Infrastructure and Public Facilities Needs Assessment:

Impact Fee Study

prepared for

County of Hawai'i
Planning Department

prepared by
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in association with
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September 2006

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EXECUTIVE SUMMARY

This study calculates the maximum impact fees that the County of Hawai'i could charge based on the existing levels of service for roads, park and recreation facilities, fire/emergency medical service (EMS) equipment and facilities, police equipment and facilities, residential solid waste facilities and equipment and wastewater facilities.

Overview of the Project

The County of Hawai'i Planning Department contracted with Helber Hastert and Fee to conduct an Infrastructure and Public Facilities Needs Assessment (IPFNA) study and draft ordinance. Helber Hastert & Fee subcontracted with Duncan Associates, impact fee experts of Austin, Texas, and Alice Moon and Co., a community and public relations firm of Hilo, Hawai'i to achieve the project outcomes. Funding was provided by the Hawai'i County Council.

The Infrastructure and Public Facility Needs Assessment project was divided into two phases. The first phase focused on policy analysis, and the second phase focused on implementation.

The first phase of this project was a policy analysis that culminated in the preparation of an *Ordinance Issues Memorandum* (October 2005) and a *Policy Analysis Memorandum* (January 2006). The first phase also included an extensive public participation process, including November 2005 focus groups in Hilo and Kona, a January 2006 video conference with participants in Kona, Hilo and Honolulu, and March 2006 workshops in Hilo and Kona.

This report represents one of two major work products of the second, implementation phase of the project. This report provides the detailed analysis and calculations needed to support the adoption of an impact fee ordinance. It also summarizes the major policy recommendations resulting from the first phase. The other major work product of this phase is a draft ordinance, which is provided separately.

Organization of the Report

This **Executive Summary** begins the report. It summarizes the policy recommendations for both this study and the ordinance, the maximum impact fees that could be adopted by the County Council, the revenue that could be generated if the fees are adopted at the full amount, and a comparison of impact fee amounts calculated for Hawai'i County with the current fair share assessments and average fees charged by jurisdictions on the mainland.

The remainder of the report is divided into three parts. **Part I: Policy Analysis** includes five chapters: Introduction, Legal Framework, Policy Issues, Agency and Public Participation and Next Steps/Implementation. **Part II: Impact Fee Calculations** consists of six chapters devoted to Roads, Parks, Fire/EMS, Police, Solid Waste and Wastewater facilities. **Part III: Appendices** contains additional detail on the legal framework, public participation and impact fee calculations, as well as a glossary of terms and answers to frequently asked questions about impact fees.

Part I: Policy Analysis begins with **Chapter 1: Introduction**. It summarizes the current fair share assessment system that would be replaced by impact fees. This chapter also describes growth trends on the Big Island.

Chapter 2: Legal Framework follows. This chapter describes the specific requirements of the State impact fee enabling act. It also explains the fundamental principles that govern impact fees. These principles guide the recommendations to base the impact fees on the existing levels of service, and to reduce the fees to account for other revenues that will be generated by new development and used to provide the same level of service that the fees are intended to provide.

Chapter 3: Policy Issues summarizes the public participation process and the recommendations on major issues that came out of the first phase of the project. The policy issues deal primarily with how to structure the impact fee ordinance, rather than with the impact fee study that is the major focus of this report.

Chapter 4: Agency and Public Participation describes the participation of County and State agency staff in providing data and input and the outreach efforts used to engage the public.

Chapter 5: Lessons Learned describes some of the lessons learned during the agency and public sessions.

Chapter 6: Next Steps/Implementation outlines action items if impact fees are not adopted, and other action items if impact fees are adopted.

Part II: Impact Fee Calculations contains the remaining chapters of the report, which calculate the net cost to accommodate new development at the existing level of service for each of the following facility types: **Chapter 7: Roads**, **Chapter 8: Parks and Recreation**, **Chapter 9: Fire/EMS**, **Chapter 10: Police**, **Chapter 11: Solid Waste** and **Chapter 12: Wastewater**.

Policy Recommendations

Based on the analysis conducted for Phase I, the County should consider replacing its fair share assessments with a true impact fee system that follows the requirements of the State impact fee enabling act. An impact fee collected from all new development would be more legally defensible, more equitable and generate significantly more revenue than the current "fair share" system. This additional revenue would translate into capital improvements that would benefit all fee payers.

1. **Treatment of Existing Lots.** The concern about how to treat existing lots is rooted in a concern about affordable housing. It is recommend that affordable housing be addressed separately, with no special treatment of existing lots.

2. **Affordable Housing.** It is important to mitigate the effects of impact fees on lower-income residents. Therefore, impact fees for affordable housing projects (e.g., Habitat for Humanity or self-help housing) should be paid by the County from other funding sources. To promote housing affordability more generally, the County could provide grants or loans to eligible homebuyers at closing to cover the amount of the impact fees paid on the home.

3. **Progressive Residential Fees.** This report presents the option of progressive single-family fees that vary by the size of the dwelling as one way to address the affordability issue. However, this option will not be available if the County decides to collect fees for new single-family lots at the time of subdivision approval, since the size of the unit will not be known at that time.

4. **Time of Collection.** To promote the provision of infrastructure concurrent with the impact of development, the County could establish a two-tier system and collect impact fees from new single-family residential development at the time of final subdivision approval. Other types of development (commercial, industrial), including existing lots subdivided prior to the effective date of the impact fee ordinance, would pay impact fees at the time the building permit is issued.

5. **Assessment and Benefit Districts.** It is recommended that all of the proposed impact fees be calculated county-wide, and that the county be divided into four benefit districts for most of the proposed impact fees. To facilitate projects of regional benefit, it is recommended that the County allow up to 20 percent of the impact fees (40 percent for solid waste fees) collected in any district to be used for projects located outside the district, provided that significant benefit will be provided to new development in the district in which the fees were collected.

6. **Pre-Ordinance Credits.** If developers have paid fair share assessments or made in-kind contributions for projects that have not been completed, impact fees should be reduced or eliminated for any remaining development in those projects.

7. **Post-Ordinance Reimbursements.** If developers are required, or agree, to dedicate land or make eligible improvements for impact fee facilities after the effective date of the ordinance, they should be reimbursed from impact fees for the value of those improvements.

8. **Phase-in Period.** The phase-in period provides the public with notice that impact fees are forthcoming. It also gives the County administration time to develop administrative procedures to implement the ordinance. The recommended effective date of the impact fee ordinance is one year after the adoption date. During the one-year phase-in period, the fair share assessments would continue to be in effect.

9. **Maximum Fees.** The County can charge any percentage of the maximum fees calculated in this report, up to 100 percent, as long as the same percentage is applied to all land use categories. The percentage of the maximum fees charged could vary by benefit district. With the exception of solid waste fees, which have a large county-wide component (the landfill), individual fees could be charged in some districts but not others.

Impact Fee Summary

The maximum potential fees calculated in this report for all six facilities and all land use types are presented in Table 1. All fees represent the maximum impact fee calculated based on the existing county-wide level of service and should be assessed through a uniform county-wide fee. The maximum road fee shown in this table does not include State roads–the County has the option to charge a maximum fee with State roads included. If State road costs are included, the road fees would be much higher. The County can charge less than 100 percent of the full amount that could be charged, as long as the fees are reduced proportionately for all land use types. For new single-family homes, the County has the option of charging a flat rate for all single-family homes, or charging fees that vary between six dwelling unit size categories based on living area.

Table 1
POTENTIAL IMPACT FEE SUMMARY

Land Use Type	Unit of Measurement	Roads*	Parks	Fire/ EMS	Police	Solid Waste	Waste-water**	Total
Less than 1,000 sq. ft.	Dwelling	$4,190	$6,369	$533	$637	$235	$3,672	$15,637
1,000 - 1,499 sq. ft.	Dwelling	$4,758	$6,763	$566	$677	$250	$3,899	$16,912
1,500 - 1,999 sq. ft.	Dwelling	$4,979	$7,026	$582	$696	$257	$4,050	$17,590
2,000 - 2,999 sq. ft.	Dwelling	$5,232	$7,420	$621	$742	$274	$4,277	$18,566
3,000 - 3,999 sq. ft.	Dwelling	$5,481	$7,879	$659	$788	$291	$4,542	$19,640
4,000 sq. ft or more	Dwelling	$5,675	$8,404	$703	$841	$310	$4,845	$20,778
Single-Family (flat rate)	Dwelling	$4,758	$6,566	$549	$657	$242	$3,785	$16,557
Multi-Family	Dwelling	$3,338	$5,187	$429	$512	$0	$2,990	$12,456
Hotel/Motel	Room	$4,767	$3,086	$258	$309	$0	$1,779	$10,199
Retail/Commercial	1,000 sq. ft.	$8,114	$0	$830	$992	$0	$606	$10,541
Office	1,000 sq. ft.	$6,187	$0	$467	$558	$0	$606	$7,817
Industrial	1,000 sq. ft.	$3,909	$0	$291	$348	$0	$606	$5,154
Warehouse	1,000 sq. ft.	$2,287	$0	$187	$223	$0	$606	$3,302
Church/Synagogue	1,000 sq. ft.	$3,121	$0	$467	$558	$0	$606	$4,752
Elem./Sec. School	1,000 sq. ft.	$1,134	$0	$467	$558	$0	$606	$2,765
Hospital	1,000 sq. ft.	$9,875	$0	$467	$558	$0	$606	$11,505
Nursing Home	1,000 sq. ft.	$2,780	$0	$467	$558	$0	$606	$4,410
Other Institutional	1,000 sq. ft.	$6,187	$0	$467	$558	$0	$606	$7,817

* County roads only; potential fee if State roads are included would be much higher.
** Wastewater fees will only be assessed for land uses served by County wastewater facilities.
Source: Potential fees for roads, parks, fire/EMS, police, solid waste and wastewater facilities from Tables 28, 43, 56, 67, 81 and 92; wastewater fees for nonresidential uses are estimates based on assumed 3" meter for 100,000 square foot building.

Impact Fee Revenue Projections

If adopted at the maximum levels calculated in this report, it is estimated that impact fees could generate approximately $45.6 million annually, as shown in Table 2. To put this in perspective, the road impact fee revenue would allow the County to construct about 1.7 miles of two-lane road per year. The park fees would fund the acquisition and development of 54 acres of new parks annually. The fire/EMS fees would allow the construction of a fire station with two fire engines and one tanker each year. The police fees would fund the construction of one police substation annually. The solid waste fees would fund the construction of about one transfer station every two years. The wastewater fees would fund the construction of a new treatment plant every three years to replace cesspools.

Table 2
POTENTIAL ANNUAL IMPACT FEE REVENUE

	Single-Family	Multi-Family	Retail	Office	Industrial	Total
Unit of Measurement	Dwelling	Dwelling	1000 sf	1000 sf	1000 sf	
Annual Growth	1,881	566	361	256	28	
Roads*	$8,947,487	$1,889,268	$2,927,825	$1,584,471	$110,917	$15,459,967
Parks	$12,348,702	$2,936,096	$0	$0	$0	$15,284,799
Fire/EMS	$1,032,506	$242,835	$299,509	$1,585,727	$8,256	$3,168,834
Police	$1,235,623	$289,817	$357,967	$142,911	$9,874	$2,036,191
Solid Waste	$455,742	$0	$0	$0	$0	$455,742
Wastewater	$7,118,465	$1,692,487	$218,544	$155,109	$17,183	$9,201,788
Total Revenue	$31,138,525	$7,050,503	$3,803,845	$3,468,218	$146,230	$45,607,321

* County roads only; potential revenue if State roads are included would be much higher.
Source: Projected annual growth based on 2000 to 2005 building permit data; potential facility fees from Table 1.

Another way to put the potential revenues in perspective is to compare them to the amounts currently programmed in the County's capital improvements program for growth-related improvements. As shown below, the potential revenue at the maximum fee levels calculated in this report would exceed planned capacity expenditures programmed in the current 5-year capital improvements program for parks, fire/EMS and wastewater. Other projects would need to be identified to be funded with the impact fees for these facilities. Potential revenue from road and solid waste impact fees, on the other hand, would fund only a small fraction of planned projects.

Table 3
POTENTIAL REVENUE VERSUS PLANNED EXPENDITURES

Type of Facility	Annual Impact Fee Revenue	Annual CIP Planned Expenditures	% Funded by Impact Fees
Roads*	$15,460,000	$87,740,000	18%
Parks	$15,285,000	$12,015,800	127%
Fire/EMS	$3,169,000	$4,742,000	67%
Police	$2,036,000	$2,752,000	74%
Solid Waste	$456,000	$3,275,000	14%
Wastewater	$9,202,000	$4,806,000	191%
Total	$45,608,000	$115,330,800	40%

* County roads only; potential revenue if State roads are included is much higher.
Source: Potential revenue from Table 2; annual expenditures is one-fifth of eligible CIP funding from the table at the end of each chapter in Part II..

Impact Fee Comparisons

The maximum impact fees calculated in this report are compared with Hawai'i County's existing fair share assessments and California and national average impact fees in Table 4. The potential single-family impact fee is higher than the current fair share assessments for all facilities. The potential road impact fees for roads (County roads only) are very similar to the current fair share assessments and the California average (although the road fee would far exceed these if it included State road costs). The

potential park fees are considerably higher than the current fair share assessments, and somewhat higher than the California average. The other impact fees are on par with current fair share assessments and what the average jurisdiction on the mainland charges for the same facilities.

Table 4
COMPARATIVE IMPACT FEE PER SINGLE-FAMILY UNIT

Facility	Maximum Impact Fee	Current Fair Share Assess.	California Average	National Average
Roads*	$4,758	$4,281	$4,210	$2,270
Parks	$6,566	$4,818	$5,890	$2,055
Fire	$549	$459	$633	$365
Police	$657	$232	$861	$345
Solid Waste	$242	$201	na	$189
Total	$12,772	$9,991	$11,594	$5,224
Wastewater	$3,785	na	$4,716	$2,587

* County roads only; maximum fee if State roads are included is much higher.
Source: Maximum impact fee for single-family unit from Table 1; Hawai'i County fair share assessments as of November 2005; California and national average fees from Duncan Associates survey, August 5, 2006

PART I: POLICY ANALYSIS

CHAPTER 1: INTRODUCTION

The purpose of this study is to calculate the maximum impact fees that Hawai'i County can charge based on the existing levels of service for the Big Island's major road network, parks and recreation facilities, police, fire/EMS, wastewater treatment and solid waste facilities. If adopted, impact fees would replace the County's current system of "fair share" assessment.

This project has been divided into two phases. Phase I previously identified facilities for which it would be feasible to develop impact fees based on available data and other factors. This Phase II report presents detailed impact fee studies necessary to implement the policy decisions made in Phase I and develop an impact fee ordinance.

Current Fair Share Contributions

Since the early 1990s, the County of Hawai'i has imposed "fair share" assessments on applicants for new residential (including agricultural lots zoned one acre or less in size) and hotel zoning. The fees, which are imposed as a condition of zoning approval, are collected prior to securing final subdivision approval for newly created lots or prior to obtaining final plan approval for multi-family or hotel development. The fees, which are adjusted annually for inflation based on the Honolulu Consumer Price Index (CPI), currently (as of November 2005) total approximately $9,991.20 per dwelling unit; $6,411.25 for multi-family; and $10,994.22 for resort, per rental unit. The assessments are collected for roads, parks, fire, police and solid waste facilities.

The County's fair share assessments have never been adopted as an ordinance, although the County Council did pass a general authorization in 1992 for the collection of such fees as a condition of development approval in 1992 (Hawai'i County Code §2-162). The fees are based on an impact fee study that was prepared by a consultant in 1990, but was never formally approved or adopted by the County.[1] The fees calculated in that report are adjusted annually based on the change in the Honolulu Consumer Price Index.

Many of the zoning ordinances passed by the Hawai'i County Council in recent years contain a provision requiring that in the event an impact fee ordinance is adopted, it will give credit for the fair share contributions. A typical provision reads as follows: "Should the Council adopt a Unified Impact Fees Ordinance setting forth criteria for imposition of exactions or assessment of impact fees, conditions included herein shall be credited towards the requirements of the Unified Impact Fees Ordinance."[2]

While the fair share assessments are substantial, they have not generated much revenue. An analysis done in 2004 determined that over $74 million had been assessed on new approved rezonings in the ten years of the program, but only $3.6 million had been collected in cash and another $15.2 million had

[1] Ann Usagawa, *Development Impact Fee Pricing Technical Report*, August 1990

[2] Ordinance No. 05-74, adopted on May 18, 2005

been provided by developers in the form of in-kind contributions in return for credits.[3] This is because most of the land that has been subject to fair share assessments at the change of zone level has not yet been subdivided. If the fair share assessment amounts had been in the form of impact fees collected at time of building permit, they would have generated $103 million in cash and credits since January 2000, and if they had been assessed on nonresidential as well as residential development, they would have generated $170 million in less than six years, as shown in Table 5.

Table 5
HYPOTHETICAL FAIR SHARE REVENUE, 2000-2005

Facility	Residential	Nonresidential	Total
Roads	$44,176,556	$58,813,053	$102,989,609
Parks	$50,038,557	$0	$50,038,557
Police	$2,273,269	$2,743,975	$5,017,244
Fire	$4,783,316	$3,618,026	$8,401,342
Solid	$2,102,646	$1,812,255	$3,914,901
Total	$103,374,344	$66,987,309	$170,361,653

Source: Estimated revenue based on building permits issued from January 1, 2000 through August 31, 2005 and annual fair share rates based on "Fair Share Contributions–Adjustments for inflation using the Honolulu Consumer Price Index."

Impact fees would essentially replace the fair share contributions. Lots that had paid fair share contributions would get credit against the impact fees or be exempt from having to pay impact fees for the same type of facilities. Fair share contributions made at zoning but not yet collected at the time of the effective date of the impact fee ordinance (because the property had not yet been subdivided) would become void; instead of paying fair share contributions, the properties would pay impact fees. A major difference is that impact fees would be assessed on all new development, including nonresidential development and residential development in areas with existing zoning.

Background

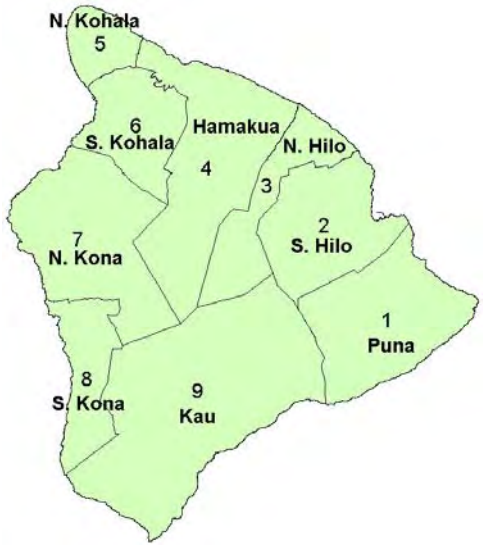
The County of Hawai'i encompasses the entire island of Hawai'i (the "Big Island"). The land area of the county is approximately twice the combined land area of all the other islands of the State.

Traditionally, agriculture has played an important role in the County's economy and much of the County's population growth and development was tied to the growth and employment needs of its agricultural economy. The island's population declined after World War II with the decreasing need for agricultural workers. Since the 1960s, however, tourism has emerged as the primary economic activity. In addition, the County has seen substantial population growth beyond what would be expected from economic opportunities in the County's primary industries; such population growth has most likely been due to in-migration of people drawn to the quality of life in the County.

[3] Hawai'i County Planning Department, *Fair Share Contributions Annual Report 2004*, May 21, 2004

The County of Hawai'i is currently the second most populous county in Hawai'i. The 2000 U.S. Census recorded the County's population as 148,677. The County of Hawai'i's population growth has remained relatively constant over the last two decades, with a slight decline from an annual rate of 2.71 percent in the 1980s to 2.14 percent in the 1990s. According to population projections provided in the medium series projections in the *Hawai'i County General Plan*, Hawai'i County's population is expected to grow at about 1.9 percent a year over the next two decades. Under this growth assumption, the County's population is expected to be about 217,718 in 2020.

Figure 1
JUDICIAL DISTRICTS



As shown in Table 6, certain districts experienced much more rapid growth during the 1990s than the county as a whole. The bulk of the growth occurred in the districts of Puna, South Kohala and North Kona. The districts of North Kohala and Ka'u at opposite ends of the island also grew at a faster rate than the island average, but they started from a relatively small population base.

In the 1950s and 1960s, the County allowed many subdivisions with minimal improvements, mostly in Puna and Ka'u, with a few in South Kona. Today, there are about 53,000 residential lots in Puna, of which about 40,000 are vacant. Ka'u has about 16,000 residential lots, of which about 13,000 are vacant (mostly in Hawai'ian Ocean View Estates). Thirty-seven percent of the island's population increase in the 1990s occurred in Puna, almost entirely in these older subdivisions.

Table 6
COUNTY POPULATION GROWTH BY DISTRICT, 1990-2000

Judicial District	1990	2000	Growth	Growth Share	Growth Rate
1-Puna	20,781	31,335	10,554	37.21%	4.19%
2-South Hilo	44,639	47,386	2,747	9.69%	0.60%
3-North Hilo	1,541	1,720	179	0.63%	1.10%
4-Hamakua	5,545	6,108	563	1.99%	0.97%
5-North Kohala	4,291	6,038	1,747	6.16%	3.47%
6-South Kohala	9,140	13,131	3,991	14.07%	3.69%
7-North Kona	22,284	28,543	6,259	22.07%	2.51%
8-South Kona	7,658	8,589	931	3.28%	1.15%
9-Ka'u	4,438	5,827	1,389	4.90%	2.76%
Total	120,317	148,677	28,360	100.00%	2.14%

Source: County of Hawai'i Data Book, Section 1 <http://www.hawaii-county.com/>.

In addition to the development potential on zoned and subdivided lots, there is also significant development that can occur by subdivision of land under current zoning. According to County

Planning Department staff, eight areas outside of major resorts could be subdivided to accommodate 11,000 dwelling units without additional rezoning.[4]

In addition to the resident population, Hawai'i County has a significant daily tourist population. Table 7 shows the resident population and visitor industry projections through 2020. Based on data from the *Hawai'i County General Plan*, there were 1,265,700 visitors and 10,041 hotel rooms in the County in 2000. The average daily visitor census data illustrates the significance of tourism. The average daily number of visitors is projected to increase by 2.00 percent annually, from 21,831 in 2000 to 32,440 in 2020.

Table 7
HAWAI'I COUNTY POPULATION AND VISITORS

Year	Resident Population	Avg. Daily Visitors	Hotel Rooms
1985	105,900	8,040	7,511
1990	120,317	16,970	8,952
1995	137,290	18,650	9,575
2000	148,677	21,831	10,041
2005	159,908	24,103	10,513
2010	176,937	26,612	10,892
2015	195,965	29,382	11,200
2020	217,718	32,440	11,452

Source: Hawai'i County General Plan, Table 1-5; Average Daily Visitor Census, 1985 to 2000, from *Hawai'i County Data Book*, Table 7.3, data from 2005-2020 derived used total visitor growth rate projected increase of 2% per year from *Hawai'i County General Plan*.

Nonresidential growth appears to be at least as strong as residential construction, based on building permit data. Since the year 2000, the number of housing units has increased by about three percent annually, while nonresidential square footage has been increasing by almost seven percent annually.

Table 8
RESIDENTIAL AND NONRESIDENTIAL DEVELOPMENT, 2000-2006

Land Use	2000 Census	2000-2005 Permits	2006 Estimate	Annual Increase
Single-Family Detached	48,231	10,127	58,358	3.2%
Multi-Family/Other	14,443	3,124	17,567	3.3%
Total Residential Units	62,674	13,251	75,925	3.2%
Total Nonresidential Sq. Ft.	17,233,626	6,727,881	23,961,507	6.8%

Source: Residential data from 2000 U.S. Census and January 1, 2000 through December 31, 2005 building permit data; 2005 nonresidential square footage estimate from Hawai'i County tax records (data as of January 1, 2005 assessment date for 2005 tax year); 2000-2005 nonresidential permit data from County of Hawai'i for January 1, 2000 through August 31, 2005; 2000 nonresidential estimate is difference.

[4] The areas are Waikoloa Village, Bridge Ainalea, Kohala Ranch Project IV, former "Y.O." property, University Terrace, Wilder Road property, Parker Ranch 2020 Plan in Waimea, former Haseko property south of Kona Palisades, per Hawai'i County Planning Department memorandum, March 9, 2005

CHAPTER 2: LEGAL FRAMEWORK

Impact fees are one of the most direct ways for local governments to require new developments to pay a larger portion of the costs they impose on the community. In contrast to traditional "negotiated" developer exactions, impact fees are charges that are assessed on new development based on a standard formula and objective characteristics, such as the number of dwelling units constructed or vehicle trips generated. The fees are one-time, up-front charges. Essentially, impact fees require that each developer of a new residential or commercial project pay its pro-rata share of the cost of new infrastructure facilities required to serve that development.

General Principles

Since impact fees were pioneered in states that lacked specific enabling legislation, such fees have generally been legally defended as an exercise of local government's broad "police power" to protect the health, safety and welfare of the community. Over time, various state courts have developed guidelines for constitutionally valid impact fees, based on a "rational nexus" that must exist between the regulatory fee or exaction and the activity that is being regulated. The standards set by court cases generally require that an impact fee or other developer exaction meet a two-part test:

1) The need for new facilities must be created by new development (first prong of the dual rational nexus test); and

2) The expenditure of impact fee revenues must provide benefit to the fee-paying development (second prong of the dual rational nexus test).

A Florida district court of appeals described the dual rational nexus test in 1983 as follows, and this language was quoted and followed by the Florida Supreme Court in its 1991 *St. Johns County* decision:[5]

> *In order to satisfy these requirements, the local government must demonstrate a reasonable connection, or rational nexus, between the need for additional capital facilities and the growth in population generated by the subdivision. In addition, the government must show a reasonable connection, or rational nexus, between the expenditures of the funds collected and the benefits accruing to the subdivision. In order to satisfy this latter requirement, the ordinance must specifically earmark the funds collected for use in acquiring capital facilities to benefit the new residents.*

In addition to the dual rational nexus test, impact fees may also need to meet Federal constitutional requirements for developer exactions. The most important recent legal development regarding development exactions is the 1994 decision of the U.S. Supreme Court in *Dolan v. City of Tigard*.[6] In *Dolan*, the Supreme Court expanded upon the rational nexus test, adding to it a requirement that there be a "rough proportionality" between the impact of a proposed development and the burden of the exaction imposed on it. While this case involved an ad hoc land dedication requirement and may not apply to legislatively-adopted fees, impact fees are more likely to comply with this standard than other types of developer exactions.

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[5] *Hollywood, Inc. v. Broward County*, 431 So. 2d 606, 611-12 (Fla. 4th DCA), review denied, 440 So. 2d 352 (Fla. 1983), quoted and followed in *St. Johns County v. Northeast Florida Builders Ass'n*, 583 So. 2d 635, 637 (Fla. 1991)

[6] *Dolan v. City of Tigard*, 512 U.S. 374, 129 L. Ed. 2d 304, 114 S. Ct. 2309 (1994)

State Enabling Act

To date, 26 states, including Hawai'i, have adopted impact fee enabling legislation. Like most other state enabling acts, Hawai'i's impact fee enabling act for counties reflects the constitutional standards enumerated above. Hawai'i's impact fee enabling act, adopted in 1992, authorizes counties to adopt impact fees for any "types of public facility capital improvements specifically identified in a county comprehensive plan or a facility needs assessment study." A copy of the enabling act is provided for reference in Appendix G. The only use of this authority to-date has been the adoption in 2002 of a road impact fee by the City and County of Honolulu for the Ewa region.[7]

Counties in Hawai'i are authorized by State law to enact impact fee ordinances, provided that they follow the requirements of Chapter 46, Part VIII of Hawai'i Revised Statutes (Section 46-141 through 46-148). This section provides a brief summary of those requirements most relevant to Hawai'i County.

Generally, developers prefer to pay impact fees as late in the development process as possible, and most state acts prohibit the collection of impact fees prior to the time of issuance of a building permit or certificate of occupancy. Hawai'i's act states in Section 46-146 that "Assessment of impact fees shall be a condition precedent to the issuance of a grading or building permit and shall be collected in full before or upon issuance of the permit." Hawai'i County's Corporation Counsel has interpreted this language to mean that the County may assess and collect impact fees at the time of subdivision approval or building permit issuance.

A fundamental principle of impact fees is that new development cannot be charged for a higher level of service than is provided to existing development. Section 46-142(b) states that an impact fee study "shall specify the service standards for each type of facility subject to an impact fee; provided that the standards shall apply equally to existing and new public facilities." If, for example, a County currently provides five acres of parkland per 1,000 residents, it cannot base park impact fees for new development on a standard of ten acres of parkland per 1,000 residents, unless certain conditions are met. First, another source of funding other than park impact fees would have to be identified and committed to fund the capacity deficiency created by the higher level of service. Second, the park impact fees must generally be reduced to ensure that new development does not pay twice for the same level of service, once through impact fees and again through general taxes that are used to remedy the capacity deficiency for existing development. Section 46-143(d)(1) requires counties to consider the "means, other than impact fees, by which existing deficiencies will be eliminated within a reasonable period of time..." in formulating an impact fee. One way to avoid these kinds of complications is to base the impact fees on the existing level of service.

A corollary principle is that new development should not have to pay twice for the same level of service. As noted above, if impact fees are based on a higher-than existing level of service, the fees should be reduced by a credit that accounts for the contribution of new development toward remedying the existing deficiencies. A similar situation arises when the existing level of service has not been fully paid for. Outstanding debt on existing facilities that are counted in the existing level of service will be retired, in part, by revenues generated from new development that will also pay impact fees to maintain the existing level of service. Consequently, impact fees should be reduced to account for future tax payments that will retire outstanding debt on existing facilities. The Hawai'i enabling act addresses this issue in Section 46-143(d)(6), which provides that one of the seven factors that shall be considered in

[7] Chapter 33A of the Revised Ordinances of Honolulu (the fee for a single-family unit is $1,836)

determining "a proportionate share of public facility capital improvement costs" is the "extent to which a developer required to pay impact fees over the next twenty years may reasonably be anticipated to contribute to the cost of existing public facility capital improvements through user fees, debt service payments, or other payments, and any credits that may accrue to a development because of future payments ..."

The State act implies that credit may also be due for other types of revenues besides those used to pay debt service on existing capital facilities. Section 46-143(d)(2) states that another factor that shall be considered is the "availability of other funding for public facility capital improvements, including but not limited to user charges, taxes, bonds, intergovernmental transfers, and special taxation or assessments ..." Also, Section 46-141 defines "proportionate share" to mean "the portion of total public facility capital improvement costs that is reasonably attributable to a development, less: (1) Any credits for past or future payments, adjusted to present value, for public facility capital improvement costs made or reasonably anticipated to be contributed by a developer in the form of user fees, debt service payments, taxes, or other payments..."

Aside from debt service payments, credit against impact fees may not be required for other types of funding that have historically been used for growth-related, capacity-expanding improvements, or which may even be committed to be spent in the future for such purposes. While new development may contribute toward such funding, so does existing development, and both existing and new development benefit from the higher level of service that the additional funding makes possible. To insist that historical capacity funding patterns must be continued after the adoption of impact fees, and that new development is entitled to a credit for its contribution to those funding sources, would be to argue that local governments cannot require "growth to pay for growth" unless they have always done so. Local funding that is committed to be used for capacity expansion in the future needs to be taken into account only in cases where there is no reasonable need for or benefit from higher levels of service than the existing level of service embodied in the impact fee calculations. As long as the fees are based on new development paying to maintain existing levels of service that have been paid for in full by existing development, and additional funding can reasonably be used to raise the level of service for existing and new development alike, no additional revenue credits are warranted. Nevertheless, credit will be provided in this study for dedicated revenue (e.g., motor fuel taxes earmarked for transportation improvements) and State and Federal grants.

Hawai'i's statute is one of only a handful of state enabling acts that require credit for past property tax payments. Section 46-143(d)(5) states that the "extent to which a developer required to pay impact fees has contributed in the previous five years to the cost of existing public facility capital improvements and received no reasonable benefit therefrom, and any credits that may be due to a development because of such contributions" shall be taken into consideration in the impact fee calculation. And the definition of "proportionate share" cited above makes clear that this refers not just to developer exactions, but also to past property tax payments. Prior to development, the owners of a vacant parcel of land paid property taxes that may have been used, in part, to construct capital facilities of the type for which impact fees are being assessed. Consequently, it will be necessary to reduce impact fees by the present value of property tax payments over the last five years that were used to construct existing capital facilities of the type for which the fees are being charged.

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CHAPTER 3: POLICY ISSUES

The first phase of this project was a policy analysis that culminated in the preparation of an *Ordinance Issues Memorandum* (October 2005) and a *Policy Analysis Memorandum* (January 2006). The first phase also included an extensive public participation and education process, including:

- November 2005 focus groups in Hilo and Kona (see summary in Appendix G),
- January 2006 video conference with participants in Kona, Hilo and Honolulu (see summary in Appendix H),
- and March 2006 workshops in Hilo and Kona (see summary in Appendix I).

A list of participants in these public meetings can be found in Appendix J.

Based on the analysis conducted for Phase I, the County should consider replacing its fair share assessments with a true impact fee system that follows the requirements of the State impact fee enabling act. An impact fee collected from all new development would be more legally defensible, more equitable and generate significantly more revenue than the current "fair share" system. This additional revenue would translate into capital improvements that would benefit all fee payers.

More specific recommendations are provided for detailed policy issues below.

Treatment of Existing Lots

A major issue in the development of an impact fee system for Hawai'i County is how to treat existing lots of record. In most jurisdictions that have adopted impact fees throughout the United States, how to treat existing lots is a minor issue. Generally, the supply of such lots is limited, and if they are grandfathered or otherwise exempted from impact fees the overall effect on impact fee revenues is short-lived and relatively minor. However, this is not the case in Hawai'i County. A recent analysis indicates that there are about 64,000 undeveloped residential lots in the county. This exceeds the total number of housing units on the island at the time of the 2000 census (62,674). Many of these lots are accessed via private substandard roads, have private water catchment systems, and are serviced with cesspools or septic tanks. Of the roughly 2,000 permits of single-family detached units issued by the County annually, it has been estimated that about one-third of these new homes are being built on lots that were created in the 1950s and 1960s.

The perception exists that many of these lots are owned by local residents who intend to build a home for themselves in these older subdivisions. While this is undoubtedly true to some extent, it is far from the typical case. An analysis of property tax records indicates that only about 14 percent of existing vacant residential lots are owned solely by Big Island residents, and two-thirds are under the exclusive ownership of non-Big Island residents (see Table 9). The remaining 17 percent are owned by multiple owners with some Big Island resident participation, but it is likely that most of these lots are being held as an investment, rather than as a future home site. The investment motive probably holds for a good number of the Big Island owners as well. So the number owned by Big Island residents who plan to build a home on them is probably considerably less than 9,000 lots. To put that number in perspective, it represents less than five years of single-family building permit activity in Hawai'i County at current development rates.

Table 9
OWNERSHIP OF VACANT RESIDENTIAL LOTS

Ownership	# of Lots	Percent
Big Island-Single Owner	9,123	14.20%
Big Island-Multiple Owners	175	0.30%
Mixed Big Island/Other Owners	10,747	16.70%
No Big Island Owners	44,175	68.80%
Total Vacant Residential Lots	64,220	100.00%

Source: Hawai'i County Real Property Tax Administrator, January 7, 2006 (data base excludes lots that are (1) over 20 acres, (2) already improved with $10,000 or more worth of yard or outbuilding improvements, or (3) commercial, industrial or resort hotel tax classifications or zoning, and all roadway, governmental and utility parcels.

One option that was considered for this study was to allow any existing lot of record to be developed with one dwelling unit without paying an impact fee. Any additional dwelling units or any nonresidential development on the lot would be required to pay an impact fee. This approach has the appearance of even-handedness–after all, every existing lot is given the same development right. However, exempting one dwelling unit amounts to a 100 percent exemption for an existing single-family lot, but a negligible exemption for a 500-acre parcel that will be subdivided and developed with 2,000 single-family homes.

There are several alternatives for dealing with the large number of existing lots. Five options are outlined below.

Option 1: Fee Waiver for First Dwelling. Allow any existing lot of record to be developed with one dwelling unit without paying an impact fee. Any additional dwelling units or any nonresidential development on the lot would be required to pay an impact fee. A concern here is that if the amount of development not paying the fee is large, the impact fees will not be sufficient to provide the level of service that the fees are intended to provide.

Option 2: County Grant for First Dwelling. Instead of waiving fees for the first dwelling unit on existing lots of record, an alternative would be for the County to use other funding sources to pay the impact fees for a principle single-family dwelling unit on existing lots. This approach ensures that the funding in the impact fee account is sufficient to maintain the level of service on which the impact fees are based. The County would not need to pay fees for existing lots for which fair share contributions had been paid, since the credit for such payments would likely offset any impact fees assessed.

Option 3: Transition Exemption for First Dwelling. An alternative to a permanent waiver of fees for the first dwelling unit is to make it a temporary transition provision. For example, the State impact fee enabling act in Texas allows owners of lots that were subdivided prior to the impact fee ordinance to pull a building permit within one year following adoption of the ordinance without being required to pay the fee. A longer time period than one year could be considered, but it should probably not exceed five years. The transition exemption could be a blanket one that applies to all building permits for all existing lots, or a more limited one such as the one-unit-per lot approach described above.

Option 4: Exclude Selected Areas. A fourth alternative would be to exclude the area where most of the existing lots are located (i.e., Puna and Ka'u Districts) from the impact fee system. Exclusion means

that no impact fees would be collected in this area, and no impact fees would be spent there. Exclusion would not have to be permanent. For example, Kansas City, Missouri, first developed arterial street impact fees for the area north of the Missouri River, before preparing impact fees for the southern part of the city. In each area, the older part of the city that was annexed prior to 1950 was excluded from the impact fee system. Exclusion from the impact fee system would not be meant to penalize an area, but to lessen the burden of paying an impact fee. Other methods of funding new infrastructure could be explored for those areas.

Option 5: Everyone Pays. A final option is not to provide any special treatment for existing lots. Most of the focus groups in both the Hilo and Kona workshops came up with this alternative as the preferred option. The consensus seemed to be that if housing affordability is the concern, there should be a separate program to address that. This is the recommended approach.

Affordable Housing

The key characteristic of an impact fee is that the amount of the fee is proportional to the impact on facilities. To waive fees for affordable housing or other policy goals may weaken the defensibility of the impact fee system, since opponents could argue that it is not actually an impact fee, but an illegal tax disguised as a fee. Consequently, any waiver of fees for affordable housing or other purposes should be paid by other funding sources.

Paying fees on behalf of existing lot owners as a means of encouraging affordable housing would provide a windfall for many property owners who do not actually need assistance. The recommended approach would provide assistance to first-time home buyers who earn less than 140 percent of the median family income and who are purchasing or building a single-family unit that costs less than the median home value, provided that the property is used as the buyer's primary residence. The assistance could be either in the form of an outright grant, or in the form of an interest-free loan that would be repaid when the qualifying homebuyer sells the house or ceases to live there. The loan approach would have the advantage that it would reduce the incentive to gain public assistance that is not really needed, and would also make the program more self-sufficient if the loan repayments are earmarked for future impact fee assistance. If the qualifying party already owns the lot, the assistance would be used to pay the impact fees at time of building permit. In the event of a speculative project, the builder would pay the fees at time of building permit, and the assistance in the amount of the fees paid would be provided to the qualifying homebuyer at closing to reduce the total funds required to purchase the property at closing.

Progressive Residential Fees

One thing that can be done to mitigate the effect on affordable housing is to reduce fees for the smaller and more affordable units to the extent that it can be demonstrated that smaller units have less of an impact on the need for facilities. That option has been provided in this report, although the County would need to assess a flat rate for single-family homes if fees are collected at time of subdivision approval since the size of the house would not be known until a building permit is issued for the structure (see discussion below).

Time of Collection

The current fair share assessments are imposed during the rezoning process, and are collected prior to final subdivision approval for single-family lots and prior to final plan approval for multi-family and

hotel/motel development. While collecting at subdivision gives the County more time to provide improvements ahead of the site's occupancy, collection of single-family fees at time of subdivision would be incompatible with the option of assessing single-family homes on the basis of dwelling unit size, since the square footage of the home is not known at that time.

There seem to be two reasonable alternatives for dealing with time of collection: (1) collect impact fees from all development at the time of building permit issuance; or (2) collect fees for new single-family lots at the time of final subdivision approval, and collect fees for all other development (including single-family houses on existing lots) at building permit. However, since impact fees are designed to address the development's impact on infrastructure, it may be preferable to assess the fees at the time of building permit approval, if projects will develop slowly. Historically, in Hawai'i County, large numbers of single-family lots have been approved with no homes being built for an extended period of time. One could argue that if the homes are not built, there is no impact on existing infrastructure and thus the fee should not be collected until a building permit is issued.

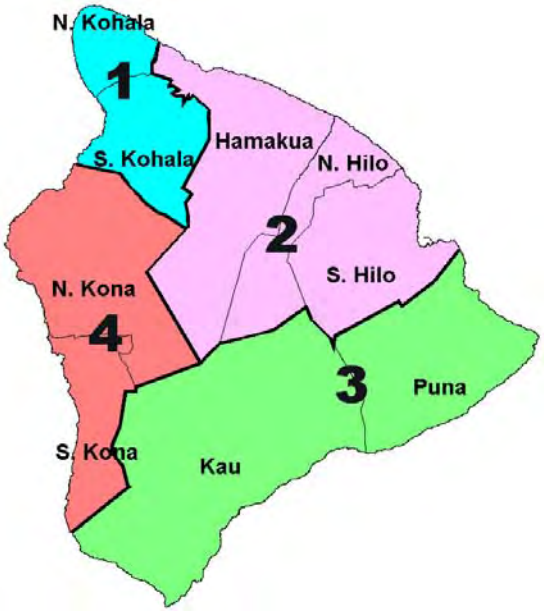
Assessment and Benefit Districts

In an impact fee system, it is important to clearly define the geographic areas within which impact fees will be collected and within which the fees collected will be spent. There are really two types of geographic areas that serve different functions in an impact fee system: assessment districts and benefit districts. An assessment district, which may also be called a service area, defines the area within which a set of common capital facilities provides service, and for which a fee schedule based on average costs within that district is calculated. Benefit districts, on the other hand, represent an area within which the fees collected must be spent. They ensure that improvements funded with impact fees are constructed within reasonable proximity of the fee-paying developments to help ensure that developments benefit from the improvements.

The assessment district is the geographic level at which the impact fee is calculated within a jurisdiction such as a county. Calculating the fees at the county-wide level, based on the county-wide existing level of service, vastly simplifies the process. This was the approach used in the 1990 study as the basis of the County's current fair share assessments. Although some concerns were expressed that the cost of construction in the west is higher than in the east, cost data was not available to support differential fees, and all of the proposed impact fees were calculated on a county-wide basis.

Concern has been expressed that a broad-based impact fee should be restricted to internal subdivision improvements like roads and parks, because otherwise owners of individual lots would not feel they were getting any benefit. However, impact fees must be used to expand capacity, and cannot be used to pave internal subdivision roads.

Figure 2
PROPOSED BENEFIT DISTRICTS



Through focus group discussions, the community has expressed a desire for multiple benefit districts for the purposes of collecting and spending the impact fee revenue. Based on that input and discussions with local staff, four regional benefit districts that conform with existing judicial boundaries are recommended, as illustrated in Figure 2. Under the proposal, the districts would be composed as follows: District 1, North and South Kohala; District 2, Hamakua, North and South Hilo; District 3, Puna and Kau; and District 4, North and South Kona. These same benefit districts could be used for most of the proposed impact fees. An exception is wastewater, where the fees should be earmarked and spent to improve the system to which the new customer has connected.

Another suggestion from the focus groups was to allow some of the revenue collected in each benefit district to be used for projects with regional or island-wide benefit. To facilitate projects of regional benefit, it is recommended that the County allow up to 20 percent of the road, park, fire and police impact fees collected in any district to be used for projects located outside the district, provided that significant benefit will be provided to new development in the district in which the fees were collected. Up to 40 percent of solid waste fees could be used for out-of-district improvements, reflecting the larger share of centralized facilities (landfill and vehicles). All wastewater fees would be restricted to be spent on improving the system to which the new customer connects.

Pre-Ordinance Credits

Some building permits will be issued in projects for which developers have already paid fair share contributions. To prevent double-charging, it will be necessary to either reimburse the developer, or to reduce or eliminate the impact fees that are charged for those building permits. Since it is likely that developers passed along the cost of the fair share contribution to the extent possible in the sale of the lots, reimbursing the developers would have the effect of handing them windfall profits. A better alternative might be to reduce or eliminate the impact fees due to be paid at building permit. Such a policy would benefit the builder of the individual dwelling.

The following approach could be used to implement the policy of pre-ordinance credits. Prior to the effective date of the ordinance, County planning staff would need to identify all parcels or subdivisions for which fair share contributions have been paid, and the amounts paid for each type of facility. If the project is built-out, no credits would be needed. If no development has yet occurred, the credit would be the amount paid, adjusted for inflation since the time of payment. If building permits have already been issued for a particular subdivision, but some development potential remains, the credit would be the amount paid, adjusted for inflation, less what the subdivision would have generated in impact fees had the fee schedule been in place. The resulting credit amounts would be available to offset impact fees otherwise due for building permits issued for the applicable parcels or within the subdivisions on a first-come, first-served basis until the credits are exhausted. The amount of the credits would be adjusted annually for inflation, using the same index that is used for the impact fees. A time limit, such as ten years, could be imposed on the use of the credits.

Fair share assessments that were imposed as a condition of zoning approval, but have not yet been paid by the effective date of the impact fee ordinance (because the property has not been subdivided or site-planned) would be replaced by the obligation to pay impact fees at the time of building permit.

Another issue that must be addressed is credits for developers who made impact fee-eligible contributions prior to the impact fee ordinance, but who did not receive credit against fair share

contributions for the value of those contributions. It is recommended that credits be provided for these types of improvements in much the same way as credits for fair share contributions.

Post-Ordinance Reimbursements

For fair share contributions and pre-ordinance contributions, credits that run with the land are recommended rather than developer reimbursements. So it may make sense to use the same approach when dealing with new developer exactions that occur after the impact fee ordinance is in place. However, an alternative approach is at least worthy of consideration, since the fair share credits affect a limited number of parcels and will expire in a certain number of years.

The alternative approach is to reimburse developers who make eligible improvements with impact fees collected for the same type of facility from other developers who do not. This approach was pioneered by Raleigh, North Carolina when it established road and park impact fees in 1987, and although it has not been widely emulated by other jurisdictions, it has much to recommend it. Raleigh enters into a reimbursement agreement with each developer who makes an impact fee-eligible improvement. If the improvement is an expensive one, the reimbursement is scheduled to occur over a five-year period, subject to available funding. The City also categorizes each developer contribution as Priority I or Priority II. Priority I projects include dedication of land or right-of-way and projects in the City's five-year capital improvements plan. Each year, the City sets aside a percentage of impact fees collected in each benefit zone (20 percent of park fees and 27 percent of road fees) into reimbursement accounts. If the reimbursement account has sufficient funds to pay all reimbursements owed for that year, all developers with outstanding reimbursements for that year receive full payment. If the funds are insufficient to reimburse all developers, developers with Priority I improvements are reimbursed first. If funds are still insufficient, each Priority I developer receives a pro rata share of his reimbursement amount, with the unpaid amount rolled over to the next year.

The reimbursement approach used by Raleigh is considerably simpler to administer than a credit approach, and it also has the advantage that a predictable percentage of impact fee revenue is available to the local government to program for priority improvements. The first advantage would not be as pronounced for Hawai'i County for the first few years, since staff would need to track fair share contribution credits for a number of years. However, those credits would affect a limited number of properties and would disappear after a few years. After that, the collection of fees at the building permit counter would be automatic for all permits, with no need to check to see if credits are available to offset the fees. The second advantage would also be somewhat attenuated in the first few years, since fair share credits would reduce the amount of fees collected, but the County would be guaranteed that subsequent developer contributions would not consume more than a fixed percentage of potential impact fee revenues.

It is recommended that the County consider using a reimbursement approach similar to Raleigh's for post-ordinance developer contributions.

Phase-In Period

Following the adoption of the impact fee ordinance by the County Council, there needs to be a period of time before the impact fees actually go into effect (the "effective date"). This lapse of time is a common approach used by other jurisdictions when implementing impact fee programs. Some delay may be desired to give development projects already underway adequate time to apply for building

permits and otherwise complete their projects. The delay also provides notice to the public. In addition, County staff will need some time to put the administrative processes in place to implement the ordinance. This includes designating an impact fee administrator, developing the collection system and the qualifying process for a grant/loan program. After discussions with staff, it is recommended that the collection of impact fees go into effect one year from the date of ordinance adoption. The fair share assessments would continue to be in effect during this period, but would be repealed on the effective date of the impact fees.

In addition, substantial new or increased impact fees are often phased-in over a period of six to 18 months. For example, the fees might go into effect initially at 50 percent, then go up to 75 percent after six months and 100 percent after a year. However, Hawai'i County is somewhat unique in that some developments are already paying substantial fees, while others are not paying any fees at all. A phase-in period that gradually imposes fees equivalent to the current fair share assessments would provide a windfall for projects that had been assessed the fair share fees. To avoid these kinds of complications, no additional phase-in after the one-year period following ordinance adoption is recommended.

Maximum Impact Fees

The impact fees calculated in this report represent the maximum fee that could be adopted by the County. The impact fees could be adopted at less than 100 percent of the impact fee levels shown for each facility type. The County must maintain proportionality between land-uses in adopting a fee at less 100 percent. For example, if the County decided to adopt the Fire/EMS fee at 75 percent of the level calculated in this report, it would need to charge 75 percent of the maximum fee calculated for each land use category.

The County should recognize that the fees adopted must be high enough to ensure adequate funds are available to reimburse developers when necessary. If fee revenue is insufficient to repay developers for improvements, the total time required for paying back developers would increase with fewer funds available for county impact fee funded projects. Road impact fees, in particular, should not be adopted at very low percentage of maximum net costs. This is because developers often make in-kind contributions in the form of right-of-way dedication or actual roadway construction, and under an impact fee system receive a reimbursement for the equivalent value of such contributions (above any required dedications) against the fee. Therefore, if the fee is adopted at a very low percentage, fees collected will be too low for a developer to be fully compensated with reimbursements.

In general, the County has considerable flexibility in imposing fees geographically, whether it be imposing fees in some areas and not others, or imposing fees at different percentages of the maximum rates in different areas. However, if this approach is taken, some modifications to the impact fee system should be considered.

First of all, solid waste is an exception, since this is the only one of the impact fee facilities that has a major island-wide component (i.e., the landfill). If you are not going to charge the solid waste fee island-wide, it will be necessary to recalculate the solid waste fee to remove the landfill component of the cost.

The County should also probably give up the flexibility of spending any of the money collected in a district outside the district. Our recommendation that the County be allowed to spend up to 20 percent of road, park, fire and police impact fees outside the benefit district in which the fees were collected, provided some benefit to the paying district could be shown, assumes that the fees are applied island-

wide at the same percentage. If the project located outside the district has significant benefits to development in another district that is not paying that fee, or paying a lower fee, it may be difficult to establish that the fees are meeting the tests of equity and proportionality. Consequently, the mixing and matching alternative to island-wide application means the County will probably need to give up some of the flexibility of using fees outside the district in which the fees were collected.

Finally, the County would probably want to show that the impact fee money is not simply being used to allow the County to take property tax money it had been spending in the areas that now have fees, and spending it instead in areas where no fees are being charged. If the fees can be shown to provide benefits to the fee-paying areas that they would not otherwise have seen, any equity concerns with this approach could be avoided.

CHAPTER 4: AGENCY AND PUBLIC PARTICIPATION

The subject of impact fees is complex, and requires a detailed understanding of many issues, including the legal requirements that test the validity of any adopted impact fee ordinance. Impact fees have been the subject of a large number of court cases throughout the United States, and the issues that have constituted these legal challenges are nationally recognized in terms of crafting defensible impact fee legislation at the county or municipal level. It is also important to understand that impact fees can be crafted to reflect important county values related to affordable housing and financial impact on builders and property owners, among others.

It might be advantageous to hire consultants to consider a local desire to adopt an impact fee program and handing over a completed product in a relatively short period of time. However such a view is short-sighted and does not allow a community to educate itself in the nuances of an impact fee ordinance by engaging in the discussion and debate of such an important policy program. Impact fees oftentimes produce strong emotions (both pro and con) during the consideration of impact fees by any community. Consequently, it is important for communities to educate themselves about impact fees, and educate consultants about the issues important to them, in order to reach a point where the adopted policy clearly reflects the personality of the community.

A summary of the agency and public participation events and participants in those events are presented in the Appendices.

Overview

The process of developing an impact fee program for Hawai'i County purposefully included a component that provided for community and public agency input and education. This aspect of the project included public agency briefings and collection of data, focus group meetings, regional meetings with small group break-out discussions, a video conference, additional discussions with a group of individuals (the "Local Resource Team") who were knowledgeable about impact fees and able to provide a "big picture" sounding board for the project team, and use of the Hawai'i County website to circulate information and work products.

The various elements of the agency and public participation and education effort are discussed in more detail below.

Agency Liaison Team

In order to provide the consultants with the necessary information to develop the Needs Assessment, an Agency Liaison Team, consisting of representatives from County and State agencies, was formed to provide data on the following type of infrastructure and public facilities: transportation, parks, police, fire, solid waste and wastewater. A large volume of information needed to be compiled and organized by the agency liaisons for the consultants to complete the needs assessment. Without their assistance the needs assessment could not have been prepared.

Public Participation and Education

Public participation and education in the study process was determined to be a critical component for this study. Initially, the contract allotted for only one stakeholder meeting, however, as the effort progressed, it became obvious, that without public education, preparing an ordinance that could be implemented would be difficult. The contract was amended twice to ensure that adequate public

education would continue throughout the process. The subject material is not simple, but through a collaborative effort between the consultants and the county, several opportunities were provided to inform and keep the public involved through video conferences, the Internet, the distribution of a fact sheet, email communication and workshops.

Informational Meetings: Key stakeholder organizations were invited to participate in two initial focus group meetings in Hilo (November 18, 2005) and Kona (November 20, 2005) as an introduction to the consultants.

County Council: The consultants held an initial workshop with the County Council on November 21, 2006, to introduce themselves, present the time line for the project, present their initial memorandum and an Impact Fee 101 PowerPoint presentation.

Video Conference: A video conference was held on January 17, 2006 that linked Kona, Hilo, Honolulu, and Duncan Associates in Austin, Texas. The consultants were on hand to provide a PowerPoint presentation on impact fees and to answer questions from the public.

Planning Commission: The consultants also held a workshop with the Planning Commission on March 9, 2006 in Hilo with a PowerPoint presentation to introduce themselves and begin the conversation on impact fees.

Ordinance Issues Workshop: Focus group meetings where held in Kona (March 8, 2006) and Hilo (March 10, 2006) to introduce and create a dialogue on those critical issues that needed to be decided on for the impact fee ordinance. Community participants brought forth positive ideas that were valuable insights for the consultants; in particular, the idea that a portion of the impact fee funds collected be used on an island-wide basis.

Final Public Meetings: Two final public meetings were held in Hilo (August 15, 2006) and Captain Cook (August 16, 2006) to provide an overview of the final needs assessment and draft ordinance. The consultants were present with the Planning Director to field questions. The public was also informed that final work products would be forwarded to the County Council with any written comments submitted.

Local Resource Team

A Local Resource Team (LRT) was created to supplement the public outreach effort being advanced by the IPFNA Project Team (Planning Department; Helber Hastert & Fee Planners, Inc.; Duncan Associates; Alice Moon & Co). The primary intent of the LRT was to discuss problematic issues that were highlighted during the larger public Group Meetings being conducted in Kona and Hilo, and to brainstorm with the Project Team on how to deal with these issues during formulation of an ordinance to establish an impact fee system within the County Hawai'i.

The solicitation of "individuals" was based on a number of factors, including organizational affiliation, presence in the development industry, participation in community affairs, and interest in the impact fee issue. The goal was to obtain a wider perspective on the issues facing the adoption of an impact fee ordinance in Hawai'i County. Overall, it was hoped that the LRT: (1) provided a more granular look at problem issues and concerns; (2) provided a "big picture" perspective; and, (3) introduced a creative approach to problem solving. Composition of the LRT was based on a combination of factors, including previous experience with and knowledge of impact fees, experience in government, dual

familiarity with the development process from a public, private and community sector basis, and the ability to provide a local and island-wide perspective. The LRT assisted in advising the project team and in reviewing the final work products.

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CHAPTER 5: LESSONS LEARNED

Although the agency and public participation meetings provided opportunities for participants to gain a better understanding of impact fees, impact fees are a complex funding mechanism intended to help solve even more complex infrastructure problems. The following are some of the lessons learned during the agency and public sessions:

o Education for all participants is an ongoing process. It is a key performance measure for a successful project. Plan and prepare to provide multiple opportunities to address questions and provide answers.

o Understand that it is impossible to reach every stakeholder, in our case, the large percentage of vacant lot owners who do not reside on Hawai'i Island. Given that, seize the opportunity of ongoing community planning efforts and initiatives, such as Community Development Plan (CDP) efforts, neighborhood boards and other grassroots efforts, as they serve as perfect venues for bringing the dialogue to the community.

o Impact fees alone will not solve the County's infrastructure problems; they are one source for partial financing of new infrastructure and public facilities. Impact fees need to be looked at as a solution in perspective with all financing options, which need to be identified and implemented by decision-makers and agencies.

o The County of Hawai'i needs to take a more comprehensive look at financing infrastructure, share that vision with the public, and encourage creative public & private efforts to ensure completion of specific improvements.

o There are no easy answers on how to address impact fees and their effect on affordable housing. Fees cannot be waived, but may be paid from grants or other funding sources. Funding sources for grants should be explored and identified early on in the process.

o Should an impact fee ordinance be implemented, current administrative procedures need to be retooled and additional staff may be needed to administer the impact fee system. Existing systems do not necessarily meet the needs of this new program. This has been a major concern and focus of discussion among the agency liaisons.

o Fees may be imposed at less than 100 percent the maximum allowable amount, provided they are applied proportionately to all land uses.

o Fees may be tailored to reflect the unique circumstances, needs and aspirations of individual communities. Specific fees can be applied to a district or community that is more ready and prepared to implement impact fees.

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CHAPTER 6: NEXT STEPS/IMPLEMENTATION

The County has a choice to adopt an impact fee ordinance based on this study or not to adopt an impact fee ordinance at this time and continue to fund new infrastructure and public facilities with existing planning and budgetary processes. Infrastructure financing options currently utilized by the County include bond issues, current revenues, state and federal funding, and the "fair share" contribution program. The County needs to determine the adequacy of current funding sources with the need for new facilities along with the legality of the current "fair share" assessment system.

Action Items If Impact Fees Not Adopted

Should the County of Hawai'i decide not adopt an impact fee ordinance, the following recommendations are suggested:

- A more extensive and comprehensive discussion of funding options for new infrastructure and public facilities should take place, with the consideration of impact fees in the context of other financing tools. This was an overarching theme that permeated all aspects of public discussion during this project.

- An Impact Fee Working Group should be established to receive an overview and education of the County's present budgetary and planning process for funding new infrastructure and informed of existing financing tools available to government. The Working Group would be tasked with considering and exploring new and creative financing options, including impact fees. A collaborative approach involving developers, businesses, non-profit organizations, local impact fee "experts" and government agencies would provide an opportunity to work on specific infrastructure improvements. The Working Group could also be tasked with identifying specific infrastructure projects with consideration of the General Plan, Community Development Plans and Capital Improvement Project (CIP) budget and proceed to implement a collaborative resolution to the planning, implementation and construction of specific projects.

Action Items if Impact Fees Adopted

Should the County of Hawai'i decide to adopt an impact fee ordinance there are also several options for implementing a fair and legally-defensible system. A full-fledged impact fee program could be imposed using maximum fees island-wide for roads, parks, fire, police solid waste and wastewater. Various options and variations could also be implemented.

The maximum fees could be used as a guide for establishing a lower, more socially acceptable and reasonable impact fee. A single benefit district could be selected as a test case or impact fees could be collected for a particular type of infrastructure, such as for roads only.

Whichever options are selected, should the impact fee ordinance proceed to adoption, it is recommended that the Mayor immediately proceed with the following:

- Designate an appropriate agency to be the overall administrator of the impact fee program. In other jurisdictions, this responsibility has fallen on the building permit department (which is responsible for collection of the fee), the finance department (which is responsible for administration of the impact fee accounts), or the planning department.

- Form an Impact Fee Implementation Committee (IFIC) consisting of affected agencies to assist in developing the administrative procedures for implementing the Impact Fee Program.

The decisions/responsibilities for the IFIC would include, among others:

- Review the options and decide the course of action for the critical policy issues listed in the Executive Summary.

- Identify a source of funding for a grant system to be implemented that would provide relief for qualifying residents, and design procedures to determine who receives a grant to address affordability and affordable housing concerns.

- Develop a collection process and identify agencies involved, system for tracking of funds and pre-ordinance offsets.

- Develop a system for annual reports so that funds are disbursed within 6 years, in accordance with HRS, Chapter 45, Impact Fees.

- Identify specific projects that impact fees would be applied to in consideration of the General Plan, Community Development Plans, and Capital Improvement Projects.

- Produce a Manual of Operations.

Depending on how far into the future the County determines the effective date of the Ordinance, a consultant could be contracted to assist with formulating, developing and expediting the design of the program and the above tasks so that the Ordinance is implemented in a timely manner.

PART II: IMPACT FEE CALCULATIONS

CHAPTER 7: ROADS

This section of the study discusses road impact fees for Hawai'i County. One of the most costly impacts associated with new development is on the road system. Road impact fees are designed to rationalize the process of ad hoc, negotiated exactions and "level the playing field" by requiring all developers to pay an impact fee based on their impact on the major roadway system. Under an impact fee system, developers who are required to make improvements to the major roadway system will receive credit against their impact fees for the value of their contributions. Credit provisions and other issues will be addressed in the impact fee ordinance.

The 1998 *Hawai'i Long Range Land Transportation Plan*, prepared by the State in association with the County, identifies the island's major transportation improvement needs to support anticipated growth to the year 2020. The major highways on the island are the Hawai'i Belt Highway and the Mamalahoa Highway, which together link the major towns of all of the districts except North Kohala. Major improvement needs identified by the *Transportation Plan* include the reconstruction of the Saddle Road (Highway 200) and the widening of Queen Kaahumanu Highway (Highway 19) to four lanes between Waikoloa Road and Kona International Airport at Keahole.

Many of the island's road capacity improvement needs are on the State road system (see Table 10). Previously, State law had restricted road impact fees outside of Oahu from being used to help fund State road improvements, but this restriction was lifted in the last legislative session (a copy of the Act is provided in Appendix H).[8] Nonetheless, this report provides the option of implementing a road impact fee for County roads only, or both County and State roads.

Table 10
ROAD IMPROVEMENT NEEDS

Priority	County Roads	State Roads	Total
Tier 1 (1998-2005)	$112,400,000	$291,000,000	$403,400,000
Tier 2 (2006-2010)	$49,300,000	$155,100,000	$204,400,000
Tier 3 (2011-2020)	$103,100,000	$307,800,000	$410,900,000
Tier 4 (Unfunded)	$173,900,000	$124,200,000	$298,100,000
Total	$438,700,000	$878,100,000	$1,316,800,000

Source: Frederick R. Harris, Inc., *Hawai'i Long Range Land Transportation Plan*, May 1998.

Assessment and Benefit Districts

Concern has been expressed that a broad-based impact fee should be used to facilitate internal subdivision improvements like roads and parks, because otherwise owners of individual lots would not feel they were getting any benefit from the expenditure of the impact fees collected. However, road impact fees must be used to expand capacity, and cannot be used to pave internal subdivision roads.

[8] 2006 Act 197 (Senate Bill 2901), effective July 1, 2006, amends Part VIII, Impact Fees of Chapter 264, Highways, to delete the definition of county, which was defined as counties having more than 500,000 residents.

Many of the capacity needs identified in Hawai'i County are on State roads and major County roads, in which case they could reasonably be county-wide. Based on available road cost data and the integrated nature of the road major road network, it is recommended that the proposed road impact fees be calculated county-wide.

Based on focus group discussions, the community has expressed a desire for multiple benefit districts. For the purposes of collecting and spending the impact fee revenue it is recommended that the County establish four road impact fee benefit districts (see Figure 2 in the Policy Issues section). To facilitate projects of regional benefit, it is recommended that up to 20 percent of the impact fees collected in any district be allowed to be used for projects located outside the district, provided that significant benefit will be provided to new development in the district in which the fees were collected.

Service Unit

A service unit creates the link between supply (roadway capacity) and demand (traffic generated by new development). An appropriate service unit basis for road impact fees is vehicle-miles of travel (VMT). Vehicle-miles is a combination of the number of vehicles traveling during a given time period and the distance (in miles) that these vehicles travel.

The two time periods most often used in traffic analysis are the 24-hour weekday (average daily trips or ADT) and the single hour of the weekday with the highest traffic volume (peak hour trips or PHT). Average daily trips are the best measure for the amount of motor fuel tax that will be generated by new development, which may be used to calculate a revenue credit. In addition, average daily trip data are less variable than peak hour trips, which can vary considerably based on the size and demographic make-up of a community. For these reasons, it is recommended that average daily VMT be utilized as the service unit for the road impact fee.

Major Roadway System

A road impact fee program should include a clear definition of the major roadway system that is to be funded with the impact fees. In the context of a consumption-based road impact fee methodology, the definition of the major roadway system affects the average trip length, as well as the types of improvements for which revenue and construction credits against the fees must be given to developers.

Currently, the County directly funds growth-related improvements only to County roads and indirectly funds improvements to State and County roads through motor fuel tax or other highway user fees generated by County residents and businesses. County roads that function as arterials or collectors are entirely the responsibility of the County, while State Highways are the responsibility of the State.

The County currently may require developers to dedicate right-of-way (ROW) or make improvements to major roads as part of the development approval process. The cost of the improvement or value of the ROW may be utilized to offset fair share contributions. Similarly, to the extent that a developer is required to make an improvement to the major road network or purchase ROW, the impact fee would be offset by a credit for the improvements.

The functional classification system for major State and County roads in Hawai'i is defined by the County's General Plan (see Figure 3). For the purpose of the road impact fees calculated for this study,

the major roadway system is proposed to be defined as existing State and County primary and secondary arterial roads and collector roads.

Figure 3
MAJOR ROADWAY SYSTEM

An inventory of the existing major roadway system was prepared as part of this project and is presented in Table 94 in Appendix A. The major purpose of the inventory is to determine the total amount of travel on the major roadway system, expressed in vehicle-miles of travel (VMT), and system-wide capacity, expressed in vehicle-miles of capacity (VMC).

Methodology

The recommended methodology is to base the road impact fees on the existing level of service. As discussed in the Phase I policy memorandum, basing the impact fees on a higher-than-existing level of service creates existing deficiencies that must be funded and requires credit against the impact fees for the revenue generated by new development and used to remedy the deficiencies. To avoid these complications, the recommended approach is to base all impact fees on the existing level of service.

The proposed road impact fee methodology relies on a "consumption-based" model, which basically charges a new development the cost of replacing the capacity that it consumes on the major roadway system. That is, for every vehicle-mile of travel (VMT) generated by the development, the road impact fee charges the net cost to construct an additional vehicle-mile of capacity (VMC).

Since travel is never evenly distributed throughout a roadway system, actual roadway systems require more than one unit of capacity for every unit of demand in order for the system to function at an acceptable level of service. Suppose for example, that the County completes a major widening project. The completed road is likely to have a significant amount of excess capacity for some period of time. If the entire system has just enough capacity to accommodate all of the vehicle-miles of travel, then the excess capacity on this segment must be balanced by another segment being over-capacity. Clearly, roadway systems in the real world need more total aggregate capacity than the total aggregate demand, because the traffic does not always precisely match the available capacity. Consequently, the standard consumption-based model generally underestimates the full cost of accommodating new development at the existing level of service.

In most rapidly growing communities, some roadways will be experiencing an unacceptable level of congestion at any given point in time. One of the principles of impact fees is that new development should not be charged for a higher level of service than is provided to existing development. In the context of road impact fees, this has sometimes been interpreted to mean that impact fees should not be spent on roadways that are already over-capacity. A variant of this approach is that impact fees should only be used to fund a percentage of the project that can be attributed to providing additional capacity beyond what is needed to remedy any existing deficiency.

These approaches for dealing with existing deficiencies create several types of problems. A major one is that impact fees are restricted from being spent on roadways that are most in need of improvement. The approach that allows a percentage of the cost to be funded complicates impact fee administration by requiring that the portion of the cost of each improvement that is attributable to remedying deficiencies be funded from a different revenue source. Finally, these approaches ignore the interconnectedness of the major roadway system. For example, road impact fees could not be spent directly to improve a deficient segment, but could be spent to improve or construct a parallel roadway that would also relieve the congestion.

The most important objection, however, is that it is not necessary to address existing deficiencies in a consumption-based system, which, unlike an improvements-driven system, is not really designed to

recover the full costs to maintain the desired LOS on all roadway segments. Instead, the standard consumption-based method is only designed to maintain a minimum one-to-one overall ratio between system demand and system capacity. Consequently, under a standard consumption-based system, the level of service standard is really a systemwide VMC/VMT ratio of one. Since the County's major roadway system currently operates at better than this LOS (see Table 19), the consumption-based method assumes a one-to-one ratio.

The consumption-based methodology is recommended for use in the road impact fee system for Hawai'i County. While the actual VMC/VMT ratio is much higher than one-to-one, this approach utilizes the more conservative ratio in evaluating the system-wide level of service on which road impact fees are based. The recommended impact fee formula is presented in Figure 4.

Figure 4
ROAD IMPACT FEE FORMULA

IMPACTFEE =		**VMT x NET COST/VMT**
Where:		
VMT	=	TRIPS x % NEW x LENGTH ÷ 2
NET COST/VMT	=	COST/VMC x VMC/VMT - CREDIT/VMT
TRIPS	=	Trip ends during an average weekday
% NEW	=	Percent of trips that are primary trips, as opposed to passby or diverted-link trips
LENGTH	=	Average length of a trip on the major roadway system
÷ 2	=	Avoids double-counting trips for origin and destination
COST/VMC	=	Average cost to add a new daily vehicle-mile of capacity
VMC/VMT	=	System-wide ratio of VMC to VMT on the major roadway system (assumed 1:1)
CREDIT/VMT	0	DEBT/VMT + PAST/VMT + GRANT/VMT
DEBT/VMT	=	Outstanding debt used for capacity improvements on existing road facilities divided by total existing VMT
PAST/VMT	=	The net present value of property taxe s paid over the last five years by vacant land for road capacity improvements, including general fund expenditures as well as debt service payments, per VMT
GRANT/VMT	=	The net present value of future Federal and State roadway capacity funding anticipated to be forthcoming per VMT over the next 20 years

Travel Demand

The travel demand generated by specific land use types is a product of three factors: 1) trip generation; 2) percent new trips; and 3) trip length. The result is the vehicle-miles of travel (VMT) generated by a unit of development.

Trip Generation

Trip generation rates are based on information published in the most recent edition of the Institute of Transportation Engineers' (ITE) *Trip Generation* manual. Trip generation rates represent trip ends, or driveway crossings at the site of a land use. Thus, a single one-way trip from home to work counts as one trip end for the residence and one trip end for the work place, for a total of two trip ends. To avoid over-counting, all trip rates have been divided by two. This places the burden of travel equally between the origin and destination of the trip and eliminates double-charging for any particular trip.

To date, few road impact fees have been adopted that vary by the size of the dwelling unit. This is largely because road impact fees are generally based on national trip generation rate data, and the Institute of Transportation Engineers (ITE) *Trip Generation* manual does not provide rates by dwelling unit size. However, the fact that trip generation rates for residential uses vary by the size of the household is actually well documented in the transportation planning literature.

This study gives the County the option of establishing impact fees for single-family housing based on the size of the dwelling unit. The size of the dwelling unit is related to the number of residents, and the average number of vehicle trips generated is strongly related to the number of people living in the dwelling unit.

The average household size of single-family detached units by number of bedrooms is available from 2000 Census five-percent sample data, which is presented in Appendix C. This information is combined with the trip rate data by household size presented in the previous table to derive daily trip rates by the size of the unit, represented by bedrooms, as shown in Table 11.

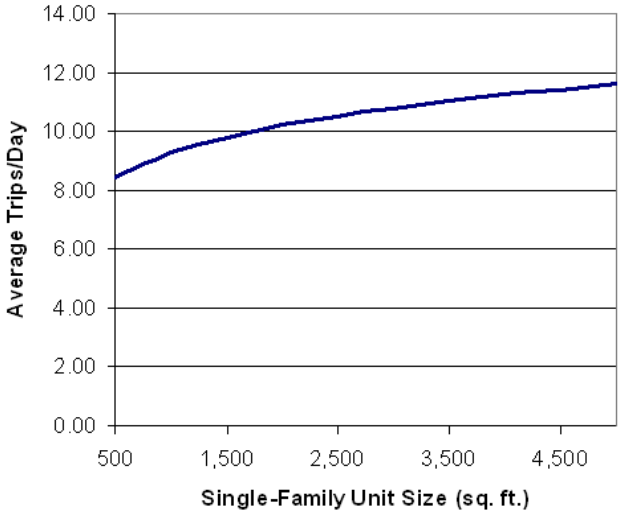
Table 11
SINGLE-FAMILY TRIPS BY BEDROOMS

Bedrooms	Avg. HH Size	Daily Trips
Up to Two	2.55	8.45
Three	2.97	9.72
Four	3.49	11.04
Five or more	4.22	12.82
Average	2.92	9.57

Source: Average household sizes from Table 100; daily trips derived from Transportation Research Board, NCHRP Report 365, "Travel Estimation Techniques for Urban Planning," Washington, D.C.: National Academy Press, Table 9 (for areas with populations of 50,000 to 199,999), 1998.

To determine a relationship between the average square footage of single-family detached units, the number of bedrooms and trip generation, the consultant analyzed a sample with compiled data on all 630 single-family homes listed for sale in Hawai'i County from the National Association of Realtors website (www.realtor.com) on October 19, 2005. To this data base, variables for daily trip rates were added, consisting of the trip rates by number of bedrooms presented in the previous table. Regression analysis was then performed to determine the relationship between unit size in square feet and trip rates. Linear, semi-logarithmic and logarithmic regressions were performed, and the logarithmic equation was determined to provide the best explanation of the data.[9]

Figure 5
DAILY TRIPS BY UNIT SIZE



The curve described by the equation for peak hour trips is shown in Figure 5. As can be seen, the relationship between size and trip generation is positive but modest. Many large homes are occupied by empty-nesters or used as second homes. Nevertheless, on average larger homes do have somewhat more impact on the road system. Using the regression equation, average daily trip rates were derived for five size categories based on square footage. The results are shown in Table 12.

Table 12
SINGLE-FAMILY TRIPS BY SQUARE FOOTAGE

Dwelling Size Category	Midpoint	Daily Trips
Less than 1,000 sq. ft.	500	8.44
1,000 - 1,499 sq. ft.	1,250	9.58
1,500 - 1,999 sq. ft.	1,750	10.03
2,000 - 2,999 sq. ft.	2,500	10.54
3,000 - 3,999 sq. ft.	3,500	11.04
4,000 sq. ft. or more	4,500	11.43

Source: Daily trips derived using the regression equation formula and the midpoints of the size categories.

New Trip Factor

Trip rates also need to be adjusted by a "new trip factor" to exclude pass-by and diverted-link trips. This adjustment is intended to reduce the possibility of over-counting by only including primary trips generated by the development. Pass-by trips are those trips that are already on a particular route for a different purpose and simply stop at a particular development on that route. For example, a stop at a convenience store on the way home from the office is a pass-by trip for the convenience store. A

[9] The equation for average daily trips is Ln (y) =0.138385 * Ln(x) + 1.272444, where y is average daily trips and x is the floor area of the unit in square feet; the R^2 is 0.42863 and the t-statistics are 21.705 for the x-coefficient and 27.119 for the y-intercept.

pass-by trip does not create an additional burden on the street system and therefore should not be counted in the assessment of impact fees. A diverted-link trip is similar to a pass-by trip, but a diversion is made from the regular route to make an interim stop. The reduction for pass-by and diverted-link trips was drawn from ITE and other published information.

Average Trip Length

In the context of a road impact fee based on a consumption-based methodology, we are interested in determining the average length of a trip on the major roadway system within Hawai'i County's jurisdiction. An inventory of the County's major roadway system was prepared as part of this project (see Table 94 in Appendix A). Traffic counts were available for about forty percent of the major road network. It is likely that roads for which counts are available have higher traffic volumes than roads for which no counts were available. To take this into account, volumes for roads without counts were assumed to have, on average, only three-quarter the volumes on roads with counts. Based on these data and assumptions, the total demand on the major County and State roadway system is estimated to be about 3.5 million VMT, with total demand on County roads accounting for 1.0 million VMT, as shown in Table 13.

Table 13
ESTIMATED ACTUAL VEHICLE-MILES OF TRAVEL

Road Class	Ln-Mi w/Counts	Observed VMT	3/4 Trips/ Lane	Ln-Mi w/o Counts	Estimated VMT	Total VMT
Prim. Arterial	125.2	872,711	5,228	3.0	15,684	888,395
Sec. Arterial	461.0	1,280,814	2,084	3.8	7,919	1,288,733
Major Collector	109.2	128,996	886	4.8	4,253	133,249
Minor Collector	1.8	3,164	1,318	133.2	175,558	178,722
State Roads	697.2	2,285,686	9,516	144.8	203,414	2,489,099
Prim. Arterial	22.4	195,868	6,558	0.0	0	195,868
Sec. Arterial	104.3	136,339	980	0.0	0	136,339
Major Collector	187.7	599,138	2,394	34.3	82,114	681,252
County Roads	314.3	931,344	9,932	34.3	82,114	1,013,459
Total	1,011.5	3,217,031	19,448.0	179.1	285,528	3,502,558

Notes: "Ln-Mi w/Counts" is lane-miles of road segments with recent traffic counts; "Observed VMT" is average annual daily travel on road segments with counts; "3/4 Trips/Lane" is 3/4 times the ratio of observed VMT to lane-miles with counts; "Ln-Mi w/o Counts" is lane-miles of segments without recent traffic count data; "Estimated VMT" is estimated average daily VMT on segments without counts (product of 3/4 VMT and lane-miles without counts); "Total VMT" is sum of observed and estimated VMT.
Source: Table 94 in Appendix A.

The average length of a trip on the County's major roadway system can be estimated by dividing the total vehicle-miles of travel (VMT) on the major road system by the total number of trips that are generated by existing land uses in Hawai'i. Multiplying trip generation rates by existing land use results in an estimate of 0.51 million daily trips generated by existing development, as shown in the following table.

Table 14
TOTAL DAILY TRIPS

Land Use	Unit	Existing Units	Daily Trip Generation	Daily Trips
Single-Family	Dwelling	58,772	4.79	281,518
Multi-Family/Other	Dwelling	17,153	3.36	57,634
Hotel/Motel	Room	10,513	3.45	36,270
Shopping Center/General Retail	1,000 sq. ft.	5,307	13.31	70,636
Office/Other Institutional	1,000 sq. ft.	4,551	5.51	25,076
Medical Office	1,000 sq. ft.	269	18.07	4,859
Industrial	1,000 sq. ft.	417	3.48	1,451
Mini-Warehouse	1,000 sq. ft.	248	1.25	310
Warehouse	1,000 sq. ft.	7,956	2.48	19,731
Church/Synagogue	1,000 sq. ft.	402	4.56	1,833
Elementary/Secondary School	1,000 sq. ft.	608	6.85	4,165
Nursing Home	1,000 sq. ft.	216	3.05	659
Hospital	1,000 sq. ft.	245	8.79	2,154
Total Daily Trips				506,296

Source: Existing housing units from Table 98; existing nonresidential units from Table 102; existing hotel/motel rooms based on 2000 hotel room count of 10,041 from *Hawai'i County Data Book*, Table 7.3, data for 2005 derived from total visitor growth rate projected increase of 2% per year from *Hawai'i County General Plan*; daily trip generation from Institute of Transportation Engineers (ITE), *Trip Generation*, 7th Ed., 2003 (shopping center rate has been multiplied by a 0.62 new trip factor).

Dividing total VMT on the major roadway system by the estimated trips generated by existing development yields an average trip length. As shown in Table 15, the average trip length on the County's major road system is approximately 2.00 miles on County roads and a total of 6.92 miles on all major roads, including State roads.

Table 15
AVERAGE TRIP LENGTH

Total Estimated Daily Vehicle-Miles of Travel, County Roads (VMT)	1,013,397
Total Daily Trips	506,288
Average Trip Length, County Roads (miles)	2.00
Total Estimated Daily Vehicle-Miles of Travel (VMT)	3,502,681
Total Daily Trips	506,288
Average Trip Length, County and State Roads (miles)	6.92

Source: Total daily trips from preceding table; VMT from Table 13.

The national average trip lengths derived from the U.S. Department of Transportation's 2001 *National Household Travel Survey* for a variety of trip purposes, including home-to-work trips, doctor/dentist, school/church, shopping, and other personal trips are shown in Table 16 below. The average trip length on Hawai'i County's major roadway system, including State roads, is 70 percent of the national average. This is not surprising, since the trip length calculation excludes travel on the County's

unclassified local roads. Reducing all of the national trip lengths by purpose by this adjustment factor yields the following estimates of local trip lengths by trip purpose.

Table 16
AVERAGE TRIP LENGTH BY TRIP PURPOSE

		County Roads		All Major Roads	
Trip Purpose	National Trip Length (miles)	Local Adjustment Factor	Local Trip Length (miles)	Local Adjustment Factor	Local Trip Length (miles)
Visit Friends/Relatives	14.99	0.20	3.00	0.70	10.49
To or from Work	12.19	0.20	2.44	0.70	8.53
Residential*	10.77	0.20	2.15	0.70	7.54
Doctor/Dentist	9.89	0.20	1.98	0.70	6.92
Average	9.82	0.20	2.00	0.70	6.92
School/Church	7.50	0.20	1.50	0.70	5.25
Family/Personal	7.43	0.20	1.49	0.70	5.20
Shopping	6.61	0.20	1.32	0.70	4.63

* weighted based on 40% work trips and 60% average trips
Source: National trip lengths from US. Department of Transportation, National Household Travel Survey, 2001; local average trip length from Table 15.

Travel Demand Summary

The result of combining trip generation rates, primary trip factors and localized average trip lengths is a travel demand schedule that establishes the daily VMT during the average weekday on the major roadway system generated by various land use types per unit of development in Hawai'i County. The recommended travel demand schedule is presented in Table 17. The schedule provides the option of assessing single-family detached development based on the overall average trip generation or on trip generation rates that vary by the size of the dwelling unit. In addition, the schedule provides the option of basing the fee on major County roads only, or including both State and County roads.

Table 17
TRAVEL DEMAND SCHEDULE

Land Use Type	ITE Code	Unit	ADT	Primary Trips	County Roads Length (miles)	County Roads Daily VMT	All Major Roads Length (miles)	All Major Roads Daily VMT
Less than 1,000 sq. ft.	210	Dwelling	4.22	100%	2.15	9.09	7.54	31.81
1,000 - 1,499 sq. ft.	210	Dwelling	4.79	100%	2.15	10.32	7.54	36.11
1,500 - 1,999 sq. ft.	210	Dwelling	5.02	100%	2.15	10.80	7.54	37.81
2,000 - 2,999 sq. ft.	210	Dwelling	5.27	100%	2.15	11.35	7.54	39.73
3,000 - 3,999 sq. ft.	210	Dwelling	5.52	100%	2.15	11.89	7.54	41.62
4,000 sq. ft. or more	210	Dwelling	5.72	100%	2.15	12.31	7.54	43.09
Single-Family Det. Avg.	210	Dwelling	4.79	100%	2.15	10.32	7.54	36.11
Multi-Family	220	Dwelling	3.36	100%	2.15	7.24	7.54	25.33
Hotel/Motel	310/320	Room	3.45	100%	3.00	10.34	10.49	36.20
Retail/Commercial	820	1000 sq. ft.	21.47	62%	1.32	17.60	4.63	61.59
Office	710	1000 sq. ft.	5.51	100%	2.44	13.42	8.53	46.97
Industrial Park	130	1000 sq. ft.	3.48	100%	2.44	8.48	8.53	29.69
Warehouse	150	1000 sq. ft.	2.48	100%	2.00	4.96	6.92	17.16
Church/Synagogue	560	1000 sq. ft.	4.56	100%	1.49	6.77	5.20	23.69
Elementary/Sec. School	520/530	1000 sq. ft.	6.85	24%	1.50	2.46	5.25	8.62
Hospital	610	1000 sq. ft.	8.79	100%	2.44	21.42	8.53	74.96
Nursing Home	620	1000 sq. ft.	3.05	100%	1.98	6.03	6.92	21.12
Other Institutional	710	1000 sq. ft.	5.51	100%	2.00	11.01	6.92	38.09

Source: "ADT" is 1/2 of daily trips from Institute of Transportation Engineers (ITE), *Trip Generation*, 7th ed., 2003; other institutional ADT based on office ADT rate; single-family trip rates by sq. footage categories from Table 12; primary trip percentages for retail/commercial uses from ITE, *Trip Generation Handbook*, March 2001 (additional 10% deducted from non-passby percentage for shopping centers to account for diverted-link trips); percentage for elementary/secondary school based on Preston Hitchens, "Trip Generation of Day Care Centers," 1990 *ITE Compendium*; local average trip lengths from Table 16.

Roadway Capacity

Nationally-accepted level of service (LOS) categories have been developed by the transportation engineering profession. Six categories, ranging from LOS A to LOS F, qualitatively describe driving conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. LOS A represents free flow, while LOS F represents the breakdown of traffic flow, characterized by stop-and-go conditions.

Service volume capacity is a quantitative measure, expressed in terms of the rate of flow (vehicles passing a point during a period of time). Service volume capacity represents the maximum rate of flow that can be accommodated by a particular type of roadway while still maintaining a specified LOS. The service volume capacity at LOS E represents that maximum volume that can be accommodated before the flow breaks down into stop-and-go conditions that characterize LOS F, and thus represents the ultimate capacity of the roadway.

The capacity of an individual roadway depends on a number of factors, including number of lanes, lane width, topography, percent of truck traffic, etc. In impact fee analysis, generalized capacity estimates are typically used based strictly on number of lanes. The Florida Department of Transportation has done extensive work developing generalized capacity estimates to be used for planning purposes based on *Highway Capacity Manual* procedures, and their work will be used to develop planning-level capacity estimates for use in this analysis. As can be seen in Table 18, major roadways tend to be able to accommodate about 6,500 vehicles per lane per day.

Table 18
DAILY VEHICLE CAPACITIES

	Total Capacity	Capacity/ Lane
2-Lane Undivided	13,000	6,500
2-Lane Divided or 3-Lane	17,100	5,700
4-Lane Undivided	25,900	6,475
4-Lane Divided or 5-Lane	34,500	6,900

Source: Data for Class II arterial roads (2.0-4.5 signalized intersections per mile) from Florida Department of Transportation, *2002 Quality/Level of Service Handbook*, 2002, Table 4-1: Generalized Annual Average Daily Volumes for Florida's Urbanized Areas.

The inventory of Hawai'i's major roadway system, including segment descriptions, segment lengths in miles, number of lanes, number of lane-miles, generalized daily capacity and average daily volumes, is presented in Appendix A, Table 94. The estimated existing system-wide demand based on available traffic count data is presented in Table 13.

Dividing the system-wide capacity (VMC) by system-wide demand (VMT) yields the VMC/VMT ratio. As shown in Table 19, the major roadway system currently has about 121 percent more capacity than demand. This represents the current system-wide level of service. However, this level of service may not be sustainable as the community grows, and instead may represent some amount of excess capacity. For this study, a conservative system-wide VMC/VMT ratio of 1.00 will be used as the level of service in the impact fee calculations.

Table 19
EXISTING SYSTEM-WIDE CAPACITY/DEMAND RATIO

	County Roads	All Roads
Total Vehicle-Miles of Capacity (VMC)	2,265,510	7,738,770
Total Estimated Vehicle-Miles of Travel (VMT)	1,013,459	3,502,558
Existing VMC/VMT Ratio	2.24	2.21
Assumed VMC/VMT Ratio for Impact Fee Calculation	1.00	1.00

Source: Actual VMC from Table 94 of Appendix A; estimated VMT from Table 13.

Cost per Service Unit

Expanding the capacity of the County's major roadway system is primarily accomplished by widening existing roadway cross-sections to accommodate additional through lanes and by building new roads and bridges. While impact fees can be used for intersection improvements and other types of capacity enhancements, it is more difficult to quantify the capacity added by these types of improvements in terms of vehicle-miles of capacity.

In a consumption-based transportation impact fee system, roadway improvement costs are entered into the formula as an average cost for providing new roadway capacity. Assuming there are no dramatic changes to the mix of the type of improvements, it is not necessary to revisit impact fees each time that the capital improvement program changes. Updates at reasonable periodic intervals are sufficient to analyze potential changes to average costs.

The current cost to add additional capacity to the existing major roadway system can be estimated using historical costs as well as planned projects for which bids have been received. Table 20 below summarizes the County's capacity-expanding improvements to its major roadway system from 2000 to 2005, including the cost and the vehicle-miles of capacity (VMC) added by each improvement. Projects for which it was impossible to quantify the vehicle-miles of capacity added by the improvement were excluded. Based on available cost data, the County's road cost is approximately $4.4 million per lane-mile, excluding bridge construction, and $5.8 million including bridge replacements.

Table 20
RECENT ROAD IMPROVEMENTS

		No. of Lanes		New	Capacity		Added	
Project	Mi.	Before	After	Ln. Mi.	Before	After	VMC	Cost
Mamalahoa Hwy	0.79	2	4	1.58	13,000	26,000	10,270	$7,258,964
Mohouli Street Extension	1.35	0	2	2.70	0	13,000	17,550	$11,207,098
Puainako Street Extension	4.50	0	2	9.00	0	13,000	58,500	$32,310,000
Kuakini Hwy, Palani to Hualalai	0.49	2	4	0.98	13,000	26,000	6,370	$12,574,000
Subtotal, Segment Improvements	7.13			14.26	26,000	78,000	92,690	$63,350,062
Komohana St./Alenaio Stream	0.02	2	4	0.04	13,000	26,000	260	$5,871,625
Oshiro, Kalopa/Aliipali & Kaumoali	0.03	1	2	0.03	6,500	13,000	195	$2,314,450
Honomu Bridge Replacement	0.02	1	2	0.02	6,500	13,000	130	$2,516,264
Inoino Gulch Bridge Replacement	0.01	1	2	0.01	6,500	13,000	65	$1,129,238
Onomea Camp Rd Bridge Replace	0.01	1	2	0.01	6,500	13,000	65	$585,005
Kawailani Street Bridge Replace	0.02	2	4	0.04	13,000	26,000	260	$7,786,710
Subtotal, Bridge Replacements	0.11			0.15	52,000	104,000	975	$20,203,293
Total				14.41			93,665	$83,553,355

Source: Road segments, miles, lanes and costs from Hawai'i County; total cost includes actual construction cost or bid cost if final cost not available, design cost and right-of-way cost if applicable; costs have been adjusted by *Engineering News-Record* Construction Cost Index from date of completion to January 2006; daily capacity before and after from Table 18; added VMC is added capacity (difference between before and after capacity) times segment length.

The calculation of the cost per service unit can be derived from the recent thoroughfare improvement project costs. As shown in Table 21, the average cost per service for new road construction including bridges is $892. However, since the bridge cost per VMC is much higher than general road construction costs per VMC, the cost per VMC excluding bridges may more accurately reflect the average cost of the entire road system. The average cost per VMC is $683 if bridge projects are excluded.

Table 21
ROAD COST PER SERVICE UNIT

	Total Road Costs	Excluding Bridges
Recent Road Improvement Costs	$83,553,355	$63,350,062
Added Lane-Miles	14.41	14.26
Average Cost per Lane-Mile	$5,798,290	$4,442,501
Recent Road Improvement Costs	$83,553,355	$63,350,062
Added VMC	93,665	92,690
Average Cost per VMC	$892	$683

Source: Recent road improvement cost, added lane-miles and added VMC from Table 20.

Net Cost per Service Unit

In the calculation of the impact of new development on roadway infrastructure, credit should be given for taxes that will be paid by new development and used to retire outstanding debt for past major roadway improvements. Credit will also be provided in this study for past property taxes on vacant property, as well as motor fuel taxes that will be generated by new development and used to pay for capacity-related major road improvements.

Roadway systems in Hawai'i County are generally financed through Federal, State and County programs. The County fuel tax and vehicular taxes are deposited to the County's Highway Fund. According to the *Hawai'i County General Plan*,[10] fuel tax and vehicular taxes collected in the county are deposited into the Highway fund for maintenance of County roads. As a result, credit for the future contribution of development to these funds is not necessary since the fund is used exclusively for the maintenance of County roads. Federal aid is generally provided for the maintenance, improvement and construction of Federal-aid County highways. The County allocates 50 percent of the fuel tax to supplement the maintenance of Federal-aid County highways, and the balance of the fuel tax is used to maintain the non-Federal-aid local roads. In addition to maintenance funding, the County receives Federal and State aid for capacity-enhancing projects.

Based on a review of the 2006 to 2008 *Statewide Transportation Improvement Program* (TIP), it is anticipated that $61.5 million in Federal funds and $6.3 million in State funds will be available to pay for capacity related improvement programs on major roads in Hawai'i County over the next three years. The current list of Federal- and State-funded eligible improvements from the State of Hawai'i Department of Transportation TIP is shown in Table 22.

[10] *Hawai'i County General Plan Infrastructure Assessment Study*, Ch. 3.3.5, 2004

Table 22
PLANNED ROAD IMPROVEMENT FUNDING, 2006-2008

Project	Segment Limits	Improvement	State Funding	Federal Funding
Hawai'i Belt Rd	Waimea Bypass	New Road	$0	$1,200,000
Konoelehua Ave (Design)	Kamehameha to Puinako	Widen	$70,000	$280,000
Kealakehe Parkway	Keanalehu Dr to Kealakaa	Road Extension	$100,000	$1,200,000
Queen Kaahumanu Hwy	Kealakehe Pkwy to Keahole	Widen	$6,000,000	$24,000,000
Volcano Road	Kulani Rd Intersection	Intersection	$100,000	$400,000
Subtotal, State Roads			$6,270,000	$27,080,000
Puainako Street	Komohana to Kawili	Widen	$0	$4,000,000
Saddle Road	n/a	Road Extension	$0	$2,400,000
Alii Hwy, Phase 1	Kamehameha III Rd to Kuakini	Widen	$0	$24,000,000
Kuakini Hwy	Hualalai Rd to Alii Hwy	Widen	$0	$40,000
Palani-Kealakaa Intersection	n/a	Intersection	$0	$4,000,000
Subtotal, County Roads			$0	$34,440,000
Totals			$6,270,000	$61,520,000

Source: Hawai'i Department of Transportation, *Statewide Transportation Improvement Program, FY 2006 to FY 2008*, 2005.

Dividing the capacity-related share of anticipated annual Federal and State funding by existing travel on the major roadway system yields the annual Federal and State capacity funding per VMT. Multiplying that figure by the appropriate net present value provides the equivalent current value of the future stream of funding over the next 20 years, a period that roughly corresponds to the life of roadway improvements. The result is a Federal and State funding credit of $151 per VMT for County roads and $78 per VMT for all roads, as shown in Table 23.

Table 23
STATE AND FEDERAL ROAD FUNDING CREDIT PER SERVICE UNIT

	County Roads	All Major Roads
Federal Capacity Improvement Funding, FY 2006 to FY 2008	$34,440,000	$61,520,000
State Capacity Improvement Funding, FY 2006 to FY 2008	$0	$6,270,000
Total State and Federal Funding	$34,440,000	$67,790,000
Total Years in Transportation Plan	3	3
Annual Funding	$11,480,000	$20,506,667
Daily VMT on Major Roadway System	1,013,397	3,502,681
Annual Capacity Funding per VMT	$11.33	$5.85
Present Value Factor (20 years at 4.25%)	13.29	13.29
Federal and State Funding Credit per VMT	$151	$78

Source: Federal and State funding from Table 22; existing VMT from Table 13; discount rate for net present value factor is based on average rate on 20-year, tax exempt AAA municipal bonds reported by fmsbonds.com on January, 18, 2006.

The thoroughfare facility fees must also take into consideration that new development will be generating future revenues that will be used to retire outstanding debt for past capacity-related roadway improvements. An analysis of GO debt is provided in Appendix B. This analysis assumes that all the

outstanding road-related debt was issued for capacity-enhancing projects. As shown in Table 24, total outstanding road-related debt is $68.8 million.

A simple method that ensures that new development is not required to pay for existing facilities, through property tax or other funds used for debt retirement, as well as new facilities, through impact fees, is to subtract the outstanding debt from the replacement cost of existing road facilities. Essentially, this defines the existing level of service that new development is required to maintain as the equity value of the existing road system. While it may be somewhat difficult to quantify the replacement value of the existing thoroughfare system, the same result is obtained by dividing the outstanding debt by existing service units. The County's road-related debt credit is $68 per service unit when prorated over travel on County roads, and $20 per service unit when based on all major road travel, as shown in Table 24.

Table 24
ROAD DEBT CREDIT

	County Roads	All Major Roads
Total Outstanding Road Related Debt Principal	$68,846,141	$68,846,141
Percent Attributable to Capacity	100%	100%
Attributable Outstanding Road Debt Principal	$68,846,141	$68,846,100
Daily VMT on the Major Roadway System	1,013,459	3,502,558
Debt Credit per VMT	$68	$20

Source: Total outstanding debt from Appendix B, Table 97; percent attributable to capacity assumed; existing VMT from Table 13.

Prior to development, the owners of a vacant parcel of land paid property taxes that may have been used, in part, to construct capital facilities of the type for which impact fees are being assessed. State law requires the provision of an additional credit in order to reduce impact fees by the value of property tax payments over the last five years that were used to construct existing capital facilities of the type for which the fees are being charged. Pursuant to State law, this credit must represent the present value of the past five years of property taxes paid by vacant land for capital facilities funded through the general fund.

Based on a review of the County' s CIP status report, nearly all of the County's road capacity improvements over the past five years have been funded through Federal and State funds and County GO bonds with maintenance and operations funded through the County's Highway Fund. Since newly-developing properties were undeveloped in the past, they did not generate any revenue for the highway fund or any other type of general fund revenues except for property taxes. As a result, a credit is necessary to account for the portion of property taxes from vacant and agricultural land that has been utilized over the past five years to pay principal and interest for outstanding road-related debt. In the absence of a detailed principal and interest schedule for road-related debt, the 2005 debt payment is assumed to be the same for all five years. As shown in the table below, the estimated annual principal and interest payments on the current outstanding debt for roads over the past five years was $31.4 million.

Table 25
ROAD GENERAL FUND HISTORICAL CAPACITY EXPENDITURES

Annual GO Bond Debt Service	$24,921,138
Roads Share of Total Outstanding Debt	25.2%
Annual Road Debt Service	$6,280,127
Years	5
Total General Fund Capacity Funding, 2000-2005	$31,400,634

Source: Annual debt service based on 2004-05 debt service from Hawai'i County, *2005-06 Annual Operating Budget*, June 2006; road share of debt from Table 96.

An analysis of budgetary and tax data indicates that vacant and agricultural properties within the County generate 32.5 percent of property tax revenues, and property taxes accounted for 66.5 percent of general fund revenues. Using these percentages, the credit for past property tax payments is $1 per VMT if only County roads are considered, or $3 per VMT if the road impact fees are based on travel on all major roads, as shown in Table 26.

Table 26
ROAD PROPERTY TAX CREDIT

	County Roads	All Major Roads
Percent of General Fund from Property Taxes, FY 2005-06	66.5%	66.5%
Percent of Property Taxes from Vacant/Ag. Land, 2006	32.5%	32.5%
Percent of General Fund from Vacant/Ag. Land	21.6%	21.6%
Total General Fund Capacity Funding, 2000-2005	$31,400,634	$31,400,634
Vacant/Ag. Land Share of Past Capital Cost	$6,786,462	$6,783,544
Replacement Cost of Existing Road System	$1,547,343,330	$5,285,579,910
Percent of Existing Cost Paid by Vacant/Ag. Land, 2000-2005	0.4%	0.1%
Road Cost per VMT	$683	$683
Past Property Tax Credit per VMT	$3	$1

Source: Percent of general fund from property taxes from Hawai'i County, *2005-06 Annual Operating Budget*, June 2006; percent of property taxes from undeveloped/agricultural land from Hawai'i County Real Property Tax Administrator, June 1, 2006; general fund capacity funding from preceding table; replacement cost is product of existing VMC from Table 94 in Appendix A and cost per VMC; cost per VMT (assumed same as cost per VMC) from Table 21.

Reducing the cost per service unit by the road debt credit, past property tax payments and the anticipated annual Federal/State funding per service unit leaves a net cost of about $461 per VMT for county roads and about $584 per VMT for all roads to replace capacity directly consumed by new development, as summarized in Table 27.

Table 27
ROAD NET COST PER SERVICE UNIT

	County Roads	All Major Roads
Cost per Vehicle-Mile of Travel (VMT)	$683	$683
Federal/State Funding Credit per VMT	$151	$78
Debt Service Credit per VMT	$68	$20
Property Tax Credit	$3	$1
Net Cost per VMT	$461	$584

Source: Cost per VMT from Table 21; Federal/State funding credit from Table 23; debt service credit from Table 24; property tax credit from Table 26.

Maximum Fee Schedule

Using the formula and the inputs calculated in this section of the impact fee report, the maximum potential road impact fees per unit of development for various land uses are shown in Table 28. The fee schedule provides the option of charging single-family detached development based on a flat rate per unit or on a variable schedule depending on the size of the dwelling unit. The fee schedule provides the option of implementing the road impact fee based on major county roads or both State and county major roads. In addition, impact fees could be adopted at less than 100 percent of the level shown in the net cost schedule, provided that the reduction is applied uniformly across all land use categories in order to retain the proportionality of the fees.

Table 28
ROAD NET COST SCHEDULE

Land Use Type	ITE Code	Unit	County Roads			All Major Roads		
			Daily VMT	Net Cost/ VMT	Net Cost/ Unit	Daily VMT	Net Cost/ VMT	Net Cost/ Unit
Less than 1,000 sq. ft.	210	Dwelling	9.09	$461	$4,190	31.81	$584	$18,577
1,000 - 1,499 sq. ft.	210	Dwelling	10.32	$461	$4,758	36.11	$584	$21,088
1,499 - 1,999 sq. ft.	210	Dwelling	10.80	$461	$4,979	37.81	$584	$22,081
2,000 - 2,999 sq. ft.	210	Dwelling	11.35	$461	$5,232	39.73	$584	$23,202
3,000 - 3,999 sq. ft.	210	Dwelling	11.89	$461	$5,481	41.62	$584	$24,306
4,000 sq. ft. or more	210	Dwelling	12.31	$461	$5,675	43.09	$584	$25,165
Single-Family (flat rate)	210	Dwelling	10.32	$461	$4,758	36.11	$584	$21,088
Multi-Family	220	Dwelling	7.24	$461	$3,338	25.33	$584	$14,793
Hotel/Motel	310/320	Room	10.34	$461	$4,767	36.20	$584	$21,141
Retail/Commercial	820	1000 sq. ft.	17.60	$461	$8,114	61.59	$584	$35,969
Office	710	1000 sq. ft.	13.42	$461	$6,187	46.97	$584	$27,430
Industrial Park	130	1000 sq. ft.	8.48	$461	$3,909	29.69	$584	$17,339
Warehouse	150	1000 sq. ft.	4.96	$461	$2,287	17.16	$584	$10,021
Church/Synagogue	560	1000 sq. ft.	6.77	$461	$3,121	23.69	$584	$13,835
Elementary/Sec. School	520/530	1000 sq. ft.	2.46	$461	$1,134	8.62	$584	$5,034
Hospital	610	1000 sq. ft.	21.42	$461	$9,875	74.96	$584	$43,777
Nursing Home	620	1000 sq. ft.	6.03	$461	$2,780	21.12	$584	$12,334
Other Institutional	710	1000 sq. ft.	13.42	$461	$6,187	46.97	$584	$27,430

Source: Net cost per VMT from Table 27; daily VMT from Table 17.

Capital Improvement Plan

Funding of $90.5 million is proposed for transportation infrastructure improvements in the County's 2005-06 to 2010-2011 capital improvements program (CIP). Impact fees may only be used for capacity-expanding improvements to the major roadway system. A detailed breakdown of each project component cost was not available; consequently, the identification of eligible projects is preliminary and subject to verification. It is estimated that eligible improvements account for $87.4 million of the total CIP costs. The current list of eligible improvements from the six-year CIP is shown in Table 29. No improvements are currently planned specifically for the proposed 4-Puna/Kaʻu benefit district. Some impact fee-eligible improvements should be identified for this benefit districts prior to the adoption of a road impact fee.

Table 29
ROAD CAPITAL IMPROVEMENT PROGRAM

Project	Judicial District	Proposed Benefit District	Total Cost	Impact Fee Eligible
Mamalahoa-Kawaihae Connector	Kohala	1-N/S Kohala	no est.	no est.
Kalopa Sand Gulch Bypass Road	Hamakua	2-Hilo/Hamakua	$2,500,000	$2,500,000
Waianuenue Ave Improvements	S. Hilo	2-Hilo/Hamakua	$8,675,000	$8,675,000
Hilo Roads Guardrail & Retaining Walls (FHWA)	S. Hilo	2-Hilo/Hamakua	$600,000	$0
Kamehameha Avenue Resurfacing (FHWA)	S. Hilo	2-Hilo/Hamakua	$1,000,000	$0
Kuakini Highway Improvements (FHWA)	S. Hilo	2-Hilo/Hamakua	$1,500,000	$1,500,000
Kawailani/Pohakulani/Ainaola/Iwalani Intersect.	S. Hilo	2-Hilo/Hamakua	$4,886,000	$4,886,000
Mamalahoa Highway Improvements (FHWA)	N./ S. Hilo	2-Hilo/Hamakua	$528,000	$528,000
Mohouli Street Improvement (FHWA)	S. Hilo	2-Hilo/Hamakua	$1,575,000	$1,575,000
Laupahoehoe Gulch Access Road Improvements	N. Hilo	2-Hilo/Hamakua	$100,000	$0
Plani-Kealakaa Intersection (FHWA)	N. Kona	4-N/S Kona	$1,316,000	$1,316,000
Alii Drive Improvements (FHWA)	N. Kona	4-N/S Kona	$800,000	$800,000
Kahului-Keauhou Parkway (FHWA)	N. Kona	4-N/S Kona	$15,830,000	$15,830,000
Alii Highway	N. Kona	4-N/S Kona	$49,321,000	$49,321,000
Bridge Inspection & Apprisals	Various		$60,000	$0
Land Acquisition for PW Facilities	Various		$450,000	$450,000
East Hawai'i Drainage Improvements	Various		$700,000	$0
West Hawai'i Drainage Improvements	Various		$700,000	$0
Total			$90,541,000	$87,381,000

Source: County of Hawai'i, *Capital Budget and Six Year Capital Improvements Program*, June 2006.

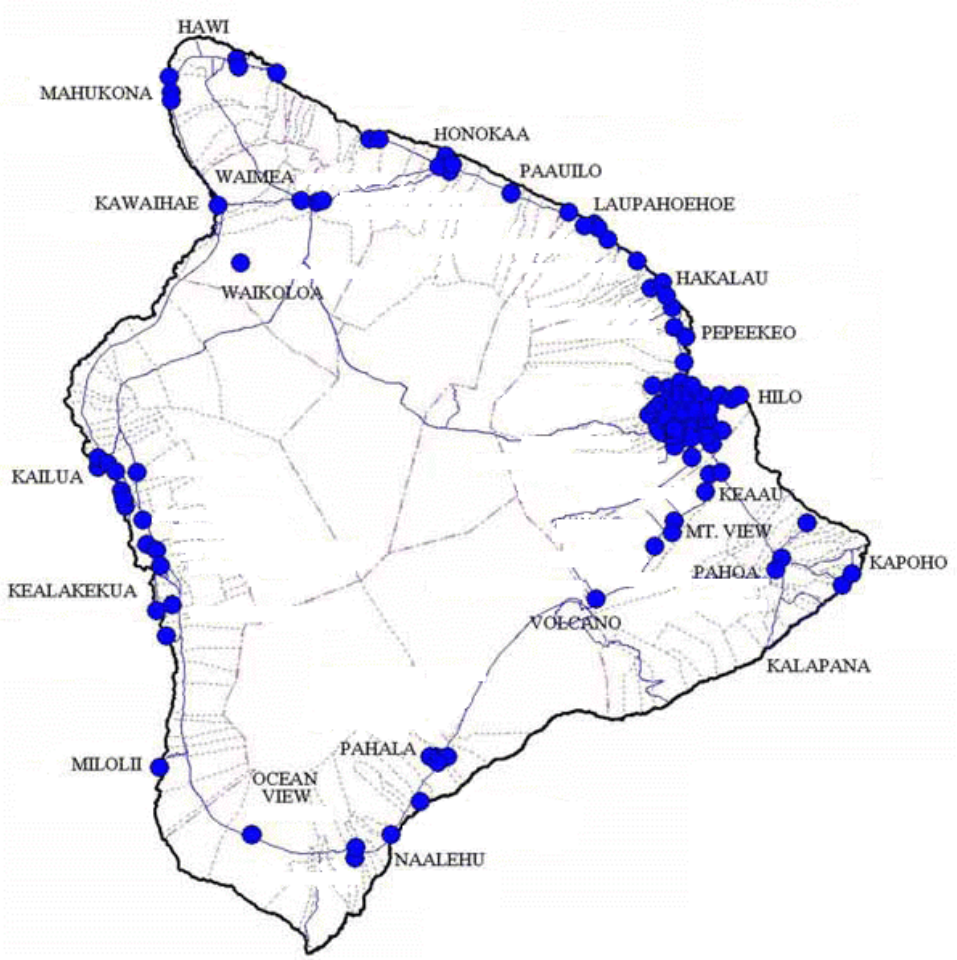
CHAPTER 8: PARKS AND RECREATION

Recreational facilities can be generally classified as resource-based or facility-based. Most resource-based parks on the island are provided by the Federal and State governments (231,400 and 800 acres respectively), with the County primarily providing resource-based parks along the coast in beach parks (260 acres).

The County provides a variety of facility-based parks, ranging from small neighborhood parks that serve relatively small geographic areas, district parks that serve an entire district, and larger regional parks with a county-wide scope. The location of existing parks and recreation facilities is graphically illustrated in Figure 6, and the inventory of parks and park facilities is shown in Table 106 of Appendix E.

This study bases the proposed park impact fees on the existing level of service, and measures that level of service in terms of the ratio of the replacement value of existing facilities to existing residential development expressed in service units.

Figure 6
EXISTING COUNTY PARKS



Assessment and Benefit Districts

The concept of assessment and benefit districts was described in the Policy Issues section. Assessment districts are geographic areas subject to a single fee schedule. Assessment districts may be divided into multiple benefit districts, which are areas where fees collected are earmarked to be spent.

While construction and land cost data are likely to vary between urban and rural locations and different parts of the County, sufficient cost data are not available by district that would provide a legal basis for calculating separate fees for each benefit district. Consequently, a single county-wide assessment district is recommended for calculating park and recreation impact fees, which provides a uniform park impact fee schedule throughout the county.

However, it is further recommended that the County create several benefit districts for park impact fees. The County currently restricts the expenditure of fair share contributions to the judicial district in which they were collected. The nine judicial districts have been aggregated into the proposed four park benefit districts (see Figure 2 on page 18). To facilitate projects with wider benefit, such as regional parks, it is recommended that the County allow up to 20 percent of the park impact fee collected in a district to be used for projects outside the district, provided that significant benefit can be shown to the district in which the fees were collected.

Service Unit

While most impact fees are assessed on all uses, park impact fees are usually assessed only on residential uses. This is because a park nexus is generally easier to establish for residential uses than for nonresidential. Some jurisdictions, however, do assess park fees on non-residential uses. Jurisdictions that charge non-residential uses for park impact fees are generally less populated central cities within major metropolitan areas with a high day-time, or functional population, than night-time, or residential population since the added influx of daytime population places extra demand and strain on park facilities and services, such as parks. Similarly, communities such as Hawai'i County, with a significant tourist population, assess park impact fees for hotel/motel accommodations since the users of those units also benefit from the community's parks and recreational facilities.

Disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for park facilities. This unit of measurement is called a "service unit." Population is the most common service unit used in park impact fee analysis. Since the level of service for park facilities is measured in terms of population, demand for park facilities is proportional to the number of people in a dwelling unit or hotel room. Consequently, data on average household size for various types of units is a critical component of a park impact fee. These data are presented and analyzed in Appendix C.

Population estimates are based on three factors: the number of dwelling units, average household sizes for various types of units and occupancy rates. The number of dwelling units can be estimated with some degree of precision, and average household size has been declining somewhat predictably but has been stabilizing in recent years. Occupancy rates, on the other hand, tend to vary significantly over time, and not in predictable directions.

Consequently, this report recommends the use of a service unit that avoids the need to make assumptions about occupancy rates. This service unit is the "equivalent dwelling unit" or EDU, which

represents the impact of a typical single-family dwelling. By definition, a typical single-family unit represents, on average, one EDU. Other types of units each represent a fraction of an EDU, based on their relative average household sizes. The EDUs associated with each housing type and unit size category are shown in Table 30.

Table 30
PARK EQUIVALENT DWELLING UNIT MULTIPLIERS

Land Use	Avg HH Size	EDUs/Unit
Less than 1,000 sq. ft.	2.78	0.97
1,000 - 1,499 sq. ft.	2.95	1.03
1,500 - 1,999 sq. ft.	3.06	1.07
2,000 - 2,999 sq. ft.	3.23	1.13
3,000 - 3,999 sq. ft.	3.45	1.20
4,000 sq. ft or more	3.68	1.28
Single-Family Detached Average	2.87	1.00
Multi-Family	2.26	0.79
Hotel/Motel	1.34	0.47

Source: Average household size for single-family average and multi-family units from Table 99 in Appendix C; average household sizes by size categories from Table 100 in Appendix C; average occupancy for hotel/motel rooms estimated to be one-half of average vehicle occupancy on vacation trips, as reported by U.S. Dept. of Transportation, National Household Travel Survey, 2001; EDUs/unit is ratio of average household size to single-family detached average household size.

In order to determine the existing level of service, it is necessary to estimate the total number of EDUs in the county. This is accomplished by multiplying the number of existing residential units by the EDUs per unit calculated above based on relative average household sizes. As shown in Table 31, there are 77,264 park service units (EDUs) in Hawai'i County.

Table 31
EXISTING PARK SERVICE UNITS

Land Use	Existing Units	EDUs/ Unit	Total EDUs
Single-Family Detached	58,772	1.00	58,772
Multi-Family	17,153	0.79	13,551
Hotel/Motel	10,513	0.47	4,941
Total Park EDUs			77,264

Source: Existing units from Table 98 in Appendix C; EDUs per unit from Table 30; hotel/motel units from Table 7.

Cost Per Service Unit

As noted earlier, this study bases the park and recreation impact fee on the existing level of service, and measures that level of service in terms of the ratio of the replacement value of existing facilities to existing residential development expressed in equivalent dwelling units. A full inventory of Hawai'i County's parks and specialized recreational facilities is shown in Table 106 and Table 107, respectively

of Appendix E. As shown in Appendix E, Hawai'i County's existing open space sites total 1,898.4 acres, with 991.6 acres of developed parkland.

The previous 1990 impact fee study utilized agriculture land value per acre in the County for determining the replacement value for park acreage. Agricultural land value provides a reasonable proxy for parks that are located in rural inland locations; however, it does not accurately reflect the value of parkland located in urban or shoreline areas where land costs are higher.

County acquisitions for parks have been infrequent in recent years and do not provide a good basis for determining current average park land costs. An alternative approach was to analyze the cost of residential land offered for sale based on an analysis of 2,147 parcels of residential land were offered for sale in Hawai'i County and were posted on the web site of the National Association of Realtors. Costs per acre vary considerably by size and location, but location is more difficult to quantify, so only variation by parcel size is used. Applying the average cost per acre for residential property based on current asking prices by existing park acreage in each parcel size category yields a reasonable estimate of current park land replacement costs of $72.6 million, as shown in Table 32. These costs are for land only, and do not include site development costs. Development costs for park land includes the cost of site preparation such as clearing and grading, installation of security lighting, landscaping and utilities. Site development costs per acre for Hawai'i County's existing developed parks are unavailable and will not be considered in determining the impact fee.

Table 32
PARK LAND REPLACEMENT COST

	Hawaii County Real Estate Data			Existing	Est. Park
Size of Parcel	Total Price	Total Ac.	Cost/Acre	Park Acres	Land Value
Less than 1 acre	$135,789,442	249.20	$544,901	8.5	$4,648,006
1 to 4.99 acres	$199,922,960	1,879.57	$106,366	178.3	$18,963,994
5 to 9.99 acres	$36,188,600	433.60	$83,461	163.3	$13,625,008
10 to 19.99 acres	$40,924,900	643.49	$63,598	169.7	$10,793,853
20 to 49.99 acres	$56,181,500	1,646.62	$34,119	348.3	$11,883,648
50 to 99.99 acres	$16,549,000	1,263.75	$13,095	521.7	$6,831,138
100 to 499.99 acres	$22,055,000	1,906.56	$11,568	508.7	$5,884,295
500 acres or more	$27,150,000	4,441.58	$6,113	0.0	$0
Total	$534,761,402	12,464.37	$42,903	1,898.4	$72,629,942

Source: Hawaii County real estate data is all residential properties offered for sale on www.realtor.com on June 6, 2006; existing park acres from Table 106 of Appendix E.

The County has invested in the construction of park and recreation facilities, ranging from playgrounds and picnic pavilions to community centers. The sum of current standard replacement costs for existing County recreation facilities total about $440.7 million, as shown in Table 33.

Table 33
STANDARD PARK FACILITY REPLACEMENT COSTS

Facility Type	Units	Unit Cost	Total Cost
Gymnasium	19	$6,000,000	$114,000,000
Gymnasium w/ Community Mtg Rm	3	$7,500,000	$22,500,000
Community Center	17	$4,500,000	$76,500,000
Senior Center	9	$2,500,000	$22,500,000
Pavilion	80	$200,000	$16,000,000
Swimming Pool (25M)	6	$6,000,000	$36,000,000
Swimming Pool (50M)	3	$10,000,000	$30,000,000
Restroom	78	$350,000	$27,300,000
Picnic Area	33	$200,000	$6,600,000
Playground Equipment	25	$250,000	$6,250,000
Baseball Field	66	$850,000	$56,100,000
Soccer/Football Field	24	$400,000	$9,600,000
Basketball Court	29	$150,000	$4,350,000
Volleyball Court	7	$150,000	$1,050,000
Tennis Court	26	$125,000	$3,250,000
Lighted Tennis Court	21	$150,000	$3,150,000
Skateboard Park	2	$250,000	$500,000
Boat Launch	5	$1,000,000	$5,000,000
Total Standard Facility Costs			$440,650,000

Source: Units from Table 106 in Appendix E with breakdown of pools by size provided by Hawai'i County Department of Parks and Recreation, July 25, 2006.; unit costs based on review of Hawai'i County facilities inventory original construction costs adjusted by ENR CCI (January 2006) and Hawai'i County Department of Parks and Recreation, April 11 and July 25, 2006.

The County's Parks and Recreation Department provides residents with additional recreational facilities for which standardized pricing is not applicable. The following table shows replacement values for non-standardized facilities such as golf courses, civic centers, arenas and unique recreational facilities. These estimates are based on original costs from the County's fixed asset listings, adjusted by a construction cost inflation factor. The estimated total value of these facilities is $25.0 million, as shown in Table 34.

Table 34
SPECIAL PARK STRUCTURES AND FACILITIES

Facility Type	Replacement Value
Special Facilities	$14,594,261
Golf Course Facilities	$2,283,847
Civic Centers and Auditoriums	$8,110,740
Total Facility Costs	$24,988,848

Source: Facility replacement value from non-standard facility adjusted cost in Table 107 in Appendix E.

Dividing the total replacement cost of existing park land and capital improvements by the number of existing park service units (or EDUs) yields the cost per EDU to maintain the existing level of service, as summarized in Table 35. The cost per service unit to maintain the current level of service is $6,967 per EDU.

Table 35
PARK COST PER SERVICE UNIT

Total Park Land Cost	$72,629,942
Total Park Facility Cost	$440,650,000
Total Special Facility Cost	$24,988,848
Total Park Costs	$538,268,790
Equivalent Dwelling Units (EDUs)	77,264
Park Cost per EDU	$6,967

Source: Park land cost from Table 32; total facility cost from Table 33; total special facility cost from Table 34; EDUs from Table 31.

Net Cost Per Service Unit

Some of the cost to provide new residents with park facilities will be paid by the new residents themselves through future payments that will be used to retire outstanding debt, and past payments paid through property taxes levied on the vacant land prior to development. In addition, some of the capital costs to serve growth will be paid by outside funding sources. Consequently, the cost per service unit is reduced to take account of these factors, and the result is referred to as the net cost.

Based on a review of the County's CIP status report, the County's primary funding source for major park capital improvements over the past five years has been general obligation bond issues. An analysis of past bond issues shown in Table 97 of Appendix B indicates that currently the County's outstanding debt related to parks is $25.4 million.

A simple method that ensures that new development is not required to pay for existing facilities, through property tax or other funds used for debt retirement, as well as new facilities, through impact fees, is to subtract the outstanding debt from the replacement cost of existing park facilities. Essentially, this defines the existing level of service that new development is required to maintain as the equity value of the existing park system. The same result is obtained by dividing the outstanding debt by existing service units. As shown in Table 36, the County's current park-related debt results in a credit of $329 for every park service unit in Hawai'i County.

Table 36
PARK DEBT CREDIT PER SERVICE UNIT

Total Outstanding Debt Principal	$25,431,806
Park Equivalent Dwelling Units, 2005	77,264
Park Debt Credit per EDU	$329

Source: Total outstanding debt from Appendix B, Table 97; total park EDUs from Table 31.

State law requires an additional credit in order to account for the portion of past property taxes from vacant land that have paid for capital facilities over the previous five years. This additional credit represents the value of the past five years of property taxes paid by vacant land for capital facilities funded through the general fund.

Based on a review of the County's CIP status report, two capacity-expanding projects for parks were funded directly from the general fund appropriations over the last five years. As shown in Table 37, direct general fund expenditures for new park facilities were $147,500.

Table 37
DIRECT PARK GENERAL FUND EXPENDITURES, 2001-2005

Project	Expenditure
Keaau Park Improvements	$110,000
District 4 Park Improvements	$37,500
Total	$147,500

Source: Hawai'i County, *Capital Improvement Project Status Report*, June 2005.

Most other capacity-expanding park projects were funded through the County's GO bonds. As shown in the table below, the estimated annual principal and interest payments on the current outstanding debt for parks over the past five years was $13.0 million. Total general fund capacity expenditures were $13.1 million.

Table 38
TOTAL PARK GENERAL FUND EXPENDITURES, 2001-2005

Annual GO Bond Debt Service	$24,921,138
Park Share of Total Outstanding Debt	10.4%
Annual Park Debt Service	$2,591,798
Years	5
Total Debt-Related Capacity Funding, 2000-2005	$12,958,992
Direct General Fund Expenditures, 2000-2005	$147,500
Total General Fund Expenditures, 2000-2005	$13,106,492

Source: Annual debt service based on 2004-05 debt service from Hawai'i County, *2005-06 Annual Operating Budget*, June 2006; park share of debt from Table 96; direct general fund expenditures from Table 37.

An analysis of budgetary and tax data indicates that vacant and agricultural properties within the County generate 32.5 percent of property tax revenues, and property taxes accounted for 66.5 percent of general fund revenues. Using these percentages, the credit for past property tax payments is $35 per EDU, as shown in Table 39.

Table 39
PARK PROPERTY TAX CREDIT

Percent of General Fund from Property Taxes, FY 2005-06	66.5%
Percent of Property Taxes from Vacant/Ag. Land, 2006	32.5%
Percent of Credit for Past Property Tax Payments	21.6%
Total General Fund Capacity Funding, 2000-2005	$13,106,492
Net Vacant/Ag. Land Share of Past Capital Cost	$2,831,423
Total Existing Park Replacement Value	$538,268,790
Percent Paid by Vacant Land in Last Five Years	0.5%
Park Cost per EDU	$6,967
Past Property Tax Credit per EDU	$35

Source: Percent of general fund from property taxes from Hawai'i County, *2005-06 Annual Operating Budget*, June 2006; percent of property taxes from undeveloped/agricultural land from Hawai'i County Real Property Tax Administrator, June 1, 2006; park general fund capacity funding from the preceding table; total existing park replacement value and park cost per EDU from Table 31.

Another factor that is often considered in determining park impact fees is the degree to which outside funding has been used to cover a portion of the recreational facility costs. While there is no guarantee that the past level of funding will be indicative of future outside funding support, to be conservative, the cost per service unit will be reduced to account for the likelihood that some growth-related park costs can be paid for with Federal and State grants. Over the last five years, the County has received an average of $216,900 annually in Federal grants for capital improvement to park facilities, as summarized in Table 40.

Table 40
PARK GRANT FUNDING, 2000-2005

Project	Fund Source	Amount
Reeds Bay Beach Park	Federal	$250,000
Isaac Hale Beach Park Expansion and Improvement	Federal	$520,824
Waimea Trails and Greenways	Federal	$313,700
Total Grant Funding 2000-2005		$1,084,524
Average Annual Grant Funding		$216,900

Source: Hawai'i County Capital Improvement Project Status Report, June 2005; Parks Department.

It may be reasonable to assume that the grant funding received per park service unit in the past will continue in the future. Dividing the average annual grant funding by existing service units yields annual funding per service unit. Multiplying that by the present value factor results in the current lump sum amount that is the equivalent of the future stream of outside funding that the County may receive over the next 20 years to help fund park improvements. Based on these assumptions, the appropriate credit for potential grant funding for parks is $37 for each new single-family home, or park service unit equivalent, as shown in Table 41.

Table 41
PARK GRANT FUNDING CREDIT

Average Annual Grant Funding	$216,900
Existing Park EDUs, 2005	77,264
Annual Funding per EDU	$2.81
Present Value Factor (20 years @ 4.25%)	13.29
Grant Funding Credit per EDU	$37

Source: Average annual grant funding from Table 40; existing park EDUs from Table 31; discount rate for present value factor from Table 23.

As shown in Table 42, reducing the cost per service unit by the debt credit and anticipated grant funding per service unit leaves a net cost of $6,566 per EDU to maintain the existing level of service.

Table 42
PARK NET COST PER SERVICE UNIT

Total Park Replacement Cost per EDU	$6,967
Debt Credit per EDU	$329
Past Property Tax Credit per EDU	$35
Grant Funding Credit per EDU	$37
Net Park Cost per EDU	$6,566

Source: Total park replacement cost per EDU from Table 35; debt credit per EDU from Table 36; past property tax credit per EDU from Table 39; grant funding credit per EDU from Table 41.

Maximum Fee Schedule

Given the data, methodology and assumptions in this analysis, the maximum fees that can be adopted by Hawai'i County are derived by multiplying the number of equivalent dwelling units (EDUs) represented by each dwelling unit type and hotel/motel room by the net cost per EDU, as shown in Table 43. The County has the option of charging single-family homes a flat rate per unit or a variable rate based on dwelling unit size.

Table 43
PARK NET COST SCHEDULE

Land Use	EDUs/ Unit	Cost/ EDU	Net Cost/ Unit
Less than 1,000 sq. ft.	0.97	$6,566	$6,369
1,000 - 1,499 sq. ft.	1.03	$6,566	$6,763
1,499 - 1,999 sq. ft.	1.07	$6,566	$7,026
2,000 - 2,999 sq. ft.	1.13	$6,566	$7,420
3,000 - 3,999 sq. ft.	1.20	$6,566	$7,879
4,000 sq. ft or more	1.28	$6,566	$8,404
Single-Family (flat rate)	1.00	$6,566	$6,566
Multi-Family	0.79	$6,566	$5,187
Hotel/Motel	0.47	$6,566	$3,086

Source: EDUs per unit from Table 30; net cost per EDU from Table 42.

The County's Park Dedication Code (Chapter 8, Hawai'i County Code) imposes a requirement for the dedication of five acres of park land for every 1,000 persons or payment of fees in-lieu of dedication. These requirements apply to the subdivision of land for residential purposes or the development of multi-family units. If this dedication requirement is maintained, credit against the park impact fees will need to be provided for the value of land required to be dedicated since the impact fee calculation includes land costs.

Capital Improvement Plan

Funding of $140.4 million is proposed for park and recreation infrastructure improvements in the County's 2005-06 to 2010-2011 capital improvements program (CIP). Impact fees may only be used for capacity-expanding improvements such as new parks and facilities or enhancements that add amenities or facilities to existing parks. A detailed breakdown of each project component cost was not available; consequently, the identification of eligible projects is preliminary and subject to verification. Eligible improvements account for $60.1 million of the total CIP costs. The current list of eligible improvements from the six-year CIP is shown in Table 44. Impact fee-eligible projects are currently planned for all of the proposed benefit districts.

Table 44
PARK CAPITAL IMPROVEMENT PROGRAM

Project	Judicial District	Proposed Benefit District	Total Cost	Impact Fee Eligible
Spencer Beach Park Improvements	S. Kohala	1-Kohala	$500,000	$0
Kamehameha Park Grandstand Restoration	N. Kohala	1-Kohala	$500,000	$0
Waimea Regional Park Development	S. Kohala	1-Kohala	$11,150,000	$11,150,000
Waimea Trails and Greenways	S. Kohala	1-Kohala	$2,300,000	$2,300,000
Kohala Pool Improvements	N. Kohala	1-Kohala	$250,000	$0
Mahukona Beach Park Improvements	N. Kohala	1-Kohala	$500,000	$0
Hakalau Gym Structure Repairs and Improvements	Hamakua	2-Hilo/Hamakua	$250,000	$0
Honokaa Park Track & Sports Fields Improvements	Hamakua	2-Hilo/Hamakua	$50,000	$0
Reed's Bay Area Parks Restoration & Improvements	S. Hilo	2-Hilo/Hamakua	$1,000,000	$1,000,000
S. Hilo Baseyard Improvements & Modifications	S. Hilo	2-Hilo/Hamakua	$500,000	$0
Lehia Beach Park Development	S. HIlo	2-Hilo/Hamakua	$1,250,000	$1,250,000
Honolii Beach Park Master Plan	S. Hilo	2-Hilo/Hamakua	$1,150,000	$1,150,000
Hilo Municipal Golf Course Improvements	S. Hilo	2-Hilo/Hamakua	$1,750,000	$0
New Waiakea Recreation Center Facility	S. Hilo	2-Hilo/Hamakua	$5,250,000	$0
Hilo Bayfront Beach Park Master Plan	S. Hilo	2-Hilo/Hamakua	$2,250,000	$2,250,000
Alae Cemetary Expansion and Improvements	S. Hilo	2-Hilo/Hamakua	$337,000	$0
Pana'ewa Equestrian Center Improvements	S. Hilo	2-Hilo/Hamakua	$350,000	$0
Kahuku Park Improvements	S. Hilo	2-Hilo/Hamakua	$500,000	$0
Leleiwi Beach Park Improvements	S. Hilo	2-Hilo/Hamakua	$500,000	$0
Pana'ewa Rainforest Zoo Improvements	S. Hilo	2-Hilo/Hamakua	$500,000	$0
New Puna Gym & Park Development	Puna	3-Puna/Ka'u	$8,250,000	$8,250,000
Ahalanui/Pohoiki Bay Beach Parks	Puna	3-Puna/Ka'u	$7,079,000	$7,079,000
New HOVE Senior/Community Center Facility	Ka'u	3-Puna/Ka'u	$1,500,000	$1,500,000
Hookena Beach Park Road Improvements	S. Kona	4-N/S Kona	$250,000	$0
Konawaena Swimming Pool Improvements	S. Kona	4-N/S Kona	$1,250,000	$0
Alii Kai Subdivision New Park Development	N. Kona	4-N/S Kona	$1,322,000	$1,322,000
Kailua Park Improvements	N. Kona	4-N/S Kona	$2,500,000	$0
Kailua -Kona Senior Center	N. Kona	4-N/S Kona	$4,500,000	$4,500,000
La'aloa Bay Beach Park/Magic Sands Beach	N. Kona	4-N/S Kona	$2,078,000	$2,078,000
West Hawai'I Regional Complex Development	NA		$15,000,000	$15,000,000
Laupahoehoe Point Park Improvements	NA		$500,000	$0
Laupahoehoe Pool Improvements	NA		$250,000	$0
Punalu'u Beach Park Improvements	NA		$500,000	$0
ADA Compliance	Various		$47,566,000	$0
Repairs/Improvements to Facilities	Various		$9,500,000	$0
DWS Water Connection Compliance	Various		$450,000	$0
Removal and/or Replacement of Hazardous Facilities	Various		$1,000,000	$0
Play Equipment Upgrade & Improvements	Various		$4,000,000	$0
Wastewater Disposal Systems Upgrade	Various		$660,000	$0
Lifeguard Towers/Stands Upgrades	Various		$200,000	$0
New Comfort Stations @ Various Parks	Various		$1,250,000	$1,250,000
Total			$140,442,00	$60,079,000

Source: County of Hawai'i, *Capital Budget and Six Year Capital Improvements Program*, June 2005.

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CHAPTER 9: FIRE/EMS

The Hawai'i County Fire Department provides fire and emergency medical service (EMS) response throughout the county. The County's existing fire station facilities are shown in Figure 7. The Fire Department headquarters are located in the County Building in Hilo and there are 14 regular fire stations, 18 volunteer fire stations and 2 Federal fire stations on the Big Island. The Kilauea Military Camp and Pohakuloa fire stations are Federal facilities. Kilauea Military Camp provides emergency medical services under an agreement with the County. The regular fire stations and three of the volunteer fire stations (Laupahoehoe, Pahala and Na'alehu) provide 24-hour fire suppression and emergency medical services. The Waiakea and Kailua-Kona stations provide rescue services, the Kaumana and South Kohala stations provide hazardous waste response and the South Kohala station provides air medical services. The *General Plan* establishes a desired standard of fire stations within five miles of concentrated settlement areas and first response emergency medical service within eight minutes of concentrated settlement areas.

Figure 7
FIRE STATION LOCATIONS

Assessment and Benefit Districts

Similar to the road and park impact fee calculation, using a single county-wide service area is recommended for calculating the fire/EMS impact fees. This will provide a uniform impact fee schedule through the county.

While fire-fighting apparatus and ambulances are generally dispatched from a station to calls within that station's primary response area, these units may also respond to calls in neighboring response areas if needed. In addition, the headquarters and training facilities are centralized. Consequently, fire/EMS facilities constitute an interrelated system that provides service throughout the jurisdiction. For these reasons, most fire/EMS impact fees use a single jurisdiction-wide benefit district. However, based on discussions with County staff and the impact fee focus group consensus, the County fire/EMS impact fee benefit districts will follow the recommendation for benefit districts shown in Figure 2 (see page 18). As with the road and park benefit districts, the County could utilize up to 20 percent of all impact fee funds for county-wide projects such as improvements to central facilities or to improvements that provide benefit to more than one district.

Service Unit

Disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for fire/rescue service. This common unit of measurement is referred to as a "service unit." Service units create the link between the supply of fire capital facilities and the demand for such facilities generated by new development.

The two most common methodologies used in calculating fire/EMS impact fees are the "calls-for-service" approach and the "functional population" approach. The calls-for-service approach uses historical data on emergency calls by land use type to make the connection between land use type and demand for fire facilities. However, since records based on the land use type where the call for service originates for fire calls are unavailable, an alternative approach was required.

An alternative approach for estimating the public safety service demands of various land use types is known as "functional population." To a large extent, the demand for fire services is proportional to the presence of people. Functional population is analogous to the concept of "full-time equivalent" employees. It represents the number of "full-time equivalent" people present at the site of a land use, and it is used for the purpose of determining the impact of a particular development on the need for fire facilities. The calculations of functional population for various land use types are presented in the Appendix D.

Cost per Service Unit

Fire/EMS impact fees are designed to charge new development the cost of providing the same level of service that is provided to existing development. The existing level of service for fire/EMS facilities is based on the replacement cost of existing facilities and equipment. The County owns facilities at 20 sites, including the Central Station. Some of the volunteer stations were built and are owned by the community in which they are located. For most stations, the County provides and owns the fire-fighting and EMS apparatus and equipment.

The replacement cost of existing fire/EMS facilities can be determined based on recent construction cost data. The cost of construction for the two most recently-built stations, adjusted to current dollars, averages $331 per square foot, as shown in Table 45.

Table 45
FIRE STATION CONSTRUCTION COST

Station	Year	Sq. Ft.	Orig. Cost	Adj. Cost	Cost /Sq. Ft.
Keauhou	1997	4,460	$1,230,997	$1,618,761	$363
Waikoloa	1998	4,768	$1,102,187	$1,426,230	$299
Average Cost					$331

Source: Recent construction project data from County of Hawai'i Fire Department; cost adjusted to January 2006 using the change in the ENR Construction Cost Index (CCI) .

The total value of existing fire/EMS facilities is based on the existing facility size and land value. The value of the fire/EMS facility land was based on market value data provided by the County. The combined replacement value of the existing fire department facilities, is estimated to be $30.93 million, as shown in Table 46.

Table 46
EXISTING FIRE/EMS FACILITY COSTS

Station No.	Station Name	Acres	Building sq. ft.	Land Cost	Building Cost	Total Costs
1	Central	1.21	10,752	$495,601	$3,558,912	$4,054,513
2	Waiakea	0.92	5,475	$300,681	$1,812,225	$2,112,906
3	Kawailani	0.58	3,700	$85,281	$1,224,700	$1,309,981
4	Kaumana	0.37	7,372	$89,581	$2,440,132	$2,529,713
5	Keaau	0.20	2,716	$142,715	$898,996	$1,041,711
6	Captain Cook	0.33	3,350	$142,781	$1,108,850	$1,251,631
7	Kailua-Kona	3.00	5,250	$221,082	$1,737,750	$1,958,832
8	Honokaa	0.13	2,016	$326,881	$667,296	$994,177
9	Waimea	0.68	8,250	$300,000	$2,730,750	$3,030,750
10	Pahoa	0.41	2,700	$150,000	$893,700	$1,043,700
11	Pahala	0.74	1,680	$135,881	$556,080	$691,961
11a	a-Naalehu	0.14	1,026	$136,517	$339,606	$476,123
12	Keauhou	1.51	4,460	$227,464	$1,476,260	$1,703,724
14	S. Kohala	2.15	4,578	$126,790	$1,515,318	$1,642,108
15	N. Kohala	1.25	1,800	$209,481	$595,800	$805,281
16	Waikoloa	3.00	4,768	$377,464	$1,578,208	$1,955,672
17	Laupahoehoe	1.53	1,600	$46,681	$529,600	$576,281
18	Paradise Park	1.00	2,137	$65,900	$707,347	$773,247
19	Volcano	0.18	5,760	$100	$1,906,560	$1,906,660
20	Ocean View	2.00	3,200	$12,900	$1,059,200	$1,072,100
Total Replacement Costs				$3,593,781	$27,337,290	$30,931,071

Source: Building and land information from County of Hawai'i Fire Department; building cost based on cost per square foot from Table 45.

The estimated replacement cost of the Fire Department's existing fire-fighting apparatus and other vehicles is summarized in Table 47.

Table 47
EXISTING FIRE/EMS VEHICLE COST

Type of Vehicle	Number	Unit Cost	Total Cost
Fire Engine/Pumper	21	$650,000	$13,650,000
Tanker	15	$300,000	$4,500,000
Aerial Platforms	1	$850,000	$850,000
Ambulance	24	$150,000	$3,600,000
Mini Pumper	30	$150,000	$4,500,000
Light Rescue	2	$150,000	$300,000
Brush Truck	7	$150,000	$1,050,000
Utility Bus	1	$75,000	$75,000
Utility Fuel Truck	2	$55,000	$110,000
Trailer (Cargo)	2	$20,000	$40,000
Trailer (Boat)	2	$7,000	$14,000
Haz Mat Truck	2	$500,000	$1,000,000
Boat w/motor	2	$70,000	$140,000
Helicopter w/accessories	2	$1,750,000	$3,500,000
Support Vehicle (Utility)	53	$35,000	$1,855,000
Total			$35,184,000

Source: Number of vehicles and replacement cost from Hawai'i County Fire Department, March 24, 2006 e-mail.

Replacement costs for the rest of the Fire Department's equipment were determined from the County's fixed asset listings. This was done by adjusting the original cost for inflation using the Consumer Price Index. The County's inventory of Fire Department equipment on the fixed asset listing includes equipment that can be classified as communications, emergency/fire, office and other equipment. Based on the original cost, the replacement cost for fire/EMS equipment is $5,530,000, as shown in Table 48.

Table 48
EXISTING FIRE/EMS EQUIPMENT COST

Type of Equipment	Original Cost	Replacement Cost
Communications Equipment	$1,340,771	$2,237,532
Emergency/Fire Equipment	$2,045,423	$2,530,800
Office Equipment	$417,910	$506,408
Other	$137,364	$255,542
Total	$3,941,468	$5,530,282

Source: Fixed asset listings from Hawai'i County Fixed Asset Listing, October, 2005; replacement cost based on U.S. Bureau of Labor Statistics, Consumer Price Index, U.S. City Average, All Items, All Urban Consumers (1982-84=100 and based on April 2006 = 201.5).

The cost per service unit based on the existing level of service can be determined by dividing the replacement cost of existing fire/EMS facilities by the existing number of public safety service units. As shown in Table 49, the replacement value of existing fire/EMS facilities and equipment is about $71.7 million. Dividing this by the existing equivalent dwelling units (EDUs) yields the cost per service unit of $767 per EDU.

Table 49
FIRE/EMS COST PER SERVICE UNIT

Fire Station Cost	$30,931,071
Vehicle Cost	$35,184,000
Equipment Cost	$5,530,282
Total Replacement Cost	$71,645,353
Existing EDUs	93,463
Cost per EDU	$767

Source: Fire/rescue facility cost from Table 46; vehicle cost from Table 47; equipment cost from Table 48; existing EDUs from Appencix E, Table ?.

Net Cost per Service Unit

A reduction of impact fees to provide a credit for future funding to be generated by new development is generally only required when there is outstanding debt on existing facilities that have been counted in the existing level of service. New development should not be required to pay for new fire/EMS facilities required to serve it through impact fees, while also having to pay for existing fire/EMS facilities through property tax or other payments used to retire outstanding debt. Fire Department-related debt issues generally provide funds for new facilities or major equipment purchases. An analysis of past bond issues shown in Appendix B indicates that currently the County's outstanding debt related to the fire department is $8.1 million. As shown in Table 50, the County's current Fire Department debt results in a credit of $87 per service unit.

Table 50
FIRE/EMS DEBT CREDIT PER SERVICE UNIT

Total Outstanding Debt Principal	$8,135,137
Fire Department EDUs	93,463
Fire Debt Credit per EDU	$87

Source: Total outstanding debt from Appendix B, Table 97; total fire department EDUs from Appendix D, Table 105.

An additional credit is required in order to account for the portion of past property taxes from vacant land that have paid for capital facilities. This additional credit represents the value of the past five years of property taxes paid by vacant land for capital facilities funded through the general fund.

Based on a review of the County's CIP status report, no capacity-expanding projects for the Fire Department were funded directly from the general fund appropriations since 2001. All recent capacity-expanding fire/EMS projects were funded through the County's GO bonds. As shown in Table 51, the

estimated annual principal and interest payments on the current outstanding debt for fire/EMS facilities over the past five years was $4.5 million.

Table 51
FIRE/EMS GENERAL FUND CAPACITY EXPENDITURES, 2001-2005

Annual GO Bond Debt Service	$24,921,138
Fire Department Share of Total Outstanding Debt	3.6%
Annual Fire Department Debt Service	$897,161
Years	5
Total Debt-Related Capacity Funding, 2000-2005	$4,485,805

Source: Annual debt service based on 2004-05 debt service from Hawai'i County, *2005-06 Annual Operating Budget*, June 2006; fire department share of debt from Table 96.

An analysis of budgetary and tax data indicates that vacant and agricultural properties within the County generate 32.5 percent of property tax revenues, and property taxes accounted for 66.5 percent of general fund revenues. Using these percentages, the credit for past property tax payments is $11 per EDU, as shown in Table 52.

Table 52
FIRE/EMS PROPERTY TAX CREDIT

Percent of General Fund from Property Taxes, FY 2005-06	66.5%
Percent of Property Taxes from Vacant/Ag. Land, 2006	32.5%
Share of General Fund Revenue from Vacant/Ag. Land	21.6%
Total General Fund Fire/EMS Capacity Funding, 2000-2005	$4,485,805
Vacant/Ag. Land Share of Fire/EMS Capital Cost, 2000-2005	$969,078
Total Existing Fire/EMS Replacement Cost	$71,645,353
Percent of Existing Cost Paid by Vacant/Ag. Land, 2000-2005	1.4%
Fire/EMS Cost per EDU	$767
Past Property Tax Credit per EDU	$11

Source: Percent of general fund from property taxes from Hawai'i County, *2005-06 Annual Operating Budget*, June 2006; percent of property taxes from undeveloped/agricultural land from Hawai'i County Real Property Tax Administrator, June 1, 2006; fire general fund capacity funding from Table 51.

Another factor that is often considered in determining fire/EMS impact fees is the degree to which outside funding has been used to cover a portion of the capital equipment and facility costs. While there is no guarantee that the past level of funding will be indicative of future outside funding support, to be conservative, the cost per service unit will be reduced to account for the likelihood that some growth-related costs can be paid with Federal and State grants. Over the past five years, the County has received an average of $830,732 annually in grants for Fire/EMS equipment, as summarized in Table 53.

Table 53
FIRE/EMS CAPITAL EQUIPMENT GRANTS, 2001 to 2005

Grant	Description	Year	Value
U.S. Dept of Health & Human Services	Bio-terror trailers	2001	$60,000
U.S. Dept of Health & Human Services	Pediatric Manniquins	2001	$2,000
U.S. Dept of Homeland Security, FEMA	Plymo-Vents	2005	$406,016
U.S. Dept of Homeland Security, FEMA	Mobile Live Burn Unit	2005	$301,000
U.S. Dept of Homeland Security, FEMA	Training Eqpmt	2002	$152,948
U.S. Dept of Interior, National Park Svc	Volcano Fire Engine Purchase	2004	$250,000
U.S. Dept of Interior, US Fish & Wildlife	Pahala Volunteer Eqpt	2005	$10,000
U.S. Dept of Interior, US Fish & Wildlife	Training Eqpmt	2002	$5,000
U.S. Dept of Transportation	Lifting Bags	2005	$36,000
U.S. Dept of Transportation	Spine Boards	2004	$10,163
U.S. Dept of Transportation	Jaws of Life Stn 3 & 4	2003	$44,000
U.S. Dept of Transportation	Child restraint seats	2001	$11,160
U.S. Dept of Transportation	Reciprocating saws	2001	$11,893
U.S. Dept of Homeland Security	Communications and Hazmat Eqpt	2005	$548,000
U.S. Dept of Homeland Security	Rescue Boat, Vehicles	2004	$722,160
U.S. Dept of Homeland Security	Hazmat Eqpt, Hazmat Truck	2003	$1,133,855
U.S. Dept of Homeland Security	Hazmat Eqpt	2002	$449,467
Total			$4,153,662
Average Annual Grant Funding			$830,732

Source: Hawai'i County Fire Department, February 11, 2006.

As mentioned above, it may be reasonable to assume that the grant funding received in the past will continue in the future. Dividing the average annual grant funding by existing service units yields annual grant funding per service unit. Multiplying that by the present value factor results in the current lump sum amount that is the equivalent of the future stream of outside funding that the County may receive over the next 20 years to help fund Fire Department facilities and equipment. Based on these assumptions, the appropriate credit for potential grant funding is $120 for each service unit, as shown in Table 54.

Table 54
FIRE/EMS GRANT FUNDING CREDIT

Average Annual Grant Funding	$830,732
Fire Department EDUs	93,463
Annual Funding per EDU	$9
Present Value Factor (20 years @ 4.25%)	13.29
Grant Funding Credit per EDU	$120

Source: Average annual grant funding from Table 53; total fire department EDUs from Appendix D, Table 105 ; discount rate for present value factor from Table 23.

As shown in Table 55, reducing the cost per service unit by the debt credit and anticipated grant funding per service unit leaves a net cost of $549 per EDU to maintain the existing level of service for the County's fire and emergency medical service.

Table 55
FIRE/EMS NET COST PER SERVICE UNIT

Total Replacement Cost per EDU	$767
Debt Credit per EDU	$87
Past Property Tax Credit per EDU	$11
Grant Funding Credit per EDU	$120
Net Cost per EDU	$549

Source: Total replacement cost per EDU from Table 49; outstanding capital debt per EDU from Table 50; property tax credit from Table 52, grant funding credit per EDU from Table 54.

Maximum Fee Schedule

The maximum potential fire/rescue impact fees, based on the information, analysis and assumptions described in this report, are calculated in Table 56.

Table 56
FIRE/EMS NET COST SCHEDULE

Land Use	Unit	EDUs/ Unit	Net Cost/ EDU	Net Cost/ Unit
Less than 1,000 sq. ft.	Dwelling	0.97	$549	$533
1,000 - 1,499 sq. ft.	Dwelling	1.03	$549	$566
1,499 - 1,999 sq. ft.	Dwelling	1.06	$549	$582
2,000 - 2,999 sq. ft.	Dwelling	1.13	$549	$621
3,000 - 3,999 sq. ft.	Dwelling	1.20	$549	$659
4,000 sq. ft. or more	Dwelling	1.28	$549	$703
Single-Family (flat rate)	Dwelling	1.00	$549	$549
Multi-Family	Dwelling	0.78	$549	$429
Hotel/Motel	Room	0.47	$549	$258
Retail/Commercial	1000 sq. ft.	1.51	$549	$830
Office/Institutional	1000 sq. ft.	0.85	$549	$467
Industrial	1000 sq. ft.	0.53	$549	$291
Warehouse	1000 sq. ft.	0.34	$549	$187

Source; EDUs per unit from Appendix D, Table 105; net cost per EDU from Table 55.

Capital Improvement Plan

Funding of $49.5 million is proposed for fire/EMS infrastructure improvements in the County's 2005-06 to 2010-2011 capital improvements program (CIP), plus projects anticipated to be added to next year's CIP. Impact fees may only be used for capacity-expanding improvements for new fire stations or expansions and additional equipment. Some portion of station replacement costs may be eligible if the new station is larger or in some other way provides more capacity to serve growth. However, in most cases the planning for the replacement stations is not far enough advanced to identify the size of the new station. Based on available information, eligible improvements account for $23.7 million of the total planned project costs. The current list of planned eligible improvements is shown in Table 57. Additional eligible improvement will need to be identified for the proposed 1-N/S Kohala benefit district before impact fees are implemented for this area.

Table 57
FIRE/EMS CAPITAL IMPROVEMENT PROGRAM

Project	Judicial District	Proposed Benefit District	Total Cost	Impact Fee Eligible
Honokaa Fire Station (replacement)	Hamakua	2-Hilo/Hamakua	$2,250,000	$0
Keaau Fire Station (replacement)	S Hilo	2-Hilo/Hamakua	$3,750,000	$0
Central Fire Station (replacement)	S Hilo	2-Hilo/Hamakua	$3,750,000	$0
Paauilo Fire Station	Hamakua	2-Hilo/Hamakua	$1,800,000	$1,800,000
Kawailani Fire Station (replacement)	S Hilo	2-Hilo/Hamakua	$4,600,000	$0
Pahoa Fire Staton (replacement)*	Puna	3-Puna/Ka'u	$3,500,000	$2,360,000
Naalehu Fire Station (replacement)	Ka'u	3-Puna/Ka'u	$2,250,000	$0
Volcano Fire Station (replacement)	Ka'u	3-Puna/Ka'u	$2,250,000	$0
Kalaoa Fire Station	N Kona	4-N/S Kona	$2,350,000	$2,350,000
Captain Cook Fire Station (replacement)	S Kona	4-N/S Kona	$1,150,000	$0
Kailua Fire Station Annex	N Kona	4-N/S Kona	$2,300,000	$2,300,000
Koloko-Honokohau Area Fire Station	N Kona	4-N/S Kona	$4,600,000	$4,600,000
Kona Makai Fire Station (replacement)	N Kona	4-N/S Kona	$4,600,000	$0
Fire Fighter Training Facility	S Hilo	County-Wide	$1,800,000	$1,800,000
Fire Admin. and Support Complex	S Hilo	County-Wide	$8,500,000	$8,500,000
Total			$49,450,000	$23,710,000

* new station will be larger than existing station (8,289 versus 2,700 sq. ft.)--share attributable to larger size station is eligible. Size data provided by Fire Department on August 10, 2006.

Source: County of Hawai'i, *Capital Budget and Six Year Capital Improvements Program*, June 2006; additional projects from Fire Department, August 7, 2006.

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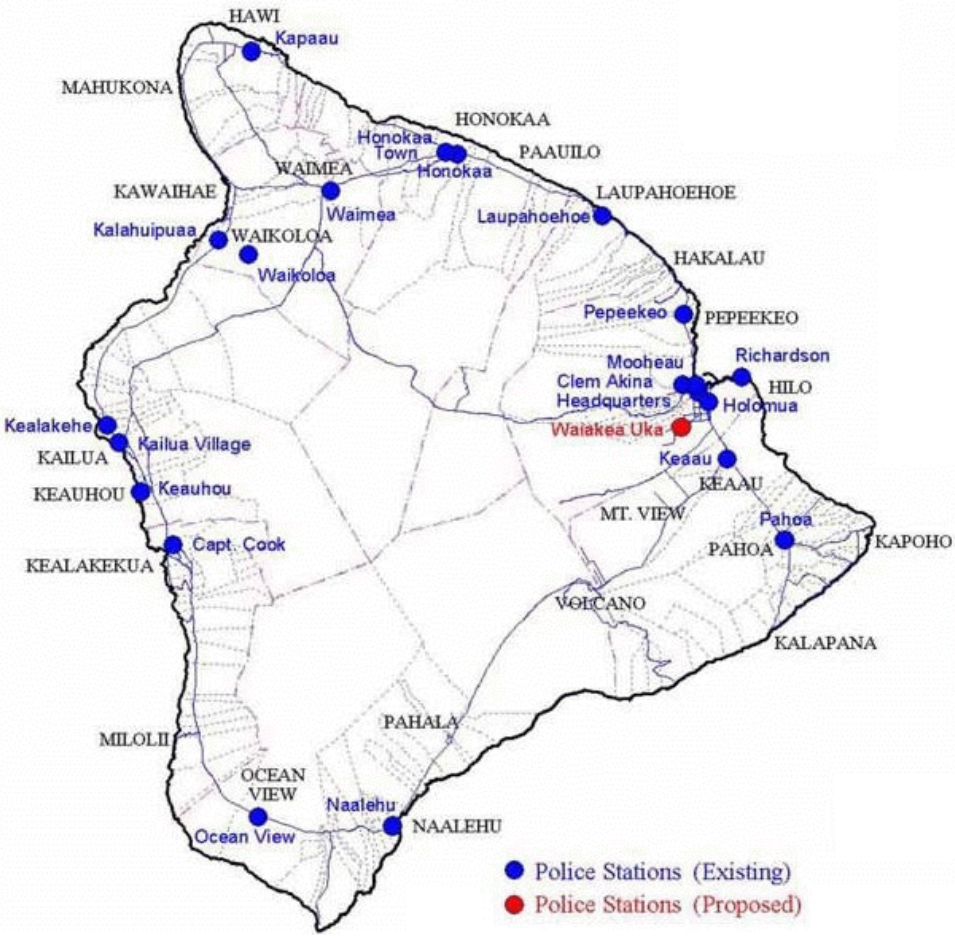
CHAPTER 10: POLICE

Each of the eight districts is served by a main police station. There are also four substations. The combined police headquarters for Hilo and the County is located in the Hilo Public Safety Building on Kaiolani Street. The location of the existing police stations and substations are shown in Figure 8.

Figure 8
POLICE STATION LOCATIONS



Assessment and Benefit Districts

As with fire/EMS fees, most police impact fees are assessed at the jurisdiction level. Central facilities serve the entire island, and officers may patrol or respond to calls beyond their station's primary response area. The four benefit districts proposed for fire/EMS fees are also recommended for the police impact fees (see Figure 2 on page 18). However, up to 20 percent of the impact fee revenue could be used for county-wide projects or projects in neighboring districts that provide benefit to the district in which the fees are collected.

Service Unit

The recommended approach for police impact fees is to use the service units—"equivalent dwelling units" or EDUs—described in Appendix D and also utilized for fire/EMS facilities.

Cost per Service Unit

The cost per service unit based on the existing level of service can be determined by dividing the replacement cost of existing police and law enforcement facilities, equipment, and vehicles by the existing number of public safety service units.

The Police Department owns each of the eight district police stations, including the Public Safety Building in Hilo, and three of the sub-station facilities. The Ocean View Substation and the ten mini police stations are all located in leased or shared facilities with other County departments. In addition, the police department's 12 radio sites are all located on either leased land or co-located on land with other County facilities. Leased and co-located facilities and radio sites are not included in the analysis of facility costs.

The total value of existing County-owned police facilities is based on the existing facility size and recent construction costs for the East Hawai'i Detention Facility at the Public Safety Complex of $450 per square foot. The value of the police facility land is available based on the land purchased for the detention facility in Hilo in 2001. The combined replacement value of the existing police facilities, is estimated to be $71.74 million, as shown in Table 58.

Table 58
EXISTING POLICE FACILITY REPLACEMENT COSTS

Name	Acres	Building sq. ft.	Land Cost	Building Cost	Total Costs
Public Safety Complex	7.94	88,364	$2,380,799	$39,763,800	$42,144,599
Laupahoehoe	1.56	5,248	$59,508	$2,361,600	$2,421,108
Honokaa	2.39	5,280	$91,514	$2,376,000	$2,467,514
South Kohala	14.80	6,048	$566,109	$2,721,600	$3,287,709
Maunalani Sub-Station	2.16	255	$82,523	$114,750	$197,273
North Kohala	2.50	3,150	$95,645	$1,417,500	$1,513,145
Kona	10.00	21,312	$382,580	$9,590,400	$9,972,980
Captain Cook Sub-Station	4.01	10,000	$153,231	$4,500,000	$4,653,231
Ka'u	5.00	3,864	$191,290	$1,738,800	$1,930,090
Puna	0.39	5,900	$14,934	$2,655,000	$2,669,934
Pahoa Sub-Station	0.29	1,056	$10,940	$475,200	$486,140
			$4,029,073	$67,714,650	$71,743,723

Source: Police facility land and building information from Hawai'i Police Department Tax Map Key; Public Safety Complex land cost based on 2001 land purchase in Hilo, and police facility replacement cost based on East Hawai'i Detention Facility (Hilo) cost of $450 per square foot in 2002, both provided by Hawaii Police Department, August 23, 2005; land cost for other stations based on average park land cost per acre.

The Police Department's current inventory of law enforcement vehicles and major capital equipment is listed in Table 59. The County police department does not maintain a fleet of patrol vehicles; instead,

the county reimburses patrol officers for the use of their private vehicle and provides vehicle equipment. Based on current cost to purchase new equipment, the total replacement cost for all County-owned vehicles, subsidized vehicle equipment and other major capital equipment is $2.63 million.

Table 59
POLICE VEHICLE AND MAJOR CAPITAL EQUIPMENT COST

Vehicle	Units	Cost/Unit	Total Cost
Support Vehicles	12	$40,000	$480,000
Prisoner Transport Van	2	$42,000	$84,000
Special Response Vehicle	1	$330,000	$330,000
Gas Chomatograph	1	$90,000	$90,000
Infrared System	1	$79,600	$79,600
Dictation System	1	$174,000	$174,000
Digital Recording System	1	$90,000	$90,000
Emergency Generator	2	$130,000	$260,000
Patrol Vehicle Equipment	373	$2,785	$1,038,805
Total Replacement Cost			$2,626,405

Source: Number of vehicles provided by Hawai'i County Police Chief, September 1, 2005; unit costs from Police Chief, August 23, and September 15, 2005.

Dividing the total law enforcement replacement costs by the existing equivalent dwelling units (EDUs) yields the cost per service unit. The cost per service unit is based on the existing level of service; as shown in Table 60, the cost per service unit is $796 per EDU.

Table 60
POLICE COST PER SERVICE UNIT

Police Department Vehicles and Capital Equipment	$2,626,405
Police Station Facilities	$71,743,723
Total, Existing Replacement Cost	$74,370,128
Existing EDUs, 2005	93,463
Total Cost per EDU	$796

Source: Cost of vehicles and equipment from Table 59; police facilities cost from Table 58; existing EDUs from Appendix D, Table 105.

Net Cost per Service Unit

Over the last five years, the County has received an average of $522,100 annually in Federal grants for major police department equipment and buildings, as summarized in Table 61.

Table 61
POLICE GRANT FUNDING, 2000 to 2005

Item	Year	Amount
East Hawai'i Detention Facility (Block Grant Funds)	2002	$2,618,801
Special Response Team Command Vehicle	2004	$330,889
4 x 4 Ford Van	2004	$33,172
Ford Van	2005	$30,000
Chevrolet MSTR	2002	$93,707
4 x 4 Ford	2005	$25,800
Total Grant Funding 2000-2005		$3,132,369
Average Annual Grant Funding		$522,100

Source: Hawai'i County Police Department Chief, August 23 and September 15, 2005.

It is reasonable to assume that the grant funding received per police department service unit in the past will continue in the future. Dividing the average annual grant funding by existing service units yields annual funding per service unit. Multiplying that by the present value factor results in the current lump sum amount that is the equivalent of the future stream of outside funding that the County may receive over the next 20 years to help fund police equipment and improvements. Based on these assumptions, the appropriate credit for potential grant funding for the Police Department is $74 for each new single-family home, or police service unit equivalent, as shown in Table 62.

Table 62
POLICE GRANT FUNDING CREDIT

Average Annual Grant Funding	$522,100
Existing Police EDUs, 2005	93,463
Annual Funding per EDU	$5.59
Present Value Factor (20 years @ 4.25%)	13.29
Grant Funding Credit per EDU	$74

Source: Average annual grant funding from Table 61; existing police department EDUs from Appendix D, Table 105; discount rate for present value factor from Table 23.

As with other facility impact fees, a reduction of impact fees to provide a credit for future funding to be generated by new development is required for outstanding debt on existing facilities that have been counted in the existing level of service. An analysis of past bond issues indicates that currently the County's outstanding debt related to the police department is $5.5 million. As shown in Table 63, the Police Department's current outstanding debt results in a debt credit of $59 per service unit.

Table 63
POLICE DEBT CREDIT

Outstanding Police Department Related Debt	$5,532,926
Existing EDUs	93,463
Debt Credit per EDU	$59

Source: Police department debt from Appendix B, Table 97; existing EDUs from Appendix D, Table 105.

State law requires a credit for property taxes paid by vacant land during the five years before it is developed and used for capacity-expanding police facility improvements. Based on a review of the County's CIP status report, no capacity-expanding projects for the Police Department were funded directly from the general fund appropriations since 2001. All recent capacity-expanding police projects were funded through the County's GO bonds. As shown in Table 64, the estimated annual principal and interest payments on the current outstanding debt for the police department over the past five years was $2.5 million.

Table 64
POLICE GENERAL FUND CAPACITY EXPENDITURES, 2001-2005

Annual GO Bond Debt Service	$24,921,138
Police Share of Total Outstanding Debt	2.0%
Annual Police Department Debt Service	$498,423
Years	5
Total Debt-Related Capacity Funding, 2000-2005	$2,492,114

Source: Annual debt service based on 2004-05 debt service from Hawai'i County, *2005-06 Annual Operating Budget*, June 2006; police department share of debt from Table 95.

An analysis of budgetary and tax data indicates that vacant and agricultural properties within the County generate 32.5 percent of property tax revenues, and property taxes accounted for 66.5 percent of general fund revenues. Using these percentages, the credit for past property tax payments is $6 per EDU, as shown in Table 65.

Table 65
POLICE PAST PROPERTY TAX CREDIT

Percent of General Fund from Property Taxes, FY 2005-06	66.5%
Percent of Property Taxes from Vacant/Ag. Land, 2006	32.5%
Percent of Credit for Past Property Tax Payments	21.6%
Total General Fund Capacity Funding, 2000-2005	$2,492,114
Net Vacant/Ag. Land Share of Past Capital Cost	$538,377
Existing Police EDUs	93,463
Past Property Tax Credit per EDU	$5.76

Source: Percent of general fund from property taxes from Hawai'i County, *2005-06 Annual Operating Budget*, June 2006; percent of property taxes from undeveloped/agricultural land from Hawai'i County Real Property Tax Administrator, June 1, 2006; police department general fund capacity funding from Table 64; police EDUs from Appendix D, Table 105.

As shown in Table 66, reducing the cost per service unit by the debt credit, property tax credit and anticipated grant funding per service unit leaves a net cost of $657 per EDU to maintain the existing level of service.

Table 66
POLICE NET COST PER SERVICE UNIT

Total Police Replacement Cost per EDU	$796
Debt Credit per EDU	$59
Past Property Tax Credit per EDU	$6
Grant Funding Credit per EDU	$74
Net Police Cost per EDU	$657

Source: Total police replacement cost per EDU from Table 60; debt credit per EDU from Table 63; past property tax credit from Table 65; grant funding credit per EDU from Table 62.

Maximum Fee Schedule

The maximum potential police department impact fees, based on the information, analysis and assumptions described in this report, are calculated in Table 67.

Table 67
POLICE NET COST SCHEDULE

Land Use	Unit	EDUs/ Unit	Net Cost/ EDU	Net Cost/ Unit
Less than 1,000 sq. ft.	Dwelling	0.97	$657	$637
1,000 - 1,499 sq. ft.	Dwelling	1.03	$657	$677
1,500 - 1,999 sq. ft.	Dwelling	1.06	$657	$696
2,000 - 2,999 sq. ft.	Dwelling	1.13	$657	$742
3,000 - 3,999 sq. ft.	Dwelling	1.20	$657	$788
4,000 sq. ft. or more	Dwelling	1.28	$657	$841
Single-Family (flat rate)	Dwelling	1.00	$657	$657
Multi-Family	Dwelling	0.78	$657	$512
Hotel/Motel	Room	0.47	$657	$309
Retail/Commercial	1000 sq. ft.	1.51	$657	$992
Office/Institutional	1000 sq. ft.	0.85	$657	$558
Industrial	1000 sq. ft.	0.53	$657	$348
Warehouse	1000 sq. ft.	0.34	$657	$223

Source; EDUs per unit from Appendix D, Table 105; net cost per EDU from Table 66.

Capital Improvement Plan

Funding of $72.2 million is proposed for police infrastructure improvements in the County's 2005-06 to 2010-2011 capital improvements program (CIP). Impact fees may only be used for capacity-expanding improvements such as new police stations or enhancements to communications and equipment that provide capabilities beyond the current level of service. A detailed breakdown of each project component cost was not available; consequently, the identification of eligible projects is preliminary and subject to verification. Eligible improvements account for $13.8 million of the total CIP costs. The current list of eligible improvements from the six-year CIP is shown in Table 68.

Table 68
POLICE CAPITAL IMPROVEMENT PROGRAM

Project	Judicial District	Proposed Benefit District	Total Cost	Impact Fee Eligible
S. Kohala Police Station Parking Lot Expansion	S Kohala	1-N/S Kohala	$25,000	$25,000
S. Kohala Heating and Cooling Improvement	S Kohala	1-N/S Kohala	$68,000	
Kalaoa Substation	Hamakua	2-Hilo/Hamakua	$50,000	$50,000
Pahoa Police Substation	S. Hilo	2-Hilo/Hamakua	$2,685,000	$2,685,000
Public Safety Complex	Hilo	2-Hilo/Hamakua	$1,300,000	$1,300,000
Security Fencing for Public Safety Complex	Hilo	2-Hilo/Hamakua	$125,000	$125,000
District Holding Cell Improvements	Hilo	2-Hilo/Hamakua	$312,000	
Public Safety Complex Indoor Range	Hilo	2-Hilo/Hamakua	$150,000	$150,000
Police Records Renovation	Hilo	2-Hilo/Hamakua	$35,000	
Puna Police Station	Puna	3-Puna/Ka‘u	$3,685,000	$3,685,000
Kealakehe Refueling Station Upgrade	S. Kona	4-N/S Kona	$300,000	
Captain Cook Station	S Kona	4-N/S Kona	$3,685,000	$3,685,000
Kona Evidence Warehouse	N Kona	4-N/S Kona	$130,000	$130,000
Renovation of District Stations	Various	Various	$150,000	
700 Megahertz System	Various	Various	$21,000,000	
700 Megahertz Conversion	Various	Various	$23,040,000	
Microwave relocation/renovation	Various	Various	$13,610,000	
Data/Information Transmission System	Various	Various	$2,000,000	$2,000,000
Total			$72,207,000	$13,760,000

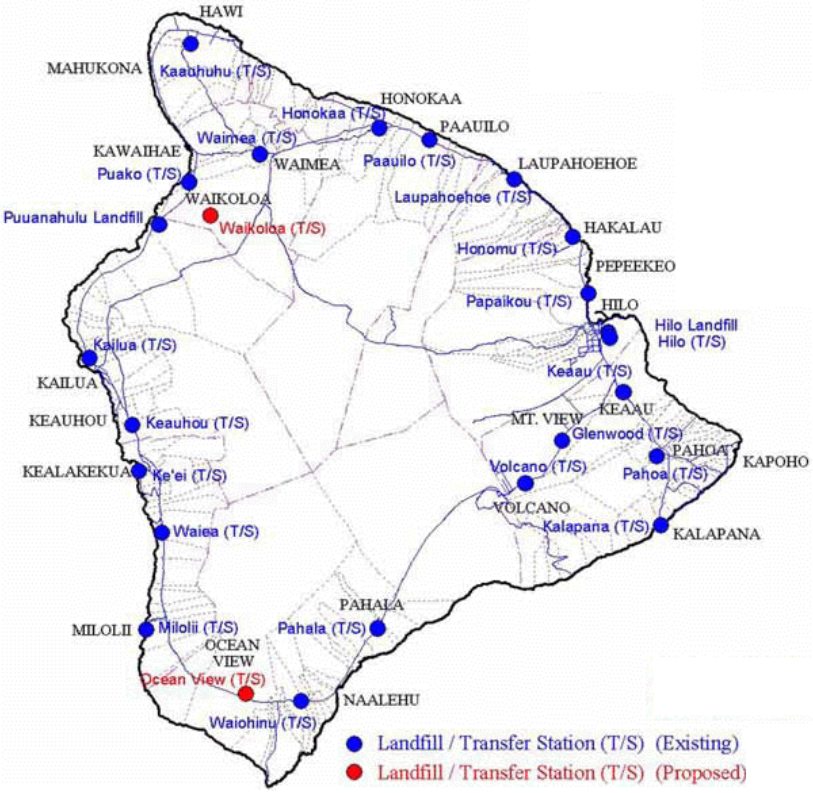
Source: County of Hawai‘i, *Capital Budget and Six Year*

CHAPTER 11: SOLID WASTE

The County currently has two landfill sites: the sanitary landfill at Pu'uanahulu on the west side of the island and the unlined landfill in Hilo on the east side of the island. There are 21 solid waste transfer sites, like the one pictured at right, situated throughout the island. The locations of the landfills and solid waste transfer stations are shown in Figure 9.

Residents can drop off their household solid waste for free at the transfer stations. However, some residents pay private haulers to pick up their garbage. Commercial businesses and private haulers are required to take their solid waste to the landfill, where they are charged a tipping fee. Commercially-hauled rubbish accounts for 61 percent of the waste entering the landfill, while the remaining 39 percent is household waste from transfer stations. Tipping fees account for 35 percent of revenue for the operation of the Solid Waste Division, while the remainder of the Division's budget comes from the general fund.

Figure 9
LANDFILL/TRANSFER STATION LOCATIONS



Faced with the possible closure of the Hilo solid waste facility, the County has studied options for solid waste disposal in its waste management plan.[11] The waste management plan concluded that the County has enough capacity at the Pu'uanahulu landfill to accommodate the projected waste stream for the entire county for 35 to 50 years and that an additional landfill would not be needed in the near future. The report emphasized the recovery of recyclable materials and waste reduction through consumer education and improved facilities. Both the waste management plan and the current County CIP include construction of two new waste transfer stations; however, County staff indicated that additional transfer facilities are unlikely.

The use of impact fee revenue is restricted to projects that add capacity. It is unknown what additional capacity expansion activity is planned beyond the construction of additional residential waste transfer facilities already programmed in the CIP. Improvements to existing sites may not be eligible for impact fee funding if they do not increase the capacity of the transfer facility. Before implementing a solid waste impact fee the County should determine if there are sufficient capacity-enhancing needs for solid waste, or if the capacity of the existing facilities are adequate to serve planned growth.

Assessment and Benefit Districts

Given the likelihood that the county will eventually be served by only one landfill, the waste transfer stations and landfill will operate as one interconnected system for the entire island. Consequently, the fees should be calculated county-wide. However, the County may desire to divide the county into the four benefit districts recommended for the other facilities (see Figure 2 on page 18). It is recommended that the County should earmark only 60 percent of the funds collected in each district to be spent within that district, with the remaining 40 percent available to be used in any benefit district or for county-wide functions such as landfill improvements. This percentage approximates the relative replacement costs of transfer stations versus landfill and vehicles.

Service Unit

Hawai'i County does not provide residential or commercial waste collection services. According to the County's Solid Waste Division, private companies haul approximately 61 percent of the waste and pay a tipping fee to dump the waste at the County's landfill sites.[12] The remaining 39 percent is self-hauled waste taken to the County's transfer stations, which are provided for disposal of residential waste. Approximately 87 percent of all single-family households self-haul rubbish to one of the islands 21 transfer stations. Since the County charges commercial customers for the solid waste service, the impact fee for solid waste should apply only to residential land uses that utilize the transfer stations.

The total number of service units utilized for calculation of the solid waste impact fee only include single-family detached units. In addition, the service units are adjusted to reflect the proportion of households that currently utilize the transfer stations rather than contract with a private hauler. As shown in Table 69, for purposes of calculating the impact fee, the estimated total solid waste residential EDUs is 51,132.

[11] Harding ESE, *Update to the Integrated Solid Waste Management Plan for the County of Hawai'i*, December 2002

[12] Department of Environmental Management, Solid Waste Division, March 10, 2006 memorandum

Table 69
EXISTING SOLID WASTE SERVICE UNITS

Single-Family Detached Units	58,772
Transfer Station Utilization Rate	87%
Total Solid Waste EDUs	51,132

Source: Existing units from Table 98 in Appendix C; EDUs per unit from Table 30; transfer station utilization rate from Department of Environmental Management Solid Waste Division, March 10, 2006 memorandum.

Cost Per Service Unit

The County's existing solid waste capital equipment and facilities dedicated for residential service are used to determine the cost per service unit. The County provides solid waste transfer stations for residents to discard their solid waste. The total estimated replacement value of the County's 21 solid waste facilities is shown in Table 70. The Keauhou facility was the most recently constructed transfer station; the transfer station improvement were constructed in 1999 at a cost of approximately $550,000; adjusted for increased construction costs, the current replacement cost for each transfer station would be approximately $698,000. As shown in Table 70, based on the most recent cost, the replacement value of the transfer facilities is $14.8 million. The replacement cost does not include the value of land, since land value and property information for the transfer facility sites are unavailable.

Table 70
SOLID WASTE TRANSFER STATION COST

Facility	Year	Original Cost	CCI	Adj. Cost
Transfer Station Unit Cost	1999	$554,298	1.271	$705,000
Total Sites				21
Total				$14,805,000

Source: Hawai'i County Fixed asset by fund, October 2005; original construction cost adjusted by *Engineering News-Record* Construction Cost Index from year of acquisition to June 2006.

As previously mentioned, Hawai'i County has two landfill sites; however, only the West Hawai'i landfill has available capacity. The West Hawai'i landfill (Pu'uanahulu) is located on land that was provided to the County by the State of Hawai'i and is operated by County personnel with management assistance from Waste Management of Hawai'i, Inc. (WMI). WMI is responsible for construction and site development of landfill cells, environmental monitoring of the facility, and closure and post-closure care of the facility. The facility has sufficient capacity for an estimated 50 years.

Most capacity-expanding investments at the West landfill, such as the construction of new cells, are undertaken by Waste Management as part of the operating contract and are paid for through tipping fees. Nonetheless, the County has funded several major improvements over the past 10 years; the value of the identifiable capacity-related improvements to the site are shown in Table 71.

Table 71
SOLID WASTE LANDFILL COST

Facility	Year	Original Cost	CCI	Adj. Cost
West Hawaii Landfill	1997	$4,805,498	1.320	$6,343,257
West Hawaii Landfill	1995	$4,499,791	1.400	$6,299,707
Total		$9,305,289		$12,642,965
Percent Attributable to Residential				39.0%
Total				$4,930,756

Source: Hawai'i County Fixed asset by fund, October 2005; original construction cost adjusted by ENR CCI from year of acquisition to January 2005.

Table 72 shows the inventory of solid waste equipment owned by the County. Some of the County's solid waste vehicles are financed with capital leases; these vehicles were omitted from the inventory since there is no information regarding the outstanding payments on these leases. As with the County's landfill costs, the total value of the equipment has been adjusted to account for the residential share of solid waste generation.

Table 72
SOLID WASTE EQUIPMENT COST

Equipment Type	Units	Unit Cost	Total Cost
R/TR	38	$93,000	$3,534,000
Support Vehicles	34	$29,000	$986,000
P/B TR	11	$117,000	$1,287,000
Tractors	5	$100,000	$500,000
Dump Truck	4	$54,000	$216,000
Wilkens TLR	4	$99,000	$396,000
Backhoe	3	$62,000	$186,000
Cat Hauler	2	$365,000	$730,000
B/Lowboy	1	$100,000	$100,000
Cat Loader	1	$112,000	$112,000
Subtotal			$8,047,000
Percent Attributable to Residential			39.0%
Total			$3,138,330

Source: Equipment type and quantity derived from Hawai'i County Fixed asset by fund, October 2005; average unit cost based on original purchase price from Fixed Asset listing adjusted by U.S. Bureau of Labor Statistics, Consumer Price Index, U.S. City Average, All Items, All Urban Consumers (1982-84=100 and based on April 2006 = 201.5); total equipment asset value adjustment based on amount attributable to residential customers.

As shown in Table 73, the replacement value for the County's existing residential solid waste facilities, equipment and vehicle fleet is an estimated $22.87 million. The full value of the transfer stations are included; however, only the value of the landfill facility that is attributed to residential customers utilizing the transfer stations is included, since the tipping fees from commercial haulers provide funds for the landfill facility. Dividing the cost of existing capital by the solid waste service unit population of the County results in a cost per residential EDU of $447.

Table 73
SOLID WASTE COST PER SERVICE UNIT

Transfer Station Cost	$14,805,000
Landfill Cost	$4,930,756
Solid Waste Equipment Cost	$3,138,330
Total Replacement Cost	$22,874,086
Solid Waste EDUs	51,132
Cost per EDU	$447

Source: Transfer station costs from Table 70; landfill cost from Table 71 adjusted by 39% based on share of facility attributable to nonresidential customers. solid waste equipment cost from Table 72; solid waste EDUs from Table 69.

Net Cost per Service Unit

A reduction of impact fees to provide a credit for future funding to be generated by new development is required for outstanding debt and capital leases for solid waste equipment and facilities. As shown in Table 74, the County has $12.3 million in outstanding debt related to solid waste facilities. However, approximately $5.7 million is related to residential services by allocating one-half of the debt for the landfill facilities to the residential customers.

Table 74
SOLID WASTE OUTSTANDING DEBT ALLOCATION

	Original Issue				
Debt Issue	Landfill	Transfer Station	Res. Share of Debt	Current SW Debt	Residential SW Debt
1993	$18,200,000	$35,000	39.1%	$9,497,250	$3,715,047
1999a	$70,000	$1,000,000	96.0%	$952,560	$914,547
2004b	$370,000	$694,745	78.8%	$605,895	$477,460
Total	$18,640,000	$1,729,745	44.2%	$11,055,705	$5,107,054
Unknown			44.2%	$1,232,949	$544,716
Total Residential Solid Waste Debt				$12,288,654	$5,651,770

Source: Original debt issue data from Hawai'i County Finance Department; residential share of debt based on 39% allocation of landfill-related debt and 100% of transfer station debt for each issue; current outstanding solid waste and unknown debt from Appendix B, Table 97; unknown debt allocated to residential customers based on average residential share of total outstanding debt.

Deducting the outstanding debt from the total available replacement cost and then dividing the existing service units yields the net cost per service unit, as shown in Table 75.

Table 75
SOLID WASTE DEBT CREDIT PER SERVICE UNIT

Outstanding Debt	$5,651,770
Residential EDUs	51,132
Debt Credit per EDU	$111

Source: Outstanding debt from Table 74; existing EDUs from Table 69.

Based on a review of the County's CIP status report, no capacity-expanding projects for the solid waste facilities were funded directly from the general fund appropriations since 2001. All recent capacity-expanding solid waste projects were funded through the County's GO bonds. As shown in Table 76, the estimated annual principal and interest payments on the current outstanding debt for solid waste over the past five years was $4.3 million.

Table 76
SOLID WASTE GENERAL FUND CAPACITY EXPENDITURES, 2001-2005

Annual GO Bond Debt Service	$24,921,138
Residential Share of Solid Waste Debt Service	44.2%
Solid Waste Share of Total Outstanding Debt	7.8%
Annual Debt Service	$859,181
Years	5
Total Debt-Related Capacity Funding, 2000-2005	$4,295,906

Source: Annual debt service based on 2004-05 debt service from Hawai'i County, *2005-06 Annual Operating Budget*, June 2006; residential share of solid waste debt service from Table 74; solid waste share of debt from Table 96.

An analysis of budgetary and tax data indicates that vacant and agricultural properties within the County generate 32.5 percent of property tax revenues, and property taxes accounted for 66.5 percent of general fund revenues. Using these percentages, the credit for past property tax payments is $18.14 per EDU, as shown in Table 77.

Table 77
SOLID WASTE PAST PROPERTY TAX CREDIT

Percent of General Fund from Property Taxes, FY 2005-06	66.5%
Percent of Property Taxes from Vacant/Ag. Land, 2006	32.5%
Percent of Solid Waste Credit for Past Property Tax Payments	21.6%
Total General Fund Capacity Funding, 2000-2005	$4,293,958
Net Vacant/Ag. Land Share of Past Capital Cost	$927,633
Residential EDUs	51,132
Past Property Tax Credit per EDU	$18.14

Source: Percent of general fund from property taxes from Hawai'i County, *2005-06 Annual Operating Budget*, June 2006; percent of property taxes from undeveloped/agricultural land from Hawai'i County Real Property Tax Administrator, June 1, 2006; solid waste general fund capacity funding from Table 76;existing EDUs from Table 69.

Over the last five years, the County has received an average of $291,300 annually in Federal and State grants for capacity-related enhancement project for solid waste facilities, as summarized in Table 78.

Table 78
SOLID WASTE GRANT FUNDING, 2000 to 2005

Grantee	Item	Year	Amount
EPA	Recycling center planning and development for Keaau	2002	$400,000
EPA	Recycling center for Waimea planning and design	2004	$397,600
CBDG	Repair and enhancement of five transfer stations	2004	$250,000
State	Development of 8 container deposit centers at transfer stations	2004	$150,000
State	Development of 10 container deposit centers at transfer stations	2005	$550,000
Total Grant Funding 2000-2005			$1,747,600
Average Annual Grant Funding			$291,300

Source: Hawai'i County Department of Environmental Management Director, March 10, 2006 memo.

It may be reasonable to assume that the grant funding received per solid waste service unit in the past will continue in the future. Dividing the average annual grant funding by existing service units yields annual funding per service unit. Multiplying that by the present value factor results in the current lump sum amount that is the equivalent of the future stream of outside funding that the County may receive over the next 20 years to help fund solid waste collection facilities. Based on these assumptions, the appropriate credit for potential grant funding for the solid waste division is $76 for each new single-family home, or solid waste service unit equivalent, as shown in Table 79.

Table 79
SOLID WASTE GRANT FUNDING CREDIT

Average Annual Grant Funding	$291,300
Existing Solid Waste EDUs, 2005	51,132
Annual Funding per EDU	$5.70
Present Value Factor (20 years @ 4.25%)	13.29
Grant Funding Credit per EDU	$76

Source: Average annual grant funding from Table 78; existing EDUs from Table 69; discount rate for present value factor from Table 23.

As shown in Table 80, reducing the cost per service unit by the debt credit and property tax credit leaves a net cost of $242 per EDU to maintain the existing level of service.

Table 80
SOLID WASTE NET COST PER SERVICE UNIT

Total Replacement Cost per EDU	$447
Debt Credit per EDU	$111
Past Property Tax Credit per EDU	$18
Grant Funding Credit per EDU	$76
Net Solid Waste Cost per EDU	$242

Source: Replacement cost per EDU from Table 73; outstanding debt per EDU from Table 75; past property tax credit per EDU from Table 77; grant funding credit from Table 79.

Maximum Fee Schedule

The maximum potential solid waste impact fees, based on the information, analysis and assumptions described in this report, are calculated in Table 81. The solid waste fee only applies to single-family residential properties that utilize the self-haul transfer stations.

Table 81
SOLID WASTE NET COST SCHEDULE

Housing Type	EDUs/Unit	Net Cost/ EDU	Net Cost/ Unit
Less than 1,000 sq. ft.	0.97	$242	$235
1,000 - 1,499 sq. ft.	1.03	$242	$250
1,500 - 1,999 sq. ft.	1.06	$242	$257
2,000 - 2,999 sq. ft.	1.13	$242	$274
3,000 - 3,999 sq. ft.	1.20	$242	$291
4,000 sq. ft. or more	1.28	$242	$310
Single-Family (flat rate)	1.00	$242	$242

Source: EDUs per unit from Table 69; net cost per EDU from Table 80.

Capital Improvement Plan

Funding of $44.4 million is proposed for solid waste infrastructure improvements in the County's 2005-06 to 2010-2011 capital improvements program (CIP). Impact fees may only be used for capacity-expanding improvements for facilities or equipment that expand the current capacity of solid waste collection or potentially for recycling activities that reduce the volume of solid waste entering the County's landfill facility. A detailed breakdown of each project component cost was not available; consequently, the identification of eligible projects is preliminary and subject to verification. Eligible improvements account for $16.4 million of the total CIP costs. The current list of eligible improvements from the six-year CIP and County staff is shown in Table 93. Eligible projects should be identified for 4-N/S Kona benefit district prior to implementation of a solid waste impact fee.

Table 82
SOLID WASTE CAPITAL IMPROVEMENT PROGRAM

Project	Judicial District	Proposed Benefit District	Total Cost	Impact Fee Eligible
Green Waste Facility	S Kohala	1-N/S Kohala	$1,500,000	$1,500,000
Equipment Maintenance Facility	S Hilo	2-Hilo/Hamakua	$7,900,000	
Hilo Scrap Metal Salvage Facility	S Hilo	2-Hilo/Hamakua	$1,550,000	$1,550,000
Hilo Scrap Metal Yard Remediation	S Hilo	2-Hilo/Hamakua	$1,650,000	
Hilo Baseyard Facility	S Hilo	2-Hilo/Hamakua	$825,000	$825,000
Waiea Transfer Station	Ka'u	3-Puna/Ka'u	$50,000	$50,000
Kona Scrap Metal Yard Remediation	N Kona	4-N/S Kona	$1,100,000	
Kailua Landfill Remediation	N Kona	4-N/S Kona	$2,150,000	
Waimea Landfill Remediation	S Kohala	County-Wide	$2,200,000	
Transfer Station Replace/Enhancement	Various	County-Wide	$3,900,000	$3,900,000
S Hilo Landfill Closure	S Hilo	County-Wide	$13,000,000	
West Hawai'i Regional Sort Station	Various	County-Wide	$8,550,000	$8,550,000
Total			$44,375,000	$16,375,000

Source: County of Hawai'i, *Capital Budget and Six Year Capital Improvements Program*, June 2006; green waste facility project cost from Hawai'i, County Department of Environmental Management, August 2, 2006.

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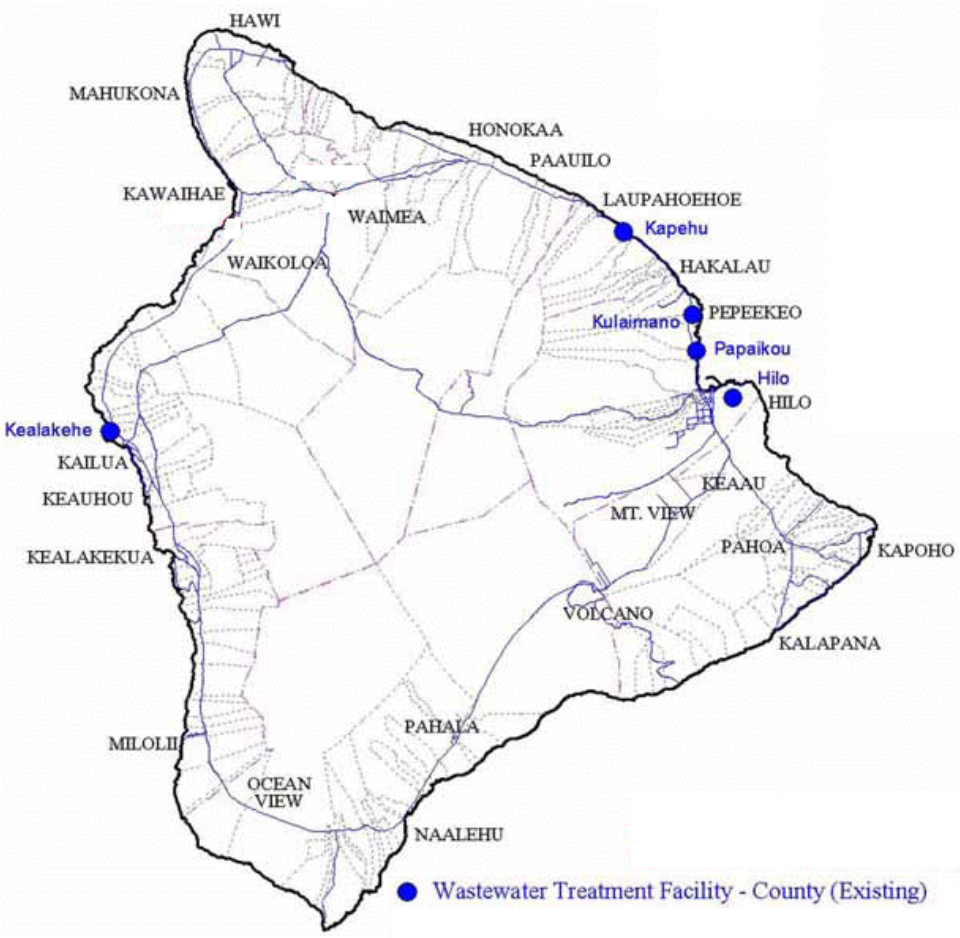
CHAPTER 12: WASTEWATER

As shown in Figure 10, Hawai'i County presently operates municipal wastewater systems in Hilo, Papa'ikou, Kapehu, Pepeekeo and Kealakehe. The rest of the island is served by private wastewater treatment facilities, or individual facilities such as cesspools or septic tanks. About 77 percent of the Hawai'i County population is served by cesspools. The State Department of Health intends to promulgate rules that will prohibit cesspools in Hawai'i County.

Figure 10
WASTEWATER TREATMENT FACILITIES



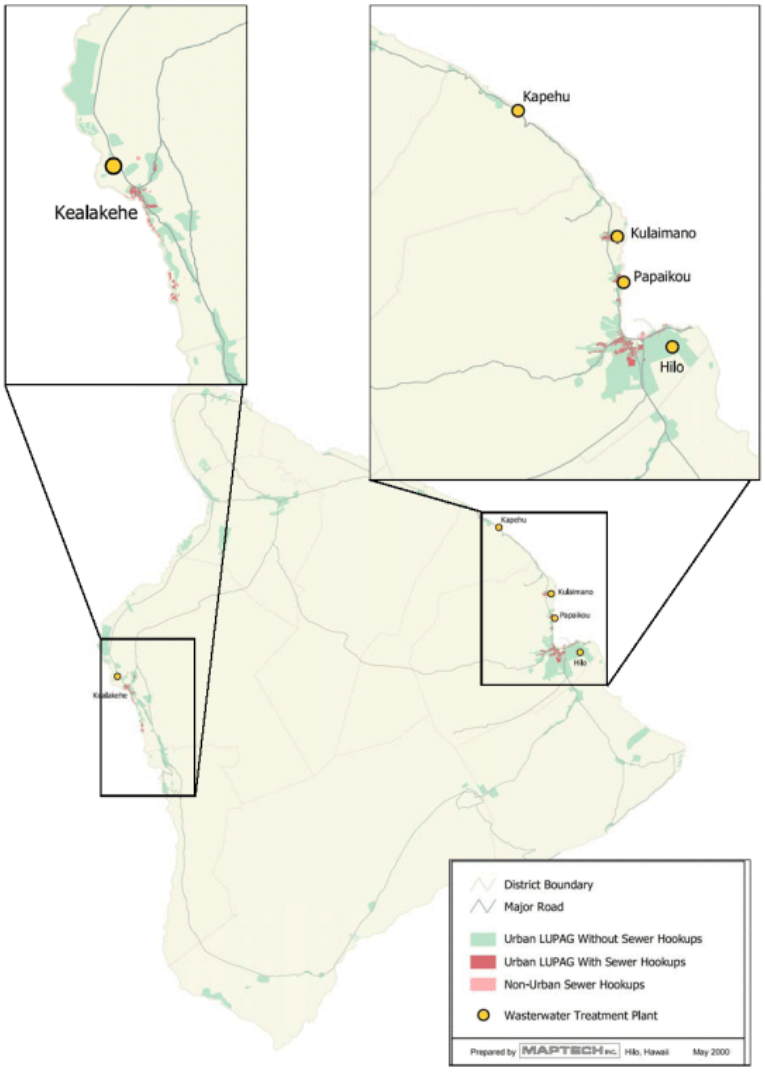
The County currently charges a water "facilities charge" to cover the capital costs of water infrastructure, but does not have a comparable fee for wastewater. The water facilities fee is $1,190 for the first dwelling unit (or water demand equivalent), and $5,500 for each additional unit.

Residents and businesses that are connected to a County sewer system pay user fees which fund all operations and maintenance. The County could charge new wastewater customers an impact fee to cover a pro rata share of the capital costs of the treatment plants, interceptors, force mains and pumping facilities.

Assessment and Benefit Districts

The County provides wastewater service to customers located in the vicinity of one of the five existing wastewater treatment facilities. It is recommended that the wastewater impact fee service area should be limited to areas currently served by a wastewater treatment plant. For this study, a county-wide level of service will be calculated based on existing facilities, with a benefit district established for each existing wastewater treatment plant, as shown in Figure 11. The wastewater impact fees will only be assessed on new customers when they connect to the County wastewater system.

Figure 11
SEWER SERVICE AREAS



Service Unit

To calculate wastewater impact fees, the wastewater demand associated with different types of customers must be expressed in a common unit of measurement, called a "service unit." A "Single-Family Equivalent" unit or SFE is a common denominator that converts all classes of customers into a common unit of expression. An SFE is the wastewater demand associated with a typical single-family residence.

Wastewater impact fees for new residential customers will be charged on a per unit basis, with the fee based on the anticipated wastewater demand compared to a typical single-family dwelling. For nonresidential uses, wastewater impact fees are almost universally charged based on the size of the water meter, irrespective of land use. Table 83 is the recommended equivalency table, showing the capacity of water meters of various sizes and the equivalency factors.

Table 83
METER EQUIVALENCY FACTORS

Meter Size	Capacity (gpm)	SFEs/ Meter
5/8" x 3/4" Meter	10	1.0
1" Meter	25	2.5
1-1/2" Meter	50	5.0
2" Meter	80	8.0
3" Meter	160	16.0
4" Meter	250	25.0
6" Meter	500	50.0
8" Meter	800	80.0
10" Meter	1,450	145.0

Source: Midrange of normal operating flow rates in gallons per minute for simple (less than 3"), compound (3-8") and turbine (10") meters from American Water Works Association, AWWA Standards C700-95, C702-01, C701-88.

Customarily, the number of existing wastewater SFEs is based on the number of water customers by meter size with the demand per SFE calculated based on average daily wastewater flow. By definition, a typical single-family unit represents, on average, one SFE. In the absence of such customer data, the demand per wastewater service unit in this study was estimated by utilizing an assumed average daily consumption of 80 gallons per day (gpd) per capita for residential customers that was utilized in both the 2004 wastewater capacity fee study[13] and the 1990 Hawai'i County impact fee study.

Demand for wastewater facilities is proportional to the number of people in a dwelling unit or hotel room. Consequently, data on average household size for various types of units is a critical component in determining the wastewater impact fee in the absence of actual customer data. Other types of units each represent an SFE, based on their relative average household sizes and wastewater demand per unit. The relative SFEs per unit are based on demographic data presented and analyzed in Appendix C.

[13] R.W. Beck, *Needs Assessment Study and Capacity Assessment Fee Study*, prepared for the County of Hawai'i, Department of Environmental Management, Wastewater Division, January 2004 Draft Report

The wastewater demand and SFEs associated with each housing type and unit size category are shown in Table 84.

Table 84
WASTEWATER SERVICE UNIT MULTIPLIERS

Land Use	Avg HH Size	GPD	SFEs/Unit
Less than 1,000 sq. ft.	2.78	222.4	0.97
1,000 - 1,499 sq. ft.	2.95	236.0	1.03
1,500 - 1,999 sq. ft.	3.06	244.8	1.07
2,000 - 2,999 sq. ft.	3.23	258.4	1.13
3,000 - 3,999 sq. ft.	3.45	276.0	1.20
4,000 sq. ft or more	3.68	294.4	1.28
Single-Family (flat rate)	2.87	229.6	1.00
Multi-Family	2.26	180.8	0.79
Hotel/Motel	1.34	107.2	0.47

Source: Average household size for single-family average and multi-family units from Table 99 in Appendix C; average household sizes by size categories from Table 100 in Appendix C; average occupancy for hotel/motel rooms estimated to be one-half of average vehicle occupancy on vacation trips, as reported by U.S. Dept. of Transportation, National Household Travel Survey, 2001; gallons per day is based on assumed demand of 80 gpd per capita; SFEs/unit is ratio of average household size to single-family detached average household size.

Wastewater System Capacity

As mentioned in the introduction, Hawai'i County presently operates municipal wastewater systems in Hilo, Papa'ikou, Kapehu, Pepeekeo and Kealakehe. The system's capacity is based on the combined average wastewater flow that the five treatment plants are designed for, less an allowance for inflow and infiltration during dry weather. As shown in Table 85, the estimated system capacity is 9.97 million gallons per day (mgd).

Table 85
WASTEWATER SYSTEM CAPACITY

Facility	Design Flow (mgd)	Est. Inflow/ Infiltration (mgd)	Estimated Avg. Capacity (mgd)
Hilo	5.00	0.80	4.20
Kealakehe	5.31	0.31	5.01
Kapehu	0.02	0.00	0.02
Kulaimano	0.50	0.07	0.43
Papaikou	0.35	0.03	0.32
Total	11.18	1.21	9.97

Source: R.W. Beck, *Needs Assessment Study and Capacity Assessment Fee Study*, January 2004 Draft Report.

The 2004 wastewater capacity fee study concluded that the existing collection system could not serve a greater capacity than the existing wastewater treatment facilities. For the purpose of determining the wastewater impact fee, the combined capacity of the wastewater treatment facilities and collections facilities is the same as the total estimated wastewater treatment plant capacity.

Cost Per Service Unit

In Hawai'i County, developers are generally required to install collection facilities such as laterals and collector sewers. These collection facilities typically consist of force mains and gravity sewers that are less than 12-inches in diameter. Based on a review of Wastewater Division construction records, the 2004 wastewater needs assessment study found that interceptor and force main costs are estimated to be 45 percent of the total collection system project cost; the remaining 55 percent of collection system project costs are for laterals and collector sewers.

The cost of facilities included in the impact fee include 55 percent of collection facility costs and 100 percent of the costs for the public service center, pumping and treatment. However, if interceptor and force mains are funded through assessments or State revolving loans that are then financed with assessments, they would need to be excluded from the impact fee calculation or a credit for the interceptor and force main costs would need to be provided for projects that are funded from assessments.

Since growth generally cannot be served with older, depreciated facilities, but instead will require new facilities, it is appropriate to base the fees on the replacement cost of existing facilities adjusted to reflect existing debt and current capacity level. An inventory of existing wastewater facilities is shown in Table 108 in Appendix F.

Table 86 shows a summary of the replacement value of the facilities based on the original cost of the facility adjusted to account for increases in construction and material costs. As with the 2004 study, the County's Building and Improvement Inventory was used to estimate the cost in 2005 dollars of replacing wastewater facilities. The total estimated replacement cost is $244.4 million. However, since some of the collection facilities were installed by developers, the collection facility cost is adjusted to account for the share of those facilities that are related to interceptor and force mains that are less than 12-inches in diameter. As a result, the adjusted replacement cost of Hawai'i County's wastewater facilities is an estimated $197.6 million.

Table 86
WASTEWATER FACILITY REPLACEMENT COST

Facility Type	Replacement Cost	Cost Adj.	Adjusted Cost
Public Service Center	$421,438	100%	$421,438
Collection	$85,045,790	45%	$38,270,606
Pumping	$34,860,160	100%	$34,860,160
Treatment	$124,031,840	100%	$124,031,840
Total, Wastewater Facilities	$244,359,228		$197,584,044

Source: Replacement cost from Table 108 of Appendix F; cost adjustment based on estimated cost of force mains and > 12-inch diameter gravity sewers from *Needs Assessment Study and Capacity Assessment Fee Study*, January 2004.

The wastewater cost per SFE is determined based on the system's replacement cost, total average daily capacity, and wastewater demand per SFE. As shown in Table 87, dividing the cost of existing wastewater facilities by the system's capacity results in a wastewater cost of $4,550 per SFE.

Table 87
WASTEWATER COST PER SERVICE UNIT

Wastewater Facility Cost	$197,584,044
Wastewater Capacity (gpd)	9,970,000
Cost per Gallon per Day	$20
Gallons per Day per SFE	230
Cost per SFE	$4,550

Source: Wastewater facility cost from Table 86; capacity from Table 85; gallons per day per SFE from Table 84.

Net Cost per Service Unit

As with other facility impact fees, a reduction of impact fees to provide a credit for future funding to be generated by new development is required for outstanding debt on existing wastewater facilities that have been counted in the existing level of service. The County has utilized both GO debt and State Revolving Fund (SRF) loans from the State of Hawai'i to finance wastewater capital projects. Currently, there is an estimated $2.4 million in outstanding SRF debt principal. Based on the analysis of GO bond issues and the current outstanding debt, the total GO bond outstanding balance for wastewater projects is $26.8 million. As shown in Table 88, the total GO and SRF outstanding debt on the existing wastewater treatment facilities is approximately $29.1 million, which results in a debt credit of $670 per SFE.

Table 88
WASTEWATER FACILITY DEBT PER SERVICE UNIT

State Revolving Fund Loan	$2,372,328
General Obligation Debt	$26,769,202
Total Outstanding Debt	$29,141,530
Wastewater Capacity (gpd)	9,970,000
Debt per gpd	$2.92
GPD per SFE	230
Debt Credit per SFE	$670

Source: SRF outstanding debt based on principal balance for FY 2006 provided by Hawai'i County Finance Department; GO debt from Appendix B, Table 97; capacity from Table 85; SFE demand from Table 83.

Based on a review of the County's CIP status report, no capacity-expanding projects for the wastewater facilities were funded directly from the general fund appropriations since 2001. All recent capacity-expanding wastewater projects have been funded through the County's GO bonds. As shown in Table 89, the estimated annual principal and interest payments on the current outstanding debt for wastewater over the past five years was $19.2 million.

Table 89
WASTEWATER GENERAL FUND EXPENDITURES, 2001-2005

Annual GO Bond Debt Service	$24,921,138
Wastewater Share of Total Outstanding Debt	15.4%
Annual Debt Service	$3,837,855
Years	5
Total Debt-Related Capacity Funding, 2000-2005	$19,189,276

Source: Annual debt service based on 2004-05 debt service from Hawai'i County, *2005-06 Annual Operating Budget*, June 2006; wastewater share of debt from Table 96.

An analysis of budgetary and tax data indicates that vacant and agricultural properties within the County generate 32.5 percent of property tax revenues, and property taxes accounted for 66.5 percent of general fund revenues. Using these percentages, the credit for past property tax payments is $95 per SFE, as shown in Table 90.

Table 90
WASTEWATER PAST PROPERTY TAX CREDIT

Percent of General Fund from Property Taxes, FY 2005-06	66.5%
Percent of Property Taxes from Vacant/Ag. Land, 2006	32.5%
Percent of Wastewater Credit for Past Property Tax Payments	21.6%
Total General Fund Capacity Funding, 2000-2005	$19,189,276
Net Vacant/Ag. Land Share of Past Capital Cost	$4,145,499
Wastewater Capacity (GPD)	9,970,000
Past Property Tax Credit per GPD	$0.42
GPD per SFE	230
Past Property Tax Credit per SFE	$95

Source: Percent of general fund from property taxes from Hawai'i County, *2005-06 Annual Operating Budget*, June 2006; percent of property taxes from undeveloped/agricultural land from Hawai'i County Real Property Tax Administrator, June 1, 2006; general fund capacity funding from Table 89; gallons per day per SFE from Table 83.

A system-wide wastewater impact fee that reflects the adjusted value of the existing wastewater treatment facility results in a fee of $3,785 per SFE, as shown in Table 91.

Table 91
WASTEWATER NET COST PER SERVICE UNIT

Wastewater Facility Cost per SFE	$4,550
Debt Credit per SFE	$670
Property Tax Credit per SFE	$95
Net Cost per SFE	$3,785

Source: Wastewater facility cost from Table 87; debt credit from Table 88; and property tax credit from Table 90.

Maximum Fee Schedule

The maximum wastewater impact fees that may be charged by the Hawai'i County, based on the methodology, data and assumptions used in this report, are shown in Table 92. The County has the option of charging single-family homes a flat rate per unit or a variable rate based on dwelling unit size.

Table 92
WASTEWATER NET COST SCHEDULE

Housing Type/Meter Size	SFEs per Unit or Meter	Net Cost per SFE	Net Cost per Unit or Meter
Less than 1,000 sq. ft.	0.97	$3,785	$3,672
1,000 - 1,499 sq. ft.	1.03	$3,785	$3,899
1,500 - 1,999 sq. ft.	1.07	$3,785	$4,050
2,000 - 2,999 sq. ft.	1.13	$3,785	$4,277
3,000 - 3,999 sq. ft.	1.20	$3,785	$4,542
4,000 sq. ft. or more	1.28	$3,785	$4,845
Single-Family (flat rate)	1.00	$3,785	$3,785
Multi-Family	0.79	$3,785	$2,990
Hotel/Motel	0.47	$3,785	$1,779
Nonresidential, 5/8" x 3/4" Meter	1.00	$3,785	$3,785
Nonresidential, 1" Meter	2.50	$3,785	$9,463
Nonresidential, 1-1/2" Meter	5.00	$3,785	$18,926
Nonresidential, 2" Meter	8.00	$3,785	$30,281
Nonresidential, 3" Meter	16.00	$3,785	$60,563
Nonresidential, 4" Meter	25.00	$3,785	$94,630
Nonresidential, 6" Meter	50.00	$3,785	$189,259
Nonresidential, 8" Meter	80.00	$3,785	$302,814
Nonresidential, 10" Meter	145.00	$3,785	$548,851

Source: Residential SFEs per unit from Table 84; nonresidential SFEs per meter from Table 83; net cost per SFE from Table 91.

Capital Improvement Plan

Funding of $92.1 million is proposed for wastewater infrastructure improvements in the County's 2005-06 to 2010-2011 capital improvements program (CIP). Impact fees may only be used for capacity-expanding improvements for facilities or equipment that expand the current capacity of wastewater processing or increase the volume of wastewater collection or disposal unless they are funded through assessments or by developers. A detailed breakdown of each project component cost was not available; consequently, the identification of eligible projects is preliminary and subject to verification. Eligible improvements appear to account for $24.0 million of the total CIP costs. The current list of eligible improvements from the six-year CIP is shown in Table 93. Improvements are currently planned only for two of the five existing systems. In addition, improvements are planned that would create three new wastewater systems. Fees should not be implemented in the three existing systems with no planned improvements until eligible improvements are identified.

Table 93
WASTEWATER CAPITAL IMPROVEMENT PROGRAM

Project	Wastewater System	Total Cost	Impact Fee Eligible
Kalanianaole Interceptor Sewer Rehab	Hilo WWTP	$6,000,000	
Wailoa SPS Renovation	Hilo WWTP	$2,000,000	
Modify HWWTP Digester	Hilo WWTP	$5,800,000	$5,800,000
Ainako Aina-Nani Collector Sewer	Hilo WWTP	$3,700,000	
Kilohana Sewer Improvement District	Hilo WWTP	$3,250,000	
Puainako Sewer Improvement District	Hilo WWTP	$15,100,000	
Pihonua Collector Sewer	Hilo WWTP	$2,200,000	
Puueo Collector Sewer	Hilo WWTP	$2,800,000	
Reed's Island Collector Sewer	Hilo WWTP	$1,100,000	
Replace Wailuku and Puueo Bridge Lines	Hilo WWTP	$2,300,000	
Ainako Collector Sewer	Hilo WWTP	$2,200,000	
Queen Liliuokalani Large Capacity Cesspool Replacement	Kealakehe WWTP	$8,800,000	$8,800,000
Abandon Emma SPS	Kealakehe WWTP	$3,450,000	
N Kona Sewer Improvement District	Kealakehe WWTP	$11,100,000	
Honokohau SPS and FM	Kealakehe WWTP	$2,500,000	
Lono Lona Collector Sewer	Kealakehe WWTP	$3,300,000	
Replace Kealakehe WWTP Lagoon Liners	Kealakehe WWTP	$3,300,000	
Lunapule Collector Sewer	Kealakehe WWTP	$420,000	
Hualalai Interceptor Sewer	Kealakehe WWTP	$2,200,000	$2,200,000
Alii Kai Collector Sewer	Kealakehe WWTP	$3,300,000	
Honokaa Large Capacity Cesspool Replacement	New, WWTP	$3,600,000	$3,600,000
Naalehu and Pahala Large Capacity Cesspool Replacement	2 New Stand alone	$3,630,000	$3,630,000
Total		$92,050,000	$24,030,000

Source: County of Hawai'i, *Capital Budget and Six Year Capital Improvements Program*, June 2006.

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APPENDIX A:
ROAD INVENTORY

PART III: APPENDICES

APPENDIX A: ROAD INVENTORY

Table 94
EXISTING MAJOR ROAD INVENTORY

				Lane-Miles					
Street Name	From/To	Ln	Miles	Total	Count	AADT	Capacity	VMT	VMC
Kanoelehua Ave	Kamehameaha Ave to Hualani St	4	0.58	2.32	2.32	23,631	26,000	13,706	15,080
Kanoelehua Ave	Hualani St to Lankikaula	4	0.48	1.92	1.92	31,965	26,000	15,343	12,480
Kanoelehua Ave	Lankikaula to Puainako	4	0.83	3.32	3.32	30,776	26,000	25,544	21,580
Kanoelehua Ave	Puainako to Kilauea	4	1.90	7.60	7.60	31,756	26,000	60,336	49,400
Volcano Rd	Kilauea to Keeau-Pahoa Rd	4	2.87	11.48	11.48	34,446	26,000	98,860	74,620
Hawaii Belt Rd	Hualalai Rd to Nani Kailua Dr	2	0.43	0.86	0.86	23,503	13,000	10,106	5,590
Hawaii Belt Rd	Nani Kailua Dr to Q Kaahumanu Hwy	2	1.07	2.14	2.14	24,046	13,000	25,729	13,910
Hawaii Belt Rd	Mud Ln to W Waimea UB	2	4.43	8.86	8.86	14,196	13,000	62,888	57,590
Kawaihae Rd	Kamamalu St to Mamalahoa Hwy	2	0.56	1.12	1.12	18,781	13,000	10,517	7,280
Kawaihae Rd	Mamalahoa Hwy to Laelae Rd	2	0.90	1.80	1.80	16,847	13,000	15,162	11,700
Kawaihae Rd	Laelae Rd to Kohala Mountain Rd	2	1.17	2.34	2.34	13,361	13,000	15,632	15,210
Kawaihae Rd	Kohala Mt Rd to Akulani St	2	0.50	1.00	1.00	8,700	13,000	4,350	6,500
Kawaihae Rd	Akulani St to Kawaihae Rd	2	7.41	14.82	14.82	7,672	13,000	56,850	96,330
Q. Kaahumanu Hy	Kawaihae Rd to Waikoloa Rd	2	7.98	15.96	15.96	10,393	13,000	82,936	103,740
Q. Kaahumanu Hy	Waikoloa Rd to Keahole Air. Rd	2	18.03	36.06	36.06	12,403	13,000	223,626	234,390
Q. Kaahumanu Hy	Keahole Air. Rd to Kealakehe Pwy Rd	2	4.52	9.04	9.04	20,839	13,000	94,192	58,760
Q. Kaahumanu Hy	Kealakehe Pwy Rd to Palani Rd	2	2.27	4.54	4.54	25,080	13,000	56,932	29,510
Kawaihae Rd	Q. Kaahumanu to Kawaihae Wharf	2	1.50	3.00			13,000		19,500
State Road Subtotal,	Primary Arterial		57.43	128.18	125.18			872,711	833,170
Volcano Rd	Keeau-Pahoa Rd to Huina St	2	3.04	6.08	6.08	14,227	13,000	43,250	39,520
Volcano Rd	Huina St to South Pszyk	2	5.01	10.02	10.02	10,789	13,000	54,053	65,130
Volcano Rd	South Pszyk to Wright Rd	2	11.71	23.42	23.42	5,451	13,000	63,831	152,230
Volcano Rd	Wright Rd to Volcano NP	2	2.00	4.00	4.00	3,273	13,000	6,546	26,000
Volcano Rd	Volcano NP Rd to Mauna Loa Rd	2	2.31	4.62	4.62	2,576	13,000	5,951	30,030
Volcano Rd	Mauna Loa Rd to Ninole Rd	2	25.76	51.52	51.52	1,861	13,000	47,939	334,880
Volcano Rd	Ninole Rd to Konohiki St	2	9.46	18.92	18.92	2,089	13,000	19,762	122,980
Volcano Rd	Konohiki St to Hookena Bch Rd	2	35.15	70.30	70.30	3,012	13,000	105,872	456,950
Volcano Rd	Hookena Bch Rd to Ke-Ala-O-Keawe	2	2.50	5.00	5.00	4,939	13,000	12,348	32,500
Volcano Rd	Ke-Ala-O-Keawe Rd to Koa Rd	2	5.55	11.10	11.10	8,811	13,000	48,901	72,150
Volcano Rd	Koa Rd to Road to Napoopoo	2	1.05	2.10	2.10	12,859	13,000	13,502	13,650
Kalanianaole St	Kalanianaole to Kamehameha Ave	2	0.71	1.42	1.42	15,879	13,000	11,274	9,230
Kamehameha Ave	Kamehameha Ave to Manono St	4	0.42	1.68	1.68	19,647	26,000	8,252	10,920
Kamehameha Ave	Manono St to Hawaii Belt Rd Junct	4	0.12	0.48	0.48	28,676	26,000	3,441	3,120
Bayfront HWY	Hawaii Belt Rd Junction to Pauahi St	2	0.45	0.90	0.90	28,676	13,000	12,904	5,850
Bayfront HWY	Pauahi St to Waianuenue Ave	2	0.62	1.24	1.24	11,114	13,000	6,891	8,060
Hawaii Belt Rd	Waianuenue Ave to Hau St	2	0.82	1.64	1.64	15,700	13,000	12,874	10,660
Hawaii Belt Rd	Hau St to Road to Papaikou	2	3.18	6.36	6.36	14,128	13,000	44,927	41,340

Street Name	From/To	Ln	Miles	Lane-Miles Total	Lane-Miles Count	AADT	Capacity	VMT	VMC
Hawaii Belt Rd	Rd to Papaikou to Kulaimano Rd	2	3.48	6.96	6.96	10,472	13,000	36,443	45,240
Hawaii Belt Rd	Kulaimano Rd to Akaka Falls Rd	2	3.37	6.74	6.74	8,394	13,000	28,288	43,810
Hawaii Belt Rd	Akaka Falls Rd to Mamane St	2	28.53	57.06	57.06	6,634	13,000	189,268	370,890
Hawaii Belt Rd	Mamane St to Plumeria Rd	2	1.53	3.06	3.06	6,790	13,000	10,389	19,890
Hawaii Belt Rd	Plumeria Rd to Mud Ln	2	8.51	17.02	17.02	7,829	13,000	66,625	110,630
Keaau-Pahoa Rd	Volcano Rd to Old Keaau-Pahoa Rd	2	1.79	3.58	3.58	16,215	13,000	29,025	23,270
Keaau-Pahoa Rd	Old Keaau-Pahoa Rd to Ainaloa Blvd	2	2.95	5.90	5.90	18,154	13,000	53,554	38,350
Keaau-Pahoa Rd	Ainaloa Blvd to Old Keaau-Pahoa Rd	2	2.95	5.90	5.90	11,397	13,000	33,621	38,350
Keaau-Pahoa Rd	Old K-P Rd to Pahoa-Kapoho Rd	2	1.48	2.96	2.96	7,047	13,000	10,430	19,240
Mamalahoa Hwy	Waimea-Kohala Air. Rd to Saddle Rd	2	4.54	9.08	9.08	7,150	13,000	32,461	59,020
Mamalahoa Hwy	Saddle Rd to Waikoloa Rd	2	4.68	9.36	9.36	5,794	13,000	27,116	60,840
Mamalahoa Hwy	Waikoloa Rd to Mahilani Dr	2	21.59	43.18	43.18	3,609	13,000	77,918	280,670
Mamalahoa Hwy	Mahilani Dr to Mamalahoa Hwy	2	2.72	5.44	5.44	11,959	13,000	32,528	35,360
Kaumana/Saddle	Hilo UB to Waenakonu	2	5.00	10.00	10.00	2,391	13,000	11,955	65,000
Kaumana/Saddle	Waenakonu to Saddle Rd	2	6.50	13.00	13.00	2,262	13,000	14,703	84,500
Akoni Pule Hwy	Kaahumanu Hwy to Kawaihae Wharf	2	1.50	3.00	3.00	6,916	13,000	10,374	19,500
Akoni Pule Hwy	Kawaihae Wharf to Upolu Air. Rd	2	16.60	33.20	33.20	4,979	13,000	82,651	215,800
Akoni Pule Hwy	Upolu Air. Rd to Hawi Rd	2	1.22	2.44	2.44	5,048	13,000	6,159	15,860
Kealakehe Pkwy	Q. Kaahumanu Hwy to Keanalehu Dr	2	1.18	2.36	2.36	4,059	13,000	4,790	15,340
Kealakehe Pkwy	Keanalehu Dr to Palani Rd	2	1.92	3.84			13,000		24,960
State Road Subtotal, Secondary Arterial			231.90	464.88	461.04			1,280,814	3,021,720
Keaau-Pahoa Rd	Pahoa-Kapoho Rd to Leilani Blvd	2	2.06	4.12	4.12	2,909	13,000	5,993	26,780
Keaau-Pahoa Rd	Leilani Blvd to Kaimu-Chain of Crates	2	6.60	13.20	13.20	1,459	13,000	9,629	85,800
Keaau-Pahoa Rd	Kaimu-Chain of Crates Rd to Closure	2	1.03	2.06	2.06	1,250	13,000	1,288	13,390
Keaau-Pahoa Rd	Closed Rd Section (3.49 mi.)	2					13,000		
Ke Ala 0 Keawe	Mamalahoa Hwy to Rd to Painted Ch	2	1.08	2.16	2.16	1,300	13,000	1,404	14,040
Ke Ala 0 Keawe	Rd to Painted Ch to City of Refuge	2	2.74	5.48	5.48	883	13,000	2,419	35,620
Akaka Falls Rd	Hawaii Belt Rd to End	2	3.80	7.60	7.60	1,596	13,000	6,065	49,400
Mamane St	Hawaii Belt Rd to Pakalana St	2	1.09	2.18	2.18	3,791	13,000	4,132	14,170
Mamane St	Pakalana St to Lehua	2	0.41	0.82	0.82	5,319	13,000	2,181	5,330
Mamane St	Lehua to Nienie Bridge	2	0.46	0.92	0.92	3,736	13,000	1,719	5,980
Mamane St	Nienie Bridge to Waipio Valley	2	7.66	15.32	15.32	1,816	13,000	13,911	99,580
Kohala Mt Rd	Kawaihae Rd to Rd to Hawaii Prep	2	0.22	0.44	0.44	1,956	13,000	430	2,860
Kohala Mt Rd	Rd to Hawaii Prep to Kynnersly Rd	2	17.16	34.32	34.32	1,965	13,000	33,719	223,080
Kohala Mt Rd	Kynnersly Rd to Mahukona-Niulii Rd	2	1.90	3.80			13,000		24,700
Mahukona-Niulii	Hawi Rd to Kohala Hospital	2	2.27	4.54	4.54	5,411	13,000	12,283	29,510
Mahukona-Niulii	Kohala Hospital to Kohala Mill Rd	2	0.98	1.96	1.96	3,933	13,000	3,854	12,740
Mahukona-Niulii	Kohala Mill Rd to Road to Niulii	2	2.88	5.76	5.76	2,177	13,000	6,270	37,440
Mahukona-Niulii	Road to Niulii to Pololu Valley Ent	2	1.57	3.14	3.14	385	13,000	604	20,410
Palani Rd	Kaiwi St to Palani Rd	2	0.30	0.60	0.60	15,698	13,000	4,709	3,900
Palani Rd	Palani Rd to Hualalai Rd	2	0.48	0.96			13,000		6,240
Palani Rd	Hualalai Rd to Wailua Rd	2	0.97	1.94	1.94	10,126	13,000	9,822	12,610
Palani Rd	Walua Rd to Q. Kaahumanu Ext	2	1.33	2.66	2.66	6,439	13,000	8,564	17,290
State Road Subtotal, Major Collector			56.99	113.98	109.22			128,996	740,870

Street Name	From/To	Ln	Miles	Lane-Miles Total	Lane-Miles Count	AADT	Capacity	VMT	VMC
Kapoho-Kaimu Rd	Pahoa-Kal-apana to Pahoa-Kapoho Rd	2	14.50	29.00			13,000		188,500
Kukui Rd	Camp Rd/Huina Rd to Volcano	2	1.70	3.40			13,000		22,100
North Kulani Rd	Huina Rd to Volcano Rd	2	1.60	3.20			13,000		20,800
Wright Rd	Elepaio Rd to Volcano Rd	2	1.10	2.20			13,000		14,300
Opihikao Rd	Pahoa-Kalapana to Kala-pana-Kapoho	2	5.30	10.60			13,000		68,900
Pohoiki Rd	Pahoa-Kapoho to Kala-pana-Kapoho	2	4.80	9.60			13,000		62,400
Pohakea Rd	Paauilo Rd to Mamalahoa Hwy	2	2.30	4.60			13,000		29,900
Kalopa Rd	Kalopa Mauka Rd to Mamala-hoa Hw	2	1.40	2.80			13,000		18,200
Kynnersley Rd	Kohala Mntn Rd to Mahukona-Niulii	2	2.30	4.60			13,000		29,900
Hawi Rd	Mahukona-Niulii Rd to End	2	0.90	1.80	1.80	3,516	13,000	3,164	11,700
Kamehameha III	Manukai St to Alii Dr	2	0.30	0.60			13,000		3,900
Walua Rd	Ainanani St to Kuakini Hwy	2	0.50	1.00			13,000		6,500
Kaleiopapa Rd	Ehukai St to Alii Dr State	2	0.20	0.40			13,000		2,600
Sunset Dr	Marlin Rd to Kuakini Hwy	2	0.30	0.60			13,000		3,900
Hinalani St	Halolani St to Mamalahoa Hwy	2	0.40	0.80			13,000		5,200
Holoholo St	Kukuna St to Kaiminani Dr	2	0.60	1.20			13,000		7,800
Halekii St	Mamao St to Mamalahoa Hihgway	2	0.20	0.40			13,000		2,600
Kinue St	Hookipa Place to Mamalahoa Hwy	2	0.20	0.40			13,000		2,600
S Point Access Rd	Mamalahoa Hwy to South Point	2	10.70	21.40			13,000		139,100
Kamoa Rd	S Pt Access to Hawaii Belt Rd	2	2.70	5.40			13,000		35,100
Kamani St	Pikake St to Hawaii Belt Rd	2	0.50	1.00			13,000		6,500
Maunakea Access	Saddle Rd to Observatory	2	15.00	30.00			13,000		195,000
State Road Subtotal, Minor Collector			67.50	135.00	1.80			3,164	877,500
Mamalahoa Hwy	Rd to Napoopoo to Kona Hosp Rd	2	1.82	3.64	3.64	15,505	13,000	28,219	23,660
Mamalahoa Hwy	Kona Hospital Rd to Old Mamalahoa	2	1.67	3.34	3.34	17,443	13,000	29,130	21,710
Mamalahoa Hwy	Old Mamalahoa Hwy to Haawina St	2	1.80	3.60	3.60	17,954	13,000	32,317	23,400
Mamalahoa Hwy	Haawina St to Kamehameha III Rd	2	1.83	3.66	3.66	18,623	13,000	34,080	23,790
Mamalahoa Hwy	Kamehameha III Rd to Kuakini Hwy	2	2.00	4.00	4.00	20,481	13,000	40,962	26,000
Kuhio St	Kuhio Wharf to Kanoelehua	2	0.80	1.60	1.60	1,912	13,000	1,530	10,400
Hawaii Belt Rd	Kuakini Hwy to Hualalai Rd	2	1.26	2.52	2.52	23,516	13,000	29,630	16,380
County Road Subtotal, Primary Arterial			11.18	22.36	22.36			195,868	145,340
Mamalahoa Hwy	Kawaihae Rd to Waimea-Kohala Air	2	1.71	3.42	3.42	9,166	13,000	15,674	22,230
Saddle Rd	Hilo UB to Mamalahoa Hwy	2	39.30	78.60	78.60	1,100	13,000	43,230	510,900
Waikoloa Rd	Q. Kaahumanu Hwy to Quarry Rd	2	4.74	9.48	9.48	10,079	13,000	47,774	61,620
Waikoloa Rd	Quarry Rd to Mamalahoa Hwy	2	6.38	12.76	12.76	4,649	13,000	29,661	82,940
County Road Subtotal, Secondary Arterial			52.13	104.26	104.26			136,339	677,690
Pahoa-Kapoho Rd	Keaau-Pahoa to Naniwale Blvd	2	1.00	2.00	2.00	5,995	13,000	5,995	13,000
Pahoa-Kapoho Rd	Naniwale Bvd to Kalapana-Kapoho	2	6.80	13.60	13.60	2,000	13,000	13,600	88,400
Keaau-Pahoa Rd	Through Pahoa Town	2	1.70	3.40	3.40	5,418	13,000	9,211	22,100
Kahakai Boulevard	Keaau-Pahoa Rd to End	2	6.10	12.20	12.20	6,140	13,000	37,454	79,300
Napoopoo Rd	Mamalahoa Hwy to Puu-honua Rd	2	4.40	8.80	8.80	1,255	13,000	5,522	57,200

Street Name	From/To	Ln	Miles	Lane-Miles Total	Lane-Miles Count	AADT	Capacity	VMT	VMC
Mamalahoa Hwy	Palani Rd to Waiaha Stream	2	4.40	8.80			13,000		57,200
Mamalahoa Hwy	Waiaha Stream to Kua-kini Hwy	2	4.80	9.60			13,000		62,400
Kamehameha III Dr	Kuakini Hwy to Kealahou village	2	1.24	2.48	2.48	10,975	13,000	13,609	16,120
Kamehameha III Dr	Kealahou Village to Alii Dr	2	0.24	0.48	0.48	10,985	13,000	2,636	3,120
Palani Rd	Mamlahoa Hwy to Kealakaa St	4	1.53	6.12	6.12	15,454	26,000	23,645	39,780
Palani Rd	Kealakaa St to Q Kaahumanu Hwy	4	1.87	7.48	7.48	17,080	26,000	31,940	48,620
Plumeria Rd	Mamane St to Mamalahoa Hwy	2	0.70	1.40	1.40	3,117	13,000	2,182	9,100
Old Mamalahoa	W to E junction with Hawaii Belt Rd	2	0.70	1.40	1.40	1,513	13,000	1,059	9,100
Pikake St	Ohia St to Mamalahoa Hwy	2	0.40	0.80	0.80	795	13,000	318	5,200
Kuakini Hwy	Palani Rd to Kaiwi St	2	0.40	0.80			13,000		5,200
Kaiwi St	Q. Kaahumanu to Kuakini Hwy	2	0.30	0.60	0.60	10,738	13,000	3,221	3,900
Aloha Kona Dr	Hienaloli Rd to Hawaii Belt Rd	2	0.90	1.80			13,000		11,700
Kealakaa St	Ulua'o St to Palani Rd	2	0.50	1.00	1.00	4,743	13,000	2,372	6,500
Loloa Dr	Holo St to Mamalahoa Hwy	2	0.50	1.00	1.00	1,256	13,000	628	6,500
Palani Rd/Alii Dr	Kuakini Hwy to Rd to Wharf	2	0.14	0.28	0.28	18,610	13,000	2,605	1,820
Palani Rd/Alii Dr	Rd to Wharf to Kailua-Kona	2	2.26	4.52	4.52	15,358	13,000	34,709	29,380
Alii Dr	Kailua-Kona UB to Hualalai Rd	2	0.76	1.52	1.52	11,175	13,000	8,493	9,880
Alii Dr	Hualalai Rd to Walua Rd	2	0.45	0.90	0.90	15,358	13,000	6,911	5,850
Alii Dr	Walua Rd to Kaiolu Rd	2	0.98	1.96	1.96	14,524	13,000	14,234	12,740
Alii Dr	Kaiolu Rd to Royal Poincana Dr	2	0.73	1.46	1.46	14,494	13,000	10,581	9,490
Alii Dr	New Con. to Kamehameha III Rd	2	0.30	0.60	0.60	8,812	13,000	2,644	3,900
Alii Dr	Kamehameha III Rd to end	2	2.67	5.34	5.34	4,509	13,000	12,039	34,710
Hualalai Rd	Alii Dr to Kuakini	2	0.20	0.40	0.40	7,577	13,000	1,515	2,600
Hualalai Rd	Kuakini to Hawaii Belt	2	1.20	2.40	2.40	6,478	13,000	7,774	15,600
Lako Rd	Kuakini Hwy to End	2	0.50	1.00	1.00	2,497	13,000	1,249	6,500
Kaiminani Dr	Mamalahoa to Queen Kaahumanu	2	3.60	7.20	7.20	6,160	13,000	22,176	46,800
Henry St	Kuakini Hwy to Hawaii Belt Rd	4	0.20	0.80	0.80	14,824	26,000	2,965	5,200
Paniolo Ave	Paniolo Ave - Waikoloa Rd to End	4	1.70	6.80	6.80	9,910	26,000	16,847	44,200
Lindsey Rd	Hokuula Rd to Mamalahoa Hwy	2	0.40	0.80	0.80	1,457	13,000	583	5,200
Old Mamalahoa	Uikeoni St to Hawaii Belt Rd	2	0.45	0.90	0.90	1,923	13,000	865	5,850
Kamamalu St	Mamalahoa Hwy to Hiiaka St	2	0.70	1.40	1.40	3,136	13,000	2,195	9,100
Kamehameha Av	Waianuenue Ave to Hilo Bay Hwy	4	1.10	4.40			26,000		28,600
Keawe	Waianuenue to Kilauea	2	0.30	0.60	0.60	8,764	13,000	2,629	3,900
Kilauea Ave	Keawe St. to Ponahawai St.	2	0.07	0.14	0.14	9,640	13,000	675	910
Kilauea Ave	Ponahawai St to Kukuau	4	0.13	0.52	0.52	12,023	26,000	1,563	3,380
Kilauea Ave	Kukuau St. to Aala Lane	4	0.10	0.40	0.40	14,327	26,000	1,433	2,600
Kilauea Ave	Aala Lane to Mohouli St	4	0.33	1.32	1.32	17,920	26,000	5,914	8,580
Kilauea Ave	Mohouli St. to Lanikaula	4	0.53	2.12	2.12	26,805	26,000	14,207	13,780
Kilauea Ave	Lanikaula to Kawili St	4	0.42	1.68			26,000		10,920
Kilauea Ave	Kawili St. to Puainako St	4	0.70	2.80	2.80	14,857	26,000	10,400	18,200
Kilauea Ave	Puainako St. to E. Kahaopea St.	4	0.35	1.40	1.40	10,196	26,000	3,569	9,100
Kilauea Ave	Kahaopea to Kawailani St.	4	0.35	1.40			26,000		9,100
Kilauea Ave	Kawailani St. to E. Palai St.	4	0.35	1.40	1.40	6,403	26,000	2,241	9,100
Kilauea Ave	Palai St. to Haihai St.	4	0.35	1.40	1.40	6,403	26,000	2,241	9,100
Kilauea Ave	Haihai St. to Kanoelehua	2	0.50	1.00	1.00	8,566	13,000	4,283	6,500

Street Name	From/To	Ln	Miles	Lane-Miles		AADT	Capacity	VMT	VMC
				Total	Count				
Kalanianaole St	Kuhio St. to Kauhane Ave.	2	0.10	0.20	0.20	11,004	13,000	1,100	1,300
Kalanianaole St	Kauhane Ave. to Baker Ave	2	0.38	0.76	0.76	6,940	13,000	2,637	4,940
Kalanianaole St	Baker Ave. and Onekahakaha St.	2	0.50	1.00	1.00	6,730	13,000	3,365	6,500
Kalanianaole St	Onekahakaha St. to Kamokuna St.	2	0.27	0.54	0.54	4,897	13,000	1,322	3,510
Kalanianaole St	Kamokuna St to Koloa St	2	0.56	1.12	1.12	3,406	13,000	1,907	7,280
Kalanianaole St	Koloa St. to Oeoe St.	2	0.12	0.24	0.24	2,550	13,000	306	1,560
Kalanianaole St	Oeoe St. to Lehia Park Gate	2	1.00	2.00	2.00	1,311	13,000	1,311	13,000
Puainako St	Railroad Ave to Kanoelehua Ave	2	0.56	1.12	1.12	8,223	13,000	4,605	7,280
Puainako St	Kanoelehua Ave to Kilauea Ave	2	0.17	0.34	0.34	18,119	13,000	3,080	2,210
Puainako St	Kilauea Ave to Kinoole St	2	0.10	0.20	0.20	11,840	13,000	1,184	1,300
Puainako St	Kinoole St to Kawili St/Iwalani St	2	0.75	1.50	1.50	9,497	13,000	7,123	9,750
Puainako St	Kawili St/Iwalani St to Komohana St	2	0.60	1.20	1.20	7,523	13,000	4,514	7,800
Kinoole St	Waianuenue Ave to Ponahawai St	2	0.37	0.74	0.74	4,688	13,000	1,735	4,810
Kinoole St	Ponanawai St to Mohouli St	2	0.71	1.42	1.42	12,687	13,000	9,008	9,230
Kinoole St	Mohouli St to Kawili St	2	0.74	1.48	1.48	14,242	13,000	10,539	9,620
Kinoole St	Kawili St to Puainako St	2	0.63	1.26			13,000		8,190
Kinoole St	Puainako St to Kawailani St	2	0.70	1.40	1.40	9,776	13,000	6,843	9,100
Kinoole St	Kawailani St to Haihai St	2	0.69	1.38	1.38	4,314	13,000	2,977	8,970
Waianuenue Ave	Kamehameha Ave to Komohana St	2	1.00	2.00	2.00	13,211	13,000	13,211	13,000
Waianuenue Ave	Komohana St to Kaumana Dr	4	0.18	0.72			26,000		4,680
Waianuenue Ave	Kaumana Dr to Puuhina St	2	0.17	0.34	0.34	8,504	13,000	1,446	2,210
Waianuenue Ave	Hilo Hospital to Lahi St	2	0.96	1.92	1.92	2,712	13,000	2,604	12,480
Waianuenue Ave	Lahi St to Akolea St	2	0.43	0.86	0.86	1,248	13,000	537	5,590
Kaumana Dr	Waianuenue Ave to Ainako Ave	4	0.78	3.12	3.12	7,865	26,000	6,135	20,280
Kaumana Dr	Ainako Ave. to Akolea St	2	0.96	1.92	1.92	9,178	13,000	8,811	12,480
Kaumana Dr	Akolea St to Wilder Ave	2	0.32	0.64	0.64	2,320	13,000	742	4,160
Kaumana Dr	Wilder to Country Club Dr	2	1.10	2.20	2.20	1,069	13,000	1,176	14,300
Kekuanaoa St	Kanoelehua Ave to Manono St	2	0.37	0.74	0.74	12,522	13,000	4,633	4,810
Kekuanaoa St	Manono St to Kilauea Ave	2	0.44	0.88	0.88	15,073	13,000	6,632	5,720
Komohana St	Wainuenue to Punahele	2	0.10	0.20	0.20	11,774	13,000	1,177	1,300
Komohana St	Punahele to Puainako	2	1.80	3.60	3.60	13,311	13,000	23,960	23,400
Komohana St	Puainako St to Ainaloa Dr	2	1.00	2.00	2.00	5,836	13,000	5,836	13,000
Komohana St	Ainoloa Dr. to Haihai St.	2	0.40	0.80			13,000		5,200
Haihai St	Kilauea Ave to Ainaola Dr	2	1.69	3.38	3.38	6,913	13,000	11,683	21,970
Haihai St	Ainaola Dr to Kupulau St	2	0.86	1.72	1.72	2,672	13,000	2,298	11,180
Ainaola Dr	Kawailani St to Haihai St	2	1.05	2.10	2.10	7,255	13,000	7,618	13,650
Ainaola Dr	Haihai St to Kupulau Rd	2	1.10	2.20	2.20	3,387	13,000	3,726	14,300
Kawailani St	Kanoelehua Ave to Kilauea Ave	2	0.13	0.26	0.26	9,163	13,000	1,191	1,690
Kawailani St	Kilauea Ave to Kinoole St	2	0.10	0.20	0.20	12,696	13,000	1,270	1,300
Kawailani St	Kinoole St to Iwalani St	2	0.75	1.50	1.50	11,843	13,000	8,882	9,750
Kawailani St	Iwalani St to Komohana St	2	0.60	1.20	1.20	8,885	13,000	5,331	7,800
Kawailani St	Komohana St to Kupulau Rd	2	1.12	2.24	2.24	7,587	13,000	8,497	14,560
Iwalani St	Haihai St to Kawili St	2	1.40	2.80	2.80	1,291	13,000	1,807	18,200
Kawili	Iwalani St to Manono St	2	1.00	2.00	2.00	11,655	13,000	11,655	13,000
Manono	Manono St to Kamehameha	2	0.73	1.46	1.46	8,862	13,000	6,469	9,490

Street Name	From/To	Ln	Miles	Lane-Miles Total	Lane-Miles Count	AADT	Capacity	VMT	VMC
Ainako Ave	Kaumana Dr to Waianuenue	2	1.50	3.00	3.00	3,710	13,000	5,565	19,500
Mohouli St	Kilauea Ave to Komohana	2	1.10	2.20	2.20	9,749	13,000	10,724	14,300
Akolea Rd	Waianuenue Ave to Kaumana	2	1.80	3.60	3.60	697	13,000	1,255	23,400
Lanikaula St	Kanoelehua Ave to Mohouli St	2	1.80	3.60	3.60	5,185	13,000	9,333	23,400
Railroad Ave	Leilani St to Kahaopea	2	1.20	2.40	2.40	7,284	13,000	8,741	15,600
Stainback Hwy	S Hilo to Kanoelehua Ave	2	1.50	3.00			13,000		19,500
Wainaku Ave	Waipahoehoe St to Wailuku Dr	2	0.30	0.60	0.60	5,696	13,000	1,709	3,900
County Road Subtotal, Major Collector			99.99	221.92	187.66			599,138	1,442,480
Total, Major County Roads				348.54	314.28			931,344	2,265,510
Total, Major Road System				1,190.58	1,011.52			3,217,031	7,738,770

Source: Major roads and classifications from Hawai'i County General Plan, Infrastructure Assessment, 2004; segment miles from General Plan Infrastructure Assessment with additional segments scaled by Duncan Associates; annual average daily traffic counts (AADT) from State of Hawai'i, Department of Transportation, Highways Division, 2002 and 2004; capacity from Table 18.

APPENDIX B:
GENERAL OBLIGATION DEBT

APPENDIX B: GENERAL OBLIGATION DEBT

Hawai'i County has utilized General Obligation (GO) debt to finance public safety, highway and street, solid waste disposal, wastewater, culture and recreation, other miscellaneous capital projects. The County does not issue separate GO bonds for each type of capital project, and it is not possible to precisely identify the amount of outstanding GO debt attributable to certain departments or types of projects. In 2005-06, total debt service for the County's general obligation bonds was approximately $17.8 million.

The County's current outstanding GO bonds and their original issue amounts are shown in Table 95. The original debt issues were allocated among departments based on an analysis of the types of projects funded by debt, the ordinance authorizing debt issues, the capital project status report, and information provided by County staff. A portion of outstanding debt was issued for projects for which details are not available.

Table 95
ORIGINAL GENERAL OBLIGATION DEBT BY DEPARTMENT

Bond	Roads	Parks	Fire/EMS	Police	Solid Waste	Wastewater	Other	Unknown
1993	$2,083,100	$5,877,875	$3,099,283	$0	$18,235,000	$31,411,000	$11,966,090	$14,072,652
1998						$775,600		
1999A	$10,281,000	$6,424,445	$3,382,000	$1,356,000	$1,070,000	$950,000	$6,536,500	
1999B								$18,835,000
2001							$16,000,000	$7,000,000
2003	$16,998,000	$9,040,000	$2,500,000	$1,800,000		$1,020,000	$4,750,000	$202,000
2004A	$30,000,000							
2004B	$4,856,507	$5,102,530	$195,575	$288,034	$613,367	$802,262	$7,686,724	
2004C				$1,677,700		$202,000	$3,417,000	
2004D						$259,200		
2004ID						$3,887,493		
Total	$64,218,607	$26,444,850	$9,176,858	$5,121,734	$19,918,367	$39,307,555	$50,356,315	$40,109,652

Notes:
1993: $20,000,000 for projects from FY91 to FY93 capital budget; $10,000,000 Water Supply Project; $3,320,000 to refund 1980 issue for which details are not available; $10,325,000 to refund 1986 issue for which details are not available; $9,625,000 to refund 1989 issue which included $10,200,000 for Hilo sewer plant, $3,500,000 for Old Kona Airport Gym, and $1,400,000 for Kealekehe wastewater treatment plant; and $29,315,000 to refund 1990 issue for wastewater and landfill projects.
1998: $775,600 for wastewater systems in Paauilo, Ookala, and Paauhau.
1999A: $30,000,000 for 1999 Hawai'i County Bill 129.
1999B: $18,835,000 to refund 1978 issue which contained unknown projects funded in prior issues from 1949 to 1977.
2001: $8,000,000 for a radio communication system, $8,000,000 for water supply projects; and $7,000,000 for unidentified capital projects from FY99 to FY01 capital budget.
2003: $36,310,000 for projects identified in 2003 Hawai'i County Bill 128.
2004A: $30,000,000 for projects identified in 2004 Hawai'i County Bill 254 (Ordinance 04 59).
2004B: Refund $30,000,000 for projects from FY1994 to FY1996 capital budget.
2004C: $202,000 to refund 1977 issue for Kulaimano sewage system, $411,000 to refund 1981 issue for water storage and transmission, $3,006,000 to refund 1997 issue for acquisition and reconstruction of J.C. Penney's facility, and $1,677,700 to refund 2001 issue for East Hawai'i police detention facility.
2004D: Waterline replacement project.
2004ID: Water system for Kona Coastview.
Source: Hawai'i County Finance Department.

Table 1 shows the share of the original debt issue attributed to certain departments or types of projects based on the analysis of the original debt issue.

Table 96
ALLOCATION OF GENERAL OBLIGATION DEBT BY DEPARTMENT

Bond	Roads	Parks	Fire/ EMS	Police	Solid Waste	Waste-water	Other	Unknown	Total
1993	2.4%	6.8%	3.6%	0.0%	21.0%	36.2%	13.8%	16.2%	100%
1998	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100%
1999A	34.2%	21.4%	11.3%	4.5%	3.6%	3.2%	21.8%	0.0%	100%
1999B	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100%
2001	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	69.6%	30.4%	100%
2003	46.7%	24.9%	6.9%	5.0%	0.0%	2.8%	13.1%	0.6%	100%
2004A	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
2004B	24.8%	26.1%	1.0%	1.5%	3.1%	4.1%	39.4%	0.0%	100%
2004C	0.0%	0.0%	0.0%	31.7%	0.0%	3.8%	64.5%	0.0%	100%
2004D	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100%
2004ID	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100%
Total	25.2%	10.4%	3.6%	2.0%	7.8%	15.4%	19.8%	15.8%	100%

Source: Allocation based on department share of each original bond issue from Table 95.

The County currently has $390.3 million in outstanding GO debt. Table 97 shows the estimated current GO debt by department based on the current outstanding principal balance for each GO Bond issue. In addition, the $19.6 million of outstanding debt related to the unknown portion of the original debt issues were allocated among the departments based on their share of the total outstanding bond issues.

Table 97
OUTSTANDING GENERAL OBLIGATION DEBT BY DEPARTMENT

Bond	Roads	Parks	Fire/EMS	Police	Solid Waste	Wastewater	Other	Unknown
1993	$1,085,400	$3,075,300	$1,628,100	$0	$9,497,250	$16,371,450	$6,241,050	$7,326,450
1998	$0	$0	$0	$0	$0	$699,300	$0	$0
1999A	$9,049,320	$5,662,440	$2,989,980	$1,190,700	$952,560	$846,720	$5,768,280	$0
1999B	$0	$0	$0	$0	$0	$0	$0	$5,300,000
2001	$0	$0	$0	$0	$0	$0	$15,416,400	$6,733,600
2003	$16,956,770	$9,041,190	$2,505,390	$1,815,500	$0	$1,016,680	$4,756,610	$217,860
2004A	$30,000,000	$0	$0	$0	$0	$0	$0	$0
2004B	$4,847,160	$5,101,245	$195,450	$293,175	$605,895	$801,345	$7,700,730	$0
2004C	$0	$0	$0	$1,678,420	$0	$201,199	$3,415,082	$0
2004D	$0	$0	$0	$0	$0	$259,200	$0	$0
2004ID	$0	$0	$0	$0	$0	$3,887,493	$0	$0
Subtotal	$61,938,650	$22,880,175	$7,318,920	$4,977,795	$11,055,705	$24,083,387	$43,298,152	$19,577,910
Unknown	$6,907,491	$2,551,631	$816,217	$555,131	$1,232,949	$2,685,815	$4,828,675	
Total	$68,846,141	$25,431,806	$8,135,137	$5,532,926	$12,288,654	$26,769,202	$48,126,827	$195,130,694

Source: Current outstanding principal from Hawai'i County Finance Department, August 2005; department allocation based on share of original bond issue from Table 96.

APPENDIX C:
DEMOGRAPHIC DATA

APPENDIX C: DEMOGRAPHIC DATA

For the impact fee analysis, it is important to know both the existing amount of residential development and the number of residents associated with each dwelling unit. The first step is to compile an estimate of existing dwelling units by type in Hawai'i. This is done by combining 2000 Census counts of housing units with building permit data on the number of dwelling units constructed since the census enumeration. As shown in Table 98, it is estimated that Hawai'i County currently has about 58,772 single-family units and 17,153 multi-family units, for a total of about 75,925 existing dwelling units.

Table 98
EXISTING DWELLING UNITS BY HOUSING TYPE

Housing Type	2000 Units	2000-2005 Permits	2006 Estimate
Single-Family Detached	48,618	10,154	58,772
Multi-Family	14,056	3,097	17,153
Total	62,674	13,251	75,925

Source: 2000 units from the U.S. Census; 2000 to 2005 building permits by housing type from Hawaii County.

An important input into the impact fee calculations is the number of persons associated with dwelling units of various housing types. The best available data source on average household size in Hawai'i County is the 2000 U.S. Census. As shown in Table 99 below, average household size varies by housing type, ranging from 2.26 persons per multi-family unit to 2.87 persons per single-family detached unit.

Table 99
AVERAGE HOUSEHOLD SIZE BY HOUSING TYPE, 2000

Housing Type	Household Population	Occupied Units	Avg. HH Size
Single-Family Detached	124,022	43,281	2.87
Multi-Family	21,904	9,704	2.26
All Housing Types	145,926	52,985	2.75

Source: 2000 U.S. Census for the County of Hawai'i, Summary File 3 (weighted -in-6 sample data).

In addition, data on the average household size of single-family detached units by number of bedrooms is available from 2000 Census five-percent sample data for geographic areas containing at least 100,000 residents. As can be seen in Table 100, single-family average household size in Hawai'i County is strongly related to the number of bedrooms in the dwelling unit. The average number of residents in an occupied single-family detached dwelling unit increases from 2.55 for a two-bedroom home to 4.22 for a home with five or more bedrooms. The overall average single-family household size derived from the 5-percent sample (2.92) is slightly higher than the figure derived from the 1-in-6 sample data for Hawai'i County (2.87).

Table 100
AVERAGE HOUSEHOLD SIZE BY BEDROOMS

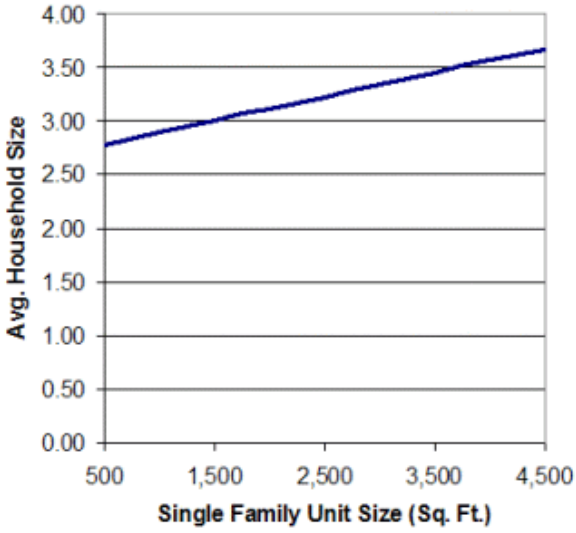
Bedrooms	Sample Households	Persons	Occupied Units	Avg. HH Size
Up to Two	1,025	40,522	15,918	2.55
Three	1,327	60,338	20,293	2.97
Four	322	17,788	5,095	3.49
Five or more	94	6,329	1,501	4.22
All Single-Family	2,768	124,977	42,807	2.92

Source: 2000 U.S. Census Public Use Microdata Sample (PUMS) 5% sample data for County of Hawai'i PUMA 00200.

While the only measure of dwelling unit size recorded by the Census Bureau is bedrooms, it is recommended that the fees be based on square footage rather than number of bedrooms. Although some jurisdictions charge impact fees on the basis of bedrooms, it can be an administrative challenge to determine the number of bedrooms when there is a financial incentive to disguise bedrooms as something else (a den or storage room, for example). An alternative is to translate bedrooms into size categories.

To determine a relationship between the unit square footage, bedrooms and household population in Hawai'i County, the consultant compiled data on all 630 single-family homes listed for sale in the County from the National Association of Realtors website (www.realtor.com) on October 19, 2005. These on-line listings give square footage and the number of bedrooms for each home offered for sale. A variable for average household size was added, consisting of the average household size multipliers by housing type and number of bedrooms derived from 2000 U.S. Census sample data. Regression analysis was then performed to determine the relationship between unit size in square feet and persons residing in the unit. Both linear and logarithmic regressions were performed. The linear regression was statistically significant, with the linear equation accounting for 35 percent of the variation.[1]

Figure 12
RESIDENTS BY UNIT SIZE



The resulting linear equation (shown in Figure 12) shows the relationship between household size and dwelling unit size for single-family unit. The graphed relationship shows that there is a strong correlation between household size and unit size, and that the larger the unit the more people it is likely to contain. As can be seen in Table 101, a single-family detached unit with less than 1,000 square feet has an average of 2.78 persons, while a unit with 4,000 square feet averages 3.68 residents.

[1] The linear equation for single-family units is y = 0.000223 * x + 2.6732 (r-square = 0.354597), where x is square feet of living area and y is household size.

Table 101
SINGLE-FAMILY HOUSEHOLD SIZE BY SQUARE FEET

Dwelling Size Category	Approximate midpoint (sq. ft.)	Average Household Size
Less than 1,000 sq. ft.	500	2.78
1,000 - 1,499 sq. ft.	1,250	2.95
1,500 - 1,999 sq. ft.	1,750	3.06
2,000 - 2,999 sq. ft.	2,500	3.23
3,000 - 3,999 sq. ft.	3,500	3.45
4,000 sq. ft. or more	4,500	3.68

Source: Average household size is derived by substituting the midpoint for x and solving for y in the equation described in the preceding text.

Existing nonresidential floor area and corresponding land use codes for existing parcels of land in Hawai'i County was provided by the County Tax Assessor. The building square footage for existing nonresidential development in Hawai'i County was estimated by summing the total square footage for all applicable parcels. Table 102 summarizes the nonresidential development in Hawai'i County by land use.

Table 102
NONRESIDENTIAL LAND USE, 2005

Land Use	Existing Sq. Ft.
Hotel/Motel	3,742,488
Commercial/Retail	5,306,676
General Office	3,766,361
Medical Office	268,618
Other Institutional	784,522
Hospital	245,374
Nursing Home	215,819
Religious Institution	401,833
School	608,152
Industrial	417,246
Warehouse	7,956,165
Mini-Warehouse	248,253
Total Nonresidential Square Footage	23,961,507

Source: Hawai'i County, October 5, 2005; data derived from tax records; data as of January 1, 2005 assessment date for 2005 tax year.

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APPENDIX D:
FUNCTIONAL POPULATION

APPENDIX D: FUNCTIONAL POPULATION

One approach for estimating the service demands of various land use types on public safety facilities is known in impact fee literature as "functional population." Functional population will then be converted into "equivalent dwelling units." The equivalent dwelling unit, or EDU, represents the impact of a typical single-family dwelling on the demand for public safety services.

To a large extent, the demand for public safety services is proportional to the presence of people. The functional population concept is analogous to the concept of "full-time equivalent" employees. It represents the number of "full-time equivalent" people present at the site of a land use. To a certain extent, however, the demand for public safety services is related to real property itself, regardless of whether it is occupied, as well as to the presence of people. Consequently, the need for public safety services during the nighttime hours, when most people are at home, should not be attributed solely to residential development.

The residential functional population is considerably simpler than the nonresidential component. It is assumed that people spend one-half of their time at home. The other half of the time spent away from home accounts for working, shopping and other away-from-home activities. This factor for residential development essentially distributes the cost of public safety facilities evenly between residential and nonresidential development. For residential uses, then, equivalent dwelling units are calculated by first dividing average household size in half to determine equivalent persons per unit, then dividing by the equivalent persons per single-family unit to determine equivalent dwelling units. The equivalent dwelling units for single-family and multi-family units and hotel/motel rooms are shown in Table 103.

Table 103
RESIDENTIAL EQUIVALENT DWELLING UNITS

Housing Type	Average Household Size	Occupancy Factor	Equivalent Persons/ Unit	EDUs/ Unit
Less than 1,000 sq. ft.	2.78	0.50	1.39	0.97
1,000 - 1,499 sq. ft.	2.95	0.50	1.48	1.03
1,499 - 1,999 sq. ft.	3.06	0.50	1.53	1.06
2,000 - 2,999 sq. ft.	3.23	0.50	1.62	1.13
3,000 - 3,999 sq. ft.	3.45	0.50	1.73	1.20
4,000 sq. ft. or more	3.68	0.50	1.84	1.28
Single-Family Detached	2.87	0.50	1.44	1.00
Multi-Family	2.26	0.50	1.13	0.78
Hotel/Motel (Room)	1.34	0.50	0.67	0.47

Source: Average household size for single-family detached from Tables 99 and 101 and average household size for multi-family from Table 99; hotel/motel rooms based on one-half of average vehicle occupancy on vacation trips from U.S. Department of Transportation, *National Household Travel Survey*, 2001; occupancy factor assumed; EDUs per unit is ratio of functional population to functional population of single-family detached unit.

The functional population methodology for nonresidential uses is based on national trip generation data compiled by the Institute of Transportation Engineers (ITE). Functional population per 1,000 square feet is derived by dividing the total number of hours spent by employees and visitors during a day by 24 hours. Employees are assumed to spend eight hours per day at their place of employment. Visitors to nonresidential facilities are assumed to spend one hour per visit. The formula used to derive the nonresidential functional population estimates is summarized in Figure 13.

Figure 13
FUNCTIONAL POPULATION FORMULA

Functional population/1000 sf = (employee hours/1000 sf + visitor hours/1000 sf) ÷ 24 hours/day

Where:

Employee hours/1000 sf = employees/1000 sf x hours/day

Visitor hours/1000 sf = visitors/1000 sf x 1 hour/visit

Visitors/1000 sf = weekday ADT/1000 sf x avg. vehicle occupancy - employees/1000 sf

Weekday ADT/1000 sf = one-way average daily trips (total trip ends ÷ 2)

Using this formula and information on trip generation rates from the ITE manual, nonresidential functional population estimates per 1,000 square feet of gross floor area were calculated. These functional population estimates were then converted into equivalent dwelling units by dividing them by the functional population per single-family unit calculated in the preceding table. Table 104 presents the results of these calculations for four general land use categories.

Table 104
NONRESIDENTIAL EQUIVALENT DWELLING UNITS

Land Use	Unit	Trip Rate	Persons/ Trip	Employees/ Unit	Visitors/ Unit	Func. Pop/ Unit	EDUs/ Unit
Shopping Center/General Retail	1000 sq. ft.	21.47	1.80	1.96	36.69	2.18	1.51
Office/Other Institutional	1000 sq. ft.	5.51	1.14	3.31	2.97	1.23	0.85
Industrial	1000 sq. ft.	3.48	1.14	2.08	1.89	0.77	0.53
Warehouse	1000 sq. ft.	2.48	1.14	1.28	1.55	0.49	0.34

Source: Trip rates are one-half average daily trip ends from Institute of Transportation Engineers (ITE) *Trip Generation*, 7th Edition, 2003, *National Household Travel Survey*, 2001 for following trip purposes: "shopping" for retail, "to work" for office, industrial and warehouse, "school/church" for church and school, and "other family/personal business" for nursing home; employees per 1,000 sq. ft. derived from trip rates per employee from ITE manual (retail employees per 1,000 sq. ft. from National Association of Office and Industrial Parks, *America's Future Office Space Needs*, 1990 p. 22); visitors/unit and functional population calculated based on formula in Figure 13; EDUs per unit is ratio of functional population to functional population of single-family detached unit from Table 102.

Total equivalent dwelling units for the Hawai'i County can be determined based on existing land use data and EDU ratios for various land use categories. As shown in Table 105, the total number of

functional population EDUs is nearly double the total number of residential units, which is not surprising given the size of the Big Island's tourism economy.

Table 105
TOTAL EQUIVALENT DWELLING UNITS

Land Use	Unit	Existing Units	EDUs/ Unit	Total EDUs
Single-Family Detached	Dwelling	58,772	1.00	58,772
Multi-Family	Dwelling	17,153	0.78	13,379
Hotel/Motel	Room	10,513	0.47	4,941
Shopping Center/General Retail	1,000 sq. ft.	5,307	1.51	8,013
Office/Other Institutional	1,000 sq. ft.	6,291	0.85	5,347
Industrial	1,000 sq. ft.	417	0.53	221
Warehouse	1,000 sq. ft.	8,204	0.34	2,790
Total Equivalent Dwelling Units				93,463

Source: Existing dwelling units from Table 98; existing hotel/motel rooms from Table 7; retail, office/institutional and industrial/utility square feet from Table 102.

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APPENDIX E:
EXISTING PARK FACILITY INVENTORY

APPENDIX E: EXISTING PARK FACILITY INVENTORY

Table 106
EXISTING PARK FACILITY INVENTORY

Park Name	Total Acres	Dev. Acres	Restrooms	Community/Rec Center	Senior Center	Pavilions	Swimming Pool	Picnic Areas	Playground Equipment	Gymnasiums	Baseball Field	Soccer/Football Field	Basketball Court	Volleyball Court	Band/Grandstand	Tennis Courts-Lighted	Tennis Courts	Skateboard Park	Camp Ground	Boat Launch
Honoka'a Park	27.7	27.7	1			2	1		1	1	2	1					2			
Ho'olulu	56.2	53.4		1		1	1			1	4				1	3	5			
Pa hoa Nbrhd Facility	70.9	9.2		1			1				2	1	1							
Gilbert Carvalho Park	15.8	8.0	1			1			1	1	1									
Herbert Shipman Park*	*10.9*	*10.9*	1			1					2		1				2			
Herbert Shipman Park*	*6.0*	*6.0*										3								
Kailua Park*	*34.9*	*34.9*	1			2	1		1	1	5	1	3			4				
Kamehameha Park	18.5	18.5	1				1		1	1	3	1			1	2				
Waimea Park	10.6	10.6	1	1							1		1		1	2		1		
Subtotal, District Park	251.5	179.2	6	3	0	7	5	0	4	5	20	7	6	0	3	11	9	1	0	0
'Ahalanui/Maunakea Pond	5.9	5.9				2		1												
Carlsmith Beach Park	6.9	2.5	1			1		1												
Honaunau Boat Ramp*	*1.2*	*1.2*																		1
Honl's Beach Park	0.7	0.7	1																	
Kahalu'u Beach Park	4.2	4.2	2			2		1												
Kalapana Beach (Area B)	15.0	0.0																		
Keokea Beach Park	7.1	3.0	1			2		2												
Kohanaiki	109.0	0.0	1			1														
La'aloa Bay Beach Park	1.5	1.5																		
Leleiwi Beach Park	1.1	0.0																		
Magic Sands Beach Park	0.9	0.9	1					1												
Reeds Bay Beach Park	2.3	2.3						1												
Richardson Ocean Park	4.6	4.6	1					1												
Bakers Beach*	*3.1*	*0.0*																		
Harry K Brown Park	22.9	0.0																		
Hawaiian Paradise Park	6.0	0.0																		
Hilo Bayfront Beach	5.2	5.2	1			8														
Ho'okena Beach Park	3.2	3.2	1			1		1											1	
Honoli'i Beach Park*	*2.8*	*2.8*	1			1														
Isaac Hale Memorial Park	26.5	2.1	1			1		1											1	
J. Kealoha Beach Park	3.5	3.5	1					1												
Kahakai Park	3.6	0.0																		
Kanakea Pond	2.4	2.4																		
Kapa'a Beach Park	26.3	2.0	1			1													1	
Kawaihae Canoe Area	4.7	0.0	1																	1

Park Name	Total Acres	Dev. Acres	Restrooms	Community/Rec Center	Senior Center	Pavilions	Swimming Pool	Picnic Areas	Playground Equipment	Gymnasiums	Baseball Field	Soccer/Football Field	Basketball Court	Volleyball Court	Band/Grandstand	Tennis Courts-Lighted	Tennis Courts	Skateboard Park	Camp Ground	Boat Launch
Kolekole Gulch Park	5.5	4.0	2			4													1	
Kuhio Kalaniana‘ole Park	2.8	2.8						1												
Lehia Beach Park	54.7	0.0																		
Leleiwi Beach Park	30.9	12.0	1			8														
Mahukona Beach Park*	*2.7*	*2.0*	1			1		1											1	
Mahukona Wharf*	*0.4*	*0.4*																		1
Manini Point	5.6	0.0																		
Miloli‘i Beach Park	1.4	1.4	1			1		1					1							
Mokuola Island	3.1	3.1	1			1		1												
Onekahakaha Beach Park	34.7	21.0	2			5		1												
Pahoehoe Beach Park	1.3	1.3						1												
Punalu‘u Beach*	*6.9*	*6.9*	1			1		2											1	
Reeds Bay Beach Park	4.1	4.1						1												
Spencer Park	13.4	9.5	3			1							1						1	
Whittington Beach Park	0.8	0.8	1			3													1	
Laup hoehoe Pt Beach	24.1	17.9	2			4	1	3		1									1	1
Subtotal, Beach Park	463.0	135.2	30	0	0	49	1	23	0	1	0	0	2	0	0	0	0	0	9	4
Arthur C. Greenwell Park	2.7	2.7		1					1		1		1			1				
Clem Akina Park	4.8	4.8		1																
Frank M. Santos Park	11.0	11.0	1	1		1				1	1	1								
Haina Park	3.6	3.6	1								1									
Hakalau Veterans Park	6.1	6.1	1							1	1						2			
H. Higashihara Park	5.3	5.3	1			1			1		1		1	1			1			
Hawaiian Beaches Park	11.0	8.0	1			1				1	2	2	1							
HI Ocean View Est.	4.0	4.0	1			1			1		1	1	1	1						
Hilo Bayfront Park	45.6	45.6	1			1	1					2								
Kalakaua Park	1.2	1.2																		
Kukuihaele Park	4.0	4.0									1									
Kurtistown Park	6.8	3.5	1			1			1		1		1				1			
Mt. View Park	3.8	3.8	1	1						1	1									
P pa‘aloa Park	5.0	5.0								1	1					2				
‘ ‘ kala Park	23.3	5.0								1	1									
Glenwood Park	1.1	1.1	1			1		1												
Honom Park	10.0	10.0							1	1	1		1							
Hualani Park	4.8	4.8				1			1	1	4	1								
Kaiwiki Park	5.0	5.0	1			1				1										
Kula‘imano Park	28.9	6.0	1	1							1									
Malama Park	10.6	7.0	1						1			1	1				2			1
Mo‘oheau Park	3.8	3.8	1								2	1		2	1					

Park Name	Total Acres	Dev. Acres	Restrooms	Community/Rec Center	Senior Center	Pavilions	Swimming Pool	Picnic Areas	Playground Equipment	Gymnasiums	Baseball Field	Soccer/Football Field	Basketball Court	Volleyball Court	Band/Grandstand	Tennis Courts-Lighted	Tennis Courts	Skateboard Park	Camp Ground	Boat Launch
Na'alehu Park*	*6.4*	*6.4*	1	1							1	1	1				2			
Pa'auilo Park	3.6	3.6	1	1						1	1									
P hala Park	8.0	8.0	1				1		1		2	1	1				2			
Pana'ewa Park	6.6	6.6	1			1			1		2	1	2				2			
Volcano Park	10.0	4.0		1					1				1				2	1		
Waiakea Waena Park	3.8	3.8							1	1	2									
Waiakea-Uka Park	7.7	7.7							1	1	2									
Waikaumalo Park	3.4	1.0	1			1														
Waikoloa Comm. Park*	*22.5*	*4.0*	1			1					2	1								
Wainaku Playground*	*5.0*	*5.0*								1	1									
Waiohinu Park	4.4	4.4	1			1			1		1	1	1	1						
Waimea Church Row Park	2.8	2.8																		
Subtotal, Comm. Park	286.6	208.6	21	8	0	13	2	1	13	13	35	14	13	5	1	3	14	1	0	1
'Ainako Park	3.0	3.0	1			1					1									
Ahualani Park	3.5	3.5	1						1		1		1							
Ka'umana Lani Park	4.7	0.0																		
Ka'umana Playground	1.5	0.0																		
Kona Hillcrest Park	1.6	1.6	1								1	1								
Kona Scenic Park	5.0	5.0	1						1		2	1	1							
Pepe'ekeo Playground*	*4.9*	*4.9*									1		1							
Waikoloa Park	4.3	4.3	1			1			1		2	1	1							
'Ainaola Park	5.9	5.9	1			1			1		1		1	1			1			
Ali'i Kai Park	1.6	0.0																		
Kailua Playground	0.7	0.7	1										1			1				
Lincoln Park	2.6	2.6	1			4		2	1							4				
Lokahi Park	7.7	7.7	1					1					1			2				
Machado Acres Park	7.9	0.0																		
Mohouli Park	4.0	4.0	1			1			1		1		1	1			2			
University Heights Park	4.3	4.3	1			1					1									
HI Ocean View Estates	72.0	0.0																		
Keikiland Playground	1.9	1.9	1					1	1											
Laupahoehoe Playground	0.5	0.5						1	1											
Subtotal, Neighborhood	137.6	49.9	12	0	0	9	0	5	8	0	11	3	8	2	0	7	3	0	0	0
Waimea Church Row	2.80	2.80																		
Happiness Gardens	1.37	1.37						1												
Kaumana Caves	4.87	0.50	1					1												
Waikui Pond	0.65	0.65																		
Liholiho Garden	0.18	0.18																		

Park Name	Total Acres	Dev. Acres	Restrooms	Community/Rec Center	Senior Center	Pavilions	Swimming Pool	Picnic Areas	Playground Equipment	Gymnasiums	Baseball Field	Soccer/Football Field	Basketball Court	Volleyball Court	Band/Grandstand	Tennis Courts-Lighted	Tennis Courts	Skateboard Park	Camp Ground	Boat Launch
Liliuokalani Gardens	19.54	19.54	1					1												
Waipio Look Out	0.95	0.95	1			1														
Kalakaua Park	1.18	1.18																		
Subtotal, General Park	31.54	27.17	3	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0
A.J. Watt Gym	2.19	2.19								1										
E. Hawai'i Cultural Ctr	0.57	0.57		1																
Hilo Drag Strip	70.66	70.66	1																	
Hilo Motorbike Track	90.00	0.00						1												
Kona Imin Ctr	2.55	2.00			1															
Konawaena Swim Pool	1.00	1.00					1													
Laupahoehoe Gym	0.50	0.50																		
Piihonua	1.65	0.00																		
Pi'ilani Elderly Complex	1.87	1.87			1															
Veterans Center	5.62	0.00																		
Wainaku Gym	2.91	1.00								1										
Hakalau Gym	1.82	1.82			1															
Halawai	3.20	3.20			1															
Hilo Armory	1.02	1.02								1										
Hilo Muni. Golf Course	164.98	164.98																		
Hilo Skeet Range	113.38	5.00	1			1														
Honaunau Rodeo Arena	6.13	6.13	1																	
Panaewa Equestrian Ctr	121.31	50.00	1																	
Panaewa Rainforest Zoo	51.00	10.00	1																	
Waiaea Rec. Center	1.76	1.76			1															
Honokaa Rodeo Arena	8.00	8.00	1																	
Hoolulu Complex	56.20	53.35																		
Hilo Senior Ctr/Kamana	3.80	3.80			1															
N. Kohala Senior Ctr	1.00	1.00			1															
Pomaikai Senior Ctr	0.96	0.96			1															
Lily Yoshimatsu SC	0.72	0.72			1															
Puna Rec Complex	13.38	0.00																		
Subtotal, Other	728.18	391.53	6	1	9	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0
Total	1,898.4	991.6	78	12	9	80	9	33	25	22	66	24	29	7	4	21	26	2	9	5

* Park property acquired through lease, right-of-entry or joint-use agreement.
Source: Hawai'i County Department of Parks and Recreation.

Table 107
NON-STANDARDIZED PARK FACILITY INVENTORY

Facility	Year	Original Cost	Cost Index	Current Cost
Hilo Drag Strip	1978	$1,138,570	2.774	$3,158,393
Hoolulu Park Grandstand	1971	$1,186,211	4.870	$5,776,848
Onekahakaha Beach Outdoor Stage #4	1948	$7,154	16.703	$119,493
Panaewa Equestrian Center Stable	1979	$41,504	2.564	$106,416
Panaewa Rainforest Zoo	2002	$367,627	1.178	$433,065
Panaewa Zoo Complex	1977	$1,031,706	2.989	$3,083,769
Panaewa Zoo Complex	1977	$350,000	2.989	$1,046,150
Shoro-an Tea House	1997	$107,000	1.322	$141,454
Shoro-an Tea House	1997	$503,633	1.322	$665,803
Waimea Park Grand Stand Complex	1994	$44,150	1.424	$62,870
Subtotal, Special Facilities		$4,777,555		$14,594,261
Hilo Muni Golf Course Maint Shop	1971	$69,524	4.870	$338,582
Hilo Muni Golf Course Work Shed	1950	$2,681	15.098	$40,478
Hilo Muni Golf Cr SE Cart Stor Bldg	1975	$28,772	3.481	$100,155
Hilo Muni Golf Crse Club House/Patio	1965	$32,988	7.930	$261,595
Hilo Muni Golf Crse Range Complex	1996	$500,000	1.370	$685,000
Hilo Muni Golf Crse Range Develop	1977	$106,904	2.989	$319,536
Hilo Muni Golf Crse Restroom, Shelter	1974	$28,440	3.812	$108,413
Muni Golf Course Greenhouse	1968	$2,124	6.667	$14,161
Muni Golf Course Greenhouse	1968	$2,124	6.667	$14,161
Papakou Club House Impr	2004	$185,659	1.082	$200,883
Papakou Club House Impr	2004	$185,659	1.082	$200,883
Subtotal, Golf Course Facilities		$1,144,875		$2,283,847
Hilo Civic Auditorium	1958	$455,187	10.145	$4,617,872
Hilo Civic Auditorium Butler Bldg	1987	$40,464	1.748	$70,731
Hilo Civic Auditorium Butler Bldg	1987	$40,464	1.748	$70,731
Hilo Civic Auditorium Butler Bldg	1987	$69,973	1.748	$122,313
Hilo Civic Auditorium Butler Bldg	1987	$69,973	1.748	$122,313
North Kohala Civic Center	1974	$308,000	3.812	$1,174,096
Waimea Civic Center	1974	$507,000	3.812	$1,932,684
Subtotal, Civic Centers and Auditoriums		$1,491,061		$8,110,740
Total		$7,413,491		$24,988,848

Source: County of Hawai'i Building and Improvement Inventory, July 2005; cost index based on the Construction Cost Index for June 2006 from *Engineering News-Record*.

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APPENDIX F:
WASTEWATER FACILITY INVENTORY

APPENDIX F: WASTEWATER FACILITY INVENTORY

Table 108
WASTEWATER FACILITIES INVENTORY

Facility	Year	Original Cost	Cost Index	Current Cost
Public Service Center-sewer	1979	$164,368	2.564	$421,438
Keawe-Kilauea Interceptor Line	1935	$61,447	31.818	$1,955,123
Kailua-Kona Sewerage Sys Phase i	1964	$283,223	8.226	$2,329,793
Wailoa Force Main & Kal Interceptor	1965	$897,458	7.93	$7,116,841
Keawe-Kilauea Interceptor	1966	$789,021	7.556	$5,961,841
Kailua-Kona Sewerage Sys Phase ii	1973	$963,432	4.063	$3,914,425
Hilo Sewer System Phase Iii	1977	$1,078,332	2.989	$3,223,135
Kawili St Sewer Ext	1978	$142,020	2.774	$393,962
Papaikou-Paukaa Sewerage System i	1986	$236,907	1.793	$424,774
Papaikou-Paukaa Sewerage System i	1986	$144,261	1.793	$258,660
Papaikou-Paukaa Sewerage System i	1986	$835,996	1.793	$1,498,941
Papaikou-Paukaa Sewerage System ii	1988	$232,439	1.704	$396,076
Papaikou-Paukaa Sewerage System ii	1988	$1,056,213	1.704	$1,799,787
Papaikou-Paukaa Sewerage System ii	1988	$136,273	1.704	$232,209
Kapehu Sewerage System	1988	$44,873	1.704	$76,464
Kapehu Sewerage System	1988	$345,405	1.704	$588,570
Kapehu Sewerage System	1988	$28,438	1.704	$48,458
Kuakini Interceptor A	1988	$286,376	1.704	$487,985
Kuakini Interceptor A	1988	$747,173	1.704	$1,273,182
Kuakini Interceptor A	1988	$122,293	1.704	$208,387
Kuakini Interceptor B	1988	$193,215	1.704	$329,238
Kuakini Interceptor B	1988	$1,181,814	1.704	$2,013,811
Kuakini Interceptor B	1988	$200,733	1.704	$342,049
W-hselot Interceptor Sewer	1992	$973,464	1.545	$1,504,002
Onekahakaha Beach Park Sewer	1996	$464,887	1.37	$636,895
Kalanianaole Collector Sewer	1997	$129,616	1.322	$171,353
Kalanianaole Collector Sewer	1997	$1,415,661	1.322	$1,871,504
Kalanianaole Collector Sewer	1997	$1,200,000	1.322	$1,586,400
Alii Dr Interceptor Sewer/Force Il	1997	$3,836,859	1.322	$5,072,327
Papaikou Sewer System	1998	$338,644	1.301	$440,575
Papaikou Sewer System	1998	$2,008,163	1.301	$2,612,620
Papaikou Sewer System	1998	$341,000	1.301	$443,641
Keakehe Force Main	1998	$1,768,188	1.301	$2,300,413
Keakehe Force Main	1998	$1,708,000	1.301	$2,222,108
Keakehe Force Main	1998	$227,733	1.301	$296,281
Waiakea Houselot Interceptor Sewer	1998	$743,804	1.301	$967,689
Waiakea Houselot Interceptor Sewer	1998	$229,660	1.301	$298,788
Waiakea Mill Pond Sewer	1998	$1,581,310	1.301	$2,057,284
Waiakea Mill Pond Sewer	1998	$650,000	1.301	$845,650

Facility	Year	Original Cost	Cost Index	Current Cost
Ainako Interceptor Sewer	2000	$2,019,174	1.238	$2,499,737
Ainako Interceptor Sewer	2000	$3,000,000	1.238	$3,714,000
Waiakea Ctr/makaala-leilani Sewer	2000	$1,000,000	1.238	$1,238,000
Waiakea Ctr/makaala-leilani Sewer	2000	$405,492	1.238	$501,999
Alii Dr Intrceptr Sewr&force Ph III	2000	$2,029,281	1.238	$2,512,250
Alii Dr Intrceptr Sewr&force Ph 1	2001	$3,255,272	1.214	$3,951,900
Hilo Sewer System Rehab	2001	$2,659,834	1.214	$3,229,038
Paukaa Comm Collective System Ph II	2002	$2,301,927	1.178	$2,711,670
Waiakea Hselot Collector Systm Ph II	2002	$5,505,904	1.178	$6,485,955
Subtotal, Collection		$49,801,214		$85,045,790
Wailuku Sewer Pump Stn	1936	$34,453	31.818	$1,096,215
Kailua-kona Pump Stn	1964	$100,000	8.226	$822,600
Pua Ave Sewage Pumping Stn	1966	$337,356	7.556	$2,549,062
Wailoa Sewage Pumping Stn	1966	$757,886	7.556	$5,726,585
Hale Halawai Sewer Pump Stn	1995	$107,655	1.407	$151,471
Pua Sewage Pump Stn	1998	$947,630	1.301	$1,232,867
Pua Sewage Pump Stn	1998	$3,159,684	1.301	$4,110,749
Pua Sewage Pump Stn	1998	$1,983,744	1.301	$2,580,851
Kealakehe Sewage Pump Stn	1998	$1,134,109	1.301	$1,475,476
Kealakehe Sewage Pump Stn	1998	$3,674,376	1.301	$4,780,363
Kealakehe Sewage Pump Stn	1998	$572,000	1.301	$744,172
Holualoa Sewage Pump Stn	1999	$20,498	1.271	$26,052
Holualoa Sewage Pump Stn	1999	$3,095,076	1.271	$3,933,842
Waiaha Sewage Pump Stn	2001	$3,697,893	1.214	$4,489,242
Wailuku Sewage Pump Stn	2002	$521,992	1.178	$614,907
Banyan Dr Sewage Pump Stn	2003	$463,177	1.135	$525,706
Subtotal, Pumping		$20,607,528		$34,860,160
Hilo Ocean Outfall Line	1964	$840,810	8.226	$6,916,499
Kailua-kona Treatment Plant	1964	$235,000	8.226	$1,933,110
Hilo Ocean Outfall Line Ext	1965	$556,145	7.93	$4,410,233
Hilo Sewer Treatment Plant	1965	$1,166,652	7.93	$9,251,551
Keauhou Treatment Plant	1971	$1,221,398	4.87	$5,948,208
Kulaimano Sewer System & Plant	1979	$2,724,919	2.564	$6,986,691
Kulaimano Sewer System & Plant	1979	$310,000	2.564	$794,840
Kulaimano Sewer System & Plant	1979	$635,462	2.564	$1,629,325
Papaikou Sewer Plant	1982	$2,525,267	2.013	$5,083,362
Papaikou Sewer Plant	1982	$399,920	2.013	$805,039
Papaikou Sewer Plant	1982	$441,842	2.013	$889,428
Papaikou Sewer Plant Fuel Tank	1994	$30,963	1.424	$44,091
Kulaimano Sewer Stn Fuel Tank	1994	$30,963	1.424	$44,091
Hilo Wastewater Influent/Eff Line	1998	$8,690,985	1.301	$11,306,971

Facility	Year	Original Cost	Cost Index	Current Cost
Hilo Wastewater Influent/Eff Line	1998	$1,460,057	1.301	$1,899,534
Hilo Wastewater Primary Facility/Ad	1998	$12,050,052	1.301	$15,677,117
Hilo Wastewater Primary Facility/Ad	1998	$9,400,156	1.301	$12,229,602
Hilo Wastewater Primary Facility/Ad	1998	$7,157,489	1.301	$9,311,893
Kealakehe Wastewater Treatment Plnt	1998	$11,366,924	1.301	$14,788,367
Kealakehe Wastewater Treatment Plnt	1998	$4,112,880	1.301	$5,350,857
Kealakehe Wastewater Treatment Plnt	1998	$6,711,016	1.301	$8,731,031
Subtotal, Treatment		$72,068,897		$124,031,840
Total, Wastewater Facilities		$142,642,006		$244,359,228

Source: County of Hawai'i Building and Improvement Inventory, July 2005; cost index based on Construction Cost Index for June 2006 from *Engineering News-Record*.

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APPENDIX G:
STATE IMPACT FEE LAW

APPENDIX G: STATE IMPACT FEE LAW

Title 6. County Organization and Administration
Subtitle 1. Provisions Common to All Counties
Chapter 46. General Provisions

[PART VIII.] IMPACT FEES

§46-141 Definitions.

As used in this part, unless the context requires otherwise:

"Board" means the board of water supply or water board of any county.

"Capital improvements" means the acquisition of real property, improvements to expand capacity and serviceability of existing public facilities, and the development of new public facilities.

"Comprehensive plan" means a coordinated land use plan for the development of public facilities within the jurisdiction of a county based on existing and anticipated needs, showing existing and proposed developments, stating principles to which future development should conform, such as the county's general plans, development plans, or community plans, and the manner in which development should be controlled. In the case of the city and county of Honolulu, public facility maps shall be equivalent to the comprehensive plan required in this part.

"County" or "counties" means the city and county of Honolulu, the county of Hawaii, the county of Kauai, and the county of Maui.

"Credits" means the present value of past or future payments or contributions, including, but not limited to, the dedication of land or construction of a public facility made by a developer toward the cost of existing or future public facility capital improvements, except for contributions or payments made under a development agreement pursuant to section 46-123.

"Developer" means a person, corporation, organization, partnership, association, or other legal entity constructing, erecting, enlarging, altering, or engaging in any development activity.

"Development" means any artificial change to real property that requires a grading or building permit as appropriate, including, but not limited to, construction, expansion, enlargement, alteration, or erection of buildings or structures.

"Discount rate" means the interest rate, expressed in terms of an annual percentage, that is used to adjust past or future financial or monetary payments to present value.

"Impact fees" means the charges imposed upon a developer by a county or board to fund all or a portion of the public facility capital improvement costs required by the development from which it is collected, or to recoup the cost of existing public facility capital improvements made in anticipation of the needs of a development.

"Needs assessment study" means a study required under an impact fee ordinance that determines the need for a public facility, the cost of development, and the level of service standards, and that projects future public facility capital improvement needs; provided that the study shall take into consideration and incorporate any relevant county general plan, development plan, or community plan.

"Non-site related improvements" means land dedications or the provision of public facility capital improvements that are not for the exclusive use or benefit of a development and are not site-related improvements.

"Offset" means a reduction in impact fees designed to fairly reflect the value of non-site related public facility capital improvements provided by a developer pursuant to county land use provisions.

"Present value" means the value of past or future payments adjusted to a base period by a discount rate.

"Proportionate share" means the portion of total public facility capital improvement costs that is reasonably attributable to a development, less:

(1) Any credits for past or future payments, adjusted to present value, for public facility capital improvement costs made or reasonably anticipated to be contributed by a developer in the form of user fees, debt service payments, taxes, or other payments; or

(2) Offsets for non-site related public facility capital improvements provided by a developer pursuant to county land use provisions.

"Public facility capital improvement costs" means costs of land acquisition, construction, planning and engineering, administration, and legal and financial consulting fees associated with construction, expansion, or improvement of a public facility. Public facility capital improvement costs do not include expenditures for required affordable housing, routine and periodic maintenance, personnel, training, or other operating costs.

"Reasonable benefit" means a benefit received by a development from a public facility capital improvement that is greater than the benefit afforded the general public in the jurisdiction imposing the impact fees. Incidental benefit to other developments shall not negate a "reasonable" benefit to a development.

"Recoupment" means the proportionate share of the public facility capital improvement costs of excess capacity in existing capital facilities where excess capacity has been provided in anticipation of the needs of a development.

"Site-related improvements" means land dedications or the provision of public facility capital improvements for the exclusive use or benefit of a development or for the provision of safe and adequate public facilities related to a particular development. [L 1992, c 282, pt of §2; am L 2001, c 235, §1]

§46-142 Authority to impose impact fees; enactment of ordinances required.

(a) Impact fees may be assessed, imposed, levied, and collected by:

(1) Any county for any development, or portion thereof, not involving water supply or service; or

(2) Any board for any development, or portion thereof, involving water supply or service;

provided that the county enacts appropriate impact fee ordinances or the board adopts rules to effectuate the imposition and collection of the fees within their respective jurisdictions.

(b) Except for any ordinance governing impact fees enacted before July 1, 1993, impact fees may be imposed only for those types of public facility capital improvements specifically identified in a county comprehensive plan or a facility needs assessment study. The plan or study shall specify the service standards for each type of facility subject to an impact fee; provided that the standards shall apply equally to existing and new public facilities. [L 1992, c 282, pt of §2; am L 1996, c 175, §1; am L 2001, c 235, §2]

§46-143 Impact fee calculation.

(a) A county council or board considering the enactment or adoption of impact fees shall first approve a needs assessment study that shall identify the kinds of public facilities for which the fees shall be imposed. The study shall be prepared by an engineer, architect, or other qualified professional and shall identify service standard levels, project public facility capital improvement needs, and differentiate between existing and future needs.

(b) The data sources and methodology upon which needs assessments and impact fees are based shall be set forth in the needs assessment study.

(c) [2004 amendment retroactive to October 1, 2002. L 2004, c 155, §6.] The pro rata amount of each impact fee shall be based upon the development and actual capital cost of public facility expansion, or a reasonable estimate thereof, to be incurred.

(d) [2004 amendment retroactive to October 1, 2002. L 2004, c 155, §6.] An impact fee shall be substantially related to the needs arising from the development and shall not exceed a proportionate share of the costs incurred or to be incurred in accommodating the development. The following seven factors shall be considered in determining a proportionate share of public facility capital improvement costs:

> (1) The level of public facility capital improvements required to appropriately serve a development, based on a needs assessment study that identifies:
>
> > (A) Deficiencies in existing public facilities;
> >
> > (B) The means, other than impact fees, by which existing deficiencies will be eliminated within a reasonable period of time; and
> >
> > (C) Additional demands anticipated to be placed on specified public facilities by a development;

(2) The availability of other funding for public facility capital improvements, including but not limited to user charges, taxes, bonds, intergovernmental transfers, and special taxation or assessments;

(3) The cost of existing public facility capital improvements;

(4) The methods by which existing public facility capital improvements were financed;

(5) The extent to which a developer required to pay impact fees has contributed in the previous five years to the cost of existing public facility capital improvements and received no reasonable benefit therefrom, and any credits that may be due to a development because of such contributions;

(6) The extent to which a developer required to pay impact fees over the next twenty years may reasonably be anticipated to contribute to the cost of existing public facility capital improvements through user fees, debt service payments, or other payments, and any credits that may accrue to a development because of future payments; and

(7) The extent to which a developer is required to pay impact fees as a condition precedent to the development of non-site related public facility capital improvements, and any offsets payable to a developer because of this provision.

(e) The impact fee ordinance shall contain a provision setting forth the process by which a developer may contest the amount of the impact fee assessed. [L 1992, c 282, pt of §2; am L 2001, c 235, §3; am L 2001, c 235, §3; am L 2004, c 155, §3]

§46-144 Collection and expenditure of impact fees.

Collection and expenditure of impact fees assessed, imposed, levied, and collected for development shall be reasonably related to the benefits accruing to the development. To determine whether the fees are reasonably related, the impact fee ordinance or board rule shall provide that:

(1) Upon collection, the fees shall be deposited in a special trust fund or interest-bearing account. The portion that constitutes recoupment may be transferred to any appropriate fund;

(2) Collection and expenditure shall be localized to provide a reasonable benefit to the development. A county or board shall establish geographically limited benefit zones for this purpose; provided that zones shall not be required if a reasonable benefit can be otherwise derived. Benefit zones shall be appropriate to the particular public facility and the county or board. A county or board shall explain in writing and disclose at a public hearing reasons for establishing or not establishing benefit zones;

(3) Except for recoupment, impact fees shall not be collected from a developer until approval of a needs assessment study that sets out planned expenditures bearing a substantial relationship to the needs or anticipated needs created by the development;

(4) Impact fees shall be expended for public facilities of the type for which they are collected and of reasonable benefit to the development; and

(5) Within six years of the date of collection, the impact fees shall be expended or encumbered for the construction of public facility capital improvements that are consistent with the needs assessment study and of reasonable benefit to the development. [L 1992, c 282, pt of §2; am L 2001, c 235, §4]

§46-145 Refund of impact fees.

(a) If impact fees are not expended or encumbered within the period established in section 46-144, the county or the board shall refund to the developer or the developer's successor in title the amount of fees paid and any accrued interest. Application for a refund shall be submitted to the county or the board within one year of the date on which the right to claim arises. Any unclaimed refund shall be retained in the special trust fund or interest bearing account and be expended as provided in section 46-144.

(b) If a county or board seeks to terminate impact fee requirements, all unexpended or unencumbered funds shall be refunded as provided in subsection (a) and the county or board shall give public notice of termination and availability of refunds at least two times. All funds available for refund shall be retained for a period of one year at the end of which any remaining funds may be transferred to:

(1) The county's general fund and expended for any public purpose not involving water supply or service as determined by the county council; or

(2) The board's general fund and expended for any public purpose involving water supply or service as determined by the board.

(c) Recoupment shall be exempt from subsections (a) and (b). [L 1992, c 282, pt of §2; am L 1998, c 2, §14; am L 2001, c 235, §5]

§46-146 Time of assessment and collection of impact fees.

Assessment of impact fees shall be a condition precedent to the issuance of a grading or building permit and shall be collected in full before or upon issuance of the permit. [L 1992, c 282, pt of §2]

§46-147 Effect on existing ordinances.

This part shall not invalidate any impact fee ordinance existing on June 19, 1992. [L 1992, c 282, pt of §2]

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APPENDIX H:
STATE ACT 197

APPENDIX H: STATE ACT 197

CHAPTER 264

HIGHWAYS

[PART VIII.] IMPACT FEES

[§264-121] Definitions.

As used in this part, unless the context requires otherwise:

"Capital costs" means part or all of the cost for capital improvements. Capital costs may include costs to acquire right-of-way, plan, design, engineer, finance, and construct improvements including costs of management and consultant fees. Capital costs shall not include periodic maintenance and other operating costs.

~~"County" means a county having a population in excess of five hundred thousand.~~ [amended by SB 2901, sent to governor 5/8/06; effective 7/1/06]

"Department" means the department of transportation.

"Development" means any artificial change to real property that requires a county grading or building permit including but not limited to construction, expansion, enlargement, alteration, or erection of buildings or structures.

"Director" means the director of transportation.

"Impact fee" means an assessment on a development used to incrementally fund a fair share of the capital costs of public highway improvements reasonably needed to serve that development.

"State highway improvements" means capital improvements to the physical infrastructure of state highways. [L 2004, c 155, pt of §2]

[§264-122] Highway development special fund.

(a) There is established in the state treasury the highway development special fund to be administered by the department, into which shall be deposited:

(1) Transfers of county impact fees assessed under part VIII of chapter 46 and this part to pay for state highway improvements;

(2) Interest from investment of deposits; and

(3) Legislative and county appropriations.

(b) Moneys in the highway development special fund shall be used for the following purposes:

(1) Capital costs of qualifying proposed state highway improvements;

(2) Reevaluation of the need, geographic limitations, amount, and use of impact fees;

(3) Transfers to reimburse other special funds for expenditures which otherwise might have been funded with moneys in the highway development special fund;

(4) Transfers under sections 36-27 and 36-30;

(5) Refunds under section 264-125; and

(6) The department's costs to implement this part, including but not limited to costs to administer the highway development special fund.

(c) The department may establish accounts in the highway development special fund as necessary to implement this part and rules adopted by the department. [L 2004, c 155, pt of §2]

[§264-123] Authority to assess impact fees; needs assessment study.

(a) A county may assess, impose, levy, collect, and transfer to the department impact fees for any development pursuant to ordinances adopted under section 46-142 and this part, and the department is authorized to receive those funds for state highway improvements.

(b) Prior to the assessment, imposition, levy, collection, or transfer to the department of impact fees pursuant to this section, the director shall approve a needs assessment study that shall identify the kinds of state highway improvements for which the fees shall be imposed by the county pursuant to part VIII of chapter 46. [L 2004, c 155, pt of §2]

[§264-124 Impact fees; director's consent.]

Notwithstanding section 264-123, no county shall assess impact fees for state highway improvements without the director's consent. [L 2004, c 155, pt of §2]

[§264-125] Refund of impact fees to county.

Upon the request of a county, the department shall refund impact fees transferred to the highway development special fund which have not been expended or encumbered for purposes established under this part within six years after collection under part VIII of chapter 46. [L 2004, c 155, pt of §2]

[§264-126] Adoption of rules.

The department may adopt rules pursuant to chapter 91 to implement this part.

[§264-127] Limitations on actions.

A civil lawsuit contesting an action by the department or a county under this part or under part VIII of chapter 46 shall be filed within sixty calendar days after the date of the action.

APPENDIX I:
NOVEMBER FOCUS GROUPS

APPENDIX I: NOVEMBER FOCUS GROUPS

Stakeholder Focus Groups Meetings
November 18 (Kona) and 21 (Hilo), 2005

A. List of Participants (Total Participants: 18)

Frederic Berg, Brookfield Homes
Will Espero, DR Horton
Sid Fuke, Planning Consultant
Jacqui Hoover, Hawaii Leeward Planning Conference (HLPC)
Keith Kato, Hawaii Island Community Development Corp. (HICDC)
Kimo Lee, W.H. Shipman, Ltd.
Ken Melrose, Hawaii Leeward Planning Conference (HLPC)
Glenn Miyao, Wilson Okamoto Corp
Bill Moore, Kohala Ranch Development Corp.
Harold Murata, Self
John Ray, Parker Ranch
Skylark Rossetti, Hawaii Island Economic Development Board (HIEDB)
Marianna Scheffer, League of Women Voters
Amy Self, Corporation Counsel
Bob Stuit, Hokulia
Dean Uchida, Land Use Research Foundation (LURF)
Bill Walter, W.H. Shipman, Ltd.
Marian Wilkins, League of Women Voters

B. Written Comments Submitted by Stakeholders:

1. Impact Fees level the playing field for new projects but do little to address the increased stresses on infrastructure based on infill on existing lots. Need parallel source of funds to fulfill government portion of costs.

2. I learned a lot – very interesting. I hope we can follow the suggestions of Duncan Associates. We must get our act together. I hope there will be more presentations open to the general public.

3. Positive: Good Questions and Answers. Handout/powerpoint informative. Negative: Started Late

4. Why is impact fee good for the County of Hawaii? What problem does it solve?

5. Good Presentation. Endeavor to educate the County on a variety of funding mechanisms. Make sure ordinance recognizes previous contributions exacted – credits. Examine county-wide fee calculation.

6. There is a need for a broader look at infrastructure needs and financing to show what is the best or fairest portion of cost should be paid by impact fees.

7. After listening to the presentation yesterday my principle concerns are the impacts on our housing programs for both low and moderate income households. Previously, the County had exempted units from impact fees if the units were part of our program, this appeared in rezoning approvals and in the pre-emption resolutions. If an impact fee ordinance is to be adopted I would hope that it would similarly exempt affordable housing otherwise it will make the homes more expensive to develop and that in turn will cause less units to be constructed. While funding infrastructure is necessary for the continued development of affordable housing I hope that it doesn't become a burden on such housing while other less regressive alternatives are under-utilized. 8. Hawaii Leeward Planning Conference (HLPC) had a study done that shows tremendous growth/contribution in property taxes by the Kohala Coast resort homes - why can't these funds be used? At very least, need to integrate those revenues into the impact fees/needs assessment. The impact fees are being considered to give the County another funding source but it does not appear that the Administration has really considered other funding sources. Will County acknowledge that their position on concurrency is contradictory to implementing impact fees? Substandard lots are purchased at lower rates just by virtue of being substandard, therefore the exemption does not seem appropriate. 9. Thank you for inviting me to this presentation. 10. Need for an overall perspective. Impact fees are one of the many "tools" that government has available. Impact fees need to be fair and predictable. Leveling the playing field and affordable housing.

C. Summary of Key Points Made by Stakeholders (written/verbal)

1. Create of a fair and predictable system

2. Exemption of existing substandard lots does not seem fair nor appropriate.

3. Take a comprehensive approach and expand scope to discuss other infrastructure financing options to supplement impact fees.

4. Government should identify their role and infrastructure financing options

5. Create an inclusive impact fee program - include state highways and schools.

6. Look at the strategic issues/questions - including, how much money we really need.

7. Address how impact fees will affect affordable housing.

8. Larger assessment/benefit districts are advantageous to county agencies.

9. County's position on concurrency and implementation of impact fees are contradictory. 10. Recognize previous fair share assessments and contributions paid by credits.

APPENDIX J:
JANUARY VIDEO CONFERENCE

APPENDIX J: JANUARY VIDEO CONFERENCE

Video Conference Workshop
Tuesday, January 17, 2006
(Hilo, Kona, Honolulu and Austin, TX)
Total Participants: 58

Questions Answered at Video Conference:

1. Q: How often does one governmental jurisdiction collect fees for another? And are there any pitfalls or better ways you might suggest for doing this. Background for Hawaii would be if Hawaii County were to collect fees for State of Hawaii facilities.

A: At present, the State enabling legislation does not provide for Counties to collect fees for State projects. Typically, throughout the United States, school fees are collected by cities and counties for individual school districts. In Hawaii, the State functions as the school district. We understand the State is working toward a uniform school impact fee that would affect new projects. It is probable that an amendment will be necessary to the State statute to permit County collection of fees for State road projects (at the beginning of the meeting, Planning Director Chris Yuen announced that the County has submitted a bill to accomplish such an amendment).

2. Q: I hear the problem of impacts on existing services clearly addressed. However, how is the impact of increased tax revenue resulting from new development taken into account?

A: The collection of property tax revenue by the County does not ensure the construction of infrastructure to keep pace with development, or even to provide adequate infrastructure in the long term. This can be seen on the Big Island. Other taxes and fees can be/are required to be spent on specific types of projects (such as the gas tax.). The need to spend targeted dollars on new infrastructure is a major determinant in the need for an impact fee.

Case law requires taxes and fees paid for some capital facilities be deducted as credit against impact fees. For example, monies collected for new road construction via gas taxes would be credited against impact fees collected for construction of new roads.

3. Q: How can allowing one dwelling per lot be legal? Financing speculators? How can citizens support the adoption of impact fees? For example, how can we help get the mayor's bill passed? How can we get a copy of your PowerPoint for posting on waimeanplan.org?

A: The issue related to the exemption of a certain class of property owners from the requirement of paying an impact fee is not resolved, and is being reviewed by the County Corporation Counsel. The issue relates to established legal precedents that require that the imposition of impact fees be equitable. There are other options available to exempting certain classes of property owners, such as offering a grace period (such as a year or other time period) for all parcels that exist at the time of the adoption of the impact fee ordinance to come in and get a building permit for that parcel.

Citizens will be able to testify in support of a bill that adopts an impact fee, when public hearings are held at the Planning Commission and County Council. The PowerPoint presentation will be posted

on the Planning Department's website through a link on the homepage at www.co.hawaii.hi.us/planning/ipfna.htm.

4. Q: To what extent are the various facilities to be proportionately funded by the impact fees, planned with the funding by the county in place? (Are we looking at additional funding sources? - am notes)

A: We recognize that the full cost of funding future infrastructure needs cannot come from impact fees. Impact fees can only be assessed to achieve existing levels of service within the County. Other funding will have to come from other sources. Impact fees will offer the County another tool for funding.. This project will identify the maximum impact fee that the County can assess, and the actual impact fee could be less.

5. Q: Ocean View has over 8,000 lots. If no impact fee is charged for existing lots, how will the county provide infrastructure if these lots are built?

A: We have to draw a distinction between on-site and off-site infrastructure. On-site infrastructure includes such things as internal subdivision roads. On-site improvements cannot be paid for with collected impact fees.

6. Q: (As written) What are the specific drawbacks of having two assessment districts corresponding to the two benefit districts- seems to be discrepancy in existing lots between East and West districts, which would be better reflected into assessment districts.

A: The consideration of existing lots does not necessarily skew data within a single benefit district at the expense of that district, or in its favor. Assessment is based on island-wide level of service of regional facilities. The benefit of having an island-wide assessment district is that it evens out the assessment value, and there are no gross inequities in its application.

7. Q: Any better basis from other jurisdiction for basing fees on square footage? Formula based on data collection from one date- Oct. 19, 2005 (peak of boom in market) other jurisdictions justified seems shaky. How have square footage basis for fee?

A: Impact fees based on unit size is an accepted methodology of fee assessment, and has been used by other jurisdictions. Data collection is based on historic data prior to October 19, 2005 going back several years.

8. Q: How can HI County support position of fees being allocated to state DOE for provision of necessary schools to support new development?

A: The County is not authorized to assess fees for State projects (including schools). If the DOE adopts its own impact fee system for schools, it is unclear at this point how that would be administered.

9. Q: Are projected impact fees going to be comparable to existing fair share assessment of roughly $10,000/unit? This would seem to be a key factor in deciding how to deal with existing lots-any way to exempt only those lots currently owned by Hawaii Island residents?

A: At this time, it would be premature to make any comparisons between fair share assessments and possible impact fee assessments. This information will be developed in the next phase of the project.

10. Q: What are you projecting for per unit fee?

A: We have not yet calculated proposed impact fees. That will happen in the next phase of the project, after we analyze data we are collecting from a number of County agencies.

11. Q: Any major drawbacks to two separate assessment districts and two benefit districts?

A: It is more complicated to calculate multiple assessment districts, and we are not recommending this. At this time, we are trying to keep the methodology simple.

12. Q: Said impact fee may only be used for CIP. Is it legal to use impact fee for repair and maintenance especially designed to reduce long-term capital costs?

A: No, this would be legally dangerous even if used for preventative means. The Enabling Act is clear. Architecture and design costs are allowed, but not maintenance.

13. Q: If I live in Puna (subdivisions) and pay an impact fee- how and where does the money for water and sewers get spent? Am I likely to see this as fair?

A: Impact fees will only apply if the property is connected to service. If not connected, you do not pay. The Department of water charges a separate connection fee at the time of building permit, so water is not being considered as part of this project. In regards to wastewater, very little of the County is actually on a County system. Only those communities that are already hooked up to or are adjacent to existing service would be considered for a sewer impact fee.

14. Q: From slides: What does "Credit for past property taxes" mean?

A: There is a provision in the Enabling Act that requires that payment of past taxes be credited toward the payment of impact fees. The Act says we must look back 5 years, and in this case that would only involve the property tax. In this case, this would probably offer only a small credit, as the overall percentage of property taxes that were spent on qualifying infrastructure would be small.

15. Q: Will impact fees cover only roads or include fire, police, schools, and parks?

A: Yes, fire, police, and parks will be included in this project. Schools are a statewide function, and cannot be covered by the County. The Department of Education is currently looking into an impact fee-type assessment.

16. Q: Resort development buyers tend to have lower impact than full time residences, yet recommended progressive fee would burden resorts more by virtue of having a higher cost on average.

A: A progressive rate is based on the size of a unit, not cost. Fees are intended to be based on the occupancy (numbers) of a unit. Resorts during peak periods have a higher impact on roads, police, and fire.

17. Q: (As written): If Impact Fees are not collected from folks building on their older subdivision lots, does this mean that the impact fees will not be funneled back to these subdivisions: i.e. parks? In some of the older subdivisions residents are concerned about the many improvements being made in their communities. They are concerned about lifestyle, community environment impacts. From your experience have communities had a say on how fees are used?

Q: (As asked): If impact fees are not collected from older subdivisions, does this mean that older subdivisions won't benefit?

A: Funds received from a district are used within that district. If an area has lots of vacant lots, little revenue is generated for parks. You pay, you benefit. You don't pay, you don't benefit.

18. Q: Are there any tales of remorse due to impact fees?

A: Few and far between. Only one of our (Duncan Associates) clients has done so, and that was due to an economic downturn. When the economy picked back up and growth resumed, the fees were reinstated.

19. Q: Could the County collect impact fees for state highways without a change in the state enabling legislation, extending the provisions of the state enabling act to the neighboring islands?

A: As discussed previously, this is a legal question, and we believe the counties cannot collect impact fees for State road projects without a change in state law. A bill has been introduced to the legislature by the County to change the state law for this purpose.

20. Q: 1. How would existing fair share assessment credits be handled?
2. Is there any consideration for collapsing State and County impact fees?

A: If fair share assessments have already been paid, credits would be applied to new development. It is conceivable that "fair share" payments could completely cover the impact fees of new development.

21. Q: Do fees go into a specific account- not a general fund, and who decides where, when and how funds are used?

A: To question #1, absolutely. To the other questions, the County Council decides.

22. Q: If you have one county wide-assessment district are you coming up with an average county-wide cost of all the improvements necessary to maintain L.O.S. for projected population (?) growth? Then money collected may only be used in one of the 2 or more benefit districts where they are collected. So each benefit district pays and receives the county average?

A: County wide assessment districts will be based on average costs. Money collected in East and West benefits districts must be spent in the respective benefit district.

23. Q: (As written): Is there any intention to use impact fees in districts where they are raised? Otherwise there will be a tendency to spend money from under privileged districts like Ka'u in the more favored districts.

(As asked): What about North and South? Will IF money coming out of South be spent in South?

A: Impact fees are intended to be spent in the benefit districts they are collected from. It is conceivable that monies collected in Ka`u could be spent elsewhere in the benefit district. But there would have to be some rational basis for spending in that manner, such as that the project will affect the larger region. This will be discussed further into the project as we get a better idea of how benefit districts might be identified.

24. Q: (As written): Many, perhaps the majority of undeveloped existing lots are in non-conforming subdivisions where little or no county services are provided within the subdivision. If lots in non-conforming subdivisions are required to pay the same impact fees as lots in subdivisions with full-developed public infrastructure, wouldn't that violate the rational nexus standard?
(As asked/recorded by am): I have questions on non-conforming lots with no County services. Will they be assessed?

A: Impact Fees will not address services within the subdivision boundaries of non-conforming lots. These are considered "internal" or "on-site" infrastructure. Only infrastructure that is of more general benefit will be funded by impact fees. The question of whether and how to address these non-conforming lots will be an important topic of future discussion.

Unanswered Questions:

25. Q: Does the "grace period" apply only to existing owners? Or also new owners? One-time? Spec houses? Residences?

A: At the present time, consideration is being given to lots that would exist at the effective date of the bill adopting the impact fee.

26. Q: If HPP lot owners don't pay a sewer fee, how will they even get this service?

A: This is a good question, and relates to the long-term capital improvement plans of the County. It would be difficult, if not impossible, for the County to assess an impact fee for a service it does not contemplate implementing within the lifetime of a capital improvements plan. There has to be a commitment on the part of the County to provide the service before a fee can be assessed.

27. Q: Currently, only limited areas within the county are serviced by public sewer. Would impact fees be discounted for areas not serviced or planned for future extension of sewer service? If not, how would fees be distributed?
A: Impact fees will be calculated for a number of different services, and assessed specifically for those services. If development occurs in an area outside the service area for a certain service, then that particular impact fee will not be assessed.

28. Q: How would the impact fees affect builders in Non-residential pre-existing subdivisions? OR: would it apply? What would residential builders be charged to build a home on agriculture land?

A: At this time, we believe all new non-residential development would be assessed for impact fees, most likely at the time of building permit. A single-family dwelling would be assessed the same basic impact fee, regardless of zoning.

29. Q: How are impact fees administered, i.e. are there provisions/mechanisms to 'waive fees'? Like the problem with fair share fees. How can we keep good old boy politics out?)

A: Procedures for administration should be clarified by ordinance, as part of the bill. It should be very straight-forward to assess and keep track of assessments and collections.

30. Q: Concern that mainland consultants were hired who are not familiar with our local communities.

A: The consultants hired by the County include a planning firm from Austin, Texas (Duncan Associates) who have a long and impressive history working with local governments all over the United States to establish fair and reasonable impact fee systems. They are working with a planning firm from Honolulu that is long-established in Hawaii, who have a good sense of "local" planning issues. Guidance from County agency officials (including the Planning Department) provide additional assurance that local issues and sensitivities are included as part of the work process and product.

31. Q: Your calculation of size to impact only works in a normal range (i.e. 1000 to 3000 sq. ft) The range in house sizes is much larger (i.e. 500-24,000+) Across this range the correlation does not hold. How do you handle this? Are you concerned that collecting @ subdivision will reduce supply by increasing costs & risks?

A: It is true that the correlation between unit size and number of residents tends to stabilize at the upper end of the typical range (about 4,000 square feet), and we generally cap the fees so that they do not continue to increase for very large homes.

We assume that your suggestion implies that developers would not want to process subdivision requests because of the added cost related to impact fees, and therefore, the number of new developable lots would not continue. We have found this not to be the case across the United States. Because the process establishes higher predictability and certainty to the development process, there is actually more interest in development than less, because the developer knows exactly what costs will be.

32. Q: Re: Needs assessment / Wa'a Wa'a Subdivision

a. due to the growth in our Pahoa community, the govt. beach road needs "quarterly maintenance" to keep it in better condition to allow EMT/fire access

b. closer proximity of fire station (current volunteer truck is Wa'a Wa'a)

c. ATV's being driven (noise, safety, and speeding) through neighborhoods INCREASE POLICE PATROL.

d. County to take over maintaining 'dedicated to county' Park- Kahaki Park- Add lavatories or portables.

A: With respect to these specific needs, impact fess cannot pay for on-going maintenance, or salaries. They can be used for new facilities (restrooms, police stations, fire stations).

33. Q: The "drill deep" population of Ka'u district is estimated as 16,000 vs. the <6,000 of the 2000 census. Will any attempt be made to assess needs on realistic population estimates? Note also that as East/West divisions of Hawaii Island compounds the neglect of South and North.

A: The calculations made for this project must be based on methodology accepted by decision-makers. In terms of population, Census data is the data used. We will take into consideration the need for additional benefit districts as the study progresses.

34. Q: Impact fees should be one of many tools we explore for infrastructure financing.

A: This is a requirement of the State Enabling Act, and will be an integral part of the assumptions used for this project.

35. Q: Clarification on credit for past property tax payments. How does that work?

A: These numbers will be calculated based on past property tax collections, and the percent of county expenditures spent for impact fee-eligible capital improvements.

36. Q: Progressive rates for residential units. Concerned over legality (more of a fee/tax) and fairness issues.

A: Other jurisdictions have used a similar approach with single-family dwellings. Assessment is based on degree of impact, and larger homes tend to have greater impacts based on average number of occupants.

37. Q: Legality issues on calculating impact fees county wide and benefit issues

A: The jurisdiction must be able to demonstrate the reasonableness of a county-wide assessment value. It has been used in many other jurisdictions.

38. Q: Concern over the ability and commitment to implement and administer.

A: The administration of an impact fee system is not complex. There is an existing system of "fair share" assessments that the County has administered for several years, so it should not be a radical change in operating procedures.

39. Q: Issue of county impact fees being able to fund state road projects.

A: An amendment to state law will be required to implement such actions.
40. Q: Would impact fees be divided between West Hawaii and East Hawaii and if so, would these fees be divided into "pots" of money for roads, parks, schools, other infrastructure and NOT be placed into the General fund?

A: Yes, impact fees collected in specific benefit districts must be spent in those benefit districts for projects for which they have been collected (i.e., roads, parks, police, fire, solid waste, sewer). Collected fees will be placed in funds specific to their use.

41. Q: I am the water commissioner from North Kona. Cooperation we receive from State Highway Department is almost non-existent. Can adoption of impact fees improve this situation? Our greatest problem is use by the country of state road rights-of-way.

A: Unfortunately, an impact fee program cannot influence the use of State facilities (including rights-of-way).

42. Q: Ocean View might have the highest number of undeveloped lots- however, Ocean View has already developed its own fire department, road maintenance independent of county funds through community organization, grants and road maintenance fees. How will the fees be levied on those subdivisions that have taken infrastructure step independent of country?
A: In terms of the internal roadways that service the subdivision, these facilities cannot receive fees collected from the impact fee program because they only service the subdivision. Impact fees are collected for facilities that have regional impact or beyond.

In terms of the fire station, if the County decides it needs to build a regional fire station, it is possible that new development could be assessed impact fees to help pay for the new facility. It is possible that credit could be given for funds spent by residents on its "private" station.

43. Q: Is it the intention that the fees collected be ear marked for expenditure on the facilities that comprise the fee? For example, if $1 of the fee was for road "A", does that $1 do to a fund to pay for road "A" only?

A: No, the fees will not be earmarked for specific projects, but for generalized categories (roads, parks, etc.)

44. Q: Can fee be used for facilities such as one stop community center for services to families and children?

A: If the community center can be considered under any of the categories proposed for impact fee collection (e.g., parks), construction of a new center could be paid for with impact fees. Operation of the center cannot be paid for with impact fees.

45. Q: New infrastructure; what is the percentage in cost to be covered by the impact fee, and what the percentage in cost to be covered by the county funding (i.e. real property taxes?)

A: This is a policy issue for the County. The impact fees will be calculated at the level needed to maintain the existing level of service that has been fully paid for by existing development. This level of service is likely to be much lower than the County's desired level of service. To achieve the desired level of service, other funding sources will be needed.

46. Q: If the impact fee is applied to a lot in Puna is it "fair" if these fees are used for roads, parks, police, fire, solid waste in another community within the benefit area?

A: The use of collected impact fees would be intended to serve most directly the area in which it was collected. It is logical to assume that fees collected for a regional-level service provider could be located outside of some of the individual communities within the region.

47. Q: The consultant recommends two possible benefit districts- East and West Hawaii. They also recommend that impact fees be calculated countywide, based on countywide costs and levels of service. Is there a difference in current costs and levels of service between East and West Hawai`i? Is it material?

A: The project methodology calls for calculating an over-all County-wide level of service, and it is not intended that other separate calculations be made for East and West Hawaii. It is possible that there are some cost and level of service differences between East and West Hawaii, but the same could be said of any geographic breakdown.

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APPENDIX K:
MARCH WORKSHOPS SUMMARY

APPENDIX K: MARCH WORKSHOPS SUMMARY

Compilation of Data from
Ordinance Issues Stakeholder Workshops
March 8, 2006 - Kona
March 10, 2006 - Hilo

Prepared by Alice Moon
March 31, 2006

Table of Contents:

The Dot Tally
Evaluation Forms Compiled
Facilitator's Report Forms Transcribed

THE DOT TALLY

KONA:

1. Are you in favor of establishing an impact fee system to benefit Hawaii County?
YES: 27
NO: 0
NOT SURE: 1- Benefits residents NOT County.

A. Impact Fees Are for County roads, parks, Fire, Police, Solid waste & Wastewater facilities.
AGREE: 24
DISAGREE: 1
SUGGESTIONS: 1
- Why not schools?
- Water flood channels, low-income housing, SK Police station, underground utilities.
- Plus cost of community planning process.
- Public Parking & public transportation

C. Impact Fees should be assessed at the time the building permit is issued.
AGREE: 30
DISAGREE: 1
SUGGESTIONS: 1
- The question is slanted,
- Developer should pay impact fees.

D. Developers who have paid fair share contributions or made in-kind contributions should have impact fees reduced or eliminated.
AGREE: 17
DISAGREE: 10
SUGGESTIONS:
- Not sure, too many "deals" have been made in the past

E. If developers dedicate land or make eligible improvements for impact fees facilities after the effective date of the ordinance they should be reimbursed from impact fees's.
AGREE: 12
DISAGREE: 8
SUGGESTIONS: 1
- Up to Impact Fee amount only.

F. All fees should be calculated Countywide & be assessed with a uniform Countywide fee schedule.

AGREE: 14
DISAGREE: 5
SUGGESTIONS: 10
- Use sliding fee schedule based on value/ size
- Fees should be assessed by benefit district

G. Fees should be spent on the side of the island (west or east) in which they were collected (two benefit districts) Park fees should have five benefit districts (fig. 2)
AGREE: 22
DISAGREE: 11
SUGGESTIONS: 1
- Until infrastructure 'equilibrium' is reached between east and west sides then island wide uniform application
- What about north and south- 50% in one district, 50% in other districts

H. Rather than waive fees for affordable housing projects, the County should appropriate other funding to pay the impact fees for such projects.
AGREE: 17
DISAGREE: 1
SUGGESTIONS: 1
- "Affordable" doesn't work, use "low income"

I. Single family fees should vary by the size of the dwelling unit to reduce the fees for smaller units
AGREE: 23
DISAGREE: 15
SUGGESTIONS:
- Also based on home value. To be based on number of occupants

K. Effective date of impact fee ordinance will be one year after the adoption date, during which fair share contributions would continue. Once ordinance is in effect, fees could be gradually increased.
AGREE: 11
DISAGREE: 13
SUGGESTIONS: 2
- Need longer time frame to incorporate new system

HILO:

1. Are you in favor of establishing an impact fee system to benefit Hawaii County? (Post workshop)
YES: 12
NO: 2

2. Are you in favor of establishing an impact fee system to benefit Hawaii County? (Pre workshop)
YES: 25
NO: 1
NOT SURE: 11

A. Impact fees are for County roads, parks, fire, police, solid waste & wastewater facilities.
AGREE: 27
DISAGREE: 0
SUGGESTIONS:
- Public Transportation
- State roads
- Schools

- Public housing

C. Impact fees should be assessed at the time the building permit is issued.
AGREE: 21
DISAGREE: 5
SUGGESTIONS: 1
- Grace period

D. Developers who have paid fair share contributions or made in-kind contributions should have impact fees reduced or eliminated.
AGREE: 20
DISAGREE: 2
SUGGESTIONS: 1
- Need to be paid the difference or be credited as such

E. If developers dedicate land or make eligible improvements for impact fee facilities after the effective date of the ordinance they should be reimbursed from impact fees.
AGREE: 16
DISAGREE: 8

F. All fees should be calculated Countywide & be assessed with a uniform Countywide fee schedule.

AGREE: 20
DISAGREE: 7

G. Fees should be spent on the side of the island (west or east) in which they were collected (two benefit districts) Park fees should have five benefit districts (fig. 2)
AGREE: 10
DISAGREE: 17
SUGGESTIONS: 5
- Districts should be based on the system needs/ operations
- Have different districts for different infra/ services
- Ditto

H. Rather than waive fees for affordable housing projects, the County should appropriate other funding to pay the impact fees for such projects.
AGREE: 15
DISAGREE: 7

I. Single family fees should vary by the size of the dwelling unit to reduce the fees for smaller units
AGREE: 16
DISAGREE: 10
SUGGESTIONS:
- Based on zoning or number of bedrooms

K. Effective date of impact fee ordinance will be one year after the adoption date, during which fair share contributions would continue. Once ordinance is in effect, fees could be gradually increased.
AGREE: 14

DISAGREE: 3
SUGGESTIONS: 3

- This is 2 questions: I agree with part one, but not with part two.
- Option to have fees paid over a specific period of time (Use improvement districts)
- Depending on type of applicant; graduated

EVALUATION FORMS COMPILED

KONA:

1. Based on today's discussion, are you in favor of establishing an impact fee system to benefit the County of Hawaii?

Yes: 21 No: 2 Not sure: 1 Did not answer: 1 Other: 0

Comments:
- With some revisions to the report as it stands now

2. Did this Stakeholder Workshop provide you with helpful information to understand the County IPFNA Project?

Yes: 21 No: 1 Not sure: 0 Did not answer: 2 Other: 1

Comments:
- Not enough

3. Was the venue convenient and appropriate?

Yes: 13 No: 11 If not, why? Did not answer: 0 Other: 1

Comments:
- Ka'u resident.
- Bad traffic to/from site.
- Very noisy.
- A venue in Kailua-Kona would have been more convenient. Yano Hall was also very noisy (highway traffic).
- Hot and noisy room.
- Far too much noise and crowding.
- Not good for hearing! Noisy.
- 40 miles one way?
- It was help during normal working hours making it difficult to attend for me and impossible for many others. Also, geographically, having one in the north and one in the south would have been more convenient and more people could have attended from those regions.
- Too noisy, too little time. Wrong place, wrong time, not big enough.
- Too noisy outside, otherwise okay.
- Marginal for driving distance.
- Too far from Kailua and noisy!

4. Is there any Impact Fee-related terminology that you do not understand or need further clarification on?
- Priority 1 and 2 improvements - these could be spelled out (or be required to be spelled out) in conjunction with adoption of the ordinance.
- Most of it was clear.

- H…"Appropriate other funding to pay the impact fee for such projects."
  - Affordable housing mean income of $52,000 is not affordable most low income workers make less than $20,000.

- Yes, (H) affordable Housing Project
  - Multi units
  - Define more, etc.
  - Single-family low income housing
  - AHP Elderly individuals with limited government fund or income earned.
- Per law, impact fees will be based on existing facility levels but West Hawaii area levels are so poor…how can we ever expect equity of facilities and still pay the…share of taxes all the while?
- All impact fees should be embarked to a special fund infrastructure. Money or fees cannot be borrowed or used for any other purposes.
- Use of "affordable housing" terminology doesn't work and the federal formula doesn't work. We need "low income housing (rentals and for sale)."

5. How could we have improved this Stakeholder Workshop?
- Larger room so tables not so close. We had to shout to hear over the other table.
  - Larger screen or closer so back of the room could read smaller print.
  - Have runners to take questions to be answered instead of having to wait till someone came to out table.
- General Q&A time so group could benefit from discussions at other tables.
- Hold in a room that provides more quiet for each group.
- Facilitators should have had training and notification earlier and been in the budget. We want more respect and prep time!
- Quiet environment and more time.
- Different location.
- Impact fees should not into the general fund. Should be assigned to the benefit district.
  - Facility too noisy.
- Less participation by consultants at our table, have a runner to them if info needed, who comes back with a concise answer. This gives us more time. Also, for each issue to first state what the issue is [re?] what's wrong with today's fair assessment fee system? So we know in what light to look at the proposed answers!
- More time, less confusing. Better notice/advance newspaper info, larger meeting room/quiet environment, held in evening so more residents could attend.
- Uncertain. It was well organized.
- It was a good workshop but subject is very complicated for even this amount of time. Thanks for doing it! Thoughtful process.
- Given the "rules of engagement" beforehand. Ex: 1.) express ? 2.) discussion 3.) consensus of group.
- Two more workshops
- The "Dot" process good except it was missing input from group discussion.
- Page 7 of policy analogies; HRS46-146 "If shall…preceded"…but as usual corp. counsel interprets "shall" as "may" (discretionary).
- Continue to dialog. Everyone needs more education on issue.

HILO:

1. Based on today's discussion, are you in favor of establishing an impact fee system to benefit the County of Hawaii?

Yes: 17 No: 1 Not sure: 5 Did not answer: 2 Other: 3

Comments:

- Still depends how commercial/industrial developments are treated.
- Need much more work re: rational nexus.
- Will support impact fee if it:
  - Complies with statute
  - Meets requirement of needs assessment study
  - Must be predictable
  - Must be reasonable, fair share and proportionate
  - Must show nexus
  - Must stay in the "region"/"community" that contributions are made contribution district = benefit district
  - Impact fees should be supplemented by other government-funding source thereby making fee reasonable
  - Must have an implementation plan
- Much more research necessary and time to incorporate PCDP into this concept.
- Yes, generally. Not sure about the details.
- Yes, but not sure nexus and fair share still uncertain benefit districts. (?)

2. Did this Stakeholder Workshop provide you with helpful information to understand the County IPFNA Project?

Yes: 27 No: 0 Not sure: 0 Did not answer: 1 Other: 0

3. Was the venue convenient and appropriate?

Yes: 26 No: 1 If not, why? Did not answer: 1 Other: 0

- 35 min. one way

Comments:

- Too noisy
- Not enough parking!

4. Is there any Impact Fee-related terminology that you do not understand or need further clarification on? No: 3

- I learned many new terms today - Thank you!
- Effect of impact fees on commercial areas! I'm particularly concerned about downtown Hilo which is under onerous development regulations, has plans (sanctioned by resolution of envision Downtown Hilo 2025) to develop "2nd floor living" and is seriously/strongly considering a B.I.D.
- Has been explained
- Not exactly sure how impact fees differ from fair share.

5. How could we have improved this Stakeholder Workshop?

- This issue needs to be related to the larger issues of service level needs, maintenance and support cost/funding, and system needs and operations.
- More time is needed- issues are too critical
    - Better explanation/clarification re: COH/Public Sector contribution
    - Clarify nexus between CDP/General Plan and Impact Fee
    - Process- consultants told us that the Impact Fee process (analysis) is not a planning based process.
- A connection with CDP planning process would help some of us participating in both, but would help in "wrapping minds" around the topics/issues that need addressing so impact fees could be implemented.
- A little more clarity in Q/A section (materials)
    - Ex: Using bullets, rather than imbedded info
    - Ex: Proofing carefully (alph) and being consistent with presentation slides, etc.
- Clarify what types of development will pay such fees before the issue of waivers is discussed.
- More time
- Better explain the methodology (maintain existing level of service) as opposed o methodology used on Oahu for the Ewa example. Why is it better?
- Seminar was positive. However, questionnaire seems so focused, why even bring up the other points if that isn't going to be really discussed?
- It was well don't/informative. I felt like the idea of impact fees on commercial development or redevelopment was purposely moved under the rug.
- Clarify commercial and residential I.T.
- I thought it worked really well. Thanks!
- More publicity about it. I wouldn't have known I could participate.
- More discussion on cost recovery. How COH island wide impact fee compares with Ewa highway impact fee on Oahu.
- Should have responded to participant [questions] before doing small group discussions.
    - Should have allowed "comments" to be incorporated as part of feed back in addition to adding solutions and voting on solutions.

FACILITATORS REPORT FORMS COMPILED

KONA:

ISSUE A: TYPES OF FEES

Kona Group 2
Summary of discussion: Is there a better method to supply water to those who do not have access except catchment? Can impact fees remedy this if charter were changed, or what could be done? Agree that we need the fees. Would like to include water but we don't know how.
FINAL POLL: Group checked "Yes" but no number of how many polled. Would like to include water (see above)

Kona Group 4
Summary of discussion: Can Impact fees cover public buildings? Can we include water systems in the impact fees? Impact fees to cover new flood channels and flooding issues? Parking lots? Underground utilities? But lots of options discussed we had a different idea about covering flooding. (Did not do Poll)

ISSUE B: EXISTING LOTS OF RECORD

Kona Group 1
Summary of discussion: Why exclude Puna and Ka`u- they are lacking in infrastructure and should be included. We agree they SHOULD BE INCLUDED. We agree possibly have a share cost with County for low-income owner.
Option 5: Treat everyone equally, with some subsidy to low-income homebuilder on single-family lots. One year to implement - grace period during which time fair share assessment would still apply.
FINAL POLL: Zero for Options 1 - 4. No written number on poll on Option 5 except as noted in discussion above.

Kona Group 2
Summary of discussion: Discussion of existing lots and how to assess them. There is a consensus that we decide to add #5 that all existing lots should be assessed an impact fee to be collected at the time of pulling building permit.
Option 5: We have a consensus that we want to add alternative #5. All existing lots should be assessed an impact fee to be collected at time of pulling building permit.
(Did not do Poll)

Kona Group 3
Summary of discussion: Puna & Ka`u don't have service? If not going assess fees in Puna & Kau where is money coming from? If more lots zoned than houses #1 without paying fee (if #1) double.
Why shouldn't everyone pay? What affect on affordable housing does everyone pays have?
How can we assess three options without knowing what is wrong with current system?
Are these options mutually exclusive? No rationale for exempting.

Option 5: Fees same across the line. All new buildings pay impact fees. Adjustment for lower income. Progressive schedule.
Option 6: Existing lots of record with existing owners of record with a grace period of 2-5 years to build without impact fee.
FINAL POLL: 3 for Option 5; 1 for Option 6

Kona Group 4
Summary of discussion: Exclude Ka`u and Puna means no services. Reject #4
Why is there no option #5 that says we charge full fees for development? Why would Puna and Ka`u be excluded? The poor should not have to pay impact fees for their housing. This fits in at time of permits.
Option 5: We charge full fees to everyone (residence, commercial, industrial, multi-family) at building permit level.
FINAL POLL: Zero for Options 1, 2 and 4. 1 for Option 3; 4 for Option 5.

Kona Group 5
Summary of discussion: Most of the group felt that the unintended consequences associated with an exemption or exemption period would create negative impacts. Most of the group voted to have NO exemption. Most of the group would like to have the no exemption approach coupled with a sliding scale based upon the size (square footage) of the residence. Questions arose as to what was included in the counted lots (were ag. lots included?). A question was raised as to whether social engineering was behind the impact fee policy.
Option 5:
a. No exemption for existing lots, but provide a sliding scale based upon home size (Sq. Ftge.)
b. No exemption and no sliding scale
FINAL POLL: Zero for Options 1, 2 and 4; 2 for Option 3; 6 for Option 5a; 3 for Option 5b

Kona Group 6
Summary of discussion: What is the magic of a 5-year period? What is the nexus?
Does 2-5 year period provide an advantage to developers vs. local residents?
Option 5: Bonafide farm dwelling (2nd house for workers) should be exempt and not give time advantage to big any developer over local residents.
FINAL POLL: As written: Option 1 _No_ Option 2 __No_ Option 3 Mixed Option 4 unconstitutional best if can include option 5

ISSUE C: TIME OF COLLECTION

Kona Group 1
Summary of discussion: When fees collected
a) Agree with recommendations collect at time of building permit.
b) Will impact fees lead to more non-permitted (illegal) construction
c) More site inspections for illegal buildings to collect impact fees/taxes
(No "FINAL POLL" printed on worksheet) Group checked "Yes" and noted "with above recommendations"

ISSUE D: PRE-ORDINANCE CREDITS

Kona Group 4

No reimbursement of fees? If the fair share is less than the impact fee does the developer get charged more?
FINAL POLL: Confusing question.

ISSUE E: ORDINANCE REIMBURSEMENTS

Kona Group 5
Summary of discussion: Question/Comment was made that while the proposed (Raleigh) approach may be easier for administration, but it may not be fair to the developer. Comments were made as to the benefits of the CFD process, including fairness to the developer and spreading out the impacts of fees on residents. Adjustments should be made under the Raleigh approach for the time value of money.
FINAL POLL: No Vote.

Kona Group 6
Summary of discussion: After ordinance date, why should developers who paid for eligible improvements be reimbursed from impact fees? Developers should be exempt.
(No "FINAL POLL" printed on that particular section of worksheet) Group noted: needs clarification

ISSUE F: ASSESSMENT DISTRICTS

Kona Group 5
Summary of discussion: May be unfair if same schedule used around the island. (recorder drew arrow with this noted to point to underneath "Final Poll")
FINAL POLL: 4 Yes; 3 No

ISSUE G: BENEFIT DISTRICTS

Kona Group 1
Summary of discussion: We agree that there should be 9 districts.
The majority of fees kept in their respective districts, with just a % to island-wide fund rather than split East/ West.
FINAL POLL: Group checked "No" but no number of how many polled. Responded to "If NO, how many?" with: 9 as noted above

Kona Group 2
Summary of discussion: Divide into East-West first, then after a period of 2 years perform a mandatory review to determine if this is a fair and workable plan.
(Did not do poll)

Kona Group 3
Summary of discussion: Benefits should be based on needs. How does benefits district help? Puna & Ka`u will be isolated.
FINAL POLL: [ALICE NOTES: this is confusing…they have written 11 for Yes, agree with 2 benefit districts then they wrote under that and circled "abstain" then there is what looks like a tally with hash marks - three hash marks with "4 or 5" after them and 1 hash mark with "4 - 9" after it]

Kona Group 4
Summary of discussion: Can we expand and benefit districts from 2-4? Can we create sub-districts within Benefit Districts? Can we list different infrastructure needs and level of service by Judicial District? Can 50% of fees in Judicial District be spent there and 50% within district?
FINAL POLL: "DISAGREE UNANIMOUS"
Other Option: 50% of fees in Judicial District be spent there and 50% within district

Kona Group 5
Summary of discussion: Most participants would like to have the resources generated in the area kept as close to the impact as possible. Most of the group wanted at least 2 benefit districts, and if only 2, that they should be segregated East/West. Most of the group, however, would like to see more than 2 districts. Five members of the group voted to have the districts established by existing districts (e.g. a district for Kau, a separate district for S. Kona, a separate district for N. Kona, etc...) Three member of the group voted to see the benefit districts conformed with the Five proposed park districts.
FINAL POLL: see below
Other Options: 1 for North/South; 5 for East/West; 3 for 9 Districts; 5 for 5 Districts (based on park districts)

Kona Group 6
Summary of discussion: Proposed park districts seem to be a fairer spread in relationship to infrastructure needs --- based on population density but might inadequate (there should be different maps for the different services -police, fire, etc.) but proposed east/west districts. Fig. 1 relates better in subsidizing to what actually exists. All services are not equal.
FINAL POLL: Do you agree with the recommendation of EAST/WEST benefit districts per figure 1? YES with equity and level of service.

ISSUE H: AFFORDABLE HOUSING

Kona Group 3
Summary of discussion: Rational nexus. Need, benefit, fair share-everybody pays.
Capacity enhancing
Inequity created-everybody pays.
1. Legal Implications
2. What is wrong with existing system- not broke why fix?

Current system- before I.F. act- legal defensibility issue. Fairness issue-commercial. All not zoned not paying? Renewal issue- not getting money. County exempted commercial.
FINAL POLL: 6 agree with recommendation; 0 do not agree

ISSUE I: PROGRESSIVE RESIDENTIAL FEE

Kona Group 3
Summary of discussion: Should fees be based on distance from urban core? Higher level of fees- some do increase with distance- trip rates and trip length- Fees can be used. Can be variable- more complicated- second generation fee.
Boundaries can be changed-lineal cash increases with distance.
Benefit district/assessment fee-
Impact fee capacity enhancing new development

Charge same for every home- progressive fees.
Socially regressive fee- rational nexus = supply and demand.
Create a need = need to pay. Made a gesture toward affordability.
FINAL POLL: 5 agree with recommendation; 1 did not agree
Other Option: Add value.

Kona Group 6
Summary of discussion: How does this relate to multi-family? (Ohana) Should be different issue from single family.
FINAL POLL: Group checked "No" but no number of how many polled.
Why? Flat fee would reflect reality of island living verses square footage up to 4,500 sq. ft.
Other Option: Suggestion: No fees for units up to 4,500 sq. ft.

ISSUE J: COST RECOVERY

Kona Group 1
Summary of discussion: Impact fees can be used for studies for water, sewer, police, fire, and PARKS, community plans purchasing easements for public access. 100% adoption is okay- Yes. Exception where county subsidizes lower income single family lots.
FINAL POLL: Group checked "Yes (with option)" but no number of how many polled.
Other Option: 100% with exception of lower income/county subsidizes

Kona Group 2
Summary of discussion: Suggested to charge maximum 100% at least as we begin until we see how the system operates. We have a large shortfall on infrastructure now, we need to catch up.
FINAL POLL: Group checked "Yes" but no number of how many polled. Noted "100% Charge."

Kona Group 6
Summary of discussion: What will the actual cost impact fees? Won't there be a disparity/inequity of services. East Hawaii vs. West Hawaii? Hello!
FINAL POLL: Group checked "Yes" but no number of how many polled. Noted "See issue G"

HILO:

ISSUE B: EXISTING LOTS OF RECORD

Hilo Group 1
Summary of discussion: Generally, group concerns were the exclusion of fees for existing lots and national nexus for exclusion?
Concurrency
Resource assessments
Consistency with CDP's general plan
Option 5: Everybody pays
FINAL POLL: Zero for Options 1, 2 and 3; 1 for Option 4 with condition "Support Option 5 if beginning point is concurrency

Hilo Group 2
Summary of discussion: Want rational nexus! What is the definition of "impact"? What kind of facilities would be built? Is this discussion premature? Impact fees vs. improvement district. Is there a constitutional issue is asking fees for existing lots? How did we get to the 64,000? How many of those are owned by "State of HI" residents?
Option 5a: Everyone pays with a credit to "substandard" subdivisions
Option 6: Long term residence (sic) don't pay fee unless they are sell (sic) (speculator) (like state 10 year plan)
Option 7: Needs more work
FINAL POLL: Zero for Options 1, 2 and 4; 3 for Option 3; 5 for Option 5a; 6 for Option 6; 6 for Option 7

Hilo Group 3
Summary of discussion: Very complex issue; see option #5.
Option 5: All previous lots pay, with an offset for low income owner-occupants based on a sliding scale in accordance with affordable housing policy.
FINAL POLL: We all agree that Option #5 should be considered.

Hilo Group 4
Summary of discussion: Option 4 not viable vs. creating improvement districts
Assessment districts
Already built lots
BI owners v. off-island/out of state owners- why not have everyone pay?
Option 5: Impose impact fees to all lots in existence from date or ordinance. (against grace period because it potentially benefits the wrong people/penalizes the wrong people). No waiver period or exemption for 1 SF unit.
FINAL POLL: Zero for Options 1, 2 and 4; 2 for Option 3; 4 for Option 5

Hilo Group 5
Summary of discussion: Lots of confusion about if commercial development was included in the discussion. How are mixed used property handled? Eg. a store with residential above. Can we factor in residency/non-residency in the charge of I.F.? Are we getting all the property owners (in and out of states) voices heard?
Option 5: Existing lot owners will not get assessed impact fee, if lot gets transferred, new owners get assessed impact fee.
FINAL POLL: Zero for Options 1, 2 and 4; 2 for Option 3 with condition: "2-5year"; 3 for Option 5 and 1 abstained

Hilo Group 6
[ALICE NOTES: very difficult to decipher this report - some notes but not good recording]
FINAL POLL:
Option 1 - 3
Option 2 - 0
Option 3 - 2
Option 4 - 1
Option 5 - 3 Collect upon 1st sale of developed property
Option 6 - 1 Each district will determine its own treatment of existing lots

ISSUE C: TIME OF COLLECTION

Hilo Group 2
Summary of discussion: Time of assessment/collection at the time of building lots. Yes - 8, No - 1
Option 1: Incremental payment over time for current owners of existing lots. Yes - 6, No - 1 [an arrow was drawn from this option in the summary area to option area]

Hilo Group 5
Can it be assured after completion, so mortgage can include it? Instead of at the permitting?
(Group did not poll)

ISSUE D: PRE-ORDINANCE CREDITS

Hilo Group 4
Summary of discussion: 1. Will real property taxes be calculated into impact fee credits? *yes, studies being conducted now to ID hard numbers. 2. Is there any method to determine whether a previous owner has already paid impact fees for a particular lot. *fees paid recorded with land (? w/ land) and not owners.
FINAL POLL: Group checked "Yes" but no number of how many polled.

ISSUE F: ASSESSMENT DISTRICTS

Hilo Group 1
Summary of discussion: Assessment districts and benefit districts - needs to be connected? Why not related to needs?
FINAL POLL: [In response to "Does your group agree or disagree with the recommendation?" this group polled zero for Yes and 7 for No.] with comment: "Similar to comments for G."

Hilo Group 5
Summary of discussion: West side costs more for infrastructure so East side cost less, so different fee structure should be placed.
(Group did not poll)

Hilo Group 6
FINAL POLL:
4 for single district for assessment
1 for nine districts
1 not sure
Idea: Zip codes per benefit district

ISSUE G: BENEFIT DISTRICTS

Hilo Group 1
Summary of discussion: Group questions rational nexus for impact fees assured in Kohala (for example) and road improvements in Puna? Group questions why 5 districts for parks and not everything else? Consensus s is that group felt inequity due to East/West distinction for districts only. Answer: Make more districts?
FINAL POLL: Two benefit districts? Zero for Yes, 7 for No

If no how many? Make more districts. 9 judicial districts. More specific about impact. Looking at level of service differences.

Hilo Group 2
Summary of discussion: N. Kona and S. Kona should be grouped together with Kau as separate district. How are "lock box" managed? Should multiple types of districts be rationalized (eg. Benefits, representations, cenus, judicial, parks, etc.). Districts "value" vs. "needs"
FINAL POLL: Zero for yes; 9 for No; Comment: Needs more work

Hilo Group 3
Summary of discussion: Perhaps we should look at benefit districts with a systems approach defining each district with respect to infrastructure categories. (Roads, park, fire, police, wastewater)
FINAL POLL: Group checked "No" but no number of how many polled.
If no how many? 7

Hilo Group 4
Summary of discussion:
1. Will east/west benefit districts foster more divisiveness between east HI and west HI? No - may help W. HI to know they are paying their own share.
2. Too broad - just East v West doesn't have adequate nexus.
3. Do judicial districts have to be basis of benefit district area? Benefit district boundaries need to adequately reflect situation/community relationships (volcano)
4. How flexible are benefit district boundaries as system evolves?
5. What factors determine district boundaries initially?
6. Why should people in an already established neighborhood pay for new growth?
7. Can benefit district be decided by up code?
8. Is there a way to differentiate fees for different types of services that benefit entire county (parks, fire, med) and those that are regional (roads)?
9. Ex: Kapolei charges flat rate fee per permit pulled to support roads.
10. Have improvement projects already been identified for proposed benefit districts?

FINAL POLL: 5 for Yes; 1 for No; 1 Doesn't want to foster further animosity between E. HI and W. HI.

Hilo Group 5
Summary of discussion: Why are the benefit districts so large? If it's too small, there won't be enough $$$. Concerned about money collected in a benefit district gets used in that area?
2 districts - Some districts can share benefit i.e. regional parks, roads that are shared any 2 or more benefit districts.
FINAL POLL: Unanimously No; Suggestion: Follow park districts

Hilo Group 6
FINAL POLL: Group checked "No" but no number of how many polled.
2 districts - 1
5 districts - 0
3 districts - 4
9 districts - 1
Comment: eliminate language "V.S." from all presentations.

ISSUE H: AFFORDABLE HOUSING

Hilo Group 4
Summary of discussion: 1. What is the source of affordable housing fund? *unknown at this time
2. Will developers be assisted a fee to pay into affordable housing fund *no
FINAL POLL: Group checked "Yes" but no number of how many polled. Comment: But not sure where money would come from.

ISSUE I: PROGRESSIVE RESIDENTIAL FEE

Hilo Group 2
Summary of discussion:
Progressive residential fees: Yes-0, No-7
Needs more study: Yes-0, No
Wrong measurement (family unit): Yes-8, No-0
Flat Fee: Yes-6, No-0
FINAL POLL: Do we agree with the recommendation? Zero for Yes; 7 for No. If no why? Needs more study
Other Option: Flat Fee: Yes-6, No-0

ISSUE J: COST RECOVERY

Hilo Group 1
Summary of discussion: 1) Where is public sector/county share? 2) What is total cost of improvement and how much does county pay? 3) Impact fees that pay for everything is a tax
1) Define public/county share: existing level of service
2) Ewa model. Calculate what you want, how funded. (i.e. impact fees, tax, etc.)
3) Current LOS (?) by tax revenues. Future improvements by impact fees
4) Are all fees expected to pay for all improvements in the future.
FINAL POLL: Do we agree with the recommendation? Zero for Yes; 6 for No

ISSUE K: PHASE-IN PERIOD

Hilo Group 3
Summary of discussion: We feel there should be a phase-in period.
FINAL POLL: Group checked "No" but no number of how many polled.
Other Option: Payments over time, with various financing periods.

Hilo Group 4
Summary of discussion: If there is a phase-in period, how does that guarantee timely construction of improvements? *phase in to address county preparation for implementation fair share payment will still continue to be collected until I.F. becomes effective.
(Group did not poll)

APPENDIX L:
AUGUST WORKSHOPS SUMMARY

APPENDIX L: AUGUST WORKSHOPS SUMMARY

Questions Posed During Infrastructure and Public Facilities Needs Assessment Workshops Hilo (August 15, 2006) and Captain Cook (August 16, 2006)

HILO

1. Question: Regarding Section 36-14(c) of the Draft Impact Fee Ordinance; on what basis shall the impact fee administrator assign priorities for allocating funds collected? There should be some reference to adopted Community Development Plans or General Plan priorities here to guide the allocation of funds toward clearly identified priorities adopted by the Council. It might be a good idea to suggest a process here whereby competing projects are ranked and presented as a package to the Council for final approval.

Response: It is probable that determining priority for expending impact fees collected will be a collective effort of the County Council, the administration -including input from the departments, and the public. It would seem that the annual budgetary process already attempts to prioritize public improvement projects, and that adherence to CDP and General Plan recommendations are integral to that process.

2. Question: In your discussion related to the phase-in period of the impact fee ordinance, you mentioned in the presentation that you would like to avoid a disruptive effect on the real estate market. What kind of effect is possible?

Response: The desire is to proceed with the adoption of an impact fee that is well-publicized, and provides builders and other residents with as much lead time as possible about the impact fee system. This will avoid confusion and surprise when building permits are submitted after the expiration of a grace period. The phase-in period would also provide administration with sufficient time to plan and implement the program by acquiring and developing the necessary tools and staff needed to ensure program operates efficiently.

3. Question: Why is there no impact fee proposed for solid waste infrastructure associated with commercial (and industrial development)?

Response: Commercial entities wind up paying a tipping fee when they dispose of solid waste. This is collected when the business (or entity) either dumps solid waste themselves, or hires a third party to collect and dispose of solid waste. The tipping fee is a "pay as you go" system.

4. Question: Can a wastewater impact fee be effective for homes that are on a catchment system?

Response: A wastewater impact fee will only be assessed for new development that is within the service area of existing municipal wastewater treatment plants.

5. Question: How were the maximum allowable impact fee values determined?

Response: They were calculated as the net cost to maintain the existing level of service, after taking into consideration other taxes and fees that would be generated by new development and available to fund capacity-expanding improvements.

6. Question: How will the expenditure of impact fees be prioritized?

Response: The prioritization of spending impact fees could be a collective decision made by the Council and the Administration, with input by the public. As projects are approved for funding during the budgetary approval process, decisions could be made about which projects should receive how much money from impact fee sources. With community development planning efforts being initiated island-wide, it is hoped that some prioritization of projects will be voiced through these meetings.

7. Question: I own a buildable lot right now; if I apply for a building permit in one year will I have to spend $12,000 extra to cover impact fees?

Response: If an application is made for a building permit prior to the effective date of the impact fee ordinance, then no impact fee will be required. Applications submitted subsequent to the effective date of the ordinance will be required to pay the impact fees. Also, keep in mind, that $12,000 represents the maximum amount that the administration can apply; and a decision can be made to apply a percentage of the maximum amount.

8. Question: I disagree that a one year phase-in period would limit or eliminate any disruption to the real estate market of projects that are "in the pipeline." This is primarily because projects in Hawaii can be "in the pipeline" for three years before ground is broken, especially if State/Federal financing and/or tax credits are involved (which is usually the case for affordable housing projects). Taking that timeline into consideration, as well as the need for supply, why can't an exemption for affordable housing be created for impact fees? Isn't the application of "fair-share"/disproportionate share a policy call?

Response: An overarching requirement for any impact fee system is that everyone pays their proportionate share. No one can be exempted. It may be possible to have other sources pay for the impact fees that qualified affordable housing units would incur, but the fees must be paid. In regard to projects that "are in the pipeline," they will not be penalized for their "review" status. If an application is made prior to the effective date of the impact fee ordinance, no impact fee will be required.

9. Question: If the County pays the impact fee for affordable housing, where does that money come from, and what would the net effect of that policy be?

Response: The source of the money to pay affordable housing impact fees must be identified by the Administration and approved by the County Council. It could come from the general fund (real property taxes), grants, or other sources. It cannot be paid from the collection of impact fees, however.

10. Question: Can road fees for homes built on private roads be covered by impact fees?

Response: No, impact fees cannot be used on private infrastructure systems of any kind.

11. Question: Has any consideration been given to people that also must pay SSPP (Special Subdivision Project Provision), which can range from $800 to $11,000?

Response: No, not at this time. Mainly because electricity is a private utility and the County is not responsible for the installation of electrical poles.

12. Question: Hawaii County has Community Development Plans (CDPs) emerging. How do the CDPs intersect with the "ideal" comprehensive infrastructure plan that is suggested for the County to determine? This seems to be a central need for Hawaii County to face!

Response: CDPs can be a valuable complement to infrastructure planning by allowing each community to assist with prioritizing infrastructure projects in their region. The CIP could take cues from the General Plan and the CDPs, during the budgetary review process. Further dialogue regarding impact fees at the CDP level can be very valuable.

13. Question: Are "impact fees" and "land tax" the same thing?

Response: No. Impact fees are not considered a tax. They are a one-time fee designed to partially off-set the initial costs of infrastructure construction and financing. A land tax is on-going exaction that is paid by landowners to government, and not only funds initial construction and financing costs, but also is used for operational funding and maintenance of existing infrastructure.

CAPTAIN COOK

1. Question: Under the current system, affordable housing is not exempt from fair share contributions. If an impact fee ordinance is adopted, and affordable housing is exempted, will that be retroactive?

Response: In the first place, affordable housing will not be exempted from the impact fee system. Although the affordable housing owner or builder may not be personally responsible for impact fee payment, the fee must be paid into the impact fee system from another source. Neither the impact fee nor the program for payment of affordable housing impact fees will be applied retroactively.

2. Question: Has the impact fee study anticipated the tax base that is projected?

Response: The Infrastructure and Public Facilities Needs Assessment Study establishes the maximum impact fee value that can be assessed for each of the various infrastructure elements. It will be up to the County Council to determine how much of that maximum is appropriate, should the County move forward with an impact fee ordinance. Certainly one of the considerations for the Council would be how much might be available from the collection of other taxes that the County receives, and how that relates to the overall budgetary requirements of the County, and the projects perceived to be necessary for funding during that budgetary cycle.

3. Question: Regarding the benefit principle: wouldn't there be better representation (pay-benefit) if there were more than 4 districts? How about the same number of districts as we currently have represented by the County Council?

Response: The number of benefit districts needs to be carefully considered. If there are too many benefit districts, it may take longer to build the fund and it might be difficult to spend all the money collected within that district within the 6-year statutory time limit. By aggregating areas into larger areas, it is significantly easier to identify projects to spend collected impact fees. Ultimately, the number of benefit districts can be tailored to meet the needs of each government body and community population that adopts an impact fee ordinance.

4. Question: In other areas, who does the actual work for infrastructural improvements, the government or the developer? Which do you recommend?

Response: Circumstances often dictate who will actually construct infrastructure improvements. Frequently, developers will construct improvements when they have been required to do so as part of the entitlement process, and then dedicate the improvements to the County. If the project is being constructed as part of a County initiative to implement a CIP project, then the County must follow legal bidding requirements, and although a private sector company might be constructing the improvements, it is the government that actually funds the project and determines scheduling. Perhaps, we can also look forward to more collaborative efforts where government, private and community partnerships are developed to construct needed infrastructure improvements.

5. Question: Kaloko paid for its own roads, water, and power lines in the early 1970's. To what extent would Kaloko be fee-exempt today?

Response: Individuals who build new homes at Kaloko after an impact fee ordinance is adopted will be required to pay impact fees.

6. Question: How many houses have been built by anyone in Hawaii County in the last 10 years that are "affordable?"

Response: Presently, data is not available to answer this question. However, in the past, most developers paid in lieu fees to meet affordable housing requirements. About a year ago, the Hawaii County Code, Chapter 11, Affordable Housing, was amended to include affordable housing requirements which increased the per unit contributions required by developers. These new regulations should lead to the actual construction of affordable housing for residents.

7. Question: Can impact fees be applied to the following: Potable water systems (wells and distributions systems); youth centers/facilities; open space land (shoreline property for parks)?

Response: Impact fees can be used for youth centers/facilities and the purchase of open space to be used for parks. Impact fees cannot be applied to potable water systems, unless a water impact fee is adopted by the County Board of Water Supply (as stated in HRS, Chapter 46). The Board of Water Supply has already adopted connection fees that function like impact fees.

8. Question: I was under the impression that impact fees can only be used to maintain level of service at the time of adoption and spent based on a capital improvement plan. How does this study ordinance address these?

Response: The Infrastructure and Public Facilities Needs Assessment Study determined an island-wide level of service for all infrastructural elements contained in the report. Costs for future CIP projects are included in the study analysis. Actual funding of specific projects will ultimately be the responsibility of the County Council as part of the budgetary process.

9. Question: How would these fees be balanced for areas with private water and/or wastewater systems (e.g., Waikoloa Village)?

Response: Impact fees cannot be collected for potable water facilities, and will not be imposed on areas that are not part of a municipal wastewater service area.

10. Question: Why is a solid waste fee not applied for uses other than single-family residential?

Response: Commercial entities wind up paying a tipping fee when they dispose of solid waste. This is collected when the business (or entity) either dumps solid waste themselves, or hires a third party to collect and dispose of solid waste. The tipping fee is a "pay as you go" system.

11. Question: There seems to be both State and County roads in the inventory. So, is the County collecting fees to improve State roads?

Response: The IPFNA study calculated maximum chargeable impact fees for County and State roadways, individually. This was in response to an initiative proposed and passed by the Legislature this year, and signed by the Governor, amending HRS Chapter 264, which gives all the Counties the ability to fund State roadway projects with monies collected by the assessment of impact fees. The value of the maximum fee that could be charged for State roadways is significantly higher than the fee for County roadways, and raises the overall value of impact fees to a very high number. It will be up to the County Council to decide if such a fee is warranted and how much of the maximum fee to charge.

12. Question: Would the consequences of non-payment of impact fees be the same as non-payment of taxes?

Response: If impact fees are not paid, then the building permit would not be issued for a specific development project. If taxes are not paid (assuming this reference is to property taxes), in a "worst-case" scenario the land in question can ultimately be seized by the County and sold to pay delinquent taxes.

13. Question: Who would be the impact fee administrator---the Planning Department, Department of Finance or someone else?

Response: At this time, no decision has been made regarding administrative responsibility for the impact fee program. It is anticipated that the various agencies that would be involved with impact fees would cooperatively determine how to administer the program. This would include the Planning Department, the Department of Public Works, and the Finance Department.

14. Question: What is the current 140% level for median income within Hawaii County?

Response: According to the most recent data found on Department of Housing and Urban Development's website (http://www.huduser.org/Datasets/IL/IL06/hi_fy2006.pdf), the current (March 8, 2006) median income for Hawaii County is $55,300. This would mean that $77,420 is 140% of median.

15. Question: What is the payment schedule for fees?

Response: All impact fees calculated pertaining to any single development will be 100% due either at the time of issuance of building permit, approval of plan review, or final subdivision approval, depending upon when impact fees are required to be paid by the adopted impact fee ordinance.

16. Question: Where do collected impact fees get deposited, and who manages the money?

Separate funds must be created for each category of infrastructure for which an impact fee is assessed, and must be further subdivided by the benefit districts created by the impact fee ordinance. The funds would be managed by the County with the designation of an impact fee administrator from one of the county departments.

17. Question: Can the money earn interest?

Response: Yes, the money can earn interest.

18. Question: If roads automatically become property of the County, wouldn't that eliminate "roads in limbo"/gated communities? The impact fees should be matched with County funds (bonds), if needed.

Response: Roads do not automatically become property of the County. Before the County will accept private roadways, they must meet County roadway standards.

19. Question: Could impact fees provide funds for a new police or fire department?

Response: Yes, impact fees can be used to build new police or fire department buildings and to purchase needed equipment (fire trucks, police cars, etc.), but cannot be used to pay for salaries or maintenance of buildings or equipment.

20. Question: Why not assess fees on sale of homes (and put it in the impact fee fund)?

Response: Impact fees cannot be assessed against existing development, regardless of whether it changes ownership.

21. Question: The biggest bottleneck to the construction of new infrastructure projects is the lack of interest by the private sector-they are too busy making big money to do County projects.

Response: Throughout the course of this project, the consultant team has heard that there is a real problem within the County getting programmed infrastructure projects constructed. We have also heard a variety of reasons that contribute to this problem. Without assigning blame or responsibility, expediting infrastructure projects must be addressed by the entire community.

APPENDIX M:
PARTICIPANTS

APPENDIX M: PARTICIPANTS

Name	Affiliation
NOV. 18, 2005 FOCUS GROUP MEETING - KONA	
Harold Murata	Community Member
Will Espero	DR Horton
Marian Wilkins	League of Women Voters
Ken Melrose	Hawaii Leeward Planning Conference
Bob Stuit	Hokulia
Dean Uchida	Land Use Research Foundation of Hawaii
NOV. 21, 2005 FOCUS GROUP MEETING - HILO	
Frederic Berg	Brookfield Homes
Sid Fuke	Planning Consultant
Jacqui Hoover	Hawaii Leeward Planning Conference
Keith Kato	Hawaii Island Community Development Corporation
Kimo Lee	W.H. Shipman, Ltd.
Glenn Miyao	Wilson Okamoto Corp.
Bill Moore	Kohala Ranch Development Corporation
John Ray	Parker Ranch Foundation Trustee/HLPC
Skylark Rossetti	Hawaii Island Economic Development Board
Marianna Scheffer	League of Women Voters
Amy Self	Corporation Counsel
Bill Walter	W.H. Shipman, Ltd.
JAN. 17, 2006 VIDEO CONFERENCE - HILO	
Charles Aina, Jr.	C. Aina Jr., Inc.
Jason Armstrong	Hawaii Tribune-Herald
Stephanie Bath	Hawaiian Acres Community Association
Marilyn Begg	Waa Waa Subdivision
Peter Boucher	Wastewater Division
Jerry Bragdon	Hawaii Island Board of Realtors
Joan Castberg	Legislative Research
Marge Elwell	Naalehu Main Street/Discovery Harbor Association
Byron Fujimoto	Jas G. Glover, Ltd.
Marissa Furfaro	American Planning Association
Jon Henricks	County Council
Nelson Ho	Environmental Management
Ben Ishii	Department of Public Works
Duane Kanuha	Hawaii Leeward Planning Conference
Keith Kato	Hawaii Island Community Development Corporation
Assistant Chief Quince Mento	Fire Department
Mike Okumoto	County of Hawaii Finance Treasury Division
Assistant Chief Elroy Osorio	Police Department
Leslie Pedersen	Yamada Diversified

Name	Affiliation
John Romanowski	Jas G. Glover, Ltd.
Charles Stanton	Sierra Club - Moku Loa Group
Wesley Takai	Administrator, Real Property Tax Division
Kim Tavares	Fern Forest Community Association
Bill Walter	W.H. Shipman, Ltd.
Hugh Willocks	Hawaii Island Contractors Association
J. Yoshimoto	County Legislative Research Branch
JAN. 17, 2006 VIDEO CONFERENCE - KONA	
Laura Aquino	Current Events
Bennett Mark	Planning Department
Jai Cheng	County Department of Public Works
Winston Chow	First Hawaiian Bank
Linda Copman	County Council
Malia David	County Council
Evelyn Gonzalez	Ocean View Community Association
Debbie Hecht	Hawaii Island Land Trust
Pete Hoffmann	County Council
Bob Hunter	Waimea Comm. Dev. Assoc./League of Women Voters
Paul Kay	Stanford Carr Dev.
Barbara Kossow	County Mayor's Office
John Medlin	Stanford Carr Dev.
Megan Mitchell	County Council
Harold Murata	Community Member
Angel Pilago	County Council
Patricia Provalenko	PATDI, Inc.
John Ray	Parker Ranch Foundation Trustee/HLPC
Stan Sitko	County Department of Finance/Real Property Tax Division
Jeff Turner	Community Member
George Wilkins	League of Women Voters/Water Board
Marian Wilkins	League of Women Voters
JAN. 17, 2006 VIDEO CONFERENCE - HONOLULU	
LeeAnn Crabbe	Queen Liliuokalani Trust
Scott Derrickson	State Office of Planning
Mary Alice Evans	DBET/Office of Planning
Frederic Berg	Berg Enterprises
Hamid Jahanmir	State Office of Planning
Dennis Kim	DBET/OP
Robert McGraw	American Planning Association - Hawaii
Dean Nakagawa	State DOT
Richard Poirier	State Office of Planning
Laura Thielen	State Office of Planning
Dean Uchida	Land Use Research Foundation of Hawaii
MAR. 8, 2006 STAKEHOLDER WORKSHOP - KONA	

Name	Affiliation
Bobby Command	West Hawaii Today
Linda Copman	County Council
LeeAnn Crabbe	Queen Liliuokalani Trust
Roger Diles	Community Member
Fred Duerr	WESPAC & HIBT
Marge Elwell	Naalehu Main Street/Discovery Harbor Association
Duane Erway	Plan to Protect
Patty Fontanilla	Coconuts to You
Brenda Ford	Citizens for Equitable and Responsible Government
Diane Gaylord	Community Member
Evelyn Gonzalez	Ocean View Community Association
Meg Greenwell	Kealekekua Ranch, Ltd.
Loren Heck	HOVE Road Corp.
Greg Hendrickson	Hokukano Ranch
Marni Herkes	Kona CDP Steering Committee
Pete Hoffmann	County Council
Gerald Holleman	Ocean View Community Association
Virginia Isbell	County Council
David Kaawa	Green Sands Subdivision
Madeline Kaawa	Green Sands Subdivision
Ola Kochis	Green Sands Subdivision
Barbara Kossow	County Mayor's Office
Mary Leleiwi	Hawaii Community College/OCET/CDP Facilitator
Lydia Mali	Kona CPD Steering Committee
Ruby McDonald	Office of Hawaiian Affairs
Mark McGuffie	Hawaii Island Economic Development Board
Harold Murata	Community Member
Nancy Pisicchio	County of Hawaii/HCRC
Tanya Power	Hawaii Island Board of Realtors
Mike Price	South Kohala Traffic Safety Commission
Bob Rosehill	Kamehameha Schools
Amy Self	Corporation Counsel
Rowena Tiqui	Kona Adult Day Center
Curtis Tyler	Kona CDP Steering Committee
Shannon Underwood	Community Member
Lynn Vanleewen	Ocean View Chamber of Commerce
George Wilkins	League of Women Voters/Water Board
Marian Wilkins	League of Women Voters
Ross Wilson, Jr.	Current Events
Louise Winn	County of Hawaii/ HCRC
MAR. 10, 2006 STAKEHOLDER WORKSHOP - HILO	
Perry Armor	Hilo Downtown Improvement Association
Gil Barden	Pacific Island Investments, LLC

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Stephanie Bath	Hawaiian Acres Community Association
Mary Begier	HI Island Chamber of Commerce/HI Board of Realtors
Jerry Bragdon	Hawaii Island Board of Realtors/Eden Roc
Malika Brown	Tsukazaki Yeh Moore
Carlton Ching	Castle & Cooke
Mary Finley	Hawaii County Economic Opportunity Council
Marissa Furfaro	American Planning Association
Fred Holschuh	County Council
Jacqui Hoover	Hawaii Leeward Planning Conference
Bob Hunter	Waimea Comm. Dev. Assoc./League of Women Voters
Austin Imamura	Pacific Rim Bank
Melvin Jadulang	FFA
Brian Kajiwara	County Department of Public Works
Keith Kato	Hawaii Island Community Development Corporation
James Komata	County Department of Parks & Recreation
Kimo Lee	W.H. Shipman, Ltd.
Calvin Mann	Castle & Cooke
Suzanne Mayhew	Hawaiian Paradise Park Owner's Association
Bruce McClure	County Department of Public Works
Robert McGraw	American Planning Association.
Jeffrey Melrose	Kamehameha Schools, Land Assets Division
Glenn Miyao	Wilson Okamoto Corp.
Bill Moore	Kohala Ranch Development Corp.
Dean Nakagawa	State DOT
Eileen O'Hora-Weir	Pakaka Road Association (Waa Waa)
Mitchell Okuma	County Real Property/Data Systems
Jon Olson	Puna Traffic Safety
Susan O'Neill	Rural South Hilo Community Association
Richard Onishi	County of Hawaii Data Systems
Richard Poirier	State Office of Planning
Anita Politano Steckel	Puueo Community Association
John Ray	Parker Ranch Foundation Trustee/HLPC
Liz Salfern	Nanawale Community Association/Puna CDP
Marianna Scheffer	League of Women Voters
Stanley Tamura	State Highways Division
Kim Tavares	Fern Forest Community Association.
Ronald Tsuzuki	State DOT
Dean Uchida	Land Use Research Foundation of Hawaii
Mary Ann Wanush	Hilo Downtown Improvement Association
J. Yoshimoto	County Legislative Research Branch
Jeff Zimpfer	Watershed Advisory Group/PACRC
AUG. 15, 2006 STAKEHOLDER PRESENTATION - HILO	
Joan Castberg	County Legislative Research Branch

Name	Affiliation
Deborah Chang	County Planning Department
Gregory L. Chun	Kamehameha Investment Corporation
Linda Copman	County Council
Melissa Fleming	
Melissa Furfaro	American Planning Association
Pete Hoffmann	County Council
Esther Imamura	County Council
Brian Kajikawa	County Department of Public Works
Alice Kawaha	County Planning Department
Brad Kurokawa	County Planning Department
Susan Lee Loy	Realtor
Kimo Lee	W.H. Shipman, Ltd.
James Leonard	Planner
Barbara Lively	County Council
Jeff Melrose	Kamehameha Schools, Land Assets Division
Glenn Miyao	Wilson Okamoto Corp.
Bill Moore	Kohala Ranch Development Corp.
Jon Olson	Puna Traffic Safety Control
Susan O'Neill	Rural South Hilo Community Association
Shirley Pedro	
Marianna Scheffer	League of Women Voters
Amy Self	Corporation Counsel
Kim Tavares	Fern Forest Community Association
Dean Uchida	Land Use Research Foundation of Hawaii
Bill Walter	W.H. Shipman, Ltd.
Elizabeth Weatherford	Community Member
James Weatherford	Community Member
Chris Yuen	County Planning Department
Mike (Unknown)	No last name or affiliation given
AUG. 16, 2006 STAKEHOLDER PRESENTATION - KONA	
Jai Cheng	County Department of Public Works
Peter Cooper	
Maile David	County Council
Duane Erway	Plan to Protect Kona
Brenda Ford	Citizens for Equitable and Responsible Government
Larry Ford	Citizens for Equitable and Responsible Government
Evelyn Gonzeles	Ocean View Community Association
Debbie Hecht	Hawaii Island Land Trust
Loren Heck	HOVE Road Corp.
Marni Herkes	Kona CDP Steering Committee
Virginia Isbell	County Council
Mike Kordas	
Ambika Kosada	Kona Soil & Water Con. District

Name	Affiliation
Barbara Kossow	County Mayor's Office
Trish Malone	
Jim Medlin	
Ken Melrose	Hawaii Leeward Planning Conference
Megan Mitchell	County Council
Harold Murata	Community Member
Diane Neuteld-Heck	
Bill Paris	Palika Ranch
Ed Rapoza	Island Land Company
Noelie Rodriguez	
Stanley Schauhuber	
Rowena Tiqui	Kona Adult Day Center
Sally Tukunaga	
Rick Vidgen	
Sherman Warner	
George Wilkins	League of Women Voters/Water Board
Marian Wilkins	League of Women Voters
Ross Wilson	Current Events
Louise Winn	County of Hawaii/HCRC
LOCAL RESOURCE TEAM	
Lee Ann Crabb	Queen Liliuokalani Trust
Mary Finley	Hawaii County Economic Opportunity Council
Robert Hunter	Waimea Comm. Dev. Assoc./League of Women Voters
Keith Kato	Hawaii Island Community Development Corporation
Robert McGraw	American Planning Association.
Bill Moore	Kohala Ranch Development Corp.
Harold Murata	Community Member
Ben Tsukazaki	Attorney
Dean Uchida	Land Use Research Foundation of Hawaii
Ann Usugawa	Community Member
MAR. 8, 2006 - KONA FACILITATORS	
Patti Dunn-O'Connell	
Karen Eoff	
Judy Kautz	
Bennett Mark	
Megan Mitchell	
Louise Winn	
MAR. 10, 2006 - HILO FACILITATORS	
Barbara Lively	
Paul Squassoni	
Alex Frost	
Larry Brown	
Bob Hunter	

Name	Affiliation
Jane Testa	
AGENCY LIAISONS	
Assistant Chief Quince Mento	Fire Department
Assistant Chief Elroy Osorio	Police Department
Judy Ah Chin	DPW - Building Division
Nicholas Ah Yo	Fire Department
Dora Beck	DEM - Technical Services
Barbara Bell	DEM - Director
Peter Boucher	DEM - Wastewater
Christopher Chin-Chance	DEM - Recycling
Nancy Crawford	Finance - Deputy Director
Michael Dworsky	DEM - Solid Waste
Pat Engelhard	Parks and Recreation - Director
Nelson Ho	DEM - Deputy Director
Brian Kajikawa	DPW - Building Division
James Komata	Parks and Recreation - Planner
Barbara Kossow	Mayor's Office Deputy Managing Director
Galen Kuba	DPW - Engineering
Bobby Jean Leithead-Todd	Corporation Counsel
Curtis Matsui	Fire Department
Bruce McClure	DPW - Chief Engineer
Jeremy McComber	County Office of Housing and Community Development
Dean Nakagawa	State - DOT
Eileen O'Hora-Weir	DEM - Recycling
Mitchell Okuma	Real Property Tax Division
Michael Okumoto	Finance - Treasurer
Richard Onishi	Data Systems - Property Management Systems Brand
Deana Sako	Finance - Accounts, Controller
Amy Self	Corporation Counsel
Stan Sitko	Finance - Director, Real Property Tax Division
Bill Takaba	Finance - Director
Wesley Takai	Real Property Tax Division - Administrator
Stan Tamura	State - DOT, Hawaii Highways Division
Clayton Yugawa	Data Systems - Director
ADMINISTRATION	
Harry Kim	Mayor, County of Hawaii
Dixie Kaetsu	Managing Director
Andy Levin	Executive Director
Roy Takemoto	Executive Assistant
Christopher Yuen	Planning Director
Brad Kurokawa	Deputy Planning Director
Lincoln Ashida	Corporation Counsel, Office of the Corporation Counsel
Barbara Bell	Director, Department of Environmental Management

Name	Affiliation
Pat Engelhard	Director, Department of Parks and Recreation
Lawrence Mahuna	Chief of Police, Police Department
Bruce McClure	Chief Engineer, Department of Public Works
Darryl Oliveira	Fire Chief, Fire Department
William Takaba	Finance Director, Department of Finance
HAWAII COUNTY COUNCIL	
Stacy K. Higa	Chair and Presiding Officer, Council District 4
Virginia Isbell	Vice-Chair, Council District 7
Fred C. Hoschuh M.D.	Council District 1
Donald Ikeda	Council District 2
James Y. Arakaki	Council District 3
Gary Safarik	Council District 5
Bob Jacobson	Countcil District 6
Angel Pilago	Council District 8
Pete Hoffmann	Council District 9
PROJECT TEAM	
Rose Acevedo	Alice Moon & Co. - Assistant
James B. Duncan	President, Duncan Associates - Impact Fee Consultant
Scott Ezer	Principal, Helber Hastert & Fee - Planning Consultant
Susan Gagorik	Co. of Hawaii, Planning Department - Project Manager
Alice Moon	Alice Moon & Co. - Community Liaison for Public Part.
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Amy Self, Esq.	Co. of Hawaii, Corporation Counsel - Legal Counsel
John Stott	Duncan Associates - Infrastructure Finance Specialist

And thank you to all others who contributed refreshments and offered suggestions and comments to the process.

Mahalo!

APPENDIX N:
IMPACT FEE GLOSSARY

APPENDIX N: IMPACT FEE GLOSSARY

Assessment Districts refer to geographic areas subject to a uniform impact fee schedule.

Benefit Districts refer to geographic areas in which impact fees collected are earmarked to be spent.

Deficiencies, Existing refers to the cost to provide development existing at the time of adoption of an impact fee ordinance with the higher-than-existing level of service on which the impact fees are based.

Development, Residential refers to subdivision of land for or construction of single-family detached or multi-family dwelling units.

Development, New refers to development that is not in existence at the time of adoption of an impact fee ordinance.

Development, Nonresidential refers to subdivision of land for or construction of buildings for uses other than residential development.

Fair Share Assessments refers to the County's informal policy of requiring applicants for residential and hotel rezoning to agree to pay fees at time of platting, site plan or building permit to cover primarily off-site infrastructure costs relating to roads, parks, fire, police and solid waste facilities. The amount of the fees are based on a 1990 study, with annual inflation adjustments based on the Consumer Price Index.

Impact Fees are one-time charges assessed on new development to cover primarily off-site infrastructure costs as authorized by Chapter 46, Part VIII of Hawai'i Revised Statutes.

Level of Service is a measure of the service provided by a certain type of capital facility. In impact fee analysis, level of service is typically expressed as a ratio of some characteristic of the facility type to the amount of development being served. For example, a common level of service measure for parks is acres of parkland per 1,000 residents.

Level of Service, Existing refers to the actual level of service provided by the County at the time of adoption of an impact fee ordinance.

Level of Service, Higher-than-Existing refers to the calculation of impact fees based on the cost of providing a better level of service than is being provided to existing development at the time of the adoption of an impact fee ordinance.

Lot of Record, Existing refers to a parcel of property in existence on the date of adoption of an impact fee ordinance on which a building or structure could legally be constructed without going through the County's subdivision process.

Lots in Older Subdivisions refers to lots that were created in the early 1950s and 1960s and do not conform to present-day subdivision code requirements. Many of these lots were created without County facilities and services: they have private roads, which are often unpaved, no County water

system, no parks, police or fire substations in the vicinity, and are on cesspool. A large number of these lots are in the Puna and Ka' Districts.

State Enabling Act refers to Chapter 46, § 141 to148 of Hawai'i Revised Statutes, which was passed by the Legislature in 1992 and authorizes counties to assess, impose, levy and collect impact fees upon conducting a facility needs assessment study and the adoption of an impact fee ordinance.

APPENDIX O:
FREQUENTLY ASKED QUESTIONS

APPENDIX O: FREQUENTLY ASKED QUESTIONS

A. Types of Fees

1. Question: What types of infrastructure costs are intended to be captured by the implementation of an impact fee ordinance?

Answer: The proposed impact fees would be used to construct County-owned roads, parks, fire, police, solid waste, and wastewater facilities.

2. Question: Why is water not included, isn't it a County infrastructure?

Answer: The County Department of Water already imposes a connection fee at the time of building permit, which functions as an impact fee.

3. Question: Can the County use impact fees to build a public facility and turn it over to a private entity to maintain?

Answer: Yes, however, the County would need to retain ownership, and the facility will have to be available for public use.

4. Question: Can County impact fees be spent on facilities owned and operated by the State of Hawai`i?

Answer: Yes. The Governor signed into law Act 197, which now gives all counties in Hawaii the ability to impose impact fees for State Highways only.

5. Question: Can impact fees be used to purchase private land to build a park?

Answer: Yes, as long as appropriate powers of eminent domain (condemnation) are used.

6. Question: Can impact fees be used to improve a private road?

Answer: No, impact fees can only be used on publicly-owned facilities.

7. Question: Can the County use impact fees to acquire a private road and make improvements to it?

Answer: Yes, if the road is classified as an arterial or collector road on the County's functional classification map.

8. Question: Can impact fees be used to retire a bond that was floated to build a park?

Answer: No, not if the park already exists and is serving existing development.

9. Question: Can impact fees be used for maintenance and operation costs?

Answer: No.

B. Treatment of Existing Lots

1. Question: What will happen to development of new homes on lots that already exist?

Answer: The fate of existing lots of record has not been determined. A variety of different options are being considered, including: (1) waiver of impact fees for the first dwelling developed on an existing lot of record; (2) creating a grace period, that would allow building one dwelling on an existing lot up to five years after the adoption date of an impact fee ordinance; (3) having the County pay the impact fee for the development of one dwelling on an existing lot; (4) incrementally phasing the amount of the impact fee assessed over a period of years (for all development); and (5) creating a separate assessment district and benefit district for the Ka`u judicial district, and not assessing any impact fees in this district for new development, which means that no funds from collected impact fees would be available for infrastructure improvements.

C. Time of Collection

1. Question: When would the impact fee be collected by the County?

Answer: The impact fee can be collected at any time during the development process (e.g., subdivision approval, building permit, certificate of occupancy). The most common point to collect impact fees is at the time of building permit issuance.

D. Pre-Ordinance Credits

1. Question: What is the County's fair share contribution program?

Answer: Fair Share Contributions are a part of the County of Hawaii's informal policy of requiring developers applying for a change of zone to pay fees to mitigate the potential regional impacts of the property with respect to parks, fire, police, solid waste and roads. Developers are assessed these contributions at the Change of Zone level for rezoning of land to Agricultural-five acre (A-5a) and below in size, excluding commercial and industrial rezonings. The fair share contribution is payable prior to securing Final Subdivision Approval or Final Plan Approval. The fees are based on a 1990 Impact Fee Study and are adjusted annually beginning three years after the effective date of the ordinance, and based on the percentage change in the Honolulu Consumer Price Index (HCPI).

2. Question: What will happen to those projects that have been processed under the "fair-share" contribution program?

Answer: If developers have paid fair share contributions or made in-kind contributions for projects that have not been completed, impact fees should be reduced or eliminated for any remaining development in those projects, based on the value of contributions already paid (adjusted for inflation) against the value of required impact fees.

3. Question: Are there any other ways to have accrued credits against impact fees?

Answer: Yes, a portion of property taxes over the last five years has been deducted from the fees in the impact fee calculations.

E. Post-Ordinance reimbursements

1. Question: What would happen if developers are required to or agree to dedicate land or make eligible improvements for impact fee facilities after the effective date of the ordinance?

Answer: They should be reimbursed from collected impact fees for the value of those improvements.

F. Assessment Districts

1. Question: What is an assessment district, and how will they be divided up within the County?

Answer: An assessment district is a geographic area that is used to determine the value of impact fees to be assessed within that district. The impact fees are determined based on the existing level of service for those facilities within the district, and the value of new facilities necessary to meet the existing level of service for new development.

For ease of administration, it is being recommended that the entire county be considered a single assessment district, which would mean that impact fees would be consistent throughout the county.

G. Benefit Districts

1. Question: What are benefit districts and why are they important?

Answer: Benefit districts are established to help determine how collected impact fees are supposed to be spent. Impact fees collected in a specific benefit district must be spent within that benefit district, so that the people who contribute the fees will actually benefit from the construction of eligible facilities. Benefit districts are not easy to establish, because they should not be too small so that not enough monies are collected, and they should not be too large so that the community is unable to see benefit.

H. Present Financing of New County Infrastructure and Public Facilities

1. Question: What are the present sources for funding new County infrastructure and public facilities?

Answer: Infrastructure and public facilities are funded through a variety of sources. County road construction and improvements are primarily financed through fuel tax and federal highway grants. They may also be funded with general obligation (GO) bonds. GO bonds are a low interest method of borrowing available to government entities wherein the full

faith and credit of the entity is pledged to guaranty the repayment of the bonds. Sewer lines and facilities are commonly financed through the State's Revolving Fund, which is a pool of money dedicated to wastewater treatment projects, from which loans are made and repaid with interest. Other public facilities are normally funded by issuing GO bonds. For instance, the recently completed Kawananakoa Hall in Keaukaha was primarily funded with bonds. Borrowing through revolving funds or bonds is the most common way to finance construction of non-road infrastructure and facilities that will benefit the County for many years. The debt and interest are repaid from general fund revenues over the life of the debt, usually twenty years. The largest contributor to general fund revenues is real property tax. Fair share contributions (fees paid by developers) and private contributions may also be used to fund public facilities.

The County's capital improvement program (CIP) is budgeted for in the Capital Projects Fund. Most projects for infrastructure and public facilities are budgeted within this fund. The funding sources mentioned above provide the cash to complete the budgeted projects.

2. What are Real Property Taxes used for?

Answer: Real property taxes help to pay for an array of services, including police and fire protection, civil defense, parks and recreation, elderly activities, solid waste program, mass transit, economic development, flood control, animal control, and government employees' retirement and health programs.

Note: Roads, highways, and traffic signals/lights are funded primarily by your fuel taxes, state/federal grants-in aid, and private developers. In addition, water development and services are funded primarily by rate payers and private developers.

I. Affordable Housing Projects

1. Question: With regard to the payment of impact fees, how will projects be treated that include dwelling units that meet affordable housing requirements?

Answer: If a dwelling unit is constructed as part of an affordable housing project, impact fees must still be paid. This is because if the fees are not paid, it will draw the legality of the impact fee ordinance into question. At present, the recommendation is that the County will pay the required impact fees out of the general fund, not out of funds collected from assessment of other individuals' impact fees.

J. Progressive Residential Fees

1. Question: Will all single-family development pay the same fee?

Answer: Not necessarily, fees can be based on the size of the dwelling unit which would be established by a progressive rate. Smaller dwellings could pay less impact fees, based on a pre-determined schedule that will become part of the impact fee ordinance or a standard fee could be applied across the board.

K. Cost Recovery

1. Question: What does cost recovery mean, and how will it be applied to the collection of impact fees?

Answer: The study that is underway for the County Planning Department will determine the maximum fee that can be charged for the various categories of infrastructure that will be included in the impact fee program. The County could then adopt impact fees up to 100% of the determined maximum fees, or any percentage lower than 100%. Preliminary analysis indicates that the total maximum impact fees will exceed the current value being used for the existing fair share contribution program.

L. Phase-In Period

1. Question: When will the impact fee program begin to operate?

Answer: Because it will take some time for the County to prepare to administer the impact fee program, there should be at a minimum, a one-year phase-in period between the date the ordinance is adopted and the date the ordinance takes effect. During this one-year phase-in period, the fair share assessments would continue to be in effect.

M. Application of Impact Fees

1. Question: Will facilities in my subdivision be upgraded with the expenditure of collected impact fees?

Answer: No. Impact fees can only be spent on facilities that have regional impact, such as collector roads, solid waste transfer stations, fire stations, etc., and cannot be used to improve private infrastructure and facilities that are internal to individual subdivisions.

N. Administration of Impact Fees

1. Question: Will impact fees be put into the General Fund?

Answer: No. Impact fees will be collected and put into funds set up for the specific type of fee collected (road, police, fire, parks, solid waste, wastewater), and can only be spent on those facilities.