sheriff's Department) in Point Reyes Station. Although response time to emergency calls within the Planning Area is generally quite good, further improvements in quenching structural fires could be enhanced were an emergency vehicle stationed within the area to immediately respond to emergency calls during the critical *initial minutes of a structural conflagration*. In times of disaster, Sir Francis Drake could be closed and the Fire Department would be unable to reach Inverness Park.

System improvements performed by both the Inverness Public Utilities District and the North Marin County Water District have improved the abilities of both the IPUD and the County Fire Department to combat structural blazes. In the Inverness area, further water system improvements will be required to accommodate both fire suppression requirements and further residential growth.

#### Electrical Power:

Electricity for residential and commercial occupancies is provided by the Pacific Gas and Electric Company. Their nearest substation to the Planning Area is located in Olema, approximately 5 miles distant. No improvements to this supply and distribution system have been deemed necessary at this time. Natural gas for heating and cooking purposes is not available within the area, a situation common to all West Marin communities. LPG is also provided in the area.

#### Sanitation:

All neighborhoods within the Planning Area share a common reliance upon on-site waste disposal systems. Residential and commercial improvements developed since 1971 are subject to bi-annual County inspections to assure that septic tanks systems are properly operating. Improvements developed prior to that time, some dating back to the turn of the century, which similarly rely on septic tank (and in some instances cesspool) waste disposal methods are not

subject to inspection and the degree of success or failure of such systems remains unknown. Until recently, little was known of the area's ability to accept further septic tank waste discharges. A few years ago, the Inverness Association established a program to monitor water quality of streams within the Planning Area, and analysis of the waters thus sampled revealed no appreciable evidence of surface water contamination. It is important to note that the physical characteristics of the Planning Area permit all fresh water and storm waters to drain directly into Tomales Bay, a body of water widely recognized for its water quality of sufficient proportion to permit uncommon mari-culture activities such as oyster production in addition to more traditional marine activities such as sport and commercial fishing.

Because of growing concern relative to the potential degradation of surface waters (creeks, streams and Tomales Bay) and sub-surface waters used for domestic purposes expressed by the Coastal Commission and the Regional Water Quality Control Board, the County of Marin imposed an interim ordinance (moratorium) on new constuction reliant upon septic tanks in four areas which were deemed most critical: Inverness Park, Paradise Ranch Estates, Inverness and Tidelands. Subsequent to the adoption of the moratorium, the State Coastal Commission provided funding for the preparation of a Cumulative Impact Study to investigate the area to ascertain to what extent poential problems existed and to determine under what conditions the use of septic tanks might be continued. A contract was thereupon executed between the County of Marin and Cooper Clark & Associates, J. Warren Nute, Inc., and Peter Warshall for such a study. Their final report was published in December, 1978, and their findings and recommendations were adopted by the Marin County Planning Commission that same month. The report was then forwarded to the Marin County Board of Supervisors which similarly accepted and adopted the report after a public hearing

conducted on January 16, 1979. The conclusions of the Cumulative Impact Study were:

- When properly designed, constructed and maintained, septic tank systems have a high degree of reliability over a reasonable life period. However, historically, in general practice, septic systems have been poorly designed and maintained and thus have had a high rate of failure.
- The State Water Resources Control Board has recently adopted policies which encourage use of individual sewage disposal systems in rural areas where sewers are uneconomical to construct.
- The Regional Water Quality Control Board has adopted a separate policy requesting that local Health Authorities adopt regulations requiring certain determinations be made in the use of septic tanks and that periodic inspections be made by a responsible public body or that maintenance districts be established to assure the long term maintenance of individual sewage disposal systems.
- The lot size provisions of the Marin County Septic Tank Ordinance (No. 1806) requiring 1 to 2 acre minimum lot sizes depending on slope is almost never a controlling factor since it does not apply if it can be demonstrated that a proposed septic tank and drainfield design will meet the other provisions of the ordinance.
- The decomposed granite soils in the Inverness area are relatively thick on the ridges and thinner on the slopes and in general, exhibit a good percolation rate although they are poor aquifers.
- Below the decomposed granite soils the bedrock is hard with prominent fractures and joints which can transmit water rapidly, thus posing a hazard that unpurified septic tank effluent could find its way into domestic wells.

- Alluvium soils found in creek bottoms and along Tomales Bay generally have good permeability but have seasonally high groundwater which will interfere with percolation and pose a contamination hazard for nearby wells.
- Tideland areas or fills underlain by bay mud are generally unsuited for septic tank use.
- The Inverness and Sheridan Variant Series soils found in the Inverness area are well drained and provide a good aerobic environment for effluent purification and disposal. Both soils have deep root zones allowing for good plant uptake of nutrients. Although both soil types provide good treatment capabilities for septic tank effluent, steepness of slopes, high water tables near streams and tidal areas and shallow soil profiles will be the limiting ecological conditions.
- Under "ideal" site conditions a lot with a one bedroom home served by a septic tank and drainfield could be as small as 5,000 square feet. However, site conditions are seldom ideal and minimum lot sizes of one half to two thirds of an acre would more likely be required in the Inverness area.
- On slopes exceeding 20 percent, special drainfield design will be necessary in order to avoid the downslope surfacing of effluent.
- The quantities of septic tank effluent which enters the groundwater stream and eventually reaches Tomales Bay will depend on the density of housing development permitted.
- Dissolved salts could eventually build up over a long period of the domestic water is derived from wells which are partially recharged from septic tank effluent.



- o In order to prevent degradation of groundwater as a water supply, as an upper bound, lot sizes should be limited to 1.4 acres per unit on an overall density basis where no groundwater is being used and 2.8 acres per unit where the same groundwater is being used as a domestic supply.
- o Predicted groundwater nitrate levels appear to be an order of magnitude greater than the nitrate levels actually found in creeks and groundwater indicating that more nitrate loss and storage is taking place than has been assumed.
- o Other than providing better water supplies and controlling population densities there is little that can be done to mitigate cumulative impacts since use of septic systems or any other system involving local sewage disposal will add nitrogen to the environment in proportion to the population of the area.

The recommendations of the Study based upon the above conclusions are contained as policies and programs 8.00 on Page 113.

Water Supply:

Of all the primary services rendered within the Planning Area, none is more fragmented and frequently controversial as water supply. There exist two primary purveyors of water: within the Silver Hill, Inverness Park and Paradise Ranch Estates areas, domestic water is furnished by the North Marin County Water District. This District draws its water from wells within Lagunitas Creek in Point Reyes Station and is transported via pipeline to storage tanks within the Planning Area. This system has had the benefit of on-going improvements and is judged to be operating in a satisfactory manner. Within Inverness and Seahaven, water is provided by the Inverness Public Utilities District, acquired from the predecessor Inverness Water Company owned by the conglomerate Citizens Utility Company. When ownership of the system was transferred to the local district, massive

system improvements and rehabilitation were undertaken. System improvement work was well in progress until January, 1982, when it experienced massive damages. Distribution lines were destroyed as were collection and treatment facilities. In an effort to restore a modicum of service, the Inverness PUD in cooperation with the North Marin County Water District (NMCWD) hurriedly laid an on-grade connector pipe to potentially permit IPUD to draw water from the NMCWD. However, no water was actually drawn through the emergency pipeline. In the ensuing months after the disaster, arrangements were made to make permanent this connection for emergency purposes while at the same time the IPUD has endeavored to restore damage and lost facilities. Because of system deficiencies inherited by the IPUD, several moratoriums precluding new connections to that system have been ordered. The IPUD states that it does not have sufficient water to entertain new connections. As a result, construction of new dwelling units within Inverness and Seaheaven has ground to a halt. Moreover, the use of wells for domestic water supplies with Inverness and Seahaven has been prevented due to prevailing local Coastal Program policies which prohibit wells. A more detailed assessment of the use of wells is provided further in this section.

One of the side effects of the January, 1982, storm which faces the IPUD is a recognition of the need to replace water catchments at elevations higher than previous intake facilities. In a move to locate water catchments in safer areas, the size of the watershed from which such waters is drawn is being reduced. The net result may be a smaller yield of domestic water. Therefore, the IPUD is potentially faced with the need to create a dam or dams for water reservoir purposes, and the ability to achieve the objective of constructing dams is not known at this time. There are obvious fiscal and environmental constraints.

There are a number of alternative water supplies potentially available to the Inverness Public Utilities District, as follows:

1. The development of dams and/or reservoirs.
2. A permanent connection with the North Marin County Water District.
3. The development of wells.
4. The development of additional catchments for streams.

There is strong community sentiment to live within the natural constraints of the Planning Area, including water supplies. Importation of water through North Marin pipelines would alter the natural balance. The IPUD has considered the above alternatives, but a final course of direction has not been fully established.

Domestic Wells:

When the Unit 2 Local Coastal Plan was adopted, by the State, policies were adopted which presently preclude the use of individual water wells for domestic purposes. Recognizing that there exists substantial public interest in the use of wells to support new residential and commercial activities within the Coastal Zone, including the Inverness Ridge Communities Planning Area, the County commissioned the firm of Larry Seeman Associates to investigate the appropriateness of amending the Unit 1 and 2 Local Coastal Plans, and, if appropriate, to offer recommended policy language. A preliminary draft of the Seeman Associates report has been provided to the County. The capabilities and sources of all local water purveyors within the coastal zone has been assessed, including those of the North Marin County Water District which furnishes water to the Inverness Park and Silver Hills neighborhoods within the Planning Area and the Inverness Public Utilities District which furnishes domestic water to the Inverness and Seaheaven neighborhoods within the Planning Area.

The following assessments are drawn from the Seeman Associates report:

"Inverness Community Water System. This water system is owned and operated by the Inverness Public Utilities District (IPUD). The IPUD system was severely damaged in the January 1982 storm, and IPUD is in the process of rebuilding the system. Before the 1982 storm, IPUD had nine surface sources and three wells. Only one of the wells was used for municipal water, and it was used as a standby source. The two other wells are disconnected, one by order of the State Health Department and the other on the recommendation of the State Health Department. Two abandoned wells produced a total of 12 gpm (19.3 AF/y).

The reconstruction of IPUD's system is about 70% complete as December 1982. The relative contribution of wells and surface sources to IPUD's system is unclear, as the District is still evaluating both potential new surface sources and potential new well sites. IPUD will have nine surface sources when reconstruction is complete, but a number of these sources are different from those that were destroyed. IPUD does plan to reconnect the well that has been used for municipal water in 1983. The District is also investigating the possibility of selling one or both of the closed wells as a source of irrigation water.

The well used by IPUD for municipal water is located in First Valley, near the southwest corner of Inverness, at an elevation of about 100 feet. The production of the well has been measured at 6 gpm (9.7 AF/y) on a sustained basis, and up to 15 gpm for short periods. The figure of 21.4 gpm in the LCP is apparently an error. The water produced by the well has relatively high concentrations of iron and manganese, but is easily within consumer acceptance standards. The well is 407 feet deep, entirely within the Point Reyes Granitics Formation.

The IPUD wells draws its water from the Point Reyes crystalline aquifer which is very complex. Inverness is located on a weathered layer of granitic rock of varying thickness, which overlays unweathered granitic rock. The weathered granitics are permeable, but the unweathered rock is not. However, the unweathered granitic rock is characterized by fractures and cracks which carry water. The aquifer is further complicated by a lack of correlation between surface geomorphic features and features of the ground watershed. The boundary of the groundwater does not coincide with the surface watershed because groundwater boundaries are determined by the highest points of the unweathered granitic rocks rather than surface features. Similarly, the water bearing fractures and cracks have little or no relation to surface features. Consequently, it is not possible to describe the size of the ground watershed tapped by the IPUD well without extensive field survey.

Hamilton Mutual Water Company. Hamilton Mutual (HMWC) obtains its water from a single surface source: a diversion in Redwood Canyon south of Inverness. The discussion of three springs in the Unit 2 Local Coastal Program is apparently incorrect. HMWC's source was destroyed in January 1982 storm, but has been replaced and is now

operating normally. HMWC's system is static, no new demands are expected, and the Company has no plans to develop any new water sources.

Noren Estates Mutual Water Company. No responses.

Point Reyes Station Water System. This system is owned and operated by the North Marin County Water District (NMCWWD). Water for the system is obtained entirely from wells along Lagunitas Creek. The wells are shallow, and apparently draw less than half of their water from groundwater aquifers (Nelson, et al). Water from Lagunitas Creek, withdrawn directly by the wells, supplies the larger part of the Point Reyes system water. NMCWWD has a superior, or preemptive, water right for water from Lagunitas Creek in whatever amount is necessary for reasonable municipal use. In 1979 the District required about 242 AF/y, and a current requirement of 261 AF/y can be calculated using the District's projected growth rate (Nelson, et. al.).

Three of NMCWWD's four wells are located adjacent to Lagunitas Creek .45 miles upstream from the Highway 1 bridge crossing at an elevation of 5 feet. One of the wells was dug as a test well and is not used for production. The other two wells are capable of producing 440 gpm (710 AF/y). Production is limited by the capacity of the treatment system rather than the wells pumping capacity. The water produced by these wells has high concentrations of iron and excessive concentrations of manganese, which are largely removed by the treatment process. During the drought of 1976-1977 these wells also experienced saltwater intrusion problems, resulting in excessive chloride ion (not to be confused with chlorine used for bacterial control) concentrations for month. All of the wells are about 60 feet deep, drilled in the alluvial deposits of Lagunitas Creek and possibly extending to the underlying Franciscan shales. The wells are located on property owned by the US Coast Guard.

The fourth NMCWWD well is a backup well located about 1 mile upstream from the Highway 1 bridge at roughly 20 feet above sea level. The production of this well is limited by the pump to 300 gpm (484 AF/y). Water quality at this well is the same as the primary wells in terms of iron and manganese, as all draw most of their water from Lagunitas Creek. Salinity problems are not expected to occur at the backup well. This well is 25 feet deep and is in the Lagunitas Creek alluvial deposits. NMCWWD owns a parcel of about half an acre at the well site.

The aquifer that all of the NMCWWD wells tap is from an alluvial system. Most of the water withdrawn by the wells is surface water that percolates through the alluvial sepositis of Lagunitas Creek. A smaller amount of the water withdrawn could be considered to be groundwater, but wells as shallow as NMCWWD's would tap an aquifer fed by the immediately surrounding area.

## Effects of Individual Well Used on Coastal Resources

Inverness Community Water District. The effects of a policy change on the IPUD system are more difficult to predict than the effects on any of the other systems. Two factors are responsible for the difficulty: the ongoing development of both the community itself and the water system, and the very complex nature of the Inverness groundwater shed. IPUD has not been able to meet the demand for new service for a variety of reasons, causing a backlog of connection requests. A change of policy could be expected to result in new building with water supplied by individual wells. An example is the land surrounding the existing IPUD well whose owner has indicated a desire to subdivide. Development of this property may affect the IPUD well. Other development could affect existing IPUD water sources. The complexity of the aquifer makes prediction of effects impossible without extensive case-by-case field studies. For example, two wells in close proximity on the surface could be drawing water from different fractures or crack networks. Similarly, two wells separated by a relatively large distance on the surface could draw water from the same fracture or crack network and compete with each other.

Individual wells in the Inverness area have a somewhat higher potential to affect the marine environment than the systems at Dillon beach because of the more limited tidal flushing that occurs in Tomales Bay at Inverness. This effect would be minor because the majority of the water would be returned to the groundwater basin through septic systems. The groundwater environment could also contribute to contamination of individual wells. Under normal operating conditions a septic system discharge wastes into aerobic soil where soil-inhabiting bacteria compete the purification process. Wastes from a malfunctioning system could enter the anaerobic environment of the fracture systems and be drawn into a well without aerobic purification (Cooper Clark Associates, et. al. 1978). The significance of this problem is difficult to assess, but such contamination may have been the reason for closure of the two abandoned IPUD wells, which are located downslope from developed areas and produced foul smelling water.

Both the Board of IPUD and landowners in the Inverness area have expressed interest in possible policy change. The IPUD Board has expressed its concern that individual water wells may adversely affect IPUD's water sources. IPUD is still investigating new sources of water, and feels that a policy change should be deferred until the economic and engineering feasibility of these options can be determined. The Board also expressed concerns over the effects of the January 1982 storm on the watershed, but these effects are primarily surficial and have little or no relation to the groundwater situation. A number of residents and landowners in the IPUD service area have expressed interest in this study, and have generally favored the option of using individual wells.

Hamilton Mutual Water Company HMWC would not be affected by a policy change because of the static nature of the service district. There would be no reason for drilling individual wells in the service area.

Noren Estates Mutual Water Company Effects unknown.

Point Reyes Station Water System Most of NMCWD's service area is completely removed from the water source (Lagunitas Creek). A small part of the Point Reyes Station area could compete with NMCWD for water if individual domestic wells were allowed. Because NMCWD has a superior water right to Lagunitas Creek water, State water law would prohibit the use of new wells tapping this source. New individual wells could possibly compete with NMCWD for groundwater not associated with Lagunitas Creek, but such water is a relatively minor part of the NMCWD source.

Effects on the marin environment are potentially large in the NMCWD area, but are unlikely to occur. Lagunitas Creek is the largest and most important source of freshwater inflow to the Tomales Bay estuarine system, but the water rights held by NMCWD and others together with agreements made with the California Department of Fish and Game protect this water source.

NMCWD routinely allows individual water wells in parts of their service area outside the Coastal Zone. The only restriction placed on such wells is a requirement for an anti-backflow device at the NMCWD meter. NMCWD has requested a similar, reinforcing condition for individual domestic water wells in their service area *within the Coastal Zone, should they be allowed.*"

The Seeman Associates report the recommends that the Unit 2 Local Coastal Plan be amended (Page 187) to state:

- a. "Type of service. New development, including land divisions, with the exception of the area served by the Inverness Public Utilities District, may utilize individual wells or other private on-site water sources. Within the area served by the Inverness Public Utilities District (IPUD) individual wells should not be allowed on parcels less than 2.8 acres in size. To protect existing IPUD water supplies individual wells should not be allowed at points in the watershed upstream from public water sources. New development shall be required to incorporate low flow water fixtures and other water-saving devices."

The above amendment has been approved by the Planning Commission. Further hearings will be conducted by the Board of Supervisors and State Coastal Commission.

## POLICY RECOMMENDATIONS:

- 8.00 Investigate the feasibility of establishing an intergrated water supply and distribution system within the Planning Area.
- A. Subsequent to the adoption of this Plan:
1. Seek the preparation of an independent study to assess the technical and financial feasibility of:
    - a. Exploring the potential of the NMCWD acquiring, operating and updating the varied water systems within the Planning Area.
    - b. Assess the possibility of assuming responsibility for septic tank maintenance.
    - c. The development of a comprehensive resource management plan.
  2. Encourage residents of the Planning Area to work with the Staff of the Local Agency Formation Commission toward either the territorial expansion of the Inverness Public Utilities District or the creation of a Community Services District to pursue the same types of studies cited in 1. a and b above. Such an expanded or specially established district could also investigate:
    - a. Providing limited local recreation facilities and activities.
    - b. Providing improved structural fire protection within the Inverness Park area.
- 8.01 To obviate the potential of adverse cumulative impacts from occurring as a result of continued installation of septic tanks within the Planning Area, accept and incorporate the specific recommendations of the Cooper Clark &



Associates Cumulative Impact Study (December, 1979) prepared for the County of Marin as follows:

### Septic System Design and Recommendations

The percolation rates found in the soils of the Inverness area are relatively good and experience with septic tank use has been good. There is a need, however, to strengthen the present septic tank design requirements in order to minimize the probability that failures will occur, particularly on steeply sloping land. In addition, good design standards are needed in order to protect groundwater quality against further degradation from unpurified septic tank effluent.

Accordingly, the following recommendations are made with respect to site investigations and septic tank design and construction requirements. It is recommended that these requirements be added to the existing septic tank regulations for the Inverness area. It should be noted, however, that each lot is a special case and it is not possible to construct a "cook book" approach to septic system design that will cover all cases. Consequently the septic system design requirements recommended below are necessarily fairly general.

### Recommendations

It is recommended that in order to reduce the probability of drainfield failure and in order to minimize the possible long-term cumulative impacts, that the septic tank and leaching field regulations for the Inverness area be revised as follows:

#### A. Site Investigations

1. The home site plan submitted with the septic tank application should show slope contours of the lot and the locations of all wells, all road cuts and embankments on and off the property within 200

feet of the property boundary. Also any seepage from cuts or embankments should be noted.

2. The site plan should show all on-site drainage including locations and outlets for all existing or proposed roof drains, patio drains and all other sources of runoff. All drainage water shall be kept off the proposed drainfield and its replacement area and shall not be allowed to concentrate on neighboring properties.
3. A careful soil profile shall be taken to a depth of 8 feet. The soil profile shall report the following:
  - a. Depth of each soil layer, soil color and any indication of mottling which would indicate a fluctuating groundwater table. Precise soil terms should be used for the soil logs, laymans soil terms should not be accepted.
  - b. Any indications of fractured pieces of bedrock, slid or soil filled seams in the bedrock, depth to hardpan, depth to perched groundwater or the depth at which the bedrock becomes solid.
  - c. Depth to groundwater in the wettest time of the year and any variations in groundwater level.
4. The percolation tests should be performed during the rainy season and should indicate the stabilized percolation, i.e., the rate water must be added in order to maintain a constant level.

B. Septic Tank and Drainfield Design

- I. Surface runoff from the site must be planned so that drains from roof tops, patios and other impervious surfaces do not drain onto drainfields. Curtain drains or peripheral surface drains should be installed on the upslope portion of the lot and at least 10 feet

upslope of the drainfield as needed to keep surface and groundwater out of the drainfield.

2. Setbacks of the septic tank and drainfield from on-site and off-site features should be in accordance with the requirements given in Table 5-1. (On file with the Marin County Planning Department).
3. Soils with percolation rates slower than 60 minutes/inch should be regarded as questionable and more percolation tests should be required to determine if better soil is available on site. Percolation rates of 120 minutes per inch would be absolute cutoff and represent completely unacceptable soils for septic systems.
4. Soils with percolation rates faster than 5 minutes per inch should be regarded as too fast and a mound drainfield system should be required.
5. Because of the shallow soil mantles on slopes and high water tables in Inverness, seepage pits are inappropriate.
6. Use of the bedroom criteria is a poor way to size drainfields in West Marin because there is a tendency to set up studio apartments in existing houses and occupy very small homes. Drainfields should be sized on the basis of occupancy, with a typical occupancy of 4 persons per home and a per person sewage contribution of 75-100 gallons per day. It is suggested that drainfields be sized on the basis of "Ryon's Corrected Criteria, Maximum Wastewater Loading Rates for Drainfields" on file with the Marin County Planning Department. A conservative approach would be to require 4 square feet of side wall area per gallon of sewage. (This is very close to the present criteria.)

7. If there is no high water table the drainfield trench should go no deeper than the mixture of soil and weathered bedrock.
8. Where the soil mantle is less than 4 feet from the ground surface seepage beds with trenches no deeper than 18" engineered to utilize percolation and evaporation should be required. (A 40' by 40' space is normally required for seepage beds.) If the soil mantle is less than 30 inches to bedrock either a seepage bed or a mound system should be required.
9. If the groundwater level in the drainfield area is shallower than three feet then shallow trenches or a mound drainfield system should be considered.
10. Drainfields should be designed as one of the following three types:
  - a. Single drainfield with equivalent expansion area - This is a minimal requirement and has minimum initial cost but with possible future cost in building a replacement field.
  - b. Dual drainfield with each part being full size - This has the greatest initial cost with minimal future risk.
  - c. Dual drainfield with expansion area of equal size - This would have the maximum life with a safety feature.
11. On slopes greater than 5% drainfields shall be serially loaded.
12. On slopes, if the soil mantle is becoming shallower, i.e., less than 4 feet, the trench spacing requirements should be increased in order to prevent effluent from flowing downslope from one trench to another.

#### Construction Requirements

1. Benching of slopes for the purpose of drainfield construction should not be permitted.

C. Septic Tank Maintenance and/or Inspection

If the residents of Inverness desire to continue to use septic tanks in lieu of sewers than it is essential that new systems be properly designed and that all septic systems be properly maintained.

Creation of a Septic Tank Maintenance District would be one way to assure proper maintenance. If formed, a Maintenance District should adopt its own ordinances regulating the determination of site suitability and design of setic systems and have the power to enter private property as well as acquire property for the purpose of maintaining private systems. The cost of maintenance functions would be funded on the basis of user charge or taxes. However, the recent passage of the Tax Limitation Initiative might restrict the ability of a new special district to collect funds.

The other method of assuring proper maintenance of septic systems would be to extend the requirement for bi-annual inspections to systems installed prior to the adoption of Ordinance No. 18.06. The County Health Department would then be required to inspect all sytems on a regular basis. Where deficiencies are found, the Health Department would order the property owner to make corrections. Funding for this inspection could be collected from each property owner before the inspection is made.

The requirement for proper maintenance through either a Septic Tank Maintenance District or by means of periodic inspections by the Health Department is consistent with the Regional Board Resolution No. 78-14 cited in Chapter 2. (On file with the Marin County Planning Department). It should be noted, however, that the ability to

economically maintain septic systems depends on good initial design and construction.

Recommendation

It is recommended that a public agency be empowered to make periodic inspections of all septic systems the ability of a new special district to collect funds.

The other method of assuring proper maintenance of septic systems would be to extend the requirement for bi-annual inspections to systems installed prior to the adoption of Ordinance No. 18.06. The County Health Department would then be required to inspect all systems on a regular basis. Where deficiencies are found, the Health Department would order the property owner to make corrections. Funding for this inspection could be collected from each property owner before the inspection is made.

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Recommendation

It is recommended that a public agency be empowered to make periodic inspections of all septic systems in order to assure that they are properly maintained.

#### D. Planning

Certain parcels of land could be identified on a site specific basis as having few constraints in respect to slope and seasonally high groundwater which would allow the use of conventional septic systems. These parcels could be given development priority while the remaining parcels would be required to undertake more extensive site investigations and design as describe above.

In addition, remnant lots adjacent to small lots with existing septic systems should be identified for acquisition by a public agency for the purpose of resale to the adjacent property owners as area for the construction of a replacement drainfield.

#### Recommendation

It is recommended that parcels of land be identified on a site specific basis which would be given priority for septic system installation and that remnant lots be identified for public acquisition for use as area for construction of replacement drainfields.

#### E. Further Studies

In order to further isolate cumulative impacts on water quality from septic tank systems from cumulative impacts from other sources the following additional studies are recommended:

1. Survey of shallow wells within 1000 feet downstream from any drainfields to determine if there is a possible contamination and to determine accurate baseline data for the purpose of establishing reasonable setback requirements for drainfields. This survey should include dye testing and nitrate sampling.
2. Conduct a water quality monitoring program of Brook Ness and Alder Creek in Old Inverness and of well water extracted in Old

Inverness between these two creeks. The water samples should be analyzed for nitrate, TDS and coliform on a weekly or monthly basis over a period of two or three years.

If nitrate pollution of Tomales Bay appears to be a problem it is suggested that the discharge of nitrates from septic systems is only one of many nitrate sources. The only type of study which would properly quantify the man-related nitrate sources would be a comprehensive study of all man's activities on a watershed basis.

#### Recommendation

It is recommended that further studies be undertaken as outlined above in order to isolate cumulative impacts from septic systems from cumulative impacts from other sources. Alternate methods could or should be encouraged.

8.02 Pursue undergrounding of electric power lines within the Planning area.

- A. P.G. & E. should underground utilities wherever financially feasible and not environmentally damaging.



NATURAL RESOURCES

## NATURAL RESOURCES

### Local Coastal Program Policies:

- 9.01 Marine environment. Tomales Bay is a Marine Sanctuary. The County of Marin strongly supports the objectives of the Marine Sanctuary which would protect valuable habitat for marine species.
- 9.02 Water quality. The County encourages the Regional Water Quality Control Board, State Department of Health, and other responsible agencies to continue working on identifying sources of pollution in Tomales Bay and to take steps to eliminate them. LCP policies which address specific development-related water quality problems, such as septic system discharges, are contained in the LCP sections on Public Service and New Development. Other LCP policies on the location and concentration of development and protection of riparian habitats address water quality concerns from a broader perspective.
- 9.03 Streams and riparian habitats. The policies contained in this section shall apply to all streams in the Unit II coastal zone, perennial, intermittent or ephemeral, which are mapped by the United States Geological Survey (U.S.G.S.) on the 7.5 minute quadrangle series.
- A. Stream alterations. Stream impoundments, diversions, channelizations, or other substantial alterations shall be limited to the following purposes:
1. Necessary water supply projects, including those for domestic or agricultural purposes;
  2. Flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such

protection is necessary for public safety or to protect existing development; or

3. Developments where the primary function is the improvement of fish and wildlife habitat.

Before any such activities are permitted, minimum flows necessary to maintain fish habitat and water quality, and to protect downstream resources (e.g. riparian vegetation, groundwater recharge areas, receiving waters, spawning habitats, etc.) and downstream users shall be determined by the Department of Fish and Game and the Division of Water Rights of the State Water Resources Control Board. New impoundments which, individually or cumulatively, would decrease stream flows below the minimum shall not be permitted.

- B. Conditions. The alteration of streams allowed for the purposes listed in (A) above shall be held to a minimum to protect stream water quality and the volume and rate of stream flow. All such developments shall incorporate the best mitigation measures feasible, including erosion and runoff control measures, and revegetation of disturbed areas with native species. Disturbance of riparian vegetation shall be held to a minimum.
- C. Stream Buffers. Buffers to protect streams from the impacts of adjacent uses shall be established for each stream in Unit II. The stream buffer shall include the area covered by riparian vegetation on both sides of the stream and the area 50 feet landward from the edge of the riparian vegetatin. In no case shall the stream buffer be less than 100 feet in width, on either side of the stream, as measured from the top of the stream banks.

D. Development in Stream Buffers. No construction, alteration of land forms or vegetation removal shall be permitted within such riparian protection area. Additionally, such project applications shall identify a stream buffer area which shall extend a minimum of 50 feet from the outer edge of riparian vegetation, but in no case less than 100 feet from the banks of a stream. Development shall not be located within this stream buffer area. When a parcel is located entirely within a stream buffer area; Design Review shall be required to identify and implement the mitigation measures necessary to protect water quality, riparian vegetation and the rate and volume of stream flows. The design process shall also address the impacts of erosion and runoff, and provide for restoration of disturbed areas by replacement landscaping with plant species naturally found on the site. Where a finding based upon factual evidence is made that development outside a riparian protection or stream buffer area would be more environmentally damaging to the riparian habitat than development within the riparian protection or stream buffer area, development of principal permitted uses may occur within such area subject to Design Review and appropriate mitigation measures.

E. Diversions Outside the Coastal Zone. Freshwater inflows to Tomales Bay are critical to the ecology of the Bay. These inflows maintain unique estuarine habitats along the shoreline of the Bay, affect the spawning characteristics of silver salmon and steelhead trout, flush saltwater and accumulated bottom sediments seaward, and influence the distribution of shellfish, including a rare and endangered species of shrimp, Syncaris pacifica. Existing dams and reservoirs have already significantly decreased the mean annual net freshwater inflow to

Tomales Bay by approximately 25%. There is general recognition that the water quality and marine life of Tomales Bay have been adversely affected by these reduced inflows. The effect of further diversions on the Bay is not known; however, the cumulative effect is generally regarded as significant.

Coastal Act policies 30230 and 30231 provide for the protection of marine resources and water quality. In addition, Section 30402 provides that all state agencies shall carry out their duties and responsibilities in conformance with the policies of the Act. Although most freshwater diversions occur outside the coastal zone and are thus beyond the jurisdiction of the LCP, the important effects of such diversion projects on the coastal zone should be considered by all agencies involved so that conformance to the Coastal Act policies cited above is ensured. The County urges all agencies involved with diversions outside the coastal zone which affect freshwater inflows to Tomales Bay to properly notify the County of any plans for such diversions so that opportunity for local comment is assured.

The LCP recommends that the impacts from diversion projects, especially on the two major tributaries to Tomales Bay, Walker and Lagunitas Creeks, be fully studied through the EIR process before they are permitted to proceed and that in all cases, mitigation and enhancement measures be required to ensure that coastal resources influenced by freshwater inflows are not significantly damaged.

9.04 Wetlands. Wetlands in the Unit II coastal zone shall be preserved and maintained, consistent with the policies in this section, as productive wildlife habitats, recreational open space, and water filtering and storage areas. Land uses in and adjacent to wetlands shall be evaluated as follows:

- A. Diking, filling, and dredging of wetlands shall be permitted only in conformance with the policies contained in the LCP on this subject, presented on page 136 of the LCP. In conformance with these policies, filling of wetlands for the purposes of single-family residential development shall not be permitted.
- B. Allowable resource-dependent activities in wetlands shall include fishing, recreational clamming, hiking, hunting, nature study, bird-watching and boating.
- C. No grazing or other agricultural uses shall be permitted in wetlands except in those reclaimed areas presently used for such activities.
- D. A buffer strip 100 feet in width, minimum, as measured landward from the edge of the wetland, shall be established along the periphery of all wetlands. Where appropriate, the required buffer strip may be wider based upon the findings of the supplemental report required in (E). Development activities and uses in the wetland buffer shall be limited to those specified in (A) and (B) above.
- E. As part of the application for a coastal development permit on any parcel adjacent to Tomales Bay, except where there is no evidence of wetlands pursuant to the Coastal Commission's guidelines, the applicant shall be required to submit supplemental biological information prepared by a qualified ecologist at a scale sufficient to identify the extent of the existing wetlands, based on Section 30121 of the Coastal Act and the area of the proposed buffer area.

9.05 Native Vegetation. The Inverness Ridge Planning Area can be typified by three unifying elements - the shoreline of Tomales Bay, the ridge itself, and a continuous band of native and introduced vegetation. Although tree cover along the north facing slopes of the ridge inhibits solar access in many areas,

mature tree growth and subordinate root structures create a natural anchor in areas of unstable soil conditions. The typical woodlands within the Planning Area therefore not only hold create a sense of place, but add a degree of protection to the area as well. Such vegetation is equally important to the varied animal and bird species which inhabit the Planning Area. To minimize disturbance of this environmental setting, the following policies shall apply:

- A. Roads and driveways serving new development shall minimize removal of native vegetation and trees to assure continued habitat values, to maintain community character and to retain soils stability characteristics.
- B. Tree cutting on any undeveloped or unimproved parcel within the Planning Area is expressly prohibited unless Planning approvals for development of such parcels has been previously secured, e.g. County Design Review.
- C. Other Environmentally Sensitive Habitats. Other sensitive habitats include habitats of rare or endangered species and unique plant communities. Development in such areas may only be permitted when it depends upon the resources of the habitat area. Development adjacent to such areas shall be set back a sufficient distance to minimize impacts on the habitat area. Public access to sensitive habitat areas, including the timing, intensity, and location of such access, shall be controlled to minimize disturbance to wildlife. Fences, roads, and structures which significantly inhibit wildlife movement, especially access to water, shall be avoided.

PLANNING AREA  
STATISTICS



PLANNING AREA STATISTICS  
(BASED ON 1980 CENSUS)

1. Total number of persons - 1293

2. Person by sex, by age:

	Total	Female
Under 1 year	19	10
1 and 2 years	26	11
3 and 4 years	25	14
5 years	21	10
6 years	11	8
7 to 9 years	54	24
10 to 13 years	72	30
14 years	31	14
15 years	21	7
16 years	19	9
17 years	16	6
18 years	11	5
19 years	9	5
20 years	2	0
21 years	4	0
22 to 24 years	35	15
25 to 29 years	84	67
30 to 34 years	188	96
35 to 44 years	223	112
45 to 54 years	120	54
55 to 59 years	60	32
60 and 61 years	28	16
62 to 64 years	34	17

65 to 74 years	129	71
75 to 84 years	47	23
85 years and over	4	2

3. Total number of housing units: 781

4. Dwellings held for occasional (seasonal) uses: 118

5. Occupied housing units by tenure, by persons in unit:

	TOTAL	RENTER OCCUPIED
1 person	164	71
2 persons	210	60
3 persons	100	32
4 persons	61	16
5 persons	17	5
6 or more persons	13	2

6. Specified owners-occupied housing units by value:

Less than \$10,000	1
\$10,000 to \$14,999	0
\$15,000 to \$19,999	1
\$20,000 to \$24,999	1
\$25,000 to \$29,999	2
\$30,000 to \$34,999	2
\$35,000 to \$39,999	2
\$40,000 to \$49,999	5
\$50,000 to \$79,999	60
\$80,000 to \$99,999	49
\$100,000 to \$149,999	91
\$150,000 to \$199,999	59
\$200,000 or more	37

7. Specified renter-occupied housing units by contract rent:

Less than \$50	0
\$50 to \$99	3
\$100 to \$119	5
\$120 to \$139	4
\$140 to \$149	1
\$150 to \$159	11
\$160 to \$169	0
\$170 to \$199	7
\$200 to \$249	19
\$250 to \$299	32
\$300 to \$399	41
\$400 to \$499	20
\$500 or more	12
No cash rent	15

8. Year-round housing units by units at address:

1	640
2 to 9	88
10 or more	3
Mobile homes	6

9. Income in 1979:

	Households	Families
Less than \$2,500	5	0
\$2,500 to \$4,999	22	6
\$5,000 to \$7,499	49	38
\$7,500 to \$9,999	36	31
\$10,000 to \$12,499	33	30

\$12,500 to \$14,999	58	23
\$15,000 to \$17,499	42	42
\$17,500 to \$19,999	34	7
\$20,000 to \$22,499	66	34
\$22,500 to \$24,999	20	7
\$25,000 to \$27,499	48	29
\$27,500 to \$29,999	37	28
\$30,000 to \$34,999	7	7
\$35,000 to \$39,999	14	14
\$40,000 to \$49,999	63	48
\$50,000 to \$74,999	42	29
\$75,000 or more	8	8

10. Income in 1979:

Unrelated Individuals

Less than \$1,000	16
\$1,000 to \$1,999	18
\$2,000 to \$2,999	22
\$3,000 to \$3,999	10
\$4,000 to \$4,999	0
\$5,000 to \$5,999	23
\$6,000 to \$6,999	25
\$7,000 to \$7,999	4
\$8,000 to \$8,999	0
\$9,000 to \$9,999	17
\$10,000 to \$11,999	39
\$12,000 to \$14,999	35
\$15,000 to \$24,999	91

\$25,000 to \$49,999	8
\$50,000 or more	13

11. Persons by poverty status in 1979 by age:

	Above poverty	Below poverty
Under 55 years	930	77
55 to 59 years	59	0
60 to 64 years	77	0
65 years or older	145	5

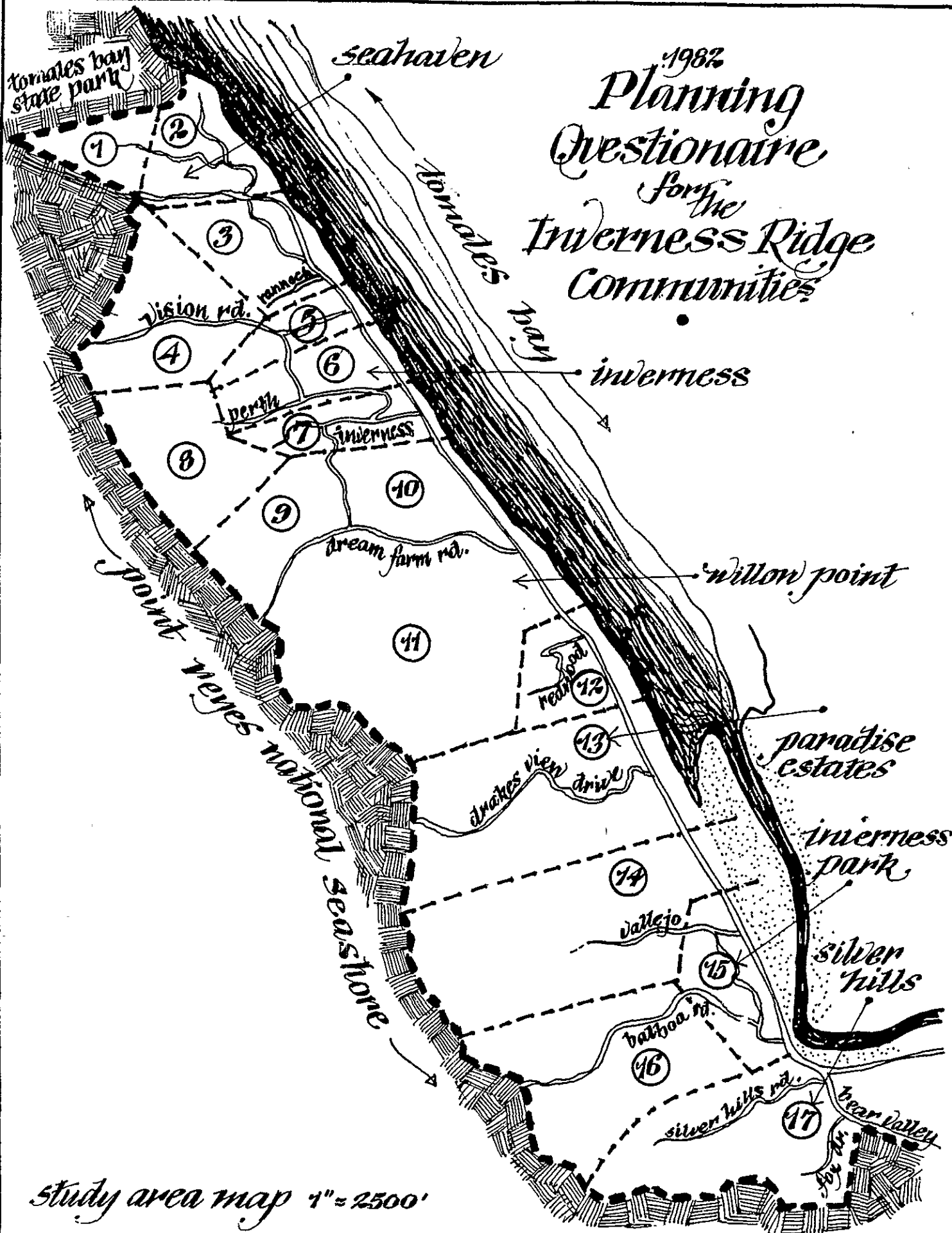
12. Employed persons 16 and by class of worker:

Private wage and salary worker	352
Federal government worker	37
State government worker	19
Local government worker	79
Self-employed worker	158

The above information drawn from the 1980 U.S. Census is a combination of data drawn from Enumeration District 254 and 255 which parallels the Planning Area boundaries.

The information presented is not exhaustive nor does it represent all census data available for the Planning Area. Individuals or agencies in search of further information should contact the Data Division of the Marin County Planning Department.

1982  
*Planning  
 Questionnaire  
 for the  
 Inverness Ridge  
 Communities*



*study area map 1" = 2500'*

APPENDIX A  
COMMUNITY SURVEY

Post Office Box 553  
Inverness, CA 94937  
April 5, 1982

Dear Inverness Ridge Resident or Property Owner:

Following is a most important survey-questionnaire prepared by the Ad Hoc Planning Group for the Inverness Ridge Communities. The purpose of this group, sponsored by the local organizations and the County, is to determine opinions and attitudes of people regarding not only post-storm restoration, but future development of the area. This information will be used in conjunction with the results of the engineering studies being done at present to make necessary decisions concerning possible revisions of the Inverness Ridge Communities Plan.

Your answer will remain completely anonymous. We ask particularly that you circle the number on the map nearest your home or property in order to localize particular problems (i.e. water, fire protection). We need opinions from each section. If you feel that you are unable to make your opinion or feelings plain, please use the backs of pages for comments.

We urge that you return this survey to the above address by APRIL 24. Should you want more information, or additional copies, we will have representatives of the Planning Group at the Inverness Park Store, the Inverness Post Office and the Pt. Reyes Post Office on Saturday, April 10, Saturday, April 17 and Saturday, April 24. Your help on this important project will be greatly appreciated.

Ad Hoc Planning Group





PUBLIC SERVICES

	<u>Agree</u>	<u>Disagree</u>	<u>No Opinion</u>
<u>Fire Protection</u>			
7. Current fire protection is adequate in my neighborhood.	<u>216</u>	<u>52</u>	<u>71</u>
8. There is adequate access to my property in an emergency.	<u>289</u>	<u>39</u>	<u>16</u>
9. Surface water storage facilities and fire hydrants in my area are adequate.	<u>191</u>	<u>73</u>	<u>75</u>
10. The Inverness Volunteer Fire Dept. should be expanded to serve <i>Inverness Park and Paradise Ranch Estates</i> .	<u>75</u>	<u>137</u>	<u>120</u>
11. Other volunteer fire depts should be established for neighborhoods now served by the County.	<u>115</u>	<u>77</u>	<u>130</u>
12. A Fire Protection District should be formed to serve the entire Inverness Ridge Planning District.	<u>37</u>	<u>81</u>	<u>45</u>
13. County ordinances for clearing dead brush from empty lots should be more consistently enforced.	<u>217</u>	<u>63</u>	<u>64</u>
<u>Roads</u>			
14. County-maintained roads should be:			
a. repaired to their pre-flood condition,	<u>218</u>	<u>20</u>	<u>13</u>
b. upgraded to county standards,	<u>138</u>	<u>72</u>	<u>28</u>
c. left as they are until a local planning group develops new standards specific to this area.	<u>51</u>	<u>48</u>	<u>24</u>
15. Unpaved access roads in the watershed should be repaired to :			
a. pre-flood standards,	<u>190</u>	<u>27</u>	<u>34</u>
b. upgraded to new standards,	<u>66</u>	<u>66</u>	<u>40</u>
c. left as they are with a minimum of repair,	<u>40</u>	<u>74</u>	<u>28</u>
d. abandoned.	<u>14</u>	<u>86</u>	<u>27</u>

	<u>Agree</u>	<u>Disagree</u>	<u>No Opinion</u>
16. Pre-flood road and driveway conditions contributed to the flood damage to a significant degree.	<u>69</u>	<u>144</u>	<u>111</u>
17. If you are not on a county-maintained road or a permanent road division, please answer the following:			
a. I would be willing to tax myself for a road-maintenance district.	<u>62</u>	<u>50</u>	<u>13</u>
b. I would be willing to work with my neighbors on an informal basis to maintain our road.	<u>119</u>	<u>13</u>	<u>9</u>
18. Surfacing and proper drainage of roads serve as a means of erosion control.	<u>292</u>	<u>23</u>	<u>22</u>
19. There should be a maintained network of foot-paths through the Inverness Ridge Planning Area.	67% <u>225</u>	<u>71</u>	<u>42</u>
20. I use public foot-paths in the area.	58% <u>194</u>	<u>86</u>	<u>14</u>
Which ones _____			
21. How often would you use a daily bus to East Marin if it left between 8:30 and 9:00 a.m. and returned between 3:30 and 5:00 p.m. <u>Never-78; Seldom-94; Occ.-43; Often-23.</u>			
22. A multi-use path should be built between Pt. Reyes Station, Inverness Park and Inverness.	<u>242</u>	<u>42</u>	<u>50</u>
23. Traffic should be controlled through village centers in Inverness Park and Inverness.	<u>180</u>	<u>80</u>	<u>53</u>
24. Resident parking is a road safety problem:			
a. in my neighborhood	<u>77</u>	<u>195</u>	<u>21</u>
b. elsewhere in the area	<u>65</u>	<u>72</u>	<u>63</u>
25. The ordinance on removal of abandoned cars should be strictly enforced.	<u>279</u>	<u>18</u>	<u>35</u>

	<u>Agree</u>	<u>Disagree</u>	<u>No Opinion</u>
<u>Electrical Power:</u>			
26. Power and phone lines are adequately maintained re			
a. tree trimming	<u>197</u>	<u>63</u>	<u>58</u>
b. understory vegetation control	<u>131</u>	<u>54</u>	<u>91</u>
27. A septic tank maintenance district should be developed which would require periodic inspections.	<u>114</u>	<u>125</u>	<u>58</u>
28. A small community sewage system should be developed in congested areas.	<u>92</u>	<u>117</u>	<u>88</u>
29. The County Mosquito Abatement District should include our area.	<u>116</u>	<u>116</u>	<u>55</u>

Water:

30. By which water system are you served? IPUD-205; N.M.-80; Priv.-7; Ham.-8; Bay-3.

31. Management of water sources and services for the entire Inverness Ridge should be unified.	<u>155</u>	<u>116</u>	<u>99</u>
32. Interties for all existing water systems should be permanent in case of future emergencies.	<u>189</u>	<u>66</u>	<u>80</u>
33. A policy of local water self-sufficiency should be maintained.	<u>260</u>	<u>37</u>	<u>40</u>
34. New water storage facilities should be developed.	<u>236</u>	<u>36</u>	<u>64</u>
35. Every home-owner should be required to convert to low- water facilities within 10 years.	<u>108</u>	<u>118</u>	<u>101</u>

WATERSHED

36. The creeks and streams in this area are a community resource and responsibility.	89%	<u>300</u>	<u>17</u>	<u>19</u>
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		<u>Agree</u>	<u>Disagree</u>	<u>No Opinion</u>
37. Creek and stream restoration and enhancement should be guided by:	50%			
a. government agencies		<u>85</u>	<u>113</u>	<u>34</u>
b. a local committee	80%	<u>248</u>	<u>36</u>	<u>18</u>
c. individual property owners who border creeks	58%	<u>137</u>	<u>77</u>	<u>27</u>
38. Funds raised by the establishment of the proposed Flood Zone #10 should be used for restoration and enhancement of streams as well as for flood control.	65%	<u>227</u>	<u>49</u>	<u>73</u>
39. A fair and equitable means of securing revenue to assist the community with flood control and rehabilitation is:				
a. taxation		<u>223</u>	<u>33</u>	<u>33</u>
b. donations		<u>153</u>	<u>40</u>	<u>25</u>
c. other sources or suggestions <u>Fed. funds, Buck, Grants, Benefits, Lotteries, I-time assessment, tollgates at creek</u>				
40. A unified set of guidelines and policies should be established for the Inverness Ridge Planning Area for watershed management, including such things as forest management, fire protection, post-disaster management, access to firewood, control of exotics, etc.	74%	<u>219</u>	<u>38</u>	<u>39</u>
41. The creeks should be:				
a. left alone		<u>62</u>	<u>115</u>	<u>53</u>
b. returned to former condition	44%	<u>111</u>	<u>76</u>	<u>68</u>
c. planted with native vegetation	76%	<u>215</u>	<u>24</u>	<u>43</u>
d. banks reinforced		<u>139</u>	<u>108</u>	<u>72</u>
e. planted with typical garden plants		<u>15</u>	<u>162</u>	<u>50</u>

	<u>Agree</u>	<u>Disagree</u>	<u>No Opinion</u>
f. parking banned near creek banks	<u>112</u>	<u>77</u>	<u>66</u>
g. wooden bridges	<u>144</u>	<u>44</u>	<u>70</u>
h. provided with culverts	<u>146</u>	<u>40</u>	<u>79</u>

TOMALES BAY

42. Guidelines for protection of Tomales Bay should be established with public support.		<u>295</u>	<u>14</u>	<u>8</u>
43. The Bay should be dredged for navigation and/or recreation.		<u>160</u>	<u>99</u>	<u>80</u>
44. Second units provide a good source of affordable housing	69%	<u>232</u>	<u>39</u>	<u>41</u>
45. A special county permit should be required for existing second units.		<u>136</u>	<u>107</u>	<u>55</u>
46. Existing second units should be legalized "as is".		<u>135</u>	<u>103</u>	<u>67</u>
47. Second units should meet standards developed by:				
a. local planning group		<u>197</u>	<u>54</u>	<u>42</u>
b. Marin county		<u>121</u>	<u>68</u>	<u>45</u>
48. Do you have a second unit on your property?				
Yes <u>47</u>				
No <u>273</u>				
49. Are you the renter of a second unit?				
Yes <u>10</u>				
No <u>307</u>				
50. If there are second units in your neighborhood, do you consider them:				
a. a problem		<u>69</u>	<u>129</u>	<u>53</u>
b. an asset		<u>127</u>	<u>54</u>	<u>68</u>

Agree   Disagree   No Opinion

DISASTER PREPAREDNESS

51. A disaster plan should be developed for the entire Inverness Ridge area.	<u>266</u>	<u>42</u>	<u>18</u>
52. Disaster planning is being organized in my area. If so, how? <u>Neighborhood, IVFD, IPA.</u>	<u>81</u>	<u>43</u>	<u>82</u>
53. My household is adequately prepared for a possible disaster tomorrow.	<u>177</u>	<u>114</u>	<u>61</u>
54. An inventory of boats and their usage should be incorporated into a Disaster Plan.	<u>244</u>	<u>43</u>	<u>37</u>

COMMUNITY DEVELOPMENT

55. Residents and property owners within the Inverness Ridge Area should seek to establish locally represented tax-supported districts to:			
a. provide for septic tank inspection and maintenance	<u>133</u>	<u>128</u>	<u>69</u>
b. fire protection	<u>240</u>	<u>51</u>	<u>32</u>
c. watershed management	<u>214</u>	<u>52</u>	<u>47</u>
d. domestic water supply and fire-fighting water in hydrants	<u>208</u>	<u>62</u>	<u>47</u>
e. mosquito abatement	<u>122</u>	<u>11</u>	<u>70</u>
f. local recreation	<u>115</u>	<u>133</u>	<u>60</u>
g. trail maintenance	<u>170</u>	<u>96</u>	<u>43</u>
h. multi-purpose trail development	<u>164</u>	<u>85</u>	<u>59</u>
i. acquisition of undeveloped bayfront parcels	<u>126</u>	<u>109</u>	<u>69</u>
56. I feel adequately informed as to the magnitude of the recent disaster and what is now being done about restoration.	<u>178</u>	<u>106</u>	<u>51</u>

57. Should the Inverness Ridge Communities Plan direct the community toward further association and alliance with governmental agencies and services or toward more self-reliance and autonomy?

<u>Gov't</u>	<u>Self</u>	<u>Both</u>
38	191	23

Please comment:

<u>Neither</u>
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1



APPENDIX B

MANAGEMENT FLOODPLAIN  
ORDINANCE

BOARD OF SUPERVISORS OF THE COUNTY OF MARIN

ORDINANCE NO. 2710

AN ORDINANCE OF THE COUNTY OF MARIN ADDING CHAPTER 23.09,  
FLOOD PLAIN MANAGEMENT TO THE MARIN COUNTY CODE AND  
AMENDING CHAPTERS 11.04, 11.08, 11.24, 20.20 AND 22.04

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THE BOARD OF SUPERVISORS OF THE COUNTY OF MARIN DOES HEREBY  
ORDAIN AS FOLLOWS:

SECTION I. Chapter 23.09, Flood Plain Management, is hereby added to the Marin  
County Code.

**Chapter 23.09**

**FLOOD PLAIN MANAGEMENT**

23.09.010	Statutory Authorization
23.09.011	Findings of Fact
23.09.020	Statement of Purpose
23.09.030	Rules and Regulations
23.09.040	Appeals
23.09.050	Penalties for Violations
23.09.060	Property Rights

**23.09.010 Statutory Authorization**

The Constitution of the State of California has in Article II, Section 7, delegated the responsibility to local governmental units to adopt zoning regulations designed to minimize flood losses.

**23.09.011 Findings of Fact**

1. The Flood hazard areas of Marin County are subject to periodic inundation which results in loss of life and property, disruption of commerce and governmental services, health and safety hazards, extraordinary public expenditures for flood protection and relief, impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.
2. These flood losses are caused by:
  - A. The cumulative effect of obstructions in flood ways and flood fringes, causing increased flood heights and erosive velocities.
  - B. The occupancy of flood hazard areas by uses vulnerable to floods or hazardous to others, which are inadequately elevated or otherwise unprotected from flood damages.
3. This chapter relies upon a reasonable process for analyzing the flood hazard affecting specific lands. The regulatory flood selected for this chapter representative of large floods known to have occurred in this region and which are reasonably characteristic of what can be expected to occur on the particular watercourses, streams, creeks, rivers, bays and lakes subject to this chapter. It is in the general order of a flood which could be expected to

occur on the average once every 100 years or has a one percent (1%) chance of occurrence in any one year.

4. The official flood identification map is hereby adopted as part of this chapter shall be that provided Marin County by the Federal Emergency Management Agency in its Flood Insurance Study, dated March 1, 1982, and any subsequent amendments thereto, and designated "Flood Insurance Rate Map" (FIRM) and "Flood Boundary Floodway Map", "Marin County California, Unincorporated Area." These maps delineate those areas determined to be subject to flooding from a flood which has a one percent (1%) chance of occurrence in any one year. Copies of said maps are on file with the Department of Public Works, and may be inspected during regular County business hours.

#### **23.09.020 Statement of Purpose**

1. It is the purpose of this chapter to promote public health, safety and general welfare and to minimize the losses described in this Section by provisions designed to:
  - A. To protect human life and health;
  - B. To minimize expenditure of public money for flood control projects;
  - C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
  - D. To minimize prolonged business interruptions;
  - E. To minimize damage to public facilities and utilities such as water located in areas of special flood hazard;
  - F. To help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood blight areas;
  - G. To ensure that potential buyers are notified that property is in an area of special flood hazard; and,
  - H. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.
2. In order to accomplish its purposes, this ordinance includes methods and provisions for:
  - A. Restricting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
  - B. Requiring that uses vulnerable to flood, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
  - C. Controlling the alteration of natural flood plains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;

- D. Controlling filling, grading, dredging, and other development which may increase flood damage; and,
- E. Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

#### **23.090.030 Rules and Regulations**

The Board of Supervisors of the County of Marin may from time to time by resolution after public hearing thereon, adopt, add to, delete, change or modify rules and regulations as are necessary to carry out the purposes of this Ordinance. Copies of the most current rules and regulations adopted to implement this chapter shall be available upon request during all regular hours at the Department of Public Works.

#### **23.090.040 Appeals**

Any person affected by the application of this chapter or by the rules and regulations implementing this chapter may appeal any decision rendered as a result of the application of this chapter, to the Board of Supervisors according to the provisions established in the adopted Rules and Regulations.

Notwithstanding the provisions of Marin County Code Chapter 22.86, variance proceedings and appeals for matters under this chapter or the implementing rules and regulations authorized thereby and adopted, shall be in accordance with the standards and procedures set forth in said rules and regulation.

#### **23.09.050 Penalties for Violation**

1. Violation of the provisions of this chapter or failure to comply with any of its requirements shall constitute an infraction. Any person who violates this chapter or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than Fifty Dollars (\$50.00) for the first violation; a fine not exceeding One Hundred Dollars (\$100.00) for a second violation of the same ordinance within one year; or a fine not exceeding Two Hundred Fifty Dollars (\$250.00) for each additional violation of the same ordinance within one year. Each day such violation continues shall be considered a separate offense.
2. Any violation of the provisions of this chapter are declared to be a nuisance and may be abated as provided for in Chapter 1.05 of the Marin County Code. Nothing herein contained shall prevent the County of Marin from taking such other lawful actions as is necessary to prevent or remedy any violations.

#### **23.090.060 Property Rights**

The Board of Supervisors hereby finds and declares that this chapter is not intended, and shall not be construed, as authorizing the County to exercise its power to adopt, amend or repeal this chapter or implementing administrative regulations in a manner which will take or damage private property for public use without the payment of just compensation therefor. This section is not intended

to increase or decrease the rights of any owner of property under the Constitution of the State of California or of the United States.

SECTION II. Section II.04.040 is amended to read as follows:

**II.04.040 Administration**

It shall be the duty of the Department of Public Works of the County to administer the provisions of this Chapter and Chapter 23.09 (insofar as it may apply) and to supervise the construction, enlargement, alteration, repair, maintenance, operation, and removal of dams, for the protection of life and property.

SECTION III. Section II.08.050 is amended to read as follows:

**II.08.050 Permit Required for Construction**

It shall be unlawful to build, construct, or maintain any retaining wall, crib wall, bulkhead, artificial slope protection, conduit, bridge, building or other structure or any facility whatsoever in, upon, over or under any creek, channel or watercourse without first securing a permit therefor from the Director of Public Works of the County of Marin. Such permit shall be subject to the provisions of this chapter and applicable provisions of Chapter 23.09.

If the proposed construction is included in work which requires a building permit or any other permit issues by the County, the Director of Public Works may waive the requirements of this section, if all conditions which would be required by the Director of Public Works hereunder or in applicable provisions of Chapter 23.09 are made conditions of the other permit issues by the County.

SECTION IV. Section II.214.040 is amended to read as follows:

**II.24.040 Supervision**

The Director of Public Works may, but is not required to, supervise any work done under a permit issued under the provisions of this chapter. In appropriate cases, the Director may also require a bond to ensure completion of compliance appropriate.

SECTION V. Section 20.20.020 is amended to read as follows:

**20.20.020 General**

The design and improvement of each subdivision shall comply with the applicable provisions of this title, Title 24, applicable provisions of Chapter 23.09, and shall specifically provide for proper grading and erosion control, including the prevention of sedimentation or damage to off-site property.

SECTION VI. Section 22.040.020 is amended to read as follows:

**22.040.020 Adoption of Zoning Plan**

There is hereby adopted a zoning plan for the unincorporated territory of the County of Marin, State of California, said zoning plan being a detailed plan based

on the master plan of said County and consisting of the establishment of various districts within which certain regulations shall be in effect, as set forth in this Title and applicable provisions of Chapter 23.09.

SECTION VII. Effective Date

This Ordinance shall be and is hereby declared to be in full force and effect as of thirty (30) days from and after the date of its passage and shall be published once before the expiration of fifteen (15) days in the Independent Journal, a newspaper of general circulation published in the County of Marin.

PASSED AND ADOPTED at a regular meeting of the Board of Supervisors of the County of Marin, State of California, held on May 11, 1982, by the following vote:

YES: Supervisors: Bob Roumiguere, Barbara Boxer, Al Aramburu, Gail Wilhelm

NOES: Supervisors: -

ABSENT:Supervisors: Gary Giacomini

\_\_\_\_\_  
CHAIRMAN OF THE BOARD OF SUPERVISORS

ATTEST:

\_\_\_\_\_  
Van Gillespie  
Clerk of the Board

BOARD OF SUPERVISORS OF THE COUNTY OF MARIN

RESOLUTION NO. 82-161

RULES AND REGULATIONS FOR ENFORCING THE PROVISIONS  
OF MARIN COUNTY CODE CHAPTER 23.09

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SECTION I. Definitions

Unless specifically defined below, words or phrases used in these rules and regulations, hereinafter referred to as rules, shall be interpreted so as to give them the same meaning as they have in common usage and so as to give these rules and regulations their most reasonable application, and shall apply to these rules only.

ACTUARIAL RATES or "risk premium rates" are those rates established by the Federal Insurance Administrator pursuant to individual community studies and investigations which are undertaken to provide flood insurance in accordance with 42 U.S.C. 4014 and the accepted actuarial principles. Actuarial rates include provisions for operating costs and allowances.

APPEAL means a request for a review of the interpretation of any provision of these rules or a request for a variance.

BREAKAWAY WALLS means any type of walls, whether solid or lattice, and whether constructed of concrete, masonry, metal, plastic, or any other suitable building material which are not part of the structural support of the building and which are so designed as to break away, under abnormally high tides or wave action, without damage to the structure integrity of the building on which they are used or any building to which they might be carried by flood waters.

COASTAL HIGH HAZARDS AREA means that the area subject to high velocity waters, including but not limited to coastal and tidal inundation of tsunamis. The area is designated on a FIRM as Zone VI-30.

CHANNEL A natural or artificial water course, with a definite bed and banks to confine and conduct continuously or periodically flowing water. Channel flow thus us that water which is flowing within the limits of a defined channel.

DEVELOPMENT means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations located within the area of special flood hazard.

EXISTING MOBILE HOME PARK OR MOBILE HOME SUBDIVISION means a parcel (or contiguous parcels) of land divided into two or more mobilke home lots for rent or sale for which the construction of facilities for servicing the lot on which the mobile home is to be affixed (including, at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads, and the construction of streets) is completed before the effective date of Marin County Code Section 23.09.

EXPANSION TO AN EXISTING MOBILE HOME PARK OR MOBILE HOME SUBDIVISION means the preparation of additional sites by the construction of facilities for servicing the lots on which the mobile homes are to affixed (including the installation of utilities, wither final site grading or pouring of concrete pads, or the construction of streets).

FLOOD OR FLOODING means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- A. The overflow of inland or tidal waters and/or
- B. The unusual and rapid accumulation of runoff of surface waters from any source.

FLOOD BOUNDARY FLOODWAY MAP means the official map on the Federal Insurance Administration has delineated both the areas of fllood hazard and the floodway.

FLOOD INSURANCE RATE MAP (FIRM) means the official map on which the Federal Insurance Administration had delineated both the areas of special flood hazards and the risk premiu zones applicable to the community.

FLOOD INSURANCE STUDY means the official report provided by the Federal Insurance Administration that includes flood profiles, the FIRM, the Flood Boundary Floodway Map, and the water surface elevation of the base flood.

FLOODWAY means the channel of a river or other watercourses and the adjacent land areas that must be recerved in order to discharge the base flood without cumulatively increasing the water surface elevation. The floodway is delineated on the *Flood Boundary Floodway Map*.

FLOOD PROOFING Any combination of structural and non-structural additions, changes, or adjustments to structures including utility and sanitary facilities, which preclude the entry of water. Structural components shall have the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.

HABITABLE FLOOR Any floor capable of being used for living, which includes working, sleeping, eating, cooking or recreation or combination thereof. A floor used only for storage purposes is not a "habitable floor".

MOBILE HOME A structure, as defined in Section 22.02.545 of the Marin County Code.

MOBILE HOME PARK means a parcel (or contiguous parcels) of land which has been divided into two or more lots for rent or sale and the placement of mobile homes.

NEW CONSTRUCTION means structures for which the "start of construction" commenced on or after the effective date of Marin County Code Section 23.09.

PLANNING COMMISSION The Planning Commission for the County of Marin.



SHALLOW FLOODING AREA means a designated AO or VO Zone on the Flood Insurance Rate Map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and, velocity flow may be evident.

SPECIAL FLOOD HAZARD AREA means the land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year. This area is designated as Zone A, AO, AH, AI-30, VO and VI\_30 on the FIRM.

START OF CONSTRUCTION for these rules only, means the first placement of permanent construction of a structure (other than a mobile home) on a site, such as the placing of slabs or footing or any work beyond the stage of excavation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwellings units or not as part of the main structure. For a structure (other than a mobile home) without a basement or poured footings, the "start of construction" includes the first permanent framing or assembly of the structure or any part thereof on its piling or foundation. For mobile homes not within a mobile home park, "start of construction" means the affixing of the mobile home to its permanent site. For mobile homes within mobile home parks or mobile home subdivisions, "start of construction" is the date which the construction of facilities for serving the site on which the mobile home is to be affixed (including, at a minimum, the construction of streets, either final site grading or their pouring of concrete pads, and installation of utilities) is completed.

STRUCTURE A structure defined in Section 22.02.680 of the Marin County Code.

SUBSTANTIAL IMPROVEMENT means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

- A. Before the improvement or repair is started, or
- B. If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition "substantial improvement" is considered to occur when the first alternation of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alternation affects the external dimensions of the structure.

The terms does not, however, include either:

- A. Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions, or
- B. Any alternation of a structure listed on the National Register of Historic Place or a State Inventory of Historic Places.

VARIANCE means a grant of relief from the requirement of Marin County Code Chapter 23.09 or these rules which permits construction in a manner that would otherwise be prohibited by Marin County Code Section 23.09 or these rules.

WATERCOURSE A definite open channel with bed and banks within which water flows either perennially or intermittently including overflow channels contiguous to the main channel. A watercourse shall include both natural and man-made channels.

## II. General Provisions

### A. Lands to which these rules apply.

These rules shall apply to all lands within the jurisdiction of the County of Marin and designated as Special Flood Hazards Areas, as shown on the County's Flood Insurance Rate Map (FIRM) and the Flood Boundary Floodway Map.

### B. Establishment of Official Flood Identification Map.

The Official Flood Identification Map defined in 23.09.020(V) of the Marin County Code, together with all explanatory material therein, is hereby adopted by reference and declared to be part of these rules. The Official Map shall be the Flood Insurance Rate Map and Flood Boundary Floodway Map which are issued by the Federal Insurance Administration, and are on file at the Marin County Department of Public Works.

C. No new structure, hereafter, shall be located or existing structures substantially improved, without full compliance with the terms of these rules and other applicable regulations.

### D. Abrogation and Greater Restrictions

It is not intended by these rules to repeal, abrogate, or impair any existing easements, covenants or deed restrictions. However, where these rules conflict or overlap with other County of Marin Code Sections, resolutions and/or ordinances the most restrictive shall apply.

### E. Interpretation

Except as specifically provided herein, it is not intended by these rules to repeal, abrogate, annul or in any way to impair or interfere with any existing provision of law or ordinance, or any rule, regulation or permit previously adopted or issued, or which shall be adopted or issued pursuant to law relating to the use of building or premises or relating to the erection, construction, establishment, moving, alteration or enlargement of any building improvement; nor is it intended by these rules to interfere with or abrogate or annul any easement, covenant or other agreement between parties; provided, however, that in cases where these rules impose a greater restriction upon the erection, construction, establishment, moving, alteration or enlargement of buildings or the use of any such building or premises in said several districts or any of them, than is imposed or required by such existing provisions of law or ordinance, or by such rules, regulations

or permits, or by such easements, covenants or agreements, then in such case the provisions of these rules shall control.

#### F. Warning and Disclaimer of Liability

The degree of flood protection required by these rules is considered reasonable for regulatory purposes and is based on engineering and scientific considerations. Larger floods may occur or flood heights may be increased by man-made or natural causes. These rules do not imply that areas outside the general flood plain district will be free from flooding or flood damages. These rules shall not create liability on the part of the County of Marin or any officer or employee thereof or the Federal Insurance Administration, for any damages that result from reliance on these rules or any administrative decision made lawfully thereunder.

#### G. Severability

If any section, clause, provision or portion of these rules is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of these rules shall not be affected thereby.

### III. Establishment of Flood Plain

The flood plain area within the jurisdiction of these rules is shown on the official Flood Identification Map as defined in Section 23.09.020(IV) of the Marin County Code. Within this district all uses not meeting the standards of these rules and those standards of the underlying zoning district shall be prohibited except that reasonable variances may be granted, as hereinafter provided.

### IV. Establishment of Permit Requirements

- A. It is not the intent of these rules and regulations to require permits other than those required under existing County permit procedures.
- B. All permit applications for proposed construction, substantial improvements or other development including but not limited to buildings or other structures, mining dredging, paving, grading, excavation, drilling and placement of mobile homes shall be reviewed by the Department of Public Works to determine whether such construction or other development is proposed within flood prone areas and therefore subject to the provisions of these rules and regulations. If it is determined that the proposed work is subject to these rules and regulations, the following information will be required.
  1. Proposed elevation in relation to National Geodetic Vertical Datum (NGVD) of the lowest habitable floor (including basement) of all structures; in Zone AO elevation of existing grade and proposed elevation of lowest habitable floor of all structure.
  2. Proposed elevation in relation to NGVD to which any structure will be floorproofed.

3. Certification by a registered civil engineer that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in Section V(C3) of these rules.
  4. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.
- C. If a proposed development, including but not limited to new construction, substantial improvement, prefabricated home or mobile home is located in a floor area as designated on the official FIRM, then such development shall:
1. Be designed and/or modified and anchored to prevent flotation collapse or lateral movement of the structure.
  2. Use construction materials and equipment that are resistant to flood damage.
  3. Use construction methods and practices that shall minimize flood damage.
  4. Have utility and sanitary facilities designed to minimize to the fullest extent possible, or eliminate the infiltration of flood waters into the system, and/or discharge into, and/or contamination of, the flood waters.
  5. The appropriate County official shall notify adjacent cities and/or counties and the State of California, Department of Water Resources prior to any diversion of, or major projects in, a watercourse and submit copies of such notification to the Federal Insurance Administrator and shall assure that the flood carrying capacity within any such watercourse is maintained.
- C. The Director of Public Works of the County of Marin shall review and comment to the appropriate governing Board of the County of Marin and that Board shall consider these comments in evaluating all subdivision proposals and other development to assure that:
1. All such proposals are consistent with the need to minimize flood damage.
  2. All public utilities and facilities under the control of the County of Marin will be located so as to minimize or eliminate flood damage.
  3. Adequate drainage is provided to reduce exposure to flood hazards.
  4. New water and sewer systems shall be constructed to eliminate or minimize infiltration; moreover, on-site disposal systems will be located so as to avoid impairment to them or contamination from them during a general condition of flooding.
- D. The Director of Public Works shall:

1. Obtain and maintain for public inspection and make available as needed for Flood Insurance Policies:
  - a. the certified elevation required in Section V (C1) of these rules.
  - b. the certification required in Section v (C2) of these rules.
  - c. the floodproofing certification required in Section V (C#) of these rules.
  - d. the certified elevation required in Section VIII (B) of these rules.
  - e. the coastal high hazard certification required in Section XI (B3) of these rules.
2. Make interpretations where needed, as to the exact location of the boundaries of these area of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section XII of these rules.
3. When base flood elevation data has been provided in accordance with Section 23.09.020(IV) of the Marin County Code, obtain, review, and reasonably utilize any base flood elevation data available from federal, state or other source, in order to administer Section V of these rules.

#### V. Standards of Construction

In all areas of special flood hazards, the following standards are required:

##### A. Anchoring

1. All new construction and substantial improvements shall anchored to prevent flotation, collapse or lateral movement of the structure.
2. All mobile homes shall meet the anchoring standards of these rules.

##### B. Construction Materials and Methods

1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
2. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

##### C. Elevation and Floodproofing

1. New construction and substantial improvement of any structure shall have the lowest habitable floor, including basement, elevated to or above the base flood elevation. Nonresidential structures may meet the standards in Section V (C3) of these rules. Upon completion of

the structure, the elevation of the lowest habitable floor, including basement, shall be certified by a registered civil engineer, licensed land surveyor and provided to the official set forth in Section IV (B) of these rules.

2. New construction and substantial improvement of any structure in Zone AO shall have the lowest floor, including basement, elevated to or above the depth number specified on the FIRM. If there is no depth number on the FIRM, the lowest floor, including the basement, shall be elevated one foot above the crown of the nearest street. Nonresidential structures may meet the standards in Section V (C3) of these rules. Prior to occupancy of the structure, a registered civil engineer or licensed land surveyor shall certify that the elevation of the structure meets this standard and provide such certification to the official set forth in Section IV (B) of these rules.
3. Nonresidential construction shall either be elevated in conformance with Section V (C1) or (2) of these rules or together with attendant utility and sanitary facilities.
  - a. be floodproof so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
  - b. have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
  - c. be certified by a registered civil engineer or licensed land surveyor that the standards of this subsection are satisfied. Such certifications shall be provided to the official as set forth in Section IV (c) of these rules.
4. Mobile homes shall meet the above standards and also the standards in Section IX of these rules.
5. Structures in Coastal High Hazards Areas shall meet the requirements in Section XI of these rules.

#### VI. Standards for Storage of Materials and Equipment

- A. The storage or processing of materials that are, in time of flooding, buoyant, flammable, explosive, or could be injurious to human, animal, or plant life is prohibited.
- B. Storage of other material or equipment may be allowed if not subject to major damage by floods and firmly anchored to prevent flotation or if readily removable from the area within the time available after flood warning.

#### VII. Standards for Water Supply and Sanitary Sewage Systems

- A. All new and replacement water supply and sanitary sewage systems under the control of the County of Marin shall be designed to minimize or

eliminate infiltration of flood waters into the system and discharge from systems into flood waters.

- B. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

#### VIII. Standards for Subdivisions

- A. All preliminary subdivision proposals shall identify the flood hazard area and the elevation of the base floor.
- B. All final subdivision plans will provide the elevation of proposed structure(s) and pads. If the site is filled above the base floor, the final pad elevation shall be certified by a registered civil engineer or licensed surveyor and provided to the official as set forth in Section IV (C) of these rules.
- C. All subdivision proposals shall be consistent with the need to minimize flood damage.
- D. All subdivision proposals shall have all utilities and facilities under the control of the County of Marin located and constructed to minimize flood damage.
- E. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.

#### IX. Standards for Mobile Homes and Mobile Home Parks and Subdivisions

##### A. Anchoring

All mobile homes and additions to mobile homes shall be anchored to resist flotation, collapse, or lateral movement by providing an anchoring system designed to withstand horizontal forces of 25 pounds per square foot and uplift forces of 15 pounds per square foot.

##### B. Mobile Home Parks and Mobile Home Subdivisions

The following standards are required for (1) mobile homes not placed in mobile home parks or subdivisions, (2) new mobile home parks or subdivisions, (3) expansions to existing mobile home parks or subdivisions, and (d) repair, reconstruction or improvements to existing mobile home parks or subdivisions that equal or exceed 50 percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement commenced.

- 1. Adequate surface drainage and access for a hauler shall be provided.
  - 2. All mobile homes shall be placed on pads or lots elevated on compacted fill so that the lowest floor of the mobile is at or above the base floor level.
- C. No mobile home shall be placed in a floodway except in an existing mobile home park or existing mobile home subdivision.

- D. No mobile home shall be placed in a coastal high hazard area except in an existing mobile home park or an existing mobile home subdivision.

#### X. Floodways

Located within areas of special flood hazards established in Section 23.09.020 (IV) of the Marin County Code are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

- A. Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered civil engineer is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- B. Prohibit the placement of any mobile homes except in an existing mobile home park or subdivision.
- C. If Section X (A) and X (B) of these rules are satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section V through IX of these rules.
- D. If no floodway is identified than a set back from any channel or waercourse shall be required to be a minimum of 2 to 1 fromt the toe of the bank plus 5 feet where encroachment will be prohibited unless certification by a registeres civil engineer is provided and concurred with by the Department of Public Works demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

#### XI. Coastal High Hazard Area

Coastal high hazard area (V Zones) are located within the areas of special flood hazard established in Section 23.09.020 (IV) of the Marin County Code. These areas have special flood hazards associated with high velocity waters from coastal and tidal inundation or tsunamis; therefore, the following provisions shall apply:

##### A. Locations of Structures

- 1. All buildings or structures shall be located landward of reach of the mean high tide.
- 2. The placement of mobile homes shall be prohibited except in an existing mobile home park or mobile home subdivision.

##### B. Construction Methods

###### 1. Elevation

All buildings or structures shall be elevated so that the lowest supporting member, except piling or columns, is located no lower than the base flood elevation level, with all space below the lowest supporting member



open so as not to impede the flow of water except from breakaway walls as provided for in Section XI (B4) of these rules.

## 2. Structural Support

- a. All buildings or structures shall be securely anchored on pilings or columns.
- b. Pilings or columns used as structural support shall be designed and anchored so as to withstand all impact forces and buoyancy factors of the base flood.
- c. There shall be no fill used for structural support.

## 3. Certification

Compliance with the provisions of this section shall be certified to by a registered civil engineer and provided to the official as set forth in Section IV (C) of these rules.

## 4. Space Below the Lowest Floor

- a. Any alteration, repair, reconstruction or improvement to a structure started after the enactment of this ordinance shall not enclose the space below the lowest floor unless breakaway walls are used as provided for in this section.
- b. Breakaway walls may be allowed below the base flood elevation provided they are not a part of the structural support of the building and are designed so as to break away, under abnormally high tides or wave action, without damage to the structural integrity of the building on which they are to be used.
- c. If breakaway walls are utilized, such enclosed space shall not be used for human habitation.
- d. Prior to construction, plans for any structure that will have breakaway walls must be submitted to the appropriate permitting agency.

## XII. Variance and Appeal Procedure

### A. Conditions for Variances

1. Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places without regard to the procedures set forth in the remainder of this section.
2. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

3. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
4. Variances shall only be issued upon:
  - a. A showing of good and sufficient cause
  - b. A determination that failure to grant the variance would result in exceptional hardship to the applicant.
  - c. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
5. In passing upon such variances, the decision making body shall consider all technical evaluations, all relevant factors, standards specified in other sections of this ordinance, and:
  - a. The danger that materials may be swept onto other lands to the injury of others.
  - b. The danger to life and property due to flooding or erosion damage.
  - c. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.
  - d. The importance of the services provided by the proposed facility in the community.
  - e. The necessity to the facility of a waterfront location, where applicable.
  - f. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage.
  - g. The compatibility of the proposed use with existing and anticipated development.
  - h. The relationship of the proposed use to the comprehensive plan and flood plain management program for that area.
  - i. The safety of access to the property in times of flood for ordinary and emergency vehicles.
  - j. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, and allowance of debris, if applicable, expected at the site.

- k. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water system, and streets and bridges.
6. Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base floor level, providing items (a-k) in Section XII (A5) of these rules have been fully considered. As the lot size increases beyond the one-half acre, the technical justification required for issuing the variance increases.
7. Upon consideration of the factors of Section XII (A5) of these rules and the purposes of this ordinance, the reviewing body may attach such conditions to the granting of variances as it deems necessary to further the purpose of this ordinance.
8. Appeal Procedure
  1. Those aggrieved by a decision of any County department pursuant to these rules and regulations may appeal such decision upon payment of a fee of \$100.00 to the Board of Supervisors of the County of Marin.
  2. In passing upon such appeal, the Board of Supervisors shall consider all items delineated in Section XII (A5) of these rules and regulations.
  3. The Director of Public Works shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.
  4. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built in variance with these rules and that the cost of flood insurance will be commensurate with the increased risk resulting from such variance.

### XIII. Nonconforming Uses

- A. A structure or the use of a structure or premises which was lawful before the passage of amendment of Chapter 23.09 of the Marin County Code and/or these rules, but which is not in conformity with their provisions, may be continued as a nonconforming use subject to the following conditions:
  1. No such use shall be expanded, change, enlarged or altered in any way which increases its nonconformity.
  2. Any substantial improvement of a nonconforming structure shall be made in compliance with the provisions of these rules.

3. If any nonconforming use or structure is destroyed by any means, including flood, to the extent of 50 percent or more of its market value immediately prior to the destruction, it shall not be reconstructed except in conformity with the provisions of these rules.

PASSED AND ADOPTED at a regular meeting of the Board of Supervisors of the County of Marin held on the 11 day of May, 1982 by the following vote:

AYES: Supervisors: Bob Roumiguere, Barbara Boxer, Al Aramburu, Gail Wilhelm

NOES: Supervisors: -

ANSENT: Supervisors: Gary Giacomini

\_\_\_\_\_  
CHAIRMAN OF THE BOARD OF SUPERVISORS  
COUNTY OF MARIN

ATTEST:

\_\_\_\_\_  
Van Gillespie  
Clerk of the Board

APPENDIX C

SECOND UNITS  
ORDINANCE

BOARD OF SUPERVISORS OF THE COUNTY OF MARIN

ORDINANCE NO. 2681

AN ORDINANCE OF THE BOARD OF SUPERVISORS OF THE COUNTY OF MARIN ADDING CHAPTER 22.98 OF THE MARIN COUNTY CODE ESTABLISHING PROCEDURES TO LEGALIZE EXISTING RESIDENTIAL SECOND UNITS AND PERMIT DEVELOPMENT OF NEW RESIDENTIAL SECOND UNITS

THE BOARD OF SUPERVISORS OF THE COUNTY OF MARIN DOES HEREBY ORDAIN AS FOLLOWS:

SECTION I. The following Section of Chapter 22.98 of the Marin County Code is hereby established to read as follows:

RESIDENTIAL SECOND UNITS

SECTION I:

- 22.98.000 Findings
- 22.98.010 Purpose
- 22.98.020 Application
- 22.98.030 Definitions
- 22.98.050 Registration of Existing Legal (non-conforming) Residential Second Units
- 22.98.051 Issuance of Certificates of Registration
- 22.98.052 Expiration Date - Certificates of Registration
- 22.98.053 Registration Period
- 22.98.054 Building Permits - Existing Legal (non-conforming) Residential Second Units
- 22.98.070 Use Permits for Legalizing all Other Existing Residential Second Units
- 22.98.071 Grant of Use Permit - Required Findings (Existing Units)
- 22.98.072 Building Permits - Existing Units
- 22.98.090 Use Permits for New Residential Second Units
- 22.98.091 Grant of Use Permit - Required Findings (New Units)
- 22.98.092 Design Review Required (New Units)
- 22.98.110 Expiration Date - Use Permits for Residential Second Units
- 22.98.120 Existing Non-Conforming Units - Violations
- 22.98.130 Enforcement and Penalties
- 22.98.150 Appeals

22.98.000 FINDINGS: The County finds some of the citizens of the County are experiencing a housing shortage particularly for low moderate income households. It is a goal of the Countywide Plan to achieve a balanced community with housing available for households of all income levels. Accordingly, the County has adopted a policy in the Housing Element of the Countywide Plan to permit Residential Second Units in selected single-family areas. Therefore, the County finds it necessary for the public health, safety and welfare in accordance with its housing policies that new and existing Residential Second Units are permitted under certain circumstances to make available an adequate supply of housing for low and moderate income persons of

the community. Inasmuch as many areas of the County would benefit from permitting the legalization of Residential Second Units, the County will afford priority in applying provisions of this Chapter to areas in which adopted Community Plans call for the establishment of new second units or standardization of existing non-conforming second units.

22.98.010 PURPOSE: The purpose of this Chapter is to establish a procedure to accomplish the following:

- a) Identification and legalization of existing second units through permit procedures in order to insure healthy and safe living environment.
- b) Development of new second units through Use Permit procedures which set forth conditions that mitigate neighborhood and environmental impacts.

22.98.020 APPLICATION: The provisions of this Chapter shall apply only in those areas of the County designated for permitting Residential Second Units, in the following manner:

- a) The Board of Supervisors shall, by resolution, declare its intention to establish areas encompassing any unincorporated portion of Marin within which Residential Second Units will be permitted in single-family zoning districts. The resolution shall set out, described and designated this proposed area or areas and shall contain a map thereof. Hearings conducted to consider and adopt such a resolution may be initiated by the Board of Supervisors. Residents of any unincorporated area of Marin County may petition the Board of Supervisors to initiate hearings to consider such a resolution.
- b) A copy of the resolution shall be published in a newspaper of general circulation in the area designated for Residential Second Units.
- c) The County Planning Commission shall conduct public hearing on said proposals in the manner provided by law for the adoption of general plans. At the conclusion of said hearings, the Planning Commission shall forward its findings and recommendations to the Board of Supervisors.
- d) The Board of Supervisors shall, after notice (as in (b) above), conduct public hearings thereon, and may, at the conclusion of said hearings, declare by resolution the establishment of the area or areas in which Residential Second Units are permitted in single-family zoning districts.
- e) The resolution by the Board of Supervisors establishing an area or areas permitting Residential Second Units, shall specify any special criteria which any new or existing Residential Second Unit must meet in order to be granted the Use Permits described in this Chapter.

22.98.030 DEFINITIONS:

- a) Residential Second Units - The term "Residential Second Unit" shall mean one additional living unit on any one lot or parcel within a single-family residential zoning district. The criterion for defining a Residential Second Unit shall be the existence of separate cooking facilities, not merely the addition of bathrooms or bedrooms to single-family units. A Residential Second Unit may be established by:
  - 1. The revision of a single-family unit whereby cooking facilities are not shared in common;
  - 2. The conversion of an attic, basement, garage, or other previously uninhabited portion of a single-family unit;
  - 3. The addition of a separate unit onto the existing single-family unit; or
  - 4. The creation of a separate structure on the lot or parcel in addition to the existing single-family unit.
- b) Use Permits - Use Permits referred to in this Chapter are granted to allow the continued use of existing Residential Second Units and the development of new Residential Second Units subject to the requirements and provisions of Chapter 22.88 and Section 22.88.020(2) of this Title.
- c) Certification of Registration - Certification of Registration granted pursuant to the Chapter shall mean that the structure for which a certificate has been granted shall be considered to conform to requirements of this Title.
- d) Single-family residential zoning district - A zoning district listed in Title 22 (Zoning) which allows only one family dwellings as a primary permitted use to the exclusion of two family dwellings and multiple family dwellings. Such zoning districts include but are not limited to R-1, R-A, A, A-2, RSP and RMP.
- e) Non-Conforming Second Unit - A second dwelling unit which has been constructed and located on a parcel of land in a manner which does not conform to the regulations for the district in which it is situated.
- f) Legal Non-Conforming Second Unit - A second dwelling unit which currently does not conform to the regulations for the district in which it is situated but did conform at the time it was constructed or erected.

22.98.050 REGISTRATION OF EXISTING LEGAL (NON-CONFORMING) RESIDENTIAL SECOND UNITS:

- a) Registration - At any time following the application of this Section, the owner of each existing Residential Second Unit



which was constructed in conformity with law and which has become legally non-conforming by reason of later enactment of zoning ordinances, rules and regulations may register such unit with the Planning Department. Non-registration of these units does not change their legal non-conforming status.

- b) Application for Registration - The application for registration shall be made by the owner in writing and shall contain the following:
1. The name of the owner or owners;
  2. The address of the unit;
  3. The Assessor's Parcel Number;
  4. The floor space of the unit;
  5. A scale drawing showing the lot dimensions, the location of the primary and second unit, and the location of all vehicular parking;
  6. By attachment, evidence of the date of the establishment of the unit, if feasible;
  7. By attachment, evidence of the continuity of use as a second unit for six (6) months or more prior to application for registration;
  8. Signature under penalty of perjury;
  9. Description and location of water and sanitary services (septic or sewer).

22.98.051 ISSUANCE OF CERTIFICATES OF REGISTRATION: In order to grant Certificates of Registration, the Planning Director shall make the following findings based on currently adopted provisions of Marin County Code:

- a) Structure to be registered shall meet Uniform Housing Code Standards;
- b) Lot or parcel on which Residential Second Unit is located has adequate parking;
- c) Any additional findings set forth by the resolution establishing the area for permitting Residential Second Units.

In addition, Certificate of Registration may be issued with such conditions that the Planning Director determines is required to permit the mandatory findings to be established.

- 22.98.052 EXPIRATION DATE - CERTIFICATES OF REGISTRATION: The Certificates of Registration shall have no expiration date unless due to specific findings, the Planning Director determines that the protection of public welfare and property require a specific review date.
- 22.98.054 BUILDING PERMITS: A Building Permit shall be required in conjunction with the issuance of a Certificate of Registration under Section 22.98.051 only if the structure was previously constructed without benefit of Building Permit and/or if repair or rehabilitation work is necessary pursuant to Section 22.98.051(a).
- 22.98.070 USE PERMITS FOR LEGALIZING ALL OTHER EXISTING RESIDENTIAL SECOND UNITS FILED 180 DAYS OF EFFECTIVE DATE OF RESOLUTION:
- a) Use-Permit - Subsequent to the adoption of the resolution permitting second units in certain unincorporated areas of Marin County, the owner of each existing Residential Second Unit which was not constructed in conformity with law (and did not subsequently become a legal, non-conforming use) shall apply to the Zoning Administrator for a Use Permit within 180 days of the effective date of this chapter.
  - b) Application for Use Permits - The application for Use Permit shall be made by the owner in writing and shall contain the following, in addition to all requirements of Chapter 22.88:
    - 1. The name of the owner or owners;
    - 2. The address of the unit;
    - 3. The Assessor's Parcel number;
    - 4. The floor space of the second unit;
    - 5. A scale drawing showing the lot dimensions, the location of the primary and second unit, and the location of all vehicular parking;
    - 6. By attachment, evidence of the date of establishment of the unit, if feasible;
    - 7. The consent of the applicant to the physical inspection of the premises prior to the issuance of the Use Permit.
  - c) Use Permit applications for existing (non-conforming) second units filed more than 180 days after the effective date of the resolution establishing area(s) for permitting Residential Second Units shall be considered under the provisions of Sections 22.98.090, 22.98.091 and 22.98.092 of this chapter.
  - d) Use Permit applications for residential second units built after the effective date of this ordinance shall be considered under

provisions of Sections 22.98.090, 22.98.091, and 22.98.092 of this chapter.

22.98.071 GRANT OF USE PERMIT - REQUIRED FINDINGS: - In order to grant a Use Permit for Residential Second Unit existing prior to the effective date of this Section, the following findings shall be made by the Zoning Administrator, Planning Commission or Board of Supervisors:

- a) The second units is located on the same lot or parcel on which the owner of record maintains his principal residence;
- b) The second unit meets all current property development standards of the residential zoning district in which it is located;
- c) The second unit meets the current Uniform Building Code (UBC) as adopted by the County;
- d) Only one additional unit shall be allowed for each parcel;
- e) The second unit does not cause excessive noise, traffic congestion, parking congestion or overloading of public facilities;
- f) Adequate sanitary services for the additional increment of effluent resulting from the second unit;
- g) Any modification to the above findings with the exception of (c) or any additional findings can be set forth by the Resolution establishing the area for permitting Residential Second Units approved at a full hearing before the Board of Supervisors.

22.98.072 BUILDING PERMITS: A Building Permit shall be required in conjunction with the issuance of a Use Permit under Section 22.98.071 of this Chapter only if the structure was previously constructed without benefit of a Building Permit or if repair or rehabilitation work is necessary pursuant to Section 22.98.071(c).

22.98.090 USE PERMIT FOR NEW RESIDENTIAL SECOND UNITS AND EXISTING (NON-CONFORMING) RESIDENTIAL SECOND UNIT (FOR WHICH NO PERMIT APPLICATION WAS FILED WITHIN 180 DAYS OF THE ADOPTION OF THE RESOLUTION IMPLEMENTING THIS ORDINANCE.)

- a) Use Permits - A Residential Second Unit to be completed subsequent to the effective date of this Section (1982), or an existing unit for which an application has not been filed pursuant to Sections 22.98.050 or 22.98.070 of this Chapter shall be permitted only if a Use Permit is granted pursuant to the provisions of this Section.
- b) Application for Use Permits - An application for a Use Permit for a new Residential Second Unit may be made only by the owner of the property upon which the unit is proposed to be located and shall contain the following:

1. The name of the owner or owners;
2. The address of the unit;
3. The Assessor's Parcel Number;
4. The floor space of the unit;
5. A scale drawing showing the lot dimensions, the location of the unit, and the location of all vehicular parking;
6. By attachment, evidence of the date of establishment of the unit, if feasible;
7. The consent of the applicant to the physical inspection of the premises prior to the issuance of the Use Permit.

22.98.091 GRANT OF USE PERMIT - REQUIRED FINDINGS: In order to grant a Use Permit for a new Residential Second Unit to be built subsequent to the effective date of this Section, the following findings shall be made by the Zoning Administrator, Planning Commission or the Board of Supervisors.

- a) The second unit is located on the same lot or parcel on which the owner of record maintains his principal residence;
- b) The second unit meets all current property development standards of the residential zoning district in which it is located, except as modified by criteria established in paragraph (f) below;
- c) The second unit meets the current Uniform Building Code as adopted by the County;
- d) Only one additional unit shall be allowed for each parcel;
- e) The second unit does not cause excessive noise, traffic congestion, parking congestion or overloading of public facilities;
- f) The lot or parcel on which is proposed second unit is to be located meets the minimum building site area requirements of this zoning district in which it is located (parcels in excess of one half acre in size are exempt from this finding);
- g) The second unit has a separate entrance and contains a separate kitchen and bathroom facility;
- h) The addition of a second unit maintains the scale of adjoining residences and blends into existing neighborhoods by use of building forms, height, materials, color and landscaping appropriate to that setting;
- i) For second units requiring the construction of a new detached structure, the finding shall be made that public service levels are adequate to serve new residence.

- j) Any modification to the above findings with the exception of (c) or any additional findings can be set forth by the resolution establishing the area for permitting Residential Second Units approved at a full hearing before the Board of Supervisors.

- 22.98.092 DESIGN REVIEW REQUIRED - NEW UNITS: All new Residential Second Units constructed after the date of adoption of this ordinance shall be subject to Design Review pursuant to provisions of Chapter 22.82. Design Review shall consider special criteria as in (i) above and encourage energy efficient building design.
- 22.98.093 BUILDING PERMITS: A Building Permit shall be required in conjunction with the issuance of a Use permit under Section 22.98.090 of this Chapter.
- 22.98.110 EXPIRATION OR REVIEW DATE - USE PERMITS FOR RESIDENTIAL SECOND UNITS: Use Permits granted pursuant to Chapter 22.98 of this Title shall have no expiration date unless due to special findings by the Zoning Administrator, Planning Commission or Board of Supervisors determination that the protection of public welfare and property require a special review date to determine compliance with conditions of approval.
- 22.98.115 RECORDATION OF CERTIFICATES OF REGISTRATION AND USE PERMITS: Any Certification of Registration or Use Permit granted under provisions of this Chapter shall be recorded in the County Recorder's Office as an informational document in reference to the title of the subject property.
- 22.98.120 EXISTING NON-CONFORMING UNITS - VIOLATIONS: Existing non-conforming second units which are not permitted through application of this Chapter shall constitute violation of Title 22 (Zoning) Marin County Code and shall be subject to Chapters 22.06 and 22.98 of this Title. Second units considered to be in violation are units for which a Use Permit or Certificate of Registration has been denied or a unit located in an unincorporated area of the County not approved for second units.
- 22.98.130 ENFORCEMENT AND PENALTIES: Failure to comply with any provision of this Chapter shall constitute a violation of this Chapter and any condition permitted to exist in violation of this Chapter shall be subject to provisions of Chapter 22.06 of this Title.
- 22.98.150 APPEALS: Any person aggrieved by any action involving the grant denial, suspension or revocation of a Use Permit or Certificate of Registration may appeal such determination in accordance with Chapter 22.89 of this Title.
- SECTION II SEVERABILITY:** If any provision of this ordinance or application thereof to any person or circumstances is held invalid, such invalidity shall not affect other provisions or application of this ordinance which can be given effect without the invalid provision or application, and to this end the provisions of this ordinance are declared to be severable.

SECTION III PUBLICATION: This Ordinance shall be and is hereby declared to be in full force and effect as of thirty (30) days from and after the date of its passage and shall be published once before the expiration of fifteen (15) days after its passage with the names of the Supervisors voting for and against the same in the \_\_\_\_\_, a newspaper of general circulation published in the County of Marin.

PASSED AND ADOPTED at a regular meeting of the Board of Supervisors of the County of Marin, State of California, on the 12 day of January, 1982, by the following vote, to wit:

AYES: Supervisors: Boxer, Aramburu, Giacomini, Wilhelm

NOES: Supervisors: -

ABSENT: Supervisors: Roumiguere

CHAIRMAN OF THE BOARD OF SUPERVISORS  
COUNTY OF MARIN

ATTEST:

\_\_\_\_\_  
Van Gillespie  
Clerk of the Board

APPENDIX D

DESIGN GUIDELINES FOR  
HISTORIC AREAS

## DESIGN GUIDELINES FOR CONSTRUCTION IN HISTORIC AREAS AND FOR PRE-1930'S STRUCTURES

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Technology has quickened the pace of change and introduced a great variety of building materials and construction methods. Since personal tastes and social attitudes often govern today's choice of materials and methods, design review has been introduced to guarantee carefully executed design solutions.

The landscape and buildings of a healthy community exhibit continuity of a community's past and present. In recognition of this concept, a properly instituted design review program aims to insure guided freedom for future growth in historic areas. Design review will vary according to conditions in particular communities, but should insure that new buildings conform in scale, proportions and texture to existing community form.

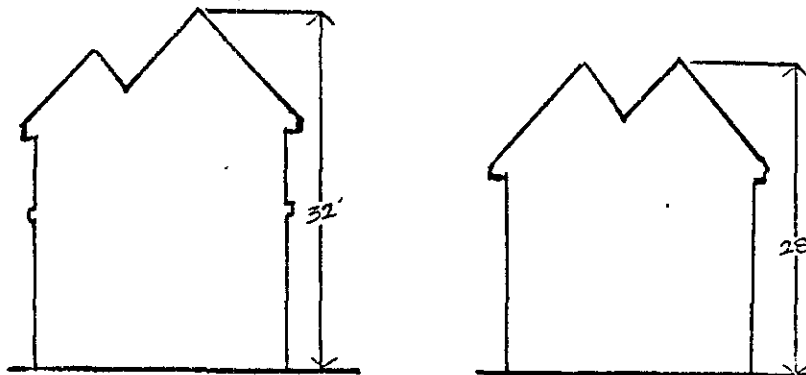
The design principles and standards below are intended to insure maximum compatibility of remodeling and new construction with older buildings in historic districts.





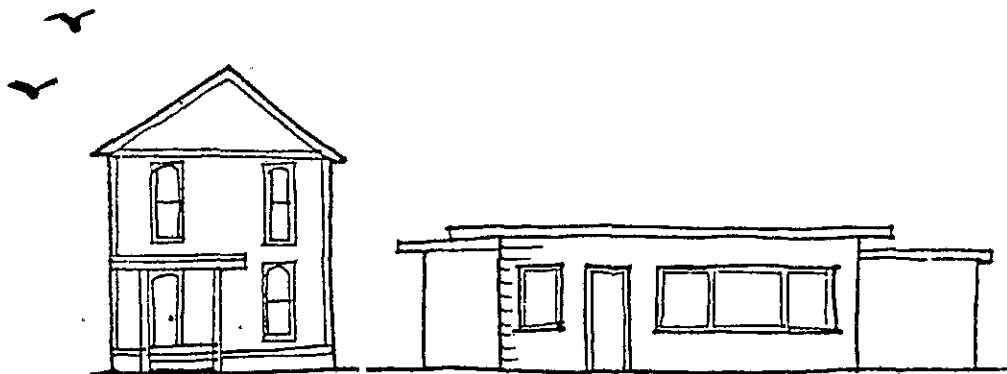
## REPETITION OF ROOF SHAPE

Similarity of roof shapes is often the most important means for achieving continuity in design between new and old buildings in historic areas. Roofs are an important factor in the overall design of a building to help relate items such as height and scale to those adjacent structures.



## CONSISTENT BUILDING HEIGHT

New buildings should be constructed to a height within a reasonable average height if existing adjacent buildings.



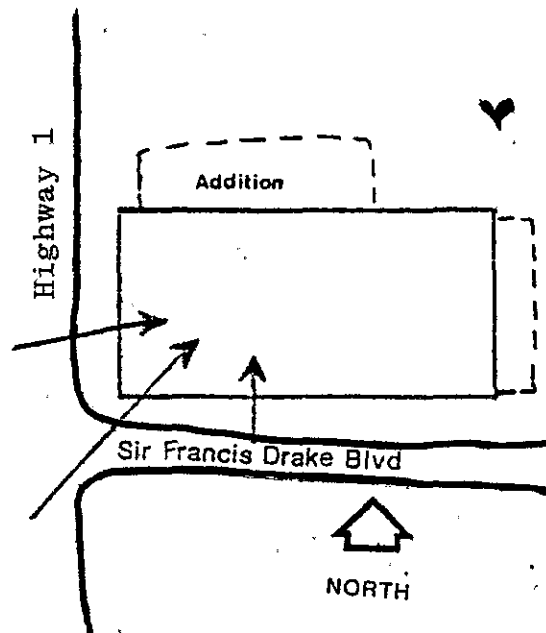
## DIRECTIONAL EXPRESSION OF FRONT ELEVATIONS

Structural shape, placement of openings, and architectural details may give a predominantly vertical horizontal, or a non-directional character to a building's facade. If buildings in a historic district are predominantly vertical expressions, then new buildings should be vertical expressions also.

19th century buildings tend to be vertical while 20th century buildings often have a horizontal emphasis.

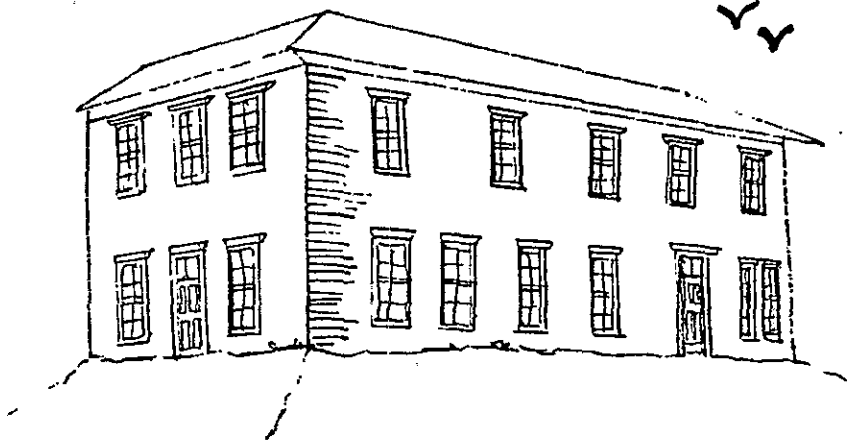
## PLACEMENT OF NEW ADDITIONS TO HISTORIC BUILDINGS

The most important facade of any building is generally the frontal facade; this is particularly true when viewing a streetscape. The front elevation, and side elevation on a corner building, should not have additions added that destroy a building's historic character.

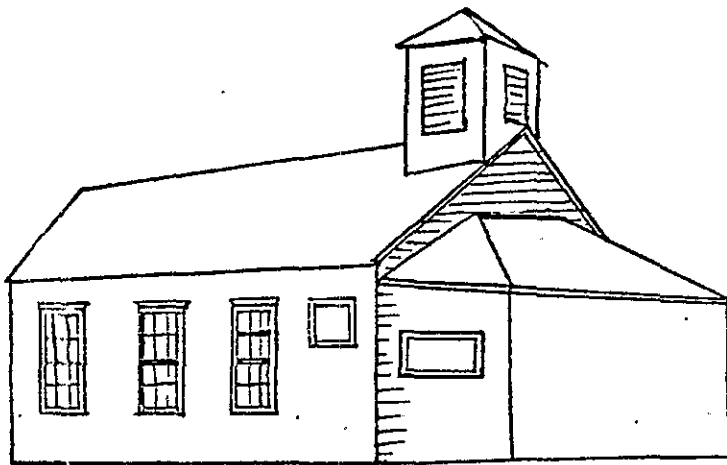


### GOOD EXAMPLE

Focal Points of  
Olema Inn.



Additions were made to the Olema Inn, but these additions left the focal point facades intact.



BAD EXAMPLE

Greek Revival School house with additional on front facade, destroys the focal point view.

BAD EXAMPLE

italianate commerical structure with front facade addition.

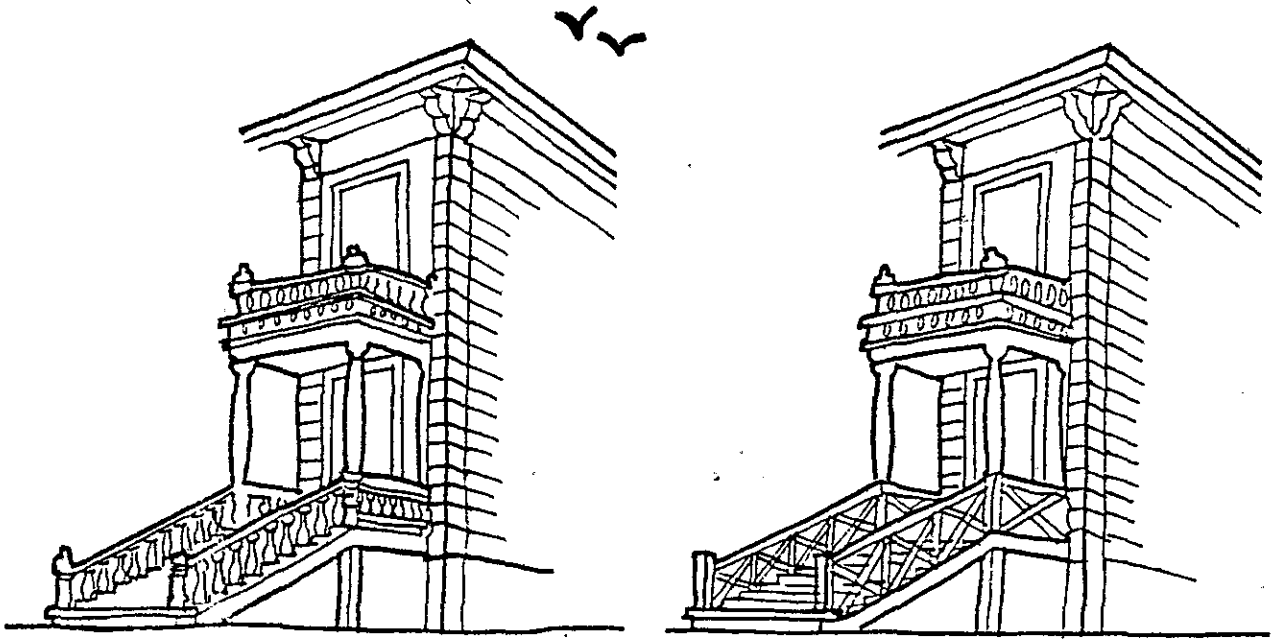


BUILDING SETBACK

Setback is an important consideration in harmonizing new with old in rural historic areas.

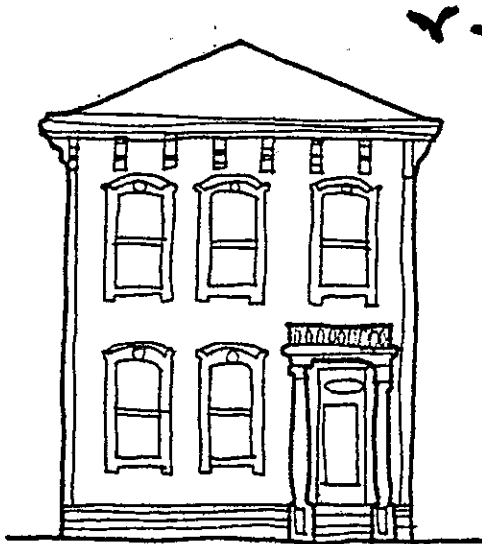


PRESERVE OR REPLICATE HISTORIC DETAILS

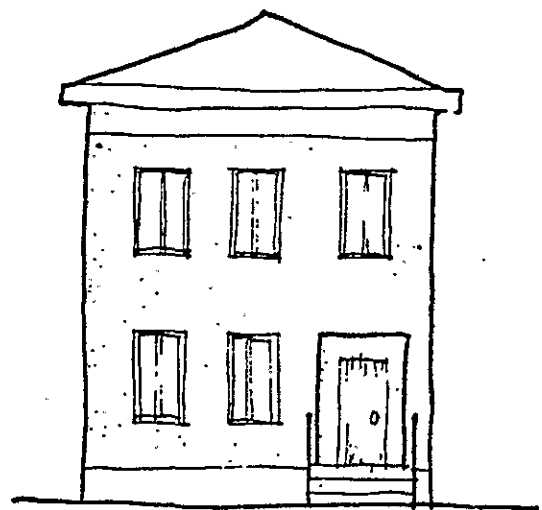


Original: Sympathetic treatment of stairway railing.

Remodeled: Unsympathetic treatment of stairway railing.



Original: Precise wooden details



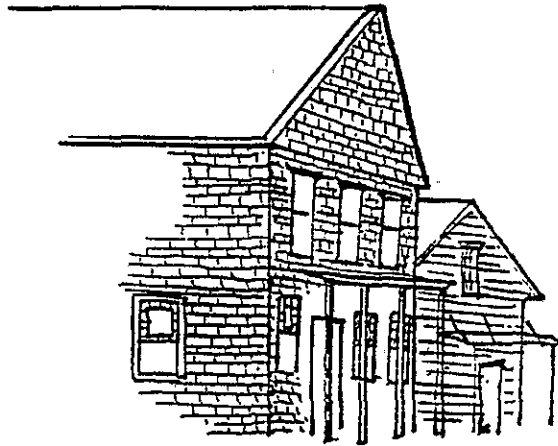
Remodeled: Stucco facade destroys

around windows, doors, cornice

integrity of historic structure.

line, at building edges, horizontal

lap siding.



The front facade of the Greek Revival commercial building (in foreground to left) has been "modernized" with the addition of wood shingles and brick. These exterior coverings are not appropriate for Greek Revival. Its next-door neighbor (smaller building to left) retains the Greek Revival feeling.

#### RELATIONSHIP OF TEXTURES

The texture of a building is an important factor in the overall appearance of a neighborhood. The predominant texture may be smooth (stucco), or rough (brick with tooled joints), or horizontal wood siding, or other textures. Whatever texture is used, its appearance must be considered in relation to the neighborhood to insure a compatible blending with other styles.

The front facade on the Greek Revival commercial building (in foreground to left) has been "modernized" with the addition of wood shingles or brick. These exterior coverings are not appropriate for Greek Revival. Its next-door neighbor (smaller building

to right) retains the Greek Revival feelings, with the original horizontal siding.

### REPETITION OF DETAILS

Repetition of details, such as choice of exterior building materials, proportions of windows and doors, gingerbread porch posts and trim, window and door moldings, cornices, lintels, and arches, is extremely important insuring compatible appearance in new construction in historic areas.

There has been a general misunderstanding about 19th century styles because of the weather-beaten appearance of many vintage buildings. Greek Revival, Queen Anne, Italianate, and Stick architectural styles are precise in their detailing and consistency of proportions. There is a great difference between these precise, albeit weathered, architectural statements, and contemporary efforts to create vintage-style buildings by constructing badly proportioned, indistinctive, rough-shod buildings of rough-sawn plywood or board and batten.

### RELATIONSHIP OF COLORS

The proper application of a color scheme to a building or a series of buildings can highlight important features and increase their overall appearance. Accent or blending colors on building details is also desirable in creating compatibility of neighboring structures.

Use of exterior color is of particular importance in the case of a wood frame house where the combination of wall and trim colors usually decides its basic character.

A good color scheme should be neighborly as well as effective in itself, so that both the house and the environmental

<sup>1</sup> "Marinated" - the fad in Marin County currently is to add wood shingles whether appropriate or not.

APPENDIX E

COTTAGE INDUSTRIES  
DRAFT ORDINANCE



DRAFT ORDINANCE

ORDINANCE NUMBER \_\_\_\_\_

AN ORDINANCE OF THE MARIN COUNTY BOARD OF SUPERVISORS AMENDING THE PROVISION OF MARIN COUNTY CODE TITLE 22 (ZONING) PROVIDING FOR THE ESTABLISHMENT OF "COTTAGE INDUSTRIES" BY USE PERMIT IN THOSE AREAS OF MARIN COUNTY WHERE ADOPTED COMMUNITY PLANS PROVIDE THE ENABLING POLICIES FOR THE CONSIDERATION OF SUCH USES.

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THE BOARD OF SUPERVISORS OF THE COUNTY OF MARIN does hereby ordain as follows:

SECTION I. Chapter 22.02.010. Definitions, is hereby amended by the addition of:  
22.02.185 Cottage Industry. "Cottage Industry" means a use conducted or within a detached accessory building on the same site as within a dwelling by the inhabitants of the dwelling within a dwelling or within a detached accessory building on the same site as the dwelling by the inhabitants of the dwelling and not more than one non-resident employee who is engaged in the design, manufacture, and sale of the following products and services: Antique repair and refinishing, Batik and tie dyeing, dress making, sewing and millinery, furniture and cabinet making, sculpture, weaving, woodworking, photography, holography, catering, baking and the preparation of food specialties for consumption at locations other than the place of preparation, and such similar uses as determined by the Zoning Administrator to be of the same general character and intensity. All such uses may use such mechanical equipment or processes as are necessary for the above listed uses, provided, however, that no such use shall audible beyond the limits of the property upon which said use is conducted, shall comply with all applicable health, sanitary and fire codes, and shall not display any exterior sign which exceeds two (2) square feet in

area.

SECTION II. Chapter 22.68. Use Regulations, is hereby amended by the addition of: Section 22.68.080. Cottage Industries. Cottage Industry as defined in Section 22.02.185 by be established in R Districts upon the securing of a Use Permit in each instance in those area of Marin County only where a Community Plan has been adopted and which Plan specifically provides the necessary policy authorization for the consideration of such uses.

SECTION III. Effective Date. This ordinance shall be and is hereby declared to be in full force and effect as of thirty (30) days from and after the date of its passage and shall be published once before the expiration of fifteen (15) days after its passage with the names of the Supervisors voting for and against the same in the \_\_\_\_\_, a newspaper of general circulation published in the County of Marin.

PASSED AND ADOPTED at a regular meeting of the Board of Supervisors of the County of Marin, State of California, on the \_\_\_\_\_ day of \_\_\_\_\_, 1982, by the following roll call vote:

AYES:

NOES:

ABSENT:

\_\_\_\_\_  
CHAIRMAN OF THE BOARD OF SUPERVISORS  
COUNTY OF MARIN

ATTEST: \_\_\_\_\_  
Van Gillespie  
Clerk of the Board

APPENDIX F

CREEK AND STREAMS  
HAZARDOUS AREA PLATES



INVERNESS PARK 6

DRAKE

ROAD

GULCH

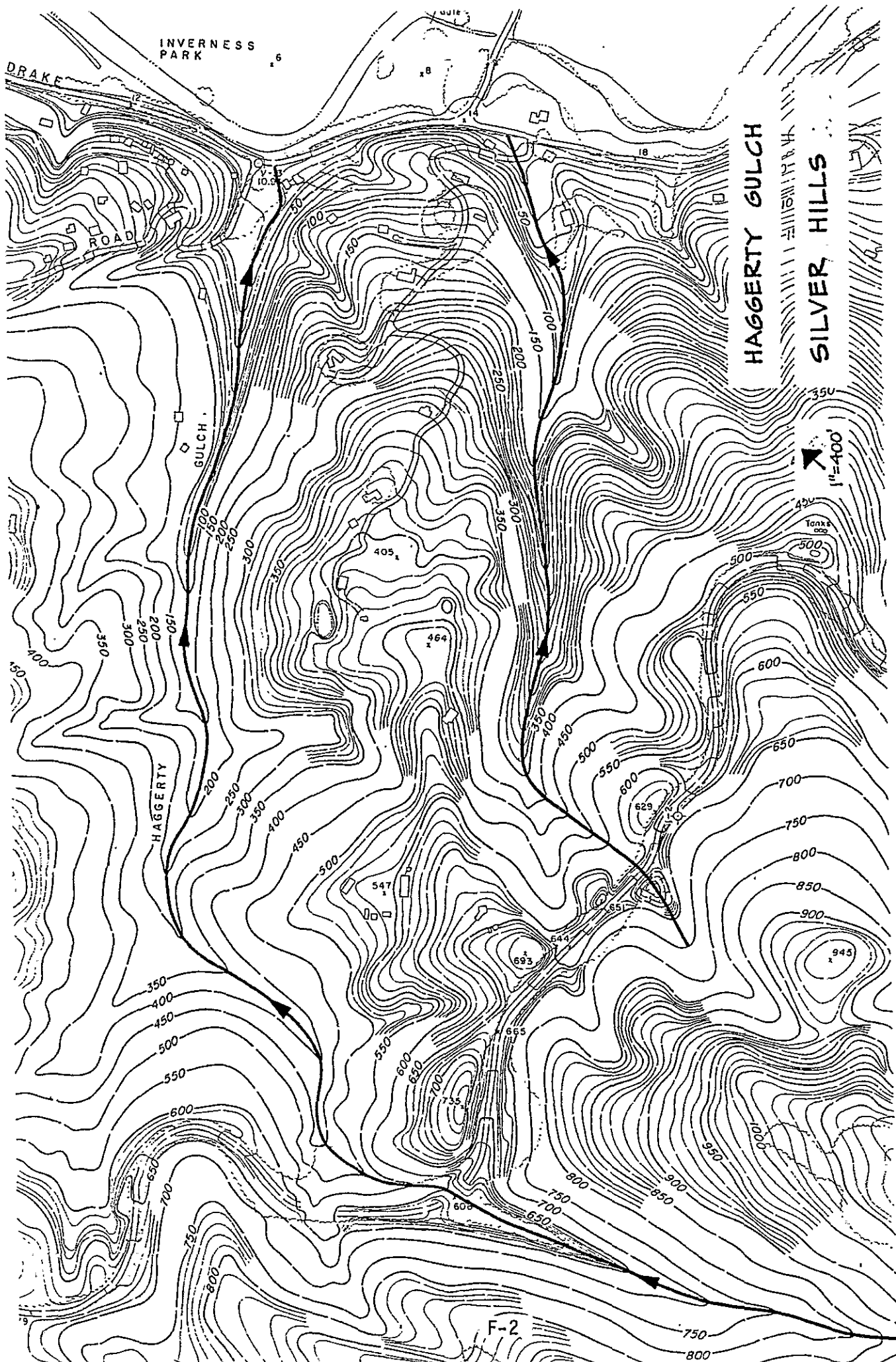
HAGGERTY

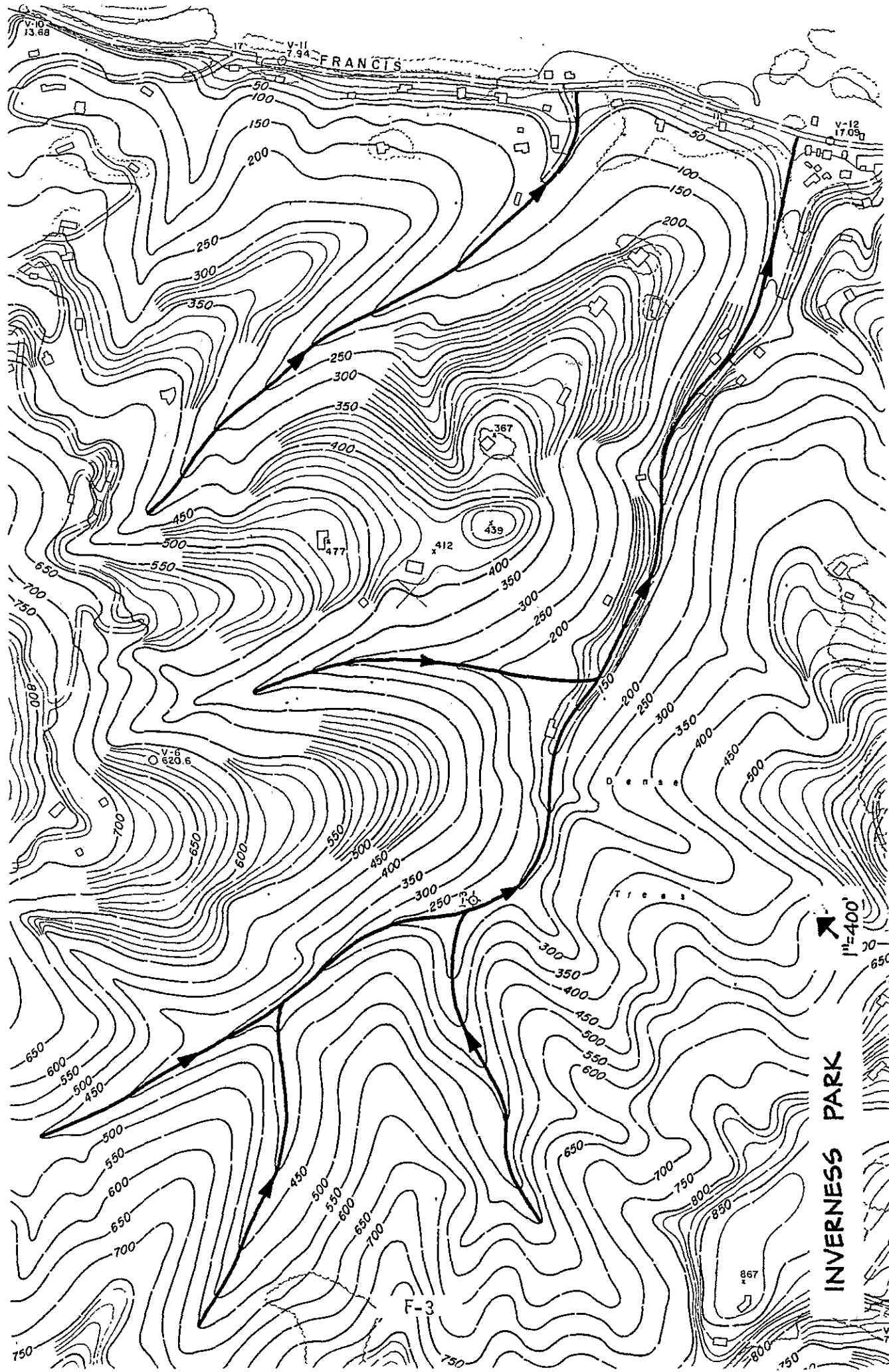
HAGGERTY GULCH

SILVER HILLS

1"=400'

F-2



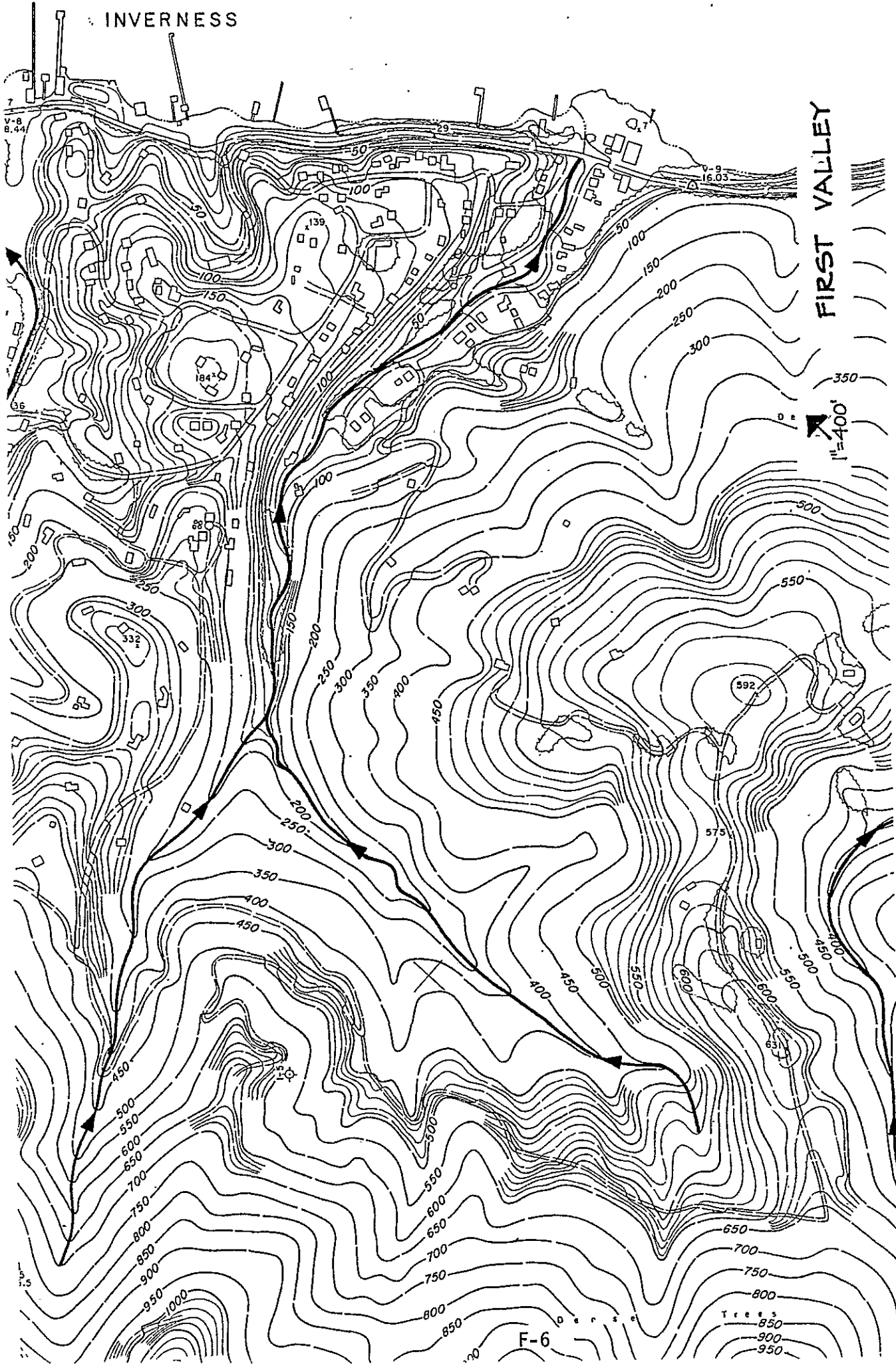








INVERNESS

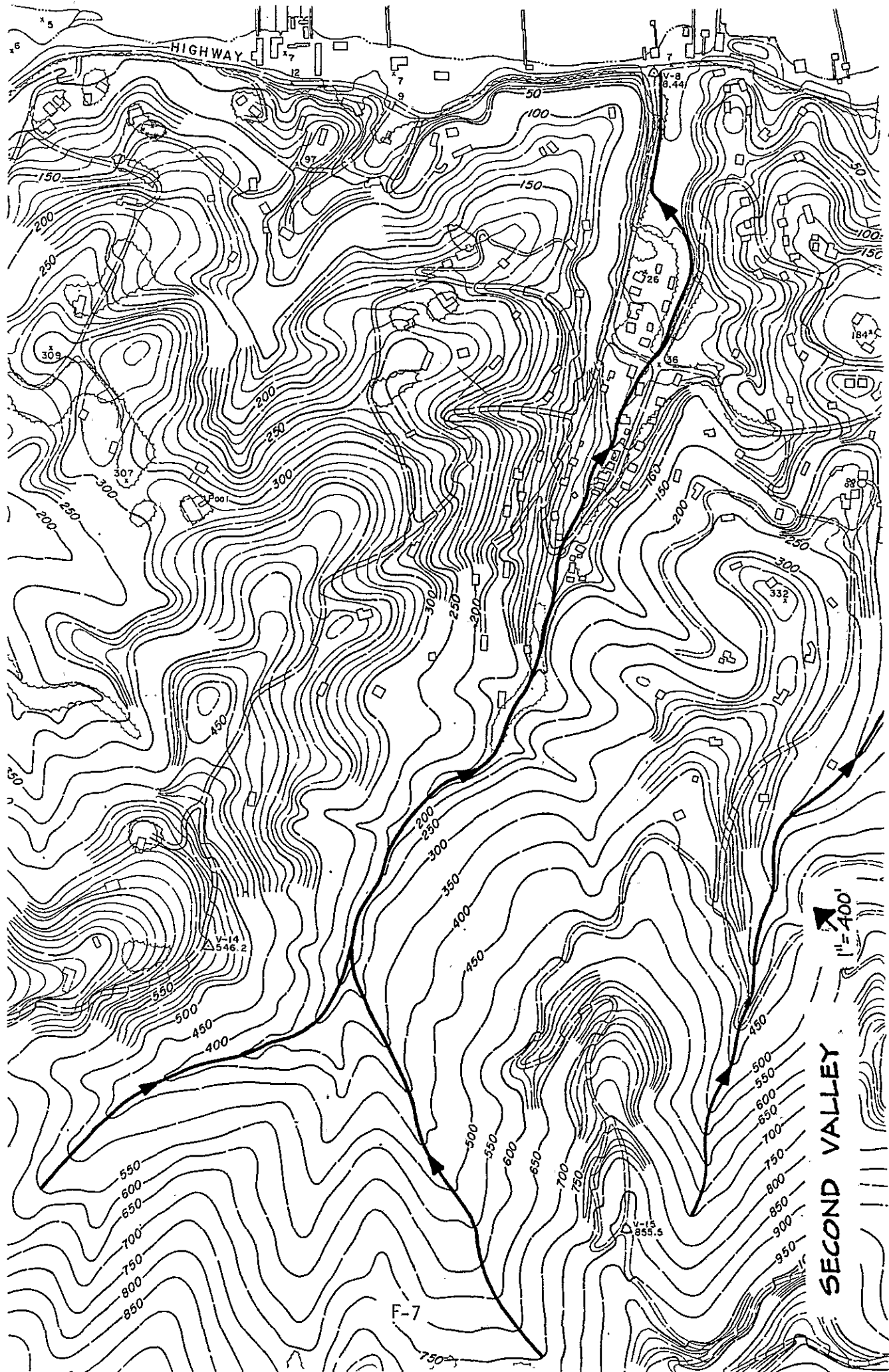


FIRST VALLEY

1"=400'

F-6

Trees  
850  
900  
950



SECOND VALLEY

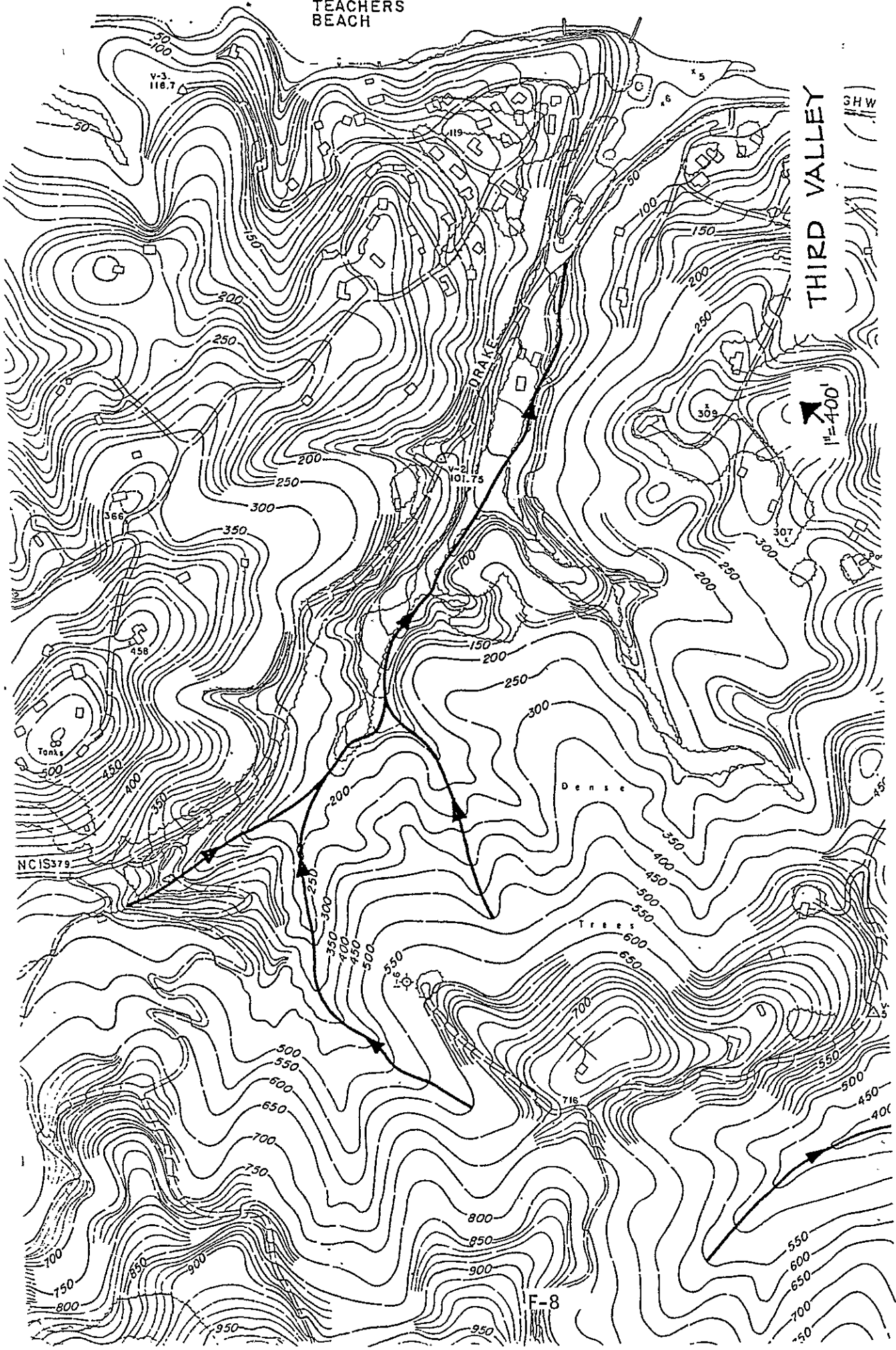
1" = 400'

F-7

TEACHERS  
BEACH

THIRD VALLEY

SHW



NCIS379

F-8

APPENDIX G

PARADISE RANCH ESTATES  
PARCEL ASSESSMENTS

PARADISE RANCH ESTATES  
PARCEL ASSESSMENT

Prospective purchasers of lots within the Paradise Ranch Estates subdivision should be guided by the following assessment of the buildability of individual parcels as expressed in the Paradise Ranch Estates Restoration Plan:

Based upon the site specific survey, the parcels were classified in three general categories: unconstrained, marginal and highly constrained lots.

Unconstrained Lots

This category contains lots that appear, from the site survey, to have minimal apparent constraints to development. As noted above, a final determination of the ability of each lot to support development will depend upon site-specific engineering work that will be required at the time an application for a development permit is made to the County. Twenty-one lots fall in this category. In addition, this category contains two lots which are owned by the Federal government and which therefore have no further development potential.

AP #114-110-05 (Gall). This is a lineally shaped lot located at the entrance to Paradise Ranch Estates and sandwiched between Sir Francis Drake Boulevard and Drakes View Drive. There is an area where slopes generally range from 15 to 20 percent, which is of sufficient size to accommodate a septic system. An adequate building site is located above the logical septic site, where slopes appear to be around 30 percent.

AP #114-110-89 (Chan). This is a large (approximately five-acre) parcel with a major drainage channel that parallels the northern property line. Despite the necessity to provide a setback of at least 100-feet from the creek for the septic system, there is a large relatively flat area near the southern end of the property that could accommodate a building site and septic system. Slopes in

this area are approximately 20 percent. Access is available from Roberts Drive. The northern portion of this site is located in Zone 4.

AP #114-110-68 (Lowe). This parcel is somewhat more constrained than Chan's having approximately 30 percent slope in the area of the potential septic field and building site, and therefore would require an engineered septic system. There is also some evidence of slow surface slippage. A previously graded bench provides driveway access from Baywood Court.

AP #114-110-15 (Yurt). While this lot contains some steep areas, a house and septic system could be accommodated in an area where the slopes range from 20 to 30 percent. An engineered septic system would probably be required. The northern portion of this parcel is located in Zone 4.

AP #114-110-12 (Del Valle). This lot has easily attainable access from Drakes View Drive. It has moderate slopes and could accommodate a septic system and building site. Care should be taken in siting any future driveway access to this parcel, since it is at the intersection of Drakes View Drive and Sunnyside Drive. This parcel is located in Zone 4.

AP #114-100-11 (Elder). Slopes on areas of this parcel range from 10 to 30 percent. An adequate area for a septic system and building site appears to exist. Access from Drakes View Drive is feasible; however, this parcel is located on a hairpin turn and there are some sight distance problems. This can be mitigated through careful siting of the driveway and a requirement that the understory brush be cleared as a condition of any future approval. This parcel has been determined to be merged with AP #114-100-20 by the Marin County Board of Supervisors. This parcel is located in Zone 4.

AP #114-130-08 (Vantuna). This parcel has easy access from Sunshine Court. Slopes are in the 10 to 20 percent range with building area and septic system easily accommodated. This parcel is located in Zone 4.

AP #114-100-62 (LaFore), AP #114-100-67 (Feist), AP #114-100-68 (Cooke).

These parcels are located on a knoll at the end of Upper Roberts Road. All parcels have moderate slopes. Each parcel has sufficient level areas to accommodate a building site and septic system.

AP #114-100-32 (Micheal). This is a long, rectangular parcel that has access from Pine Crest Road. There is a previously graded driveway. Sufficient area of moderate slope exists near Pine Crest Road to support a septic system and building site.

AP #114-120-53 (Dernberg). This parcel is located near the end of Pine Crest Road, which is narrow, unpaved, and overgrown at this point. A previously graded driveway extended to a natural bench, which is large enough to accommodate two building sites and septic systems.

AP #114-150-43, 49, 50 (Burger). These merged lots are located at the end of an extremely marginal road. There is, however, a reasonable building pad, area for car deck, and septic system. This lot has been authorized for park purchase in the Burton Bill. The lot is not included within the boundaries of the North Marin Water District, but it does appear to have a water meter.

AP #114-150-39 and AP #114-150-48 (U.S.A.). These two, non-contiguous parcels are both owned by the Federal government, and therefore have no further development potential.

AP #114-150-34 (Kingdom). This lot is surrounded on three sides by roads; access is feasible from either the upslope or downslope portion of the property. Slopes are in the 20 to 30 percent range, which would require an engineered septic system, but it appears one could be accommodated. A feasible building site also exists. This lot has been authorized by Congress for inclusion in the National Seashore.

AP #114-150-33 (Dudley). This lot is also surrounded on three sides by roads. It is located in a ridge top. Portions of the property have bedrock close to the

surface, which would adversely affect the ability of the site to support a septic system. However, the eastern end of the property does appear to have adequate soil depth to support a septic system. The slope in this area is in the 25 to 30 percent range, which probably would require an engineered septic system. Access and a building site could be sited at various places on the property. This parcel has also been authorized for inclusion in the Federal park.

AP #114-150-27 (Hoffman). This parcel has a minor water course running through it; however, it is large and has moderate (15-20 percent) slopes and a building site are also feasible.

AP #114-120-28 (Singer). This site contains a previously graded driveway from Sunnyside Drive. The grade of this driveway appears to exceed 12 percent, which means that paving would be required at the time a building permit is issued. There is an area that would accommodate a septic system, with the slope ranging from 20 to 30 percent, which would require an engineering system. There appears to be several potential building sites on the property.

AP #114-130-05 (Lavery). The northwest corner of this lot has slopes of 15 to 20 percent. This area could easily provide access, building site, and septic system.

AP #114-130-61 (Burroughs). This lot has frontage on three sides. The most likely access would be from Dover, and would probably require a small retaining wall. Slopes ranging from 20 to 40 percent in this area, and a building site and engineered septic system appear feasible. This parcel has been authorized for park purchase by the Federal government. It is also the lot that was the subject of the Shinomiya coastal permit application.

AP #114-120-24 (Kougiias). This parcel has a large, flat area with slopes of about five percent. Access from Douglas Drive can be attained. Sufficient flat area exists to accommodate a building site and septic system. The road



leading to this parcel is in poor condition, and off-site road improvements may be required as conditions of any future approval.

AP #114-130-37 (West). This parcel is a panhandle lot with a driveway on the panhandle that serves the adjacent Goelet property. The driveway has a slope of about 20 percent, which would require paving. There is a feasible building site and a feasible septic area with slopes in the 30 to 35 percent range, which would require an engineered system.

#### Marginal Lots

Lots in this category are marginal (questionable) for one of a number of reasons. Usually the problem concerns the ability of the lot to support a septic system or reasonable access. There are nine lots in this category.

AP #114-110-85 (Aster). This parcel is located on Drakes View Drive, and is the location of a previous landslide. The major drainage course of the central watershed area drains the northmost area of the site.

AP #114-110-72 (Crespo). This lot has frontage on Drakes View Drive and Carlton Place. Access would have to be taken from Carlton Place. Two drainage swales preclude access from Drakes View Drive and complicate development of this parcel. There is an existing graded driveway on the parcel which may be wide enough to accommodate a developed driveway. If not, a retaining wall and fill may be necessary to provide an adequate driveway width. The site has adequate building and septic system areas. An engineered septic system would probably be required since the slope exceeds 30 percent. The majority of this lot is located in Zone 4.

AP #114-100-51 (Savage) and #114-100-73 (Fukuda). These are two adjacent lots on the uphill side of upper Roberts Road. They have similar constraints, although Savage is somewhat less steep than Fukuda. Both these parcels have a relatively flat area, partially formed by what appears to be an old logging trail, about two-thirds of the way up the property. In this area, both lots could

support a building site and septic system. Slopes in this area on the Savage parcel are in the 25 to 30 percent range, and on the Fukuda parcel are 30 to 40 percent; both parcels would probably require an engineered septic system. In order to reach these developable areas, substantial cuts with switchbacks would be required for the driveways in order to meet the standards of Marin County Code. This problem could be mitigated somewhat by a combined driveway, which both property owners have indicated they are interested in doing. Even with a combined driveway, however, a substantial amount of grading would be necessary because of the slope. Savage appears to have a potential alternative building site in the northeast corner of the lot, near Upper Roberts Road and an existing house on an adjacent property.

AP #114-100-74 (Kendall). This parcel is located on the downslope side of Upper Roberts Road, in the sensitive Tomlinson Creek Watershed. Slopes over most of this lot range from 40 to 60 percent, with some areas in excess of 60 percent. There is an artificially created bench on the southwest side of the property, which could probably support a driveway and building site. Two areas, near the center and eastern portion of the property, respectively, are, relatively speaking, of a somewhat flatter nature, ranging from 35 to 40 percent in slope. These would appear to be the only areas capable of supporting a septic system, if all the requirements of the septic ordinance can be met. If more precise measurements determine that the slope of at least one of these areas is under 40 percent, then a waiver of the septic ordinance would not be necessary, but a fairly lengthy pipeline would be necessary to conduct sewage effluent from the probable building site to the possible septic field location.

AP #114-100-16 (Roushey). This parcel is a downslope lot with access from Pine Crest Road. Access and a building site exist by virtue of a previous grading on the property. However, a septic system would have to be located in

either the southeast or southwest corner of the lot, and it is questionable whether sufficient flat area exists to accommodate this. The slope in this area ranges from 20 to 30 percent, which would probably require an engineered system.

AP #114-130-58 (Lubman). This is a downslope lot with access from the eastern extension of Dover. The road fronting the site is in particularly poor condition, with slopes at approximately 18 to 20 percent. A drainage course runs through the western portion of the property, limiting the available area for septic system. The most gentle slopes on the lot appear to be at about 40 percent, approaching the point at which a waiver from the septic ordinance would be necessary. An engineered septic system would be required. Access could be provided by a car deck at the property line with a house supported on poles. This lot has been authorized for inclusion in the Point Reyes National Seashore.

AP #114-130-25 (Sommer). This parcel has frontage on three sides of the lot, fronting both Douglas Drive and the eastern end of Dover Road. The only feasible access appears to be from Dover Road, near where it makes hairpin turn. In this area a house on the upslope portion of the lot with a garage underneath appears to be feasible. The area available for septic system is very limited, making future development of this lot questionable. If further engineering work indicates that a septic system could be accommodated, the section of Dover Road along the Western property line should be required to be filled in and replanted, since it is in very poor condition and is not necessary for access to other parcels. This lot has been authorized for inclusion in the Point Reyes National Seashore.

AP #114-130-41 (Bluder). This lot is adjacent to West (AP #114-130-37), discussed above. It has an easement over West's panhandle. Access via this easement is preferable to that from Douglas Drive, which would require steep

cut banks. Access from the easement would require a car deck and pole house in an area with slopes approximately 40 percent. At the bottom of the lot there are slopes in the 25 percent range, which could probably accommodate a septic system, if the required setback from the road cut can be maintained. An engineered septic system would be required.

#### Constrained Lots

All of these lots are extremely steep and many contain major drainage courses. It appears that none of the lots in this category could support a septic system, unless a waiver from the requirements of the septic ordinance were obtained. The recently adopted Local Coastal Plan for Unit II has a policy that states: "No waiver shall be granted unless a public entity has formally assumed responsibility for inspection monitoring, and enforcing the maintenance of the system in accordance with criteria adopted by the Regional (Water Quality Control) Board, or such waivers have otherwise been reviewed and approved by the Regional Board."

In addition to the limitations on the ability of the site to support a septic system, access to most of these parcels would have to be with a car deck set close to or on the property line, and structures would be pole houses. There are 11 lots in this highly constrained category.

AP #114-110-17 (Fisher). This is a rectangular parcel, 200 feet wide by 1000 feet long, with a major drainage course running the length of the parcel. This parcel is not a part of the Paradise Ranch Estates Subdivision, but was included within the scope of the Paradise Ranch Estates Restoration Plan Study because of its geographic location. An encroachment permit from the Marin County Department of Public Works was obtained several months ago, to allow driveway access from Sir Francis Drake Boulevard. A building site and access could be provided adjacent to Sir Francis Drake. Because of the drainage channel, fitting a septic system that meets the requirements of Marin

County Code may be difficult. The property owner's engineer has determined that an engineered septic system can be accommodated on the southwest portion of the property. This site would probably require pumping effluent uphill approximately 600 feet and across the drainage channel. Final determination of the feasibility of this system will depend upon percolation tests. The western portion of this site is located in Zone 4.

AP #114-100-57 (Young), AP #114-100-84 (Adams), AP#114-100-83 (Western Title). These three parcels are located on the downslope side of Upper Roberts Road. All parcels are extremely steep, with some minor benching on the Young parcel, which is formed by what is probably an old logging road. Any septic system would require a waiver from the septic ordinance because of the steep slopes, which exceed 40 percent. Access would be obtained from the car decks close to or on the property line, with houses supported on poles. These parcels may have been authorized for inclusion in the park system by the federal government; however, the National Park Service has not been able to make a final determination on this matter.

AP #114-100-80 (Western Title). This lot also contains slopes in excess of 40 percent. Tomlinson Creek parallels the northern property line. As in the parcels discussed above, accommodating a structure would be quite difficult; also, any septic system would require a waiver from the septic ordinance. Legal access exists over an existing overgrown trail which would require substantial work to reconstruct.

AP #114-100-85 (Foote). This parcel is one that staff contends is merged to an adjacent developed lot. The Planning Commission has not yet acted on this merger, and the property owner has applied for a Certificate of Compliance to create two lots from his holdings. This parcel is a panhandle lot, widening toward the northern end of the subdivision. The northern portion of the lot contains Tomlinson Creek. The panhandle area is relatively flat, but a minor

drainage channel is located through the middle, this severely restricting the area available for both a building site and septic system.

AP #114-120-52 (Gusmano) and AP #114-120-62 (Shawn). These adjacent parcels are located at the end of Pine Crest Road, which is an overgrown trail at this point. Both parcels have average slopes exceeding 40 percent and both contain a major drainage channel that carries the headwaters of the Tomlinson Creek. Fitting a septic system on these parcels would be extremely difficult and would probably require a waiver of the septic ordinance for both slope and setback from a drainage channel. In addition, any residence would be a pole house overhanging Tomlinson Creek, although there does exist the possibility that Shawn could fit a residence on the pad that presently is Pine Crest Road.

AP #114-150-08,09,30, 31, 44, 45, 46 (Anderson). These parcels are merged and a house is located on parcel 09. The remaining section of the property is extremely steep, with a canyon developing through parcels 44, 45, and 46. These latter three parcels have been authorized for purchase by the Federal government. Because of the steep slopes, there is no apparent additional area to support either a septic system or building site, with the possible exception of a small area on parcel 08 near the existing house. This lot consists of over 11 acres and therefore meets the minimum size to qualify for a land division. However, it appears unlikely that this site could meet the other requirements of the subdivision ordinance.

AP #114-150-51 (Anderson). This is a large (5 acres) parcel characterized by steep slopes and a major drainage course through the center. It appears unlikely that the site could support a septic system; because of the steep slopes (over 40 percent) any septic system would require a waiver. The only feasible access and building site would be a car deck and structure supported on poles.

AP #114-130-47, 48, 49, 50 (Goelet). These four Assessor's Parcels are merged into one lot. All of this lot is extremely steep. It contains a major drainage course. Any building would have to be supported on poles. Because of the steep slope and drainage channel, the ability of this site to support a septic system is questionable.