Exhibit 5

Market Feasibility Study and Economic Report

MARKET FEASIBILITY STUDY

PURPOSE :

As of June 1, 1994, determine the market feasibility of developing approximately 88 acres of unimproved agricultural land located adjacent to Kihei Gateway Plaza and Kihei Commercial Center along the mauka side of Piilani Highway, Kihei , Maui, Hawaii, into a light industrial subdivision containing approximately 122 lots.

CONSIDERATIONS AND ASSUMPTIONS:

Sales projections of the subdivided lots are based on the considerations and assumptions as follows:

. The units (lots) will be sold/leased as vacant lots on the open market.

. The land will be available for purchase in fee simple.

. The land will be available for long term lease.

. Covenants, conditions and restrictions similar to those in effect for light industrial subdivisions in Kahului and Wailuku will encumber the project.

. All utilities will be readily available.

. No additional restrictions, prohibitions or moratoriums will be imposed by any governmental authorities.

LIMITING CONDITIONS AND UNDERLYING ASSUMPTIONS :

The analysis, opinions and conclusions of this report are based on market, social and economic conditions as of the date of the report.

Information and data provided by other sources are believed to be reliable. No responsibilities or liabilities are assumed for the accuracy of such information.

SALES ACTIVITIES AND TRENDS :

Sales activities of light industrial properties were abundant during 1988-89 in Kahului and Wailuku. No significant activity of similar properties were recorded in West Maui or South Maui during that period, primarily because there were very little or no inventory available on the market.

During that period, sales in Kahului were mainly attributed to business entities purchasing the leased fee interest of land which each business occupied. Sales in Wailuku were attributed to businesses desiring fee simple land to be developed for owner-occupants and investment or a combination of both.

Increasing sales activities were also attributed to IRC 1031 tax deferred exchanges which continued into 1990-91 time period.

Activity stabilized in 1992 and began to decline in 1993. The stabilization can be attributed to two major factors:
1) Statewide economic recession; and 2) lack of inventory which were feasibly priced. The decline in tourism has had a devastating effect on the hotel industry; restaurants; related services; small, independent businesses; unskilled and semi-skilled employment, causing a decline in demand for business and industrial properties. This observation is supported by the abundance of vacancies of improved business properties throughout Maui.

Market trends were as follows:

1988-89 . . .
Purchase of leased fee (Kahului) - $12.00 to $16.00 / sq. ft.
Purchase of fee simple land (Kahului) - $20.00 to $23.00 / sq. ft.
Land lease renegotiation (Kahului) - $1.25 to $1.60 / sq. ft. / yr.
Purchase of fee simple land (Wailuku) - $16.00 to $20.00 / sq. ft.

1990-91 . . .
Purchase of leased fee and fee simple land (Kahului) - $26.00 to $30.00 sq. ft.
Land lease renegotiation (Kahului) - $`1.40 to $2.80 / sq. ft. / yr.
Purchase of fee simple land (Wailuku) - $23.00 to $26.00 / sq. ft.

1992-93 . . .
Purchase of leased fee and fee simple land (Kahului) - $30.00 to $35.00 / sq. ft.
Land lease renegotiation (Kahului) - $2.00 to $2.80 / sq. ft./yr.
Purchase of fee simple land (Wailuku) - $24.00 to $30.00 / sq. ft.

Note: Most businesses prefer Wailuku-Kahului area to establish their respective businesses for the following reasons:

1) Larger population base.

2) Hub of the business and government centers.
3) Close proximity to ports (Kahului Harbor and Airport).

Factors which would cause relocation or creation of branches:
1) Population/business shift.
2) Higher cost of doing business in existing location.
3) More efficient and cost effective distribution system to service and support customers.

CURRENT MARKET CONDITIONS :

Although 1992-93 were considered to be stagnant in the real estate industry, the last quarter of 1993 generally showed signs of rejuvenation in real estate sales with continued interest by purchasers in January, 1994.

Sales activities have been prevalent in the residential market with sparse sales in commercial and industrial properties. The increased activity in the residential properties are attributed to extremely low mortgage interest rates and a significant reduction in real estate values.

Residential property values have declined 40% to 60% within the last three years in the resort areas on Maui. The values in the Wailuku, Kahului and Upcountry areas have also declined, however, these areas were not as drastic as the resort areas (15% to 20%).

Sales activities for business (commercial and industrial) properties have not had any significant changes during the last three years. Demand for such fee simple properties have decreased which may be an indication of the low inventory of business properties available for sale. On the other hand, leasehold business properties, primarily office and retail space, are in abundance.

The higher rents commanded by retail and office spaces during 1988-90 have had a downward adjustment, with an average decrease of 10% to 15% below its peak.

PERMITTED USES:

The permitted uses of M1 (light industrial) zoning provided by the existing County of Maui Codes allow for services or supplying communities,producing or manufacturing goods as provided under B1, B2, B3, and M1 zoning (see attached Exhibit "A").Current codes also provide for minimum lot sizes, height limitations of improvements and yard requirements. The M1 zoning would be most appropriate for the area with regard to uses, minimum lot size, height limitations and yard requirements; contiguously having similar uses and improvements of the adjacent (Kihei Commercial Center) development.

NEIGHBORHOOD CONDITIONS AND NEEDS:

This Project Assessment Report clearly provides an evaluation of existing conditions in the surrounding area. Further elaboration of the conditions will identify the need of more business/ light industrial land uses in the very near future.

At the extreme south end of the Kihei, Wailea, Makena Community, the high concentration of luxury residences, resort hotels, condominiums, shopping and recreational facilities has developed into a mecca for tourism. North and adjacent to the resort area are single family and multi family dwellings primarily occupied by those who are employed at resort complexes. Continuing in a northerly direction between Piilani Highway and the ocean, there are a mixture of dwellings, mini shopping malls , condominiums (both long term rentals and resort operations) and various small business operations. These residents and small businesses also support or are supported mainly by tourism.

The focal point of South Maui appears to be in the vicinity of Lipoa Street from Piilani Highway to Kihei Road within a half a mile radius from its midpoint. The concentration of activities and development planned for that area are extensive which would require supporting services to be close by.

The proposed Kaonoulu Industrial Park is ideally located to provide such support conveniently for existing requirements in Wailea and Makena; to existing businesses along South Kihei Road; and to support the community for proposed developments planned by the government and private industry.

Northerly of the subject property is a twenty-four (+/-) acre light industrial complex which is approximately two-thirds developed. It is anticipated that the balance of the project will be completely developed within the next year or two. Except for approximately two acres of undeveloped light industrial zoned land along Maalaea Small Boat Harbor, the existing twenty-four acres of light industrial property is the only light industrial development available in South Maui.

South Maui's population is anticipated to expand more than any other region on Maui. Based on population forecasts, Maui can expect an overall 25% population increase from 1990 to the year 2000. South Maui's growth is expected to be nearly 30% during that period.

COMPARATIVE ANALYSIS:

West Maui is an example of a community which requires balancing of needs for goods and services with tourism and the other existing businesses and services within that location. Unlike South Maui, West Maui has agriculture (sugar and pineapple) which it relies upon as a means to support its community. Its also has an airport to provide easy access to and from other neighbor islands.

Exclusive of Pioneer Mill's heavy industrial properties, West Maui has nearly 120 acres of light industrial zoned lands of which approximately 35 acres are presently undeveloped. Preliminary subdivision approval has been granted for the remaining undeveloped 35 acres by the County of Maui. The other developed 85 acres are used for goods and services primarily to support the resort hotels, condominiums and, other related business (i.e. car rentals, warehousing, construction services, auto repairs parts, furniture sales, shopping complex, etc.).

It is being proposed for the present community plan review that additional lands be reclassified and designated for light industrial/business use.

West Maui's current population is slightly less than South Maui's population. Population growth for both regions are expected to be approximately the same. (see Exhibit "B"). To support the expected growth, the West Maui community has expressed its desire to increase the total light industrial lands to approximately 150 acres in order to support the needs in that region.

South Maui having only 24 acres of light industrial property must rely heavily on goods and services to be delivered from Wailuku-Kahului area. This would result in higher cost for goods and services for South Maui residents and businesses, increase in traffic and many other inconveniences for both providers and receivers of these goods and services.

PROJECTED ABSORPTION:

Although the neighboring 24 acres of light industrial development is not fully completed and has a high vacancy rate, it is anticipated that the Kaonoulu Industrial Park will be readily absorbed as it is developed.

There always is a need for leasehold loft and turnkey business spaces throughout the community. There is a need for fee simple properties as well. Currently there are no inventory of fee simple properties in South Maui available for these specific uses (light industrial).

Public records reflect that construction of offices and warehouses in Wailuku and Kahului by owner occupants were prevalent during the last four years. The market for fee simple ownership of business properties continues to rise . Without regard to the economic conditions, values of light industrial zoned properties have not shown any significant decline during the last three years. All other types of property values declined between 20% to 60% within the last three years.

Having a balanced mixture of various lot sizes within the subdivision is important to the marketing strategy. Assuming that comparable values established in Wailuku and Kahului may be used to market the subject parcels (currently estimated at $26 to $35 per square foot), it is necessary to have two-fifths to one-half of the parcels to be of minimum lot sizes or slightly larger. These lots would be purchased by small businesses who have a great desire to remain independent and self-reliant. Very little or no visibility will be required for these businesses. Another group or category of prospective purchasers who have the desire to own property is the owner occupant/investor. To satisfy their needs, approximately a third to two-fifths of the project should contain lots having sizes ranging from 15,000 to 30,000 square feet. These prospective buyers will generally occupy a portion of the property and lease the balance to another establishment. These lots require higher degree of visibility. High visibility areas would also attract free standing businesses (i.e. fast foods, gas stations, etc.).

The third category of occupants are generally long term lessees. These occupants require the best possible visibility advantage from highways and streets. The expectation is that other investors will purchase the land, develop the improvements for multi tenant use and have a long term lease with the occupants. Examples of these occupants are: Discount retailers; auto parts sales; furniture and appliance sales; sportswear and equipment; wholesale food distributors; fast food outlets; etc. Approximately one-fifth of the development should be programmed for these larger lots.

It is expected that with the projected developments for South Maui planned within the next five years, the entire project can be marketed by the year 2000, if all parcels are developed and available for sale by late 1996. The success of marketing these parcels will rely heavily on the economic conditions of Hawaii and more particularly of Maui.

The absorption rate can be expected to be about one-fourth to one-third of the inventory during presales (construction phase); approximately one-half to two-thirds within one year of completion; seventy-five to eighty percent within two years of completion and the balance within eighteen months to two years thereafter.

The success of marketing these parcels will be dependent on the success of obtaining popular and internationally recognized outlets to occupy the larger parcels, the timeliness of the installation of the infrastructure (i.e. highways, schools, etc.), and the prosperity of the tourist related businesses in South Maui. Many businesses located in Wailuku and Kahului will create branches or satellite locations in Kaonoulu Industrial Park for convenience and cost effectiveness.

CONCLUSION :

As generally supported by the Economic Report, (see enclosure) an 88 acre light industrial subdivision would be readily absorbed in the Kihei area by the end of this century provided that the properties are competitively priced and the projected infrastructures are installed. Although there is no data available within the area, it can be assumed that the mean price of improved light industrial properties would be comparable to Wailuku-Kahului at any given time.

In preparation for the proposed improvements planned for South Maui (i.e. increased development of the Research and Technology Park, Upcountry to Kihei Highway, installation of the super computer, expansion of Kihei schools) and the Kahului Airport runway extension, the development of a light industrial subdivision will add significantly to the South Maui community.

The projected increase of residents in the area will also depend on the job opportunities in the vicinity; availability of services (i.e. automotive repair; auto body and fender repair; health services; warehousing and storage facilities; contractors/sub-contractors for home repair and improvements; wholesale distributors; etc.) and ease of transportation. Services relocating and/or branching out to the South

Maui area would alleviate having residents driving into Wailuku-Kahului for such services, thereby, reducing the need for more or wider highways.

RECOMMENDATIONS :

In keeping with the needs of the consumer, it is recommended that the marketing strategy of the developer emphasize a balance of lot sizes which will include affordability of small, independent businesses; lots for medium size businesses and; lots for large businesses which will complement each other. Generally, small business's needs would be limited to the minimum size to make it marketable and economically feasible to purchase/lease, improve and operate from that property. Approximately two-fifths to one-half of the subdivision should contain lots of minimum size or slightly larger. To accommodate the medium size businesses, lot sizes of 15,000 to 30,000 sq. ft. should be installed (another third to two-fifths of the subdivision). The remaining lots of one to three acres in size should be strategically located within the subdivision to allow larger projects to be developed.

These estimates of lot sizes, quantity and values are provided for planning purposes only. It is only one conceptual alternative which meets current market conditions with considerations for economic, social and physical variables. These estimates require reassessments from time to time, and may need to be adjusted accordingly. Any major variable (i.e. location of new highway) may require an alteration of the subdivision's configuration, however, the current requirement for additional light industrial land use in South Maui should not change.

As stated previously by comparison with West Maui, there already is a shortage of light industrial use lands in South Maui, causing imbalances and stress to find alternatives to meet the community's needs. The reclassification of the Kaonoulu land should alleviate the stress and have a positive impact on the community.

To insure some degree of quality control, covenants, conditions and restrictions should be established. Forming an owners' association consisting of an enforcement committee at the beginning of the project would also be of benefit to the development. Experience from other similar projects with similar organizations and covenants have resulted in active involvement by its members and greater concern for the betterment of the project.

EXHIBIT "A"

B-1 NEIGHBORHOOD BUSINESS DISTRICT

Permitted Uses: Within the B-1 district, the following uses shall be permitted:

A. Barber or beauty shops;
B. Baker goods stores;
C. Book, stationery or gift stores;
D. Candy stores;
E. Churches;
F. Day care centers and nurseries;
G. Delicatessen stores;
H. Drugstores;
I. Florist shops;
J. Grocery stores and meat markets;
K. Ice cream or snack counters;
L. Laundromats;
M. Liquor stores (package only);
N. Gasoline retailing, provided it is owned and operated as an adjunct to a neighborhood store; and provided further, that no servicing, repairing, storing, washing, or maintenance of vehicles will be permitted on the premises;
O. Other similar retail businesses or service establishments which supply commodities or perform services primarily for residents of the surrounding neighborhood; provided, however, such uses shall be approved by the commission as conforming to the intent of this title;
P. One single-family dwelling per lot, provided the lot is sufficiently large to prove a lot area six thousand square feet for the dwelling after the area for the business, parking and other accessory areas for the business have been subtracted; or living and sleeping quarters for a single family constructed above the ground floor of the business building.

B-2 COMMUNITY BUSINESS DISTRICT

Permitted Uses: Within the B-2 district, the following uses shall be permitted:

1. Any use permitted in a B-1 neighborhood business district;

however, no living or sleeping quarters shall be permitted in any detached accessory building or structure on the same lot;

2. Amusement enterprises; including billiard or pool halls;
3. Antique shops;
4. Apartment and apartment-hotels;
5. Art galleries;
6. Auctioneer establishments;
7. Auditoriums and theaters;
8. Automobile parking lots and/or buildings;
9. Automobile parts stores;
10. Automobile service stations, with or without auto repairing, provided all auto-repairing operations are conducted in enclosed buildings; and provided further, that tire rebuilding or battery manufacturing shall not be permitted within this district;
11. Automobile upholstery shops;
12. Awning or canvas shops;
13. Banks;
14. Baseball or football stadiums and other sport activities and amusements;
15. Bath houses, commercial (plunge);
16. Baths, Turkish and the like; including masseurs;
17. Block-printing establishments;
18. Bowling alleys;
19. Business offices and agencies;
20. Catering establishments employing not more that five persons;
21. Charity relief organizations;
22. Clinics, medical or dental;
23. Custom dressmaking or millinery shops;
24. Dance halls;
25. Dancing and hula studios;
26. Dressmaking shops;
27. Dry goods and/or department stores;
28. Equipment rental and sales yards;
29. Feed stores;
30. Gymnasiums;
31. Haberdasheries and women's apparel shops;
32. Hardware and garden supply stores;
33. Hotels;
34. Ice cream and milk manufacturing plants employing not

more than twenty-five persons;

35. Jewelry stores or fine arts shops, including interior decorating;

36. Libraries;

37. Marinas;

38. Miniature golf courses;

39. Museums;

40. Music conservatories or music studios;

42. Nurseries (flowers or plants); provided, that all incidental equipment and supplies, including fertilizers and empty cans are kept within enclosed buildings;

43. Nursing and convalescent homes;

44. Parcel delivery stations;

45. Pet shops, not involving the treatment or boarding of animals;

46. Photo studios;

47. Physical culture studios;

48. Plumbing shops within wholly enclosed buildings and employing not more than five persons;

49. Printing, lithography or publishing shops;

50. Private clubs or fraternal organizations;

51. Private schools or business colleges;

52. Professional and financial buildings;

53. Public parking areas;

55. Religious, benevolent, and philanthropic societies;

56. Restaurants, cafes or bars, including drive-ins;

57. Sanitariums;

58. Shoe stores;

59. Sign-painting shops within wholly enclosed buildings and employing not more than five persons;

60. Skating shops;

61. Tailor shops;

62. Trade schools;

63. Used car lots, provided all repair and maintenance is conducted within a wholly enclosed building;

64. Mortuaries, subject to the approval of the commission;

65. Warehouses and yards which are adjunct to, and part of, the operation of the permitted uses listed above may be permitted by the commission, provided such uses are determined to conform to the intent of this article, and subject to such terms and conditions as may be warranted. Such uses shall be conducted wholly within a completely

enclosed building or within an area enclosed on all sides by a solid fence or wall at least six feet in height; and provided, that no goods materials, or objects shall be stacked higher than the fence or walls so erected.

66. Any other retail businesses or commercial enterprises which are similar in character of rendering sales of commodities or performance of services to the community and not detrimental to the welfare of the surrounding area; provided, however, that such uses shall be approved by the commission as conforming to the intent of this article.

B-3 CENTRAL BUSINESS DISTRICT

Permitted Uses: Within the B-3 district, there shall be permitted any use permitted in a B-1 district and B-2 community business district, with the following exceptions:

A. Living or sleeping quarters in any detached accessory buildings or structure on the same lot;
B. Automobile repair shops and garages;
C. Automobile painting or steam cleaning;
D. Automobile upholstery shops;
E. Awning or canvas stores;
F. Equipment rental and sales yards;
G. Hatcheries;
H. Lumber yards;
I. Machine shops;
J. Plumbing shops;
K. Storage buildings and warehouses (separate from main building):
L. Storage yards;
M. Trucking and truck stores;
N. Used car lots.

M-1 LIGHT INDUSTRIAL DISTRICT

Permitted Uses: Within the M-1 district, no building, structure or premises shall be used and no building or structure hereafter erected, structurally altered, replaced, or enlarged except for one or more of the following uses:

1. Any use permitted in a B-1, B-2, or B-3 district; provided,

however, that no building, structure or portion thereof shall be hereafter erected, converted, or moved onto any lot in a M-1 district for dwelling purposes, including hotels and motels, except living quarters used by watchmen or custodians of industrial used property;

2. Animal kennels;

3. Carpet cleaning plants;

4. Cold storage plants;

5. Commercial laundries;

6. Craft, cabinet and furniture manufacturing;

7. Assembly of electrical appliances, radios and phonographs including the manufacture of small parts such as coils, condensers, crystal holders and the like;

8. Farm implement sales and services;

9. General food, fruit and vegetable processing storage;

10. Ice cream and milk producing, manufacturing and storage;

11. Laboratories--experimental, photo or motion picture, film or testing;

12. Light and heavy equipment and product display rooms, storage and service;

13. Machine shop or other metal working shop;

14. The manufacture, compounding or treatment of articles or merchandise from the following previously prepared materials; aluminum, bone, cellophane, canvas, cloth, cork, feathers, felt, fiber, fur, glass, hair, horn, leather, plastics, precious or semi-precious metals or stones, shell, tobacco and wood;

15. The manufacture, compounding, processing, packing or treatment of such products as candy, cosmetics, drugs, perfumes, pharmaceuticals, toiletries, and food products except the rendering or refining of fats and oils;

16. The manufacture, dyeing and printing of cloth fabrics and wearing apparel;

17. The manufacturing of musical instruments, toys, novelties and rubber and metal stamps;

18. Manufacture of pottery and figurines or other similar ceramic products;

19. Milk bottling or central distribution stations;

20. Plumbing shops having more than five employees;

21. Poultry or rabbit slaughter incidental to a retail business on the

same premises;

22. Radio transmitting and television stations; provided, that towers are of the self-sustaining type without guys;

23. Replating shop;

24. Retail lumber yard including mill and sash work, except that mill and sash work shall be conducted within a completely enclosed building;

25. Small boat building;

26. Soda water and soft drink bottling and distribution plants;

27. Tire repair operation including recapping and retreading;

28. Vocational and trade schools giving general instruction as prescribed by the State Department of Education;

29. Warehouse, storage and loft buildings;

30. Wearing apparel manufacturing;

31. Wholesale business, storage buildings; non-explosive goods and warehouses;

32. Apartment houses.

The above uses are to be conducted wholly within a completely enclosed building; or within an area enclosed on all sides except the front of the lot, by a solid fence or wall or cyclone fence at least six feet in height.

E X H I B I T "B"

EXHIBIT R-8.1: POPULATION BY REGION

Forecast Variables	Historical 1990	Projected 1995	1996	2000	2005	2010
J. Population by Region						
Lahaina	14,574	16,593	16,978	18,555	20,337	22,633
Kihel-Makena	15,365	17,658	18,094	19,885	21,908	24,514
Wailuku-Kahului	32,816	36,520	37,225	40,119	43,387	47,597
Makawao-Pukalani-Kula	18,923	20,273	20,530	21,584	22,775	24,310
Paia-Haiku	7,788	8,437	8,561	9,068	9,641	10,379
Hana	1,895	2,034	2,061	2,170	2,293	2,452
Total	91,361	101,516	103,448	111,382	120,342	131,884
K. Average Household Size by Region						
Lahaina	2.99	2.96	2.95	2.93	2.89	2.86
Kihei-Makena	2.59	2.61	2.61	2.62	2.61	2.61
Wailuku-Kahului	3.24	3.18	3.17	3.13	3.08	3.03
Makawao-Pukalani-Kula	3.06	3.04	3.03	3.01	2.99	2.96
Paia-Haiku	3.01	2.98	2.98	2.96	2.94	2.91
Hana	3.22	3.18	3.17	3.14	3.11	3.07
Maui Island	3.02	2.99	2.98	2.96	2.93	2.89

NOTES:

Population by Region = 1990 Population by Region + Population In Incremental Households by Region

Average Household Size by Region = Population by Region / Households by Region

Maui Average Household Size = Total (Population by Region) / Maui Island Households

REFERENCES

County of Maui, 1993, Maui County Codes, (Revised).

Maui Board of Realtors, MLS data, March, 1994.

Community Resources, Inc., Maui Socio-Economic Forecast Study, "Unconstrained Forecast, Maui Island Region Level," 1993.

County of Maui, 1987, Kihei - Makena Community Plan.

County of Maui, 1985, Lahaina Community Plan.

ECONOMIC REPORT

1. Economic impacts: an overview

The State of Hawaii Land Use Commission requires an analysis of "economic impacts of ... proposed development[s] including provision of employment opportunities and relationship to centers of trading and employment." Similar requirements for analysis are imposed by County planners. While the emphasis is on spatial impacts and the potential for external costs or benefits, the Kaonoulu light-industrial project will provide a site for light-industrial activities where virtually none have hitherto existed. Under these circumstances external costs will be minimal and external benefits greater than had substantial light industrial development already been present.

Because the Kihei area will serve as a commercial and industrial hub for development along the southwestern coast from Maalaea to Makena, the Kaonoulu site will emerge as a regional focal point for distribution activity as well as light industrial activities such as automotive repair. Currently these economic activities take place almost exclusively in Wailuku-Kahului. Therefore, one of the more compelling economic reasons for the Kaonoulu development is the reduction in transportation and other transactions costs (for example, time and other costs of *arranging* for an automobile to be delivered and picked-up at a Wailuku-Kahului repair shop) arising from Kaonoulu's proximity.

1.1 Faster growth

In the discussion that follows, many economic projections will implicitly represent *lower bounds* on potential future outcomes because the emergence of Kihei as a separate commercial and industrial center from the traditional Wailuku-Kahului center will involve more rapid initial growth than is characterized by the ratios, drawn from historical patterns characteristic of Wailuku-Kahului, that are applied to population and housing forecasts for the Kihei area. Patterns such as the number of businesses, residents and households characteristic of Maui County in the past are more representative of mature communities like the Wailuku-Kahului area than emerging communities like the Kihei area. Moreover, population projections through the year 2010 suggest that Kihei has reached a size at which it has entered a crucial development phase: businesses will increasingly prefer to locate in Kihei rather than in Maui's urban core. This is especially true for distribution and light industrial activities, which depend on proximity to end-user markets to keep costs at competitive levels.

A large initial investment in commercial and industrial infrastructure such as potential development sites (e.g. Kaonoulu) is a prerequisite for subsequent commercial and industrial development in the Kihei area. This is true for two reasons. First, the incremental costs of piecemeal provision of such infrastructure over time will be higher, in present value terms, than the lump sum cost of early provision, since adjustment costs are convex (the cost of physical capital investments increases at an increasing rate with the scale of the investment). Second, the cost of real estate will almost certainly rise faster than other costs of development (financing, materials, labor) over time, given Kihei's status as a resort community. Thus, costs will be minimized, in the long-run, by developing the entire 88-acre Kaonoulu site initially rather than phasing-in site development over the next two decades.

1.2 Cyclical considerations

Another theme presented in what follows is the recognition that, as a result of the business cycle, the second half of the 1990s is more likely to represent an above trend growth phase for the Kihei region than the first half of the 1990s has. This is the result of the combined cyclical downturns of construction and tourism in the earlier period and the excess capacity, particularly in the visitor plant (hotel rooms and condominiums and other transient rental housing units) that is a legacy of the late-1980s building boom.

Long-term trends for the Kihei area are identified in County planning documents and projections as comparatively strong. Cycling around that trend, economic activity during the remainder of the decade will gradually transcend the current, recession-induced below-trend performance and enter an acceleration period marked by the rapid absorption of excess capacity in the visitor plant, housing and urbanization, and the derived demand for commercial activities and, via backward linkages, to distribution and light industrial activities. Economic activity in the Kihei area will gradually cycle above trend in the near future and this provides an additional motivation to provide the commercial and light-industrial infrastructure that the Kaonoulu development represents. The alternative of too slow infrastructural development will impose cost and other constraints on accelerating economic activity arising from distribution and other bottlenecks.

2. Projected business requirements

Spotty data from previous censuses of industries makes it difficult to project the Kihei area's future business environment, but the historical data do provide glimpses of Maui County as a whole from which some conjectures can be drawn. As noted above existing data tend to be dominated by characteristics of the Wailuku-Kahului area and, especially for more recent years' data, represent a potential *underestimate* of likely outcomes for the Kihei area. Kihei will rapidly evolve from a satellite resort community without its own distribution and light industrial center and reliant on the urban core for these economic activities, to a more free-standing community with many of those activities located within the Kihei area, if allowed to do so through proper planning and implementation of sufficient industrial land use.

2.1 Business patterns

During the 1950s and 1960s, Maui County experienced a stagnation holding few hints of the rapid development that was to occur in the 1970s and 1980s. The number of business establishments *declined* from just under 500 to little more than 400 between 1950 and 1960, rising gradually to nearly 800 by 1970 and then more than doubling in the subsequent decades to nearly 1,900 by 1980 and more than 3,000 by 1990. Growth from virtually nothing in Kihei to virtually any level will inevitably exceed growth in a more mature area like Wailuku-Kahului.

In the censuses of wholesale industries the number of wholesale establishments rose from 53 in 1967 to 87 in 1972, 95 in 1977, 110 in 1982 and 157 in 1987.[1] Employment in these establishments rose from just over 380 persons in 1967 to more than 1,200 in 1987, a three-fold increase. However, just 3 such establishments employing 7 persons were identified in Kihei during the 1987 census of wholesale trade. Business and residents of

[1]Census of industry data from 1992 are to be released in 1994

Kihei faced the higher transportation and transactions costs associated with distribution from the urban center than their counterparts in the urban center primarily because the Kihei area had not grown to a sufficient critical minimum size to justify regional investments in these activities, and because no appropriately zoned sites existed in Kihei.

Similarly, in the censuses of services industries 109 establishments with payrolls were identified in the 1967 census, employing 1,469 persons. By 1987, there were 725 such establishments employing 12,469, representing the even more dramatic growth of services-producing industries during the two decades. The number of automotive repair and services establishments reached 70 in 1987, employing 741 persons, up from 37 establishments and 215 employed in 1972, the first year for which two-digit SIC (standard industrial classification) data are available for Maui County. County-wide, other services establishments in 1987 included personal services, 66 establishments employing 449; business services, 110 establishments employing 727; non-automobile repair services, 28 establishments employing 116, among others, many of which classes of services would be potential tenants at the Kaonoulu site. The 1987 census identified only 66 non-financial services industries establishments in Kihei employing 369, of which only 10 offered business services, 5 personal services, 2 automotive repair services, and no non-automotive repair services.

2.2 Establishments per household and resident

In addition to the business growth identified above, another factor at work compounded the effects of simple economic expansion. Since statehood the ratios of business establishments per household and business establishments per resident in Maui County have been rising: business formation (the numerator) has outstripped household formation or resident population growth (the denominator) in the three decades since statehood. This has occurred for two reasons. First, tourism emerged as a dominant export activity, with its dependence on servicing a large nonresident but physically present de facto population (represented by the average daily visitor census). This augmented household demand for the goods and services produced by Maui business establishments. Second, the expansion of business opportunities to a wider variety of nontraditional participants, such as women, and the growth of small business opportunities outstripped the opportunities available for large, monolithic and traditional business entities like the plantations.

Thus, from 0.0324 business establishments per household in Maui County during the 1960s, the ratio rose to 0.0556 in 1970, 0.0655 in 1980 and 0.0985 in 1990. That is, the ratio of business establishments to households tripled in the three decades after statehood. The ratios of business establishments to residents rose from 0.0097 in 1960 to 0.0323 in 1990, a similar multiple.

2.3 Some Kihei projections

Based on the County's recent long-range projections, these ratios would imply a notional business total of between 5,700-5,900 business establishments County-wide in the year 2000 and between 9,300-9,900 establishments in the year 2010.[2]

[2] If one regresses the natural logarithm of establishment counts on a time index, the resulting forecast business establishment totals for 2000 and 2010 are even higher: approximately 6,900 and 14,000

As an indication of the kind of derived demand for the Kaonoulu project that these forecasts imply, the same methods yield a projected 228-229 wholesale establishments in 2000 and 313-345 wholesale establishments in 2010, up from 157 in 1990. Presumably not all of these establishments will be located in the urban core, indeed, it is the hypothesis here that a disproportionately large share of the increment will occur in the Kihei area, in West Maui and Upcountry.

However, even under the conservative assumption that historical ratios persist there would be a demand for as many as 36-44 such establishments in Kihei by 2000 and 53-68 such establishments in 2010. Given that only 3 establishments were identified in the 1987 census of wholesale trade, these projections suggest that the pent-up demand alone for distribution (and by inference, light industrial) sites in Kihei area would generate rapid initial absorption of such sites, were they to be provided in sufficient numbers during the remainder of this decade. Future absorption, beyond the pent-up demand, would similarly have a large initial incremental requirement as distributors position themselves to supply the Kihei area's subsequent growth.

These rapid absorption projections would still be reasonable even if the Wailuku-Kahului area continued to dominate wholesale (and light industrial) establishment formation in the next two decades, because those new establishments locating in Kihei would enjoy an even greater competitive advantage arising from spatial proximity than would be the case if their regional peer group were larger. The fewer new establishments forming in Kihei under this alternative scenario would enjoy larger investment returns, at the margin, the faster they entered and the more rapidly they secured market share in the Kihei area.

3. Complementary factors

These projections are predicated only on the housing and resident population projections adopted for Maui County planning purposes. Several other aspects of development on Maui and in the Kihei area should complement the trends identified above.

3.1 Emergent opportunities

While the population and housing projections, and the associated employment projections, embodied in the County planning assumptions provide a forecast basis on "flow" assumptions--the flows of new residents and housing units associated with Kihei's anticipated growth, they inadequately characterize some "stock adjustment" factors that could potentially give rise to discrete jumps in the derived demand for distribution and light industrial sites at the Kaonoulu development. That is, discrete changes in the economic environment along the trends embodied in the planning assumptions could enhance the demand for the Kaonoulu project.

For example, the construction of a high school in the Kihei area, like the more recent construction of several large resort hotels (despite their initially low occupancy rates) creates a discrete jump in the demand for the services of suppliers of materials and a variety of business services, including repair and maintenance, management and

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respectively. The projections in the text are predicated on households numbering just over 42,000 in 2000 and just over 50,000 in 2010, and on residents numbering 124,500 in 2000 and 145,900 in 2010.

accounting, etc., that is not embodied in the "smooth" nature of the long-run projections. The absorption of the existing excess visitor plant represented by anticipated rising hotel occupancy rates during the remainder of the 1990s is such a smooth flow. But the lumpy nature of future investments in schools, hotels, and other physical capital investments in the Kihei area will be a future source of demand pulses for the distribution and light industrial activities targeted at Kaonoulu.

Other discrete changes looming in Maui's future include the construction of an Upcountry highway linking Kihei with Upcountry Maui. As a bedroom community and as a distinct, diversified agricultural production area, Upcountry Maui has been primarily dependent on a single transportation link to Wailuku-Kahului. A new Upcountry highway will provide a secondary source of derived demand for distribution and light industrial activities located at the Kaonoulu site, particularly because of the site's location near the northern end of Kihei.

A third discrete jump in demand could arise from the lengthening of the runways at Kahului airport and the emergence of the airport as a destination for direct air travel both from North America and from Asia, in the event that international arrivals and departures someday become part of the airport's capabilities. Opening the airport to direct departures, in particular, to overseas destinations will overcome an obstacle not removed by the existing arrivals capability, and will enhance air transportation links for exports critically dependent on short time windows for delivery and sensitive to transshipment delays out of Honolulu.

The growth of technology-driven business at the nearby Maui Research & Technology Park, marked by the recent siting of a supercomputer facility at the Park, will add another potential stimulus to demand for Kaonoulu's offerings.

3.2 The business cycle: history

As noted in the overview, the nature of Maui's recent business cycle provides a compelling reason for an expectation of faster than average economic growth in the latter half of the 1990s. Two ways to view the recent cycle are to examine the performance of the construction and tourism sectors, which are important drivers for the Maui's overall economic cycle. Construction has a comparatively small share of gross county product or value-added, but its relatively volatile nature--the fact that the construction cycle has greater amplitude than other components of gross value-added--contributes disproportionately to the overall economic cycle. Tourism, in contrast, has a greater share of output but a cycle of smaller amplitude. However, as Maui's principal export sector, tourism is a channel of transmission for economic disturbances and cycles from outside the Maui economy, such as those emanating from the U.S. mainland and Japan.

Maui's recent construction cycle is well-pronounced. The value of private building permits issued for construction in Maui County surged from just over \$150 million in 1986 to a peak of over \$400 million in 1990, falling to \$200 million in 1992, the apparent trough of the current private building cycle. Government construction contracts for projects on Maui rose from less than \$100 million in the mid-1980s to \$188 million in 1990 and \$170 million in 1992, but are expected to pull back from those levels in the mid-1990s as fiscal pressures are brought to bear on government budgets. Construction employment in Maui County rose from 1,250 in 1985 to 3,200 in 1991, but declined to

2,500 in 1993. The number of housing units authorized for construction was less than 600 in 1983, surged to nearly 2,500 in 1988, and fell below 1,000 in 1993.

Overbuilding during the late-1980s boom was particularly excessive in the hotel sector, but by 1993 long-run trends in Maui's visitor plant had reached the actual room counts, which had surged above trend in the late-1980s. Despite the growth in tourism on Maui during the late-1980s, from 1.8 million visitors in 1984 to a peak of 2.4 million visitors in 1990, hotel occupancy island-wide declined from over 80 percent to under 65 percent during the same years. Maui's visitor plant swelled from 12,750 rooms to nearly 18,500, more than one-third of which are concentrated in the Kihei area.

3.3 The business cycle: prognosis

The hotel building boom provided a foundation for future tourism growth. However, the existing light industrial capacity in the Kihei area will force future growth to rely on the more distant Wailuku-Kahului area without the Kaonoulu development. Under the existing County plans, under which near-term new hotel construction in the region will be virtually nil, absorption of the existing underutilized room inventory will require the goods and services of support industries such as those planned for Kaonoulu. Tourism's recovery on Maui is already evident in the arrivals data: the number of visitors to Hawaii destined for Maui only has been increasing at annual rates of as much as 10 percent *during the recession*. Eastbound visitors, outnumbered nearly 4 to 1 by the westbound counterparts in recent years, are growing in number and bucked the trend in 1992 and 1993 by increasing, after the decline associated with the Persian Gulf War in 1991. As a medium-term prospect the emerging eastbound visitor segment has only begun to be cultivated by Maui's tourism sectors.

As global economic stagnation is replaced by global economic recovery in the second half of the 1990s, Maui will again shift to above trend growth both in tourism and in other segments of the economy. Construction, for example, should emerge from its cyclical trough after 1995. Both diversified agriculture and, in contrast to operations elsewhere in the state, plantation agriculture enjoy comparatively secure positions in the Maui economy. Maui is not nearly as vulnerable as Oahu to defense cutbacks. With the recession itself receding into history, expanding Kihei's light industrial infrastructure seems warranted.

Evidence of Maui County's economic turnaround is already emerging. In 1993, total taxable transactions increased 2.7 percent after inflation for the first increase since 1990; in 1991 transactions fell 6.2 percent, and in 1992 4.4 percent, after inflation. A particularly sharp resurgence in real retail sales was registered, rising 9.8 percent in 1993 after falling 17.3 percent in 1991 and 4.3 percent in 1992, after inflation. Moreover, most of the economic growth captured in these statistics occurred in the latter quarters of 1993. For example, Maui County's year-over-year increases in total taxable transactions, after inflation, were posted at 0.9 percent in the first quarter of 1993, 1.6 percent in the second quarter, 2.3 percent in the third quarter, and 3.5 percent in the fourth quarter of 1993. This reacceleration of transactions activity provides a clear signal of economic recovery.

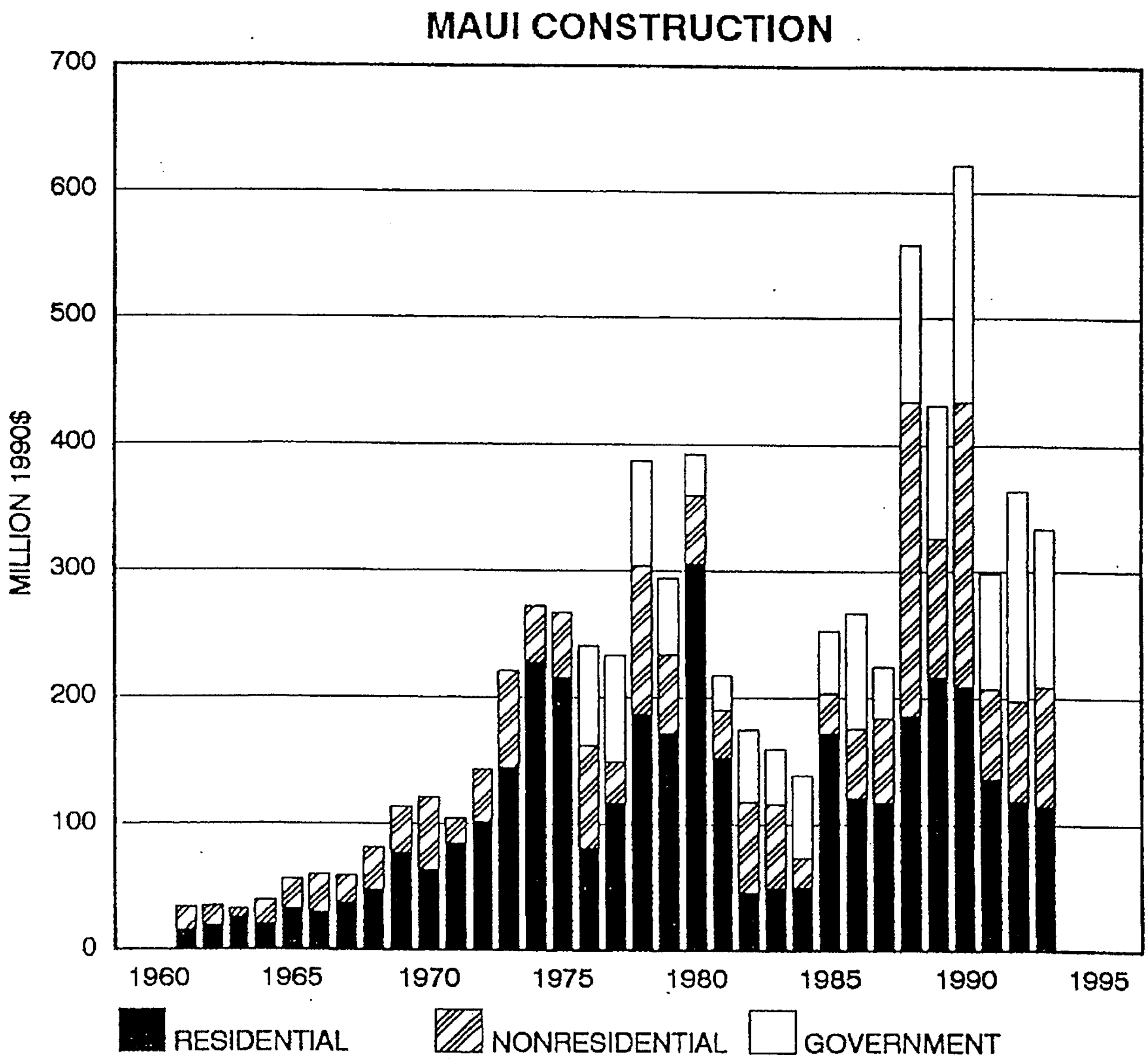
4. Multiplier effects

While it is generally anticipated that Maui's growth in the remainder of the 1990s will fall short of its torrid pace of the 1970s and 1980s, growth in the Kihei area will outpace that elsewhere in the County. Under these circumstances, given the expectation of above trend growth for much of the remainder of the decade, and with the prospect of impulse effects noted in section 3.1 above, demand for the light industrial infrastructure that Kaonoulu will provide is assured.

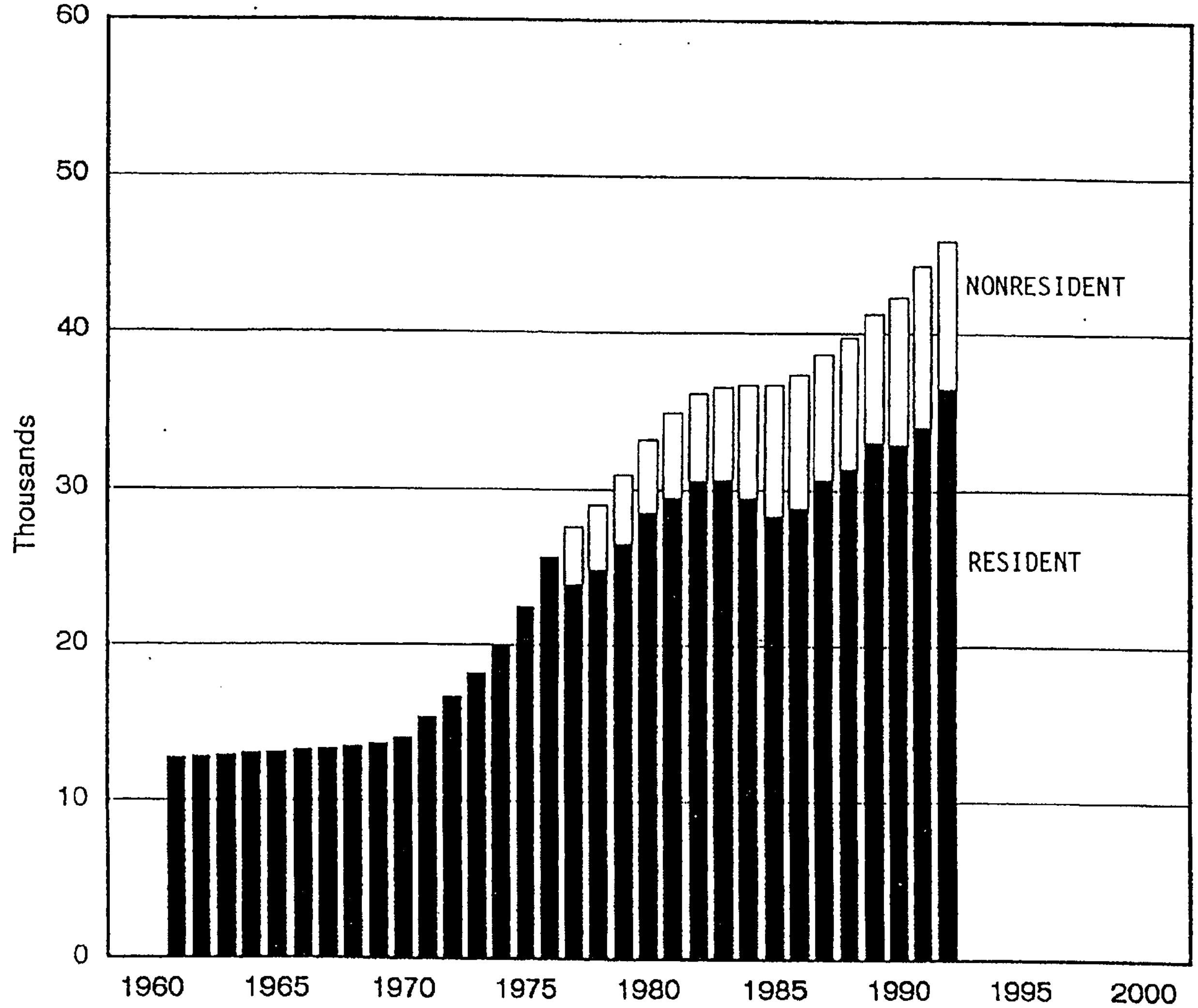
In turn, by siting a light industrial development at Kaonoulu, in proximity to the Research & Technology Park and existing commercial and industrial establishments, on Piilani Highway and the prospective terminus of the proposed Upcountry highway, the potential for sales and employment multiplier impacts from business establishment formation at Kaonoulu on the greater Kihei area is great. For one thing, as a growing community Kihei can draw on resources from other parts of the state, labor and capital, to enjoy the full impact of input-output multipliers as they are commonly applied.[3]

Generally speaking, the kinds of establishments targeted for the Kaonoulu development have output (sales) multipliers in the neighborhood of 2.0-2.5, meaning that firms that locate at Kaonoulu will in turn generate two to two-and-a-half times as much final output (in the gross county product sense) as they themselves produce. Similarly, firms likely to locate at Kaonoulu will have employment multipliers ranging from 1.7-2.4, meaning that, again, roughly twice as much overall employment will be generated by firms locating at Kaonoulu than those firms themselves generate. The distribution of these effects on other sectors will depend on the exact mix of establishments locating at Kaonoulu.

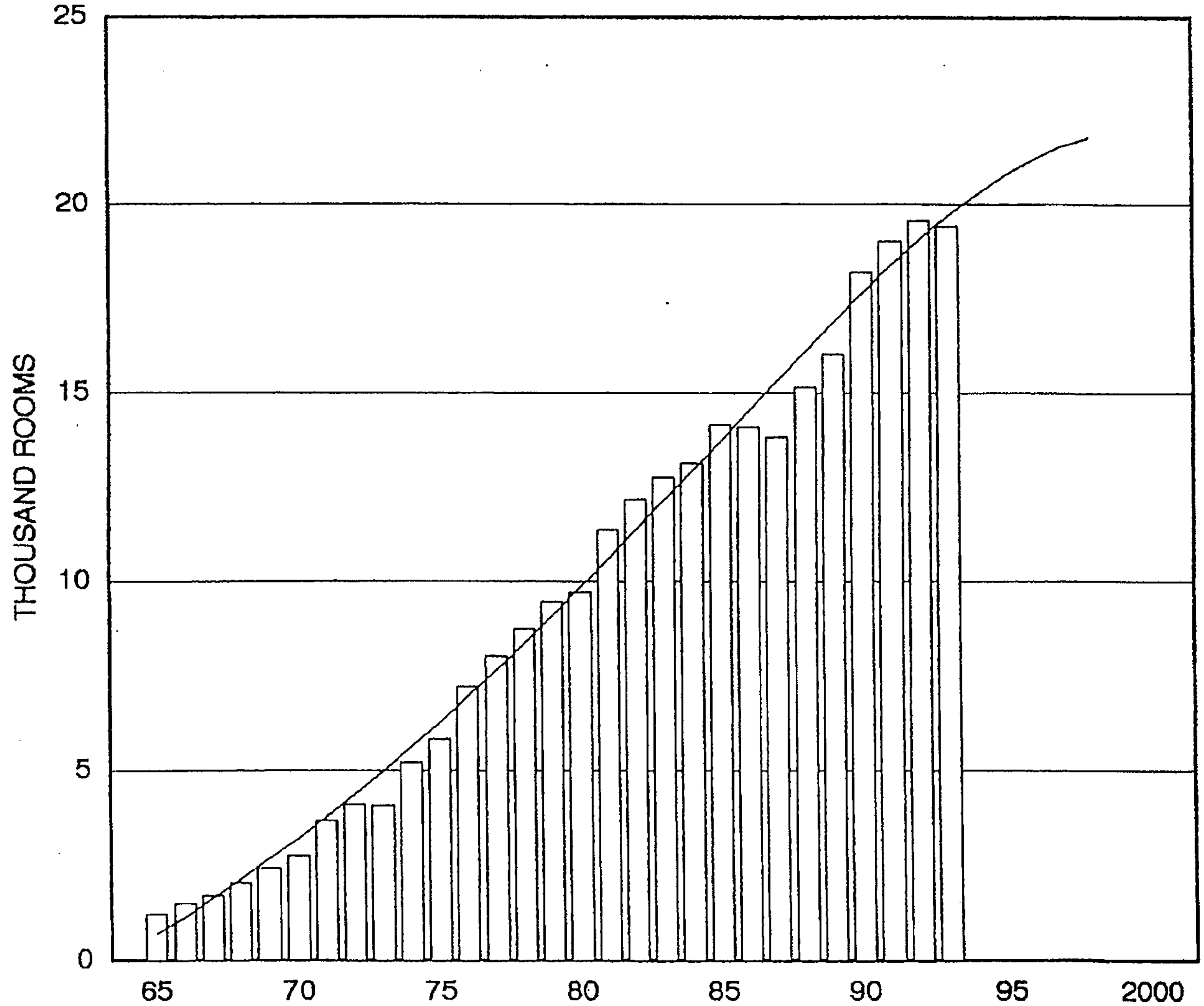
[3]Input-output multipliers are frequently cited to describe the impact of an increase in sales in one industry on sales or employment in the economy as a whole. Generally, industries with greater backward- and forward-linkages to other industries have the greatest impact on other industries and, as a result, have the highest input-output multipliers associated with them. Conceptually, for the full multiplier effects to be felt, an economy (or a regional economy like Kihei's) must not be resource-constrained, since the multiplier relies on "fixed-coefficients" in production to generate the predicted effects. Kihei, as a growing community, is ideally suited for the application of this analytical concept.

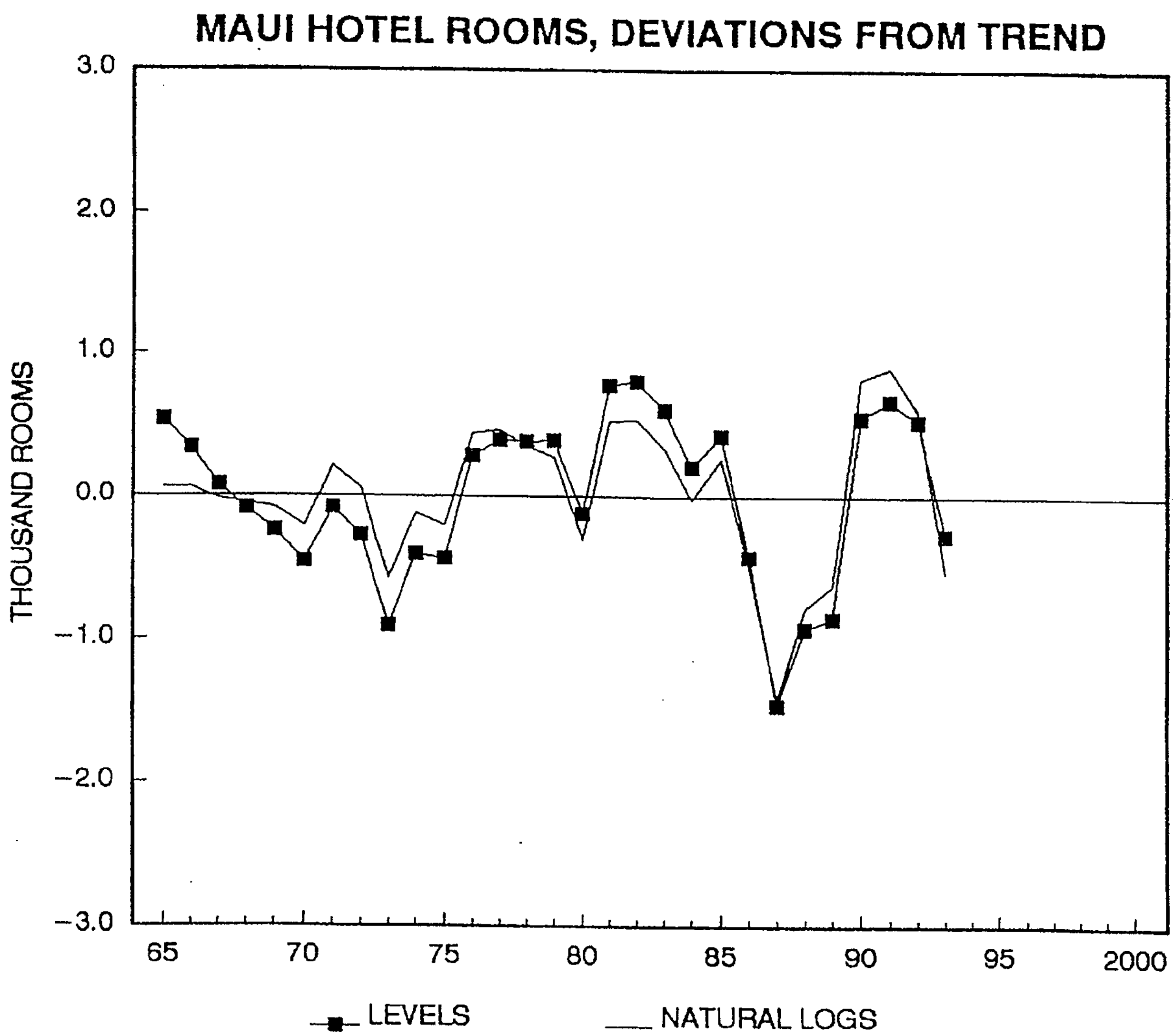

MAUI CONSTRUCTION
MILLION 1990$
700
600
500
400
300
200
100
0
1960
1965
1970
1975
1980
1985
1990
1995
RESIDENTIAL
NONRESIDENTIAL
GOVERNMENT

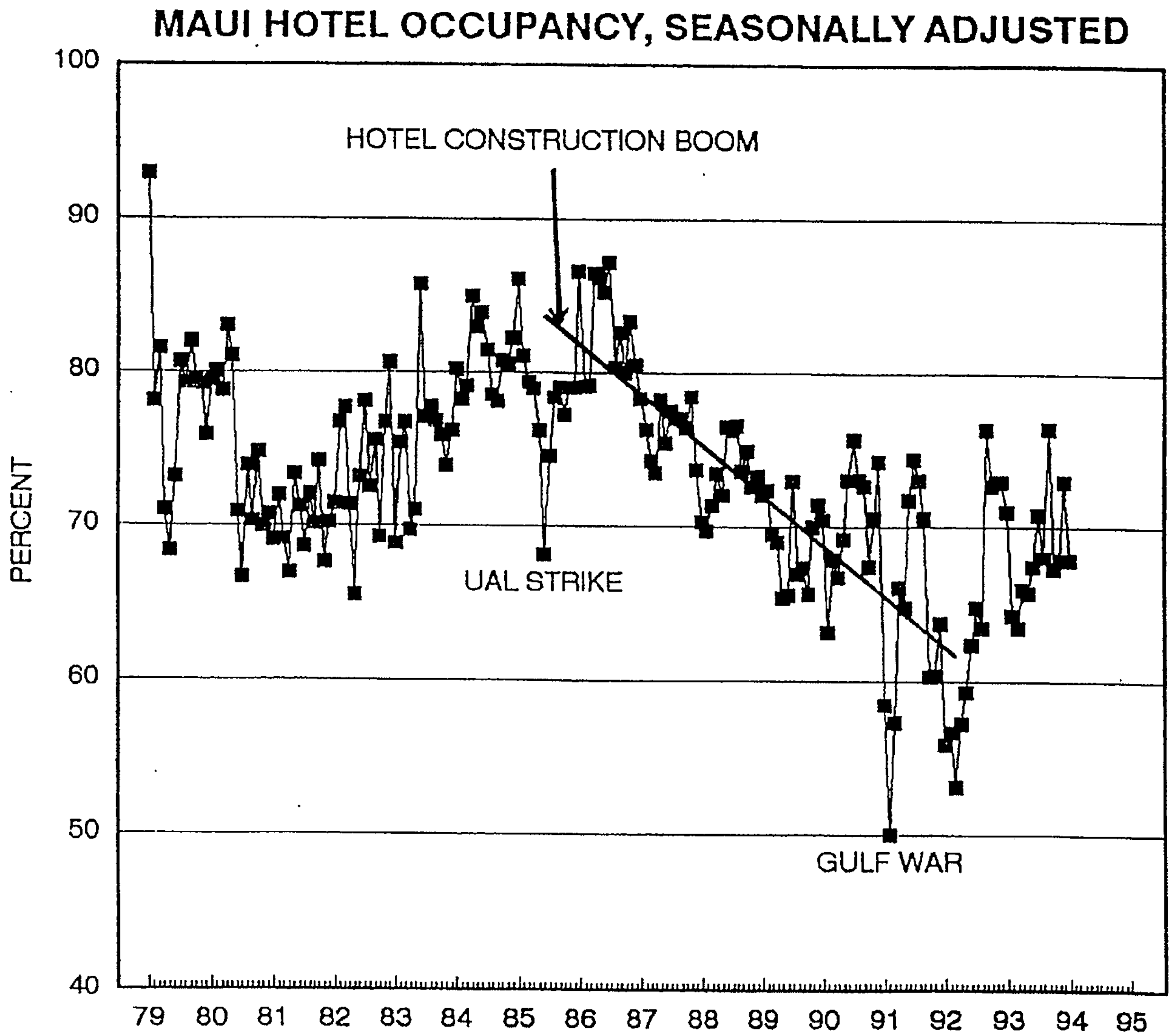
MAUI HOUSING STOCK



MAUI HOTEL ROOMS




MAUI HOTEL ROOMS, DEVIATIONS FROM TREND
THOUSAND ROOMS
3.0
2.0
1.0
0.0
−1.0
−2.0
−3.0
65
70
75
80
85
90
95
2000
LEVELS
NATURAL LOGS


MAUI HOTEL OCCUPANCY, SEASONALLY ADJUSTED
100
90
80
70
60
50
40
PERCENT
HOTEL CONSTRUCTION BOOM
UAL STRIKE
GULF WAR
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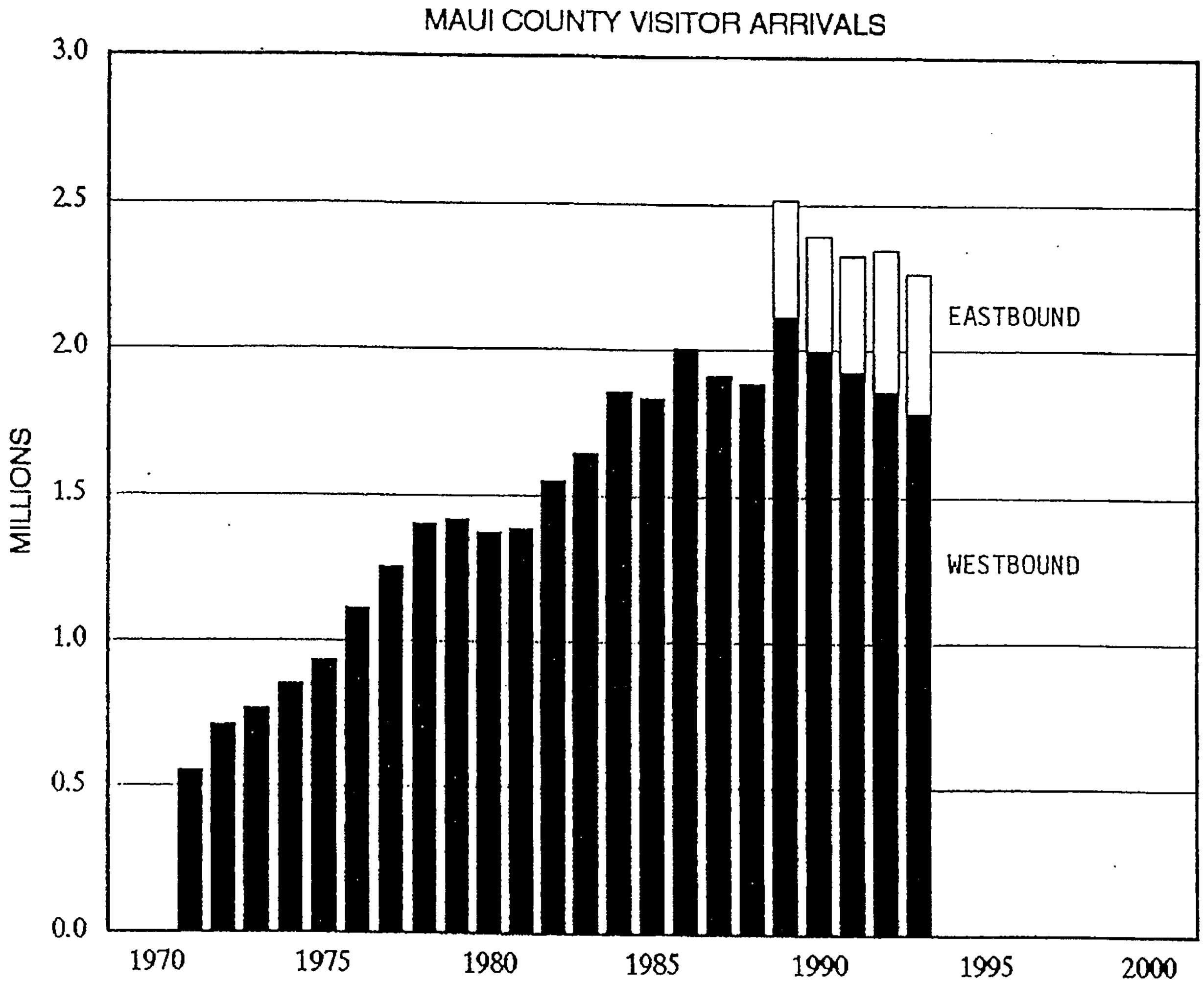
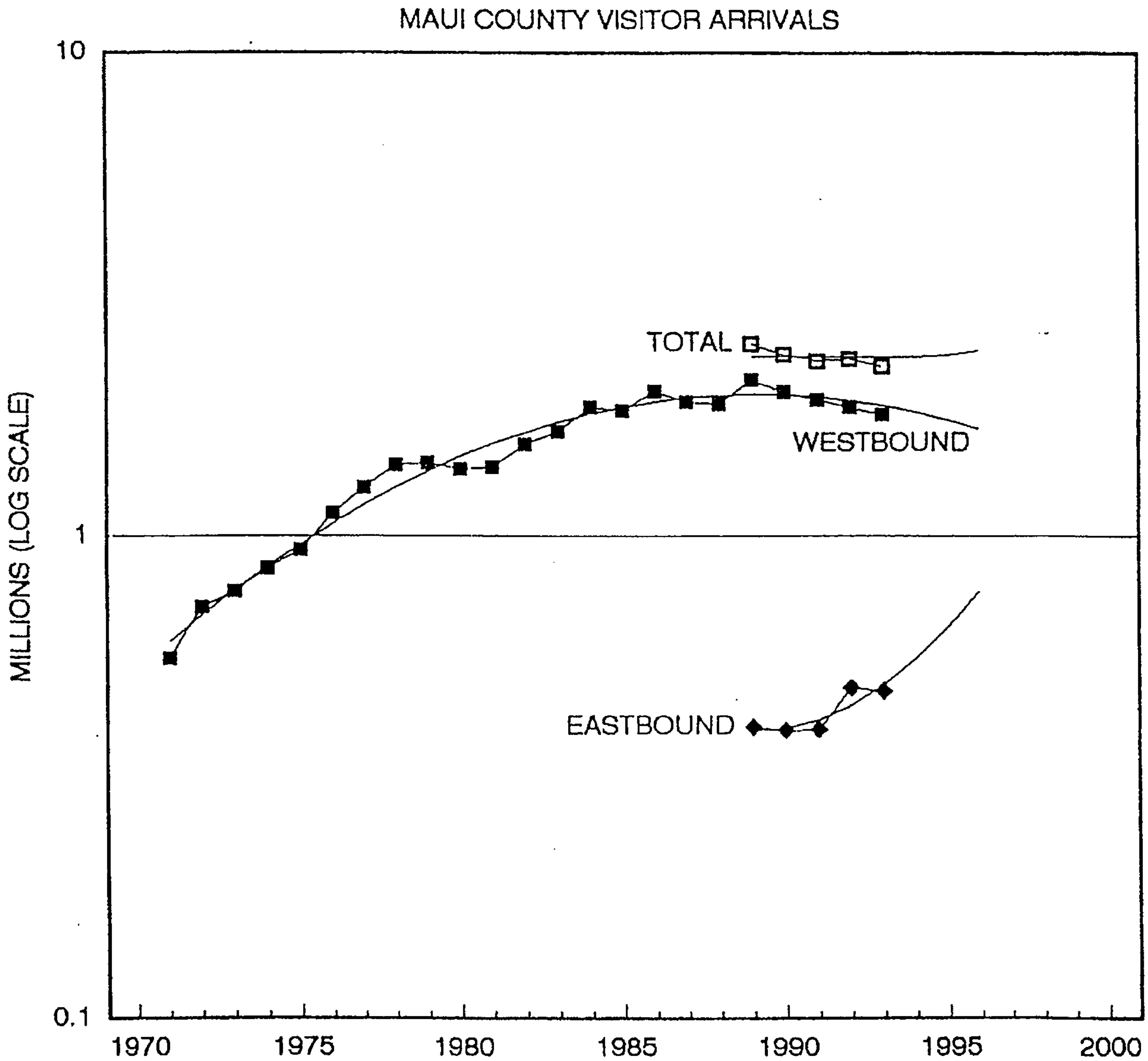


MAUI COUNTY VISITOR ARRIVALS
3.0
2.5
2.0
1.5
1.0
0.5
0.0
MILLIONS
EASTBOUND
WESTBOUND
1970
1975
1980
1985
1990
1995
2000



SECOND-ORDER POLYNOMIAL TRENDS SHOWN; EVEN IN UNLIKELY CASE THAT GROWTH IN WESTBOUND ARRIVALS DOES NOT RETURN TO PRE-RECESSION PATTERNS, GROWTH IN EASTBOUND ARRIVALS COULD STABILIZE COUNTS AND RETURN TOTAL TO AN UPWARD TREND. MORE LIKELY: WESTBOUND COUNTS WILL REBOUND AS THEY DID IN THE AFTERMATH OF THE EARLY 1980s RECESSION.