LINDA LINGLE
GOVERNOR

PATRICIA HAMAMOTO
SUPERINTENDENT

STATE OF HAWAI'I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI'I 96804

OFFICE OF SCHOOL FACILITIES AND SUPPORT SERVICES

DEC 23 2009

Letter No. 453.9

December 3, 2009

TO: Katherine Puana Kealoha, Esq., Director
Office of Environmental Quality Control
Department of Health

FROM: Duane Y. Kashiwai, Public Works Administrator
Facilities Development Branch
Department of Education

SUBJECT: Lahainaluna High School Cafeteria
TMK: (2) 4-6-018: 012, Lahaina, Maui, Hawaii
Final Environmental Assessment Negative Declaration Determination

The Department of Education has reviewed the comments received during the 30-day public comment period which ended on July 8, 2009. The agency has determined that this project will not have significant environmental effects and has issued a negative declaration, also referred to a Finding of No Significant Impact (FONSI). Please publish this notice in the December 23, 2009 issue of the OEQC's *Environmental Notice*.

We have enclosed a completed OEQC publication form, two (2) printed copies and two (2) compact discs containing copies of the final EA in .pdf format. The publication form and project summary will also be transmitted via e-mail (e-mail will be transmitted by Chris Hart & Partners, Inc.). Should you have any questions, please call Mr. Benjamin Miura at (808) 586-0429, or Mr. Jason Medema of Chris Hart & Partners at (808) 242-1955.

DYK:BM:ru

Attachments

HRS Chapter 343 Final Environmental Assessment

Proposed Construction of a Cafeteria Building

Lahainaluna High School

(2) 4-6-018:012 (por.)
Lahaina, Maui, Hawaii

October, 2009

Prepared for:
Department of Education
State of Hawaii
P.O. Box 2360
1390 Miller Street
Honolulu, Hawai'i 96804
(808) 586-3230

Prepared by:
Chris Hart & Partners, Inc.
115 N. Market Street
Wailuku, Maui, Hawaii 96793
(808) 242-1955

1. ZONING AND FLOOD CONFIRMATION FORM

April 7, 2009

COUNTY OF MAUI
DEPARTMENT OF PLANNING
ZONING AND FLOOD CONFIRMATION REQUEST FORM

Jason Medema, Planner, Chris Hart & Partners, Inc.
APPLICANT: FOR State Of Hawaii, Department of Education TELEPHONE: 808-242-1955
ADDRESS: 115 N. Market Street, Wailuku, HI 96793
PROJECT NAME: Lahainaluna High School Cafeteria Building
ADDRESS AND/OR LOCATION: 980 Lahainaluna Road, Lahaina, HI 96761
TMK: NUMBER(S): (2) 4-6-018:012 (por.)

ZONING INFORMATION

STATE LAND USE AG & Urban COMMUNITY PLAN P/QP - Public / Quasi - Public

COUNTY ZONING Interim

OTHER SPECIAL DISTRICTS

___ Special Management Area
___ Shoreline Setback Area
___ Country Town Design District
___ Lahaina National Historic Landmark District
___ Maui Redevelopment Area
___ Other _____

RECEIVED
DEPT OF PLANNING
COUNTY OF MAUI
APR -7 P 2:29

FLOOD INFORMATION

FLOOD HAZARD AREA* ZONE C

BASE FLOOD ELEVATION N/A MEAN SEA LEVEL, 1929 NATIONAL GEODETIC VERTICAL DATUM OR FOR FLOOD ZONE AO, FLOOD DEPTH _____

FLOODWAY [ ]Yes [✓]No

FLOOD DEVELOPMENT PERMIT IS REQUIRED [ ]Yes [✓]No

* For FLOOD HAZARD AREA ZONES B OR C; A FLOOD DEVELOPMENT PERMIT would be required if any work is done in any drainage facility or stream area that would reduce the capacity of the drainage facility, river, or stream, or adversely affect downstream property.

****

FOR COUNTY USE ONLY

REMARKS/COMMENTS: _____

- ☐ Additional information required.
- ☑ Information submitted is correct.
- ☐ Correction has been made and initialed.

REVIEWED AND CONFIRMED BY: _____ 4/9/09

SIGNATURE AARON SHINMOTO DATE
ZONING ADMINISTRATION AND ENFORCEMENT DIVISION
Planning Program Administrator

(S:\ALL\FORMS\APPLICATION FORMS\SMAASSESSMENTAPP_REV0804.WPD)

2. FINAL ENVIRONMENTAL ASSESSMENT

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APPENDICES

I. PROJECT INFORMATION

A. OVERVIEW OF THE REQUEST

This Environmental Assessment (EA) has been prepared in support of the construction of a new, approximately 21,000 square foot, full-service cafeteria building along with related site improvements, at the Lahainaluna High School (LHS) campus, located at TMK (2) 4-6-018:005, 012 and 019, Lahaina, Maui, Hawaii (**See:** Figures No. 1.1 - 1.2, "Regional Location Maps," and No. 2. "TMK Map").

The site of the proposed project is located in the State Urban district, designated for Public/Quasi-Public use by the West Maui Community Plan, and lies within the Interim zoning district per Maui County Zoning. (**See:** Figures No. 3, "State Land Use Map," No. 4, "Community Plan Map," and No. 5, "County Zoning Confirmation"). The proposed action is therefore appropriate given the prevailing land use designations, as discussed in Section IV of this report. The proposed project involves the use of State land and funds; hence, it requires the preparation of Chapter 343, HRS, Draft and Final Environmental Assessments.

B. PROJECT PROFILE

Proposed Project:	Approximately 21,000 square foot cafeteria building
Lot Size(s):	Approximately 121.39 acres total
Existing Land Use:	Lahainaluna High School Campus
Project Area:	Approximately 1-acre portion of Parcel 012
Access:	Lahainaluna Road

C. PROPOSING AGENCY

Agency:	State of Hawaii, Department of Education
Address:	P.O. Box 2360 1390 Miller Street Honolulu, Hawai'i 96804
Phone:	(808) 586-3230
Contact:	Mr. Michael Nakano, Principal, LHS

D. ACCEPTING AGENCY

Agency:	State of Hawaii, Department of Education, Office of School Facilities and Support Services
Address:	P.O. Box 2360 1390 Miller Street Honolulu, Hawai'i 96804
Phone:	(808) 586-3230
Contact:	Mr. Randy Moore, Assistant Superintendent

E. CONSULTANTS

Land Use Planner:	Chris Hart & Partners, Inc.
Address:	115 N. Market Street Wailuku, Maui, Hawaii 96793
Phone:	Voice: (808) 242-1955 Facsimile: (808) 242-1956
Contact:	Mr. Jason Medema, Planner

Architect:	Ferraro Choi, Inc.
Address:	733 Bishop St. Suite 2620 Honolulu, HI 96813
Phone:	Voice: (808) 533-8880 Facsimile: (808) 599-3769
Contact:	Mr. Bill Brooks, AIA, LEED-AP, Principal
Civil Engineer:	Kim & Shiroma Engineers
Address:	1314 S King St. Suite 325 Honolulu, HI 96814
Phone:	808-593-8770
Contact:	Mr. Conrad Shiroma, P.E., President
Mechanical Engineer:	Lincolne Scott, Inc.
Address:	1132 Bishop St # 1850 Honolulu, HI 96813
Phone:	Voice: (808) 536-1737 Facsimile: (808) 537-5829
Contact:	Mr. Marcos Ibarra
Archaeologist:	Scientific Consultant Services, Inc.
Address:	711 Kapiolani Blvd. Suite 975 Honolulu, HI 96813
Phone:	Voice: (808) 597-1182 Facsimile: (808) 597-1193
Contact:	Mr. Michael Dega, Ph.D.

Traffic Engineer:	Phillip Rowell and Associates.
Address:	47-273 'D' Hui Iwa Street Kaneohe, HI 96744
Phone:	Voice: (808) 239-8206 Facsimile: (808) 239-4175
Contact:	Mr. Phillip J. Rowell, P.E.

II. DESCRIPTION OF THE PROPERTY AND PROPOSED ACTION

A. PROPERTY LOCATION

The Lahainaluna High School (LHS) campus is located at the northern (*mauka*) terminus of Lahainaluna Road, Lahaina, Maui, Hawaii; TMKs: (2) 4-6-018:005 012 and 019. (**See**: Figures No. 1.1 - 1.2, "Regional Location Maps," and No. 2. "TMK Map"). The site of the proposed new cafeteria building is roughly a 1.26-acre portion of Parcel 012, near the upper western boundary of the LHS campus, north of and adjacent to the existing cafeteria (**See:** Figure No. 12, "Campus Plot Plan").

B. EXISTING LAND USE

Land use on the project site consists of the existing Lahainaluna High School campus. The school was first established on the site in 1831, on land donated to missionaries by Hoapili, Governor of Maui, and his wife, Kalakua, for the purpose of establishing a literate ministry of Hawaiian men. The site has been in continuous use as a school since that time.

The new cafeteria site is situated on a previously developed site near the end of Lahainaluna Road, toward the northwest corner of the campus. To the south is the existing cafeteria building, and to the east is the Industrial Arts building. Lahainaluna Road is to the north and west. A groundskeeper's cottage is to the northeast of the new cafeteria.

Lahainaluna High School is bordered by Princess Nahienaena Elementary School, Lahaina Intermediate School and the Kelawea residential subdivision to the west. Lands to the east of the campus are being cultivated for use by the school's agricultural program, while lands formerly in sugar cane cultivation lie to the north, east and south. The existing use is compatible with surrounding uses and consistent with prevailing County Zoning and Community Plan designations. (**See**: Figures No. 6.1 – 6.5, Site Photographs).

C. LAND USE DESIGNATIONS

State Land Use Classification:	Urban (**See**: Figure No. 3, "State Land Use Map")
West Maui Community Plan:	Public / Quasi-Public (**See**: Figure No. 4, "Community Plan Map")
County Zoning:	Interim (**See:** Figure No. 5, "Maui County Zoning ")
Flood Zone Designation:	C (Minimal Flooding) (**See**: Figure No. 7, "Flood Insurance Rate Map")
Special Designations:	None

D. REASONS JUSTIFYING THE REQUEST

Founded in 1831, Lahainaluna High School (LHS) is the oldest school in Hawaii, as well as the oldest continuously operating school west of the Mississippi River. A unique aspect of the school is its coed boarding program, with a capacity of approximately 118 students. Current enrollment at LHS is 977 students.

The existing LHS cafeteria serves approximately 600 school lunches per day, in addition to providing breakfast and dinner for the boarding students. This cafeteria is small (roughly one-quarter the size of a standard high school cafeteria with similar enrollment) and undersized for both current and projected future student enrollment. Serving capacity is limited to approximately 220 students, and many students eat outside. Assembly seating is limited to approximately 350 students. The existing stage has been converted to office and storage space. Large assemblies which would typically be held in a cafeteria are held in the gymnasium. In addition, the existing cafeteria is outdated and considered uncomfortably warm.

The State of Hawaii, Department of Education (DOE) Facility Assessment and Development Schedule (FADS), dated January 2006, calls for a new cafeteria at the school of approximately 18,776 net usable square feet. With the addition of miscellaneous support space (mechanical, electrical, etc.), the total floor area of this type of facility reaches approximately 21,000 gross square feet (**See:** Appendix A "DOE Facility Assessment and Development Schedule").

E. DESCRIPTION OF PROPOSED ACTION

The applicant is preparing this HRS 343 Environmental Assessment (EA) in support of the construction of an approximately 21,000 square foot cafeteria building on the 121 - acre campus of the existing Lahainaluna High School, TMK (2) 4-6-018:012 (por.). The new cafeteria will have a dining seating capacity, inclusive of indoor and lanai dining, of 650 students. Indoor assembly seating capacity will be approximately 1,000 students.

Currently, the school is served by an outdated and undersized cafeteria facility as detailed above (**See:** Figures No. 6.1 – 6.5, "Site Photographs"). The proposed new facility includes 19,600 gross square feet of enclosed building area and 2,500 square feet of exterior lanai (**See:** Figure No. 8, "Concept Site Plan"). Plans for the new cafeteria are based on a design enrollment of 1,400 students; however, the DOE enrollment projection for LHS for the year 2014 - as far out as the school projects - is 997. Thus, the cafeteria design has been scaled back from the baseline FADS Design Enrollment, to reflect actual enrollment growth projections. The kitchen is 70% as large as called for in the FADS, while the overall cafeteria building is 75% as large as FADS guidelines specify.

Included in the facility will be a conventional kitchen, dining area with permanent stage and back-of-house provisions, restrooms, faculty dining room, and custodial center. Site improvements will include connections to existing power, water, and sewer service; grading, retaining, and drainage improvements; and paving, walkways and landscaping.

F. ALTERNATIVES TO THE PROPOSED ACTION

Alternatives considered in the design of the proposed project include the following:

1. No Action

Analysis. Under this alternative, the present physical condition of the land and structures would be maintained. Any benefit accruing from the proposed action, including providing adequate cafeteria space to accommodate the existing student population, will be foregone. The "no action" alternative was not deemed to be a viable option and was dropped from consideration.

2. Deferred Action Alternative

Analysis. This option would have a similar effect as the "no action" alternative in that the development of the project would be deferred until some point in the future. Delaying the project raises the potential for future economic conditions to affect its

implementation, depending on the State's economy. The "deferred action" alternative was dropped from consideration due to the immediate need for additional cafeteria space to serve the existing student enrollment.

3. Demolition of Existing Cafeteria

Analysis. Under this option, the existing cafeteria would be demolished and the new cafeteria constructed on the same site. This option would minimize site disturbance outside of the boundaries of the existing cafeteria site. However, retaining the existing structure, will allow for the eventual re-purposing of the existing, undersized cafeteria into office and classroom space. This will help to accommodate future enrollment growth at the school, as well as provide permanent space for office and classroom uses that are currently housed in portable buildings. Additionally, retaining the existing cafeteria building avoids the impacts associated with demolition waste on County landfills. The option of demolishing and replacing the existing cafeteria was therefore dropped from consideration.

III. DESCRIPTION OF THE EXISTING ENVIRONMENT, POTENTIAL IMPACTS AND MITIGATION MEASURES

A. PHYSICAL ENVIRONMENT

1. Land Use

Existing Conditions. The proposed action is to take place on the existing Lahainaluna High School campus, which occupies approximately 121 acres designated as TMK Parcels (2) 4-6-18:005, 012 and 019, located at the northern terminus of Lahainaluna Road, *mauka* of Honoapiilani Highway (**See:** Figure 1.1 – 1.2, "Regional Location Maps"). A mix of developed and undeveloped residential and agricultural zoned land, supporting residential, agricultural and open space uses, characterizes the immediate area surrounding the LHS campus.

The following is a description of Zoning, Community Plan Designations, State Land Use Classifications and existing land uses adjacent to the campus:

North:	State Land Use:	Agricultural
	Zoning:	Agricultural
	Community Plan:	Open Space
	Existing uses.	Undeveloped
East:	State Land Use:	Agricultural
	Zoning:	Agricultural
	Community Plan:	Agricultural
	Existing uses.	Undeveloped
South:	State Land Use:	Agricultural
	Zoning:	Agricultural
	Community Plan:	Agricultural
	Existing uses.	Undeveloped
West:	State Land Use:	Urban
	Zoning:	Interim
	Community Plan:	Public/Quasi-Public
	Existing uses.	Lahainaluna Intermediate School; Princess Nahienaena Elementary School

Potential Impacts and Mitigation Measures.

The site of the proposed project is located in the State **Urban** district (**See:** Figure No. 3, "State Land Use Map"), designated **Public/Quasi-Public** by the West Maui Community Plan (**See:** Figure No. 4, "Community Plan Map"), and is located in the Maui County **Interim** zoning district (**See:** Figure No. 5, "County Zoning Map"). The proposed project will involve the construction of an approximately 21,000 square foot cafeteria building. The project site is located in an area of existing public/quasi-public and residential development, and supporting infrastructure is proximate to the subject property. The proposed project complies with the intent of the applicable Maui County Zoning and West Maui Community Plan designations, as further discussed in Section IV below.

2. Topography and Soils

Existing Conditions. The school is located on the foothills of the West Maui Mountains, overlooking Lahaina Town. The project site is characterized by moderate to steep slopes (**See**: Appendix A, Preliminary Drainage Report). According to the "Soil Survey of the Islands of Kaua'i, O'ahu, Maui, Moloka'i, and Lana'i, State of Hawaii (August, 1972)," prepared by the United States Department of Agriculture Soil Conservation Service, the soil at the project site is Wainee very stony silty clay, 7 to 15 percent slopes (WxC). This series consists of well-drained soils on alluvial fans on the island of Maui. These soils developed in alluvium derived from weathered basic igneous rock. They are gently to moderately sloping. Permeability is moderately rapid. Runoff is slow to medium, and the erosion hazard is slight to moderate (**See:** Figure No 9, "Soils Map").

Potential Impacts and Mitigation Measures. The proposed project will include limited new development on a currently developed parcel. Therefore, the subject parcel will require no significant alterations to the soils or topography of the site. The topographic and soil analysis suggests that the proposed use is suitable for the site

3. Floods and Tsunami Zone

Existing Conditions. According to Panel Number 150003 0161C of the Flood Insurance Rate Map, August 3, 1998, prepared by the United States Federal Emergency Management Agency, the subject parcel is situated in Flood Zone C. Flood Zone C represents areas of minimal flooding. The subject parcel is located approximately 6.5 miles from the shoreline and is not in a tsunami inundation zone (**See:** Figure No. 7, "Flood Insurance Rate Map").

Potential Impacts and Mitigation Measures. The subject property is not located within a flood hazard area nor is it situated within the limits of tsunami inundation. As such, no adverse impacts from flooding or tsunami inundation are anticipated. During the Building Permit process, the applicant will be required to comply with Maui County Code Chapter 20.08, Soil Erosion and Sediment Control.

4. Terrestrial Biota (Flora and Fauna)

Existing Conditions. The project site is currently developed and has been subject to various ground disturbance activities over the duration of the 177 years since the school's establishment. The vegetation found on the site includes *haole koa*, various grasses, weeds and trees. Feral mammals typically found in this area include mongoose, cats, rats, and mice. Avifauna commonly found in this area includes the common mynah, spotted dove, barred dove, and house finch.

Potential Impacts and Mitigation Measures. There are no known significant habitats of rare, endangered or threatened species of flora and fauna located on the subject property, as it has already been disturbed by prior development. Therefore rare, endangered, or threatened species of flora and fauna will not be impacted by the proposed project.

5. Air Quality

Existing Conditions. Air quality refers to the presence or absence of pollutants in the atmosphere. It is the combined result of the natural background and emissions from many pollution sources. The impact of land development activities on air quality in a proposed development's locale differs by project phase (site preparation, construction, occupancy) and project type. In general, air quality in the West Maui area is considered relatively good. Non-point source emissions (automobile) are not significant to generate a high concentration of pollutants. The relatively high quality of air can also be attributed to the region's exposure to wind, which quickly disperses concentrations of emissions. West Maui is currently in attainment of all pollutant criteria established by the Clean Air Act, as well as the State of Hawaii Air Quality Standards (Hawaii State Department of Health, 2007).

Potential Impacts and Mitigation Measures Air quality impacts attributed to the proposed project could include dust generated by short-term construction related activities. Site work such as grading and building construction, for example, can generate airborne particulate. Adequate dust control measures that comply with the provisions of Hawaii Administrative Rules, Chapter 11-60.1, "Air Pollution Control,"

Section 11-60.1-33, Fugitive Dust, will be implemented during all phases of construction. Examples of some of these measures may include:

- Planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing material transfer points and on-site vehicular routes, and locating potentially dusty equipment in areas of least impact.

- Providing an adequate water source on site prior to start-up of construction activities so that the project site can be regularly sprinkled to keep dust down.

- Onsite dirt piles or other stockpiled particulate matter will be covered, and/or wind breaks installed, and water and/or soil stabilizers employed to reduce wind blown dust emissions.

- Traffic speeds will be limited to 15 miles per hour or less on all unpaved surfaces and access will be restricted to reduce unnecessary vehicle traffic.

- Landscaping and covering of bare areas, including slopes, beginning with the initial grading phase.

- Installation of temporary silt screens and an 8- to 12-feet high geo-textile dust fence around the perimeter of the project site.

- Controlling of dust from shoulders, project entrances, and access roads.

- Providing adequate dust control during weekends, after hours, and prior to daily start-up of construction activities. Controlling of dust from debris hauled away from project site.

The project is not expected to increase the volume of traffic in the region, which would increase vehicular emissions such as carbon monoxide. Thus, the proposed project is not anticipated to be detrimental to local air quality.

6. Noise Characteristics

Existing Conditions. The noise level is an important indicator of environmental quality. In an urban environment, noise is due primarily to vehicular traffic, air traffic, heavy machinery, and heating, ventilation, and air-conditioning equipment. Ramifications of various sound levels and types may impact health conditions and an area's aesthetic appeal. Noise levels in the vicinity of the project are generally low, with traffic noise from Honoapiilani Highway being the predominant source of background noise.

Potential Impacts and Mitigation Measures. Development at the site could generate some short-term adverse impacts during construction activities. Noise from heavy equipment, such as bulldozers, front-end loaders, and material-carrying trucks and trailers, would be the dominant source of noise during the construction period. To minimize construction related impacts to the surrounding neighbors, construction activities will be limited to normal daylight hours, and activities associated with the construction phase of the project will comply with the Department of Health's Administrative Rules, Chapter 11-46, "Community Noise Control." In the longer-term, the proposed project should not significantly impact existing noise conditions in the area, as there is not expected to be an increase in traffic generated by the project (**See:** Appendix B, "Traffic Impact Assessment Letter").

7. Archaeological/Historical Resources

Existing Conditions. On February 9, 2009, Scientific Consultant Services, Inc. (SCS) archaeologist Michael Dega, Ph.D. conducted a field inspection of the subject property. The survey located a small number of historic features associated with prior use of the project site for school employee housing (**See:** Appendix C, Archaeological Field Inspection).

Potential Impacts and Mitigation Measures. Pedestrian survey did not indicate any significant surface cultural features or likely areas for subsurface testing. It is the estimation of the Project Archaeologist, based on the Field Inspection, that any proposed undertaking in the project area would not have an adverse impact on any significant historic or cultural sites. Nevertheless, due to the historical significance of the Lahainaluna High School campus, archaeological monitoring will take place during any ground-disturbing activities associated with building construction. Monitoring will be subject to the review and approval of an Archaeological Monitoring Plan by the Department of Land and Natural Resources, State Historic Preservation Division (SHPD). (**See:** Appendix C, Archaeological Field Inspection).

8. Cultural Impact Assessment

Existing Conditions. Archival research, along with the conclusions of the Archaeological Field Inspection discussed above, indicates that while the Lahaina area is rich in Native Hawaiian cultural history, construction at the project site is not likely to impact cultural artifacts or practices.

Lahaina was an area favored by the *ali'i*, functioning for a time as the capital of the Hawaiian Kingdom, until Kamehameha III moved the capital to Honolulu in 1855. During this time, the Lahaina area thrived as a center for the sandalwood trade. Coastal

lands in the Lahaina area provided easy access to on- and off-shore fishponds, and some of the most extensive and fertile wet taro lands on Maui were in the Lahaina area (Kirch and Sahlins 1992 Vol. 1:19).

The school was first established on the site as Lahainaluna Seminary, on land donated to missionaries in the 1820s by Hoapili, Governor of Maui, and his wife, Kalakua, for the purpose of establishing a literate ministry of Hawaiian men. The site has been in continuous use as a school since that time, and therefore any historical and/or cultural significance attached to the site would arguably be associated with the school itself.

Informant Interviews. The State Historic Preservation Division (SHPD) and the Office of Hawaiian Affairs (OHA) were consulted in order to seek persons and information associated with native Hawaiian cultural beliefs, practices, and resources occurring at the site of the proposed project. An interview was conducted with Reverend Earl Kukahiko, an individual knowledgeable about and familiar with the project area and its history. The interview was conducted on April 15, 2009 by Chris Hart & Partners. A summary of the interview is presented below.

Earl Kukahiko was born in 1930, in Honokohua, Maui, to Reverend John Kukahiko, originally of Makena, and Daisy Kukahiko, originally from Pa'ia. Reverend John Kukahiko received his seminary training as a boarder at Lahainaluna when the school still functioned as Lahainaluna Seminary, and graduated in 1910. Reverend John Kukahiko was the minister at a plantation church in Honokohua, where Earl spent most of his childhood.

Reverend Earl Kukahiko has a long-standing association and familiarity with this project site, the surrounding environs, and associated cultural issues. He arrived as a boarder at Lahainaluna High School in 1947, at which time the school was a boys' only school. After graduating, he stayed on, and worked as school's Farm Foreman from 1952 through the early 1980s. His wife worked as cafeteria manager at the school for much of this same time period. In total, Reverend Kukahiko was at the school for 34 years before receiving his license as a minister and accepting a position at Waiola Church in Lahaina. Today, he still visits the campus often. He stated that frequently he is the first person contacted when construction or other activities uncover previously unknown infrastructure (e.g. cesspools, piping), because of his historical knowledge of the site.

Reverend Kukahiko recalled many memories of his time at Lahainaluna High School. During his time spent in the dormitories in the late 1940s, the boarding program housed approximately 120 boarders out of a total student population of roughly 400, which fostered a very close-knit community of students and teachers on campus. Farming operations at the time were far more extensive than today, as Lahainaluna was a

technical school. Boarders worked in the vegetable gardens, and tending pigs, chickens, and cows. The school at that time operated a slaughterhouse and a dairy, as well as a hatchery that was housed in the basement of the Hale Pa'i building. Reverend Kukahiko spoke about some of the young men from Lahainaluna High School who later enlisted in military service, and emphasized that the lessons of self-sufficiency they learned at Lahainaluna helped them in the military.

Reverend Kukahiko suggested that undiscovered cultural or archaeological sites probably do not underlie the project area. A cemetery dating from the time of the missionaries lies uphill from the developed area of the campus; however, its location is quite distant from the proposed cafeteria site. Reverend Kukahiko recalled that the now-undeveloped area where the project site is located was once the site of cottages for teachers and school staff, which he estimated were demolished in the 1960s. He further noted that during his early days at the school, the project area was one among several areas on the campus used occasionally for the construction of imu to cook pigs that were slaughtered in the school's slaughterhouse. He was unaware of any ongoing traditional or cultural activities in the project area, and suggested that the main item of cultural and historic significance at the site is the School itself.

Potential Impacts and Mitigation Measures. The Lahaina District as a whole is noted as being significant from a cultural perspective; however, the area which includes the project site has been significantly altered by existing development for the past 178 years. Lands surrounding the campus have been subject to disturbance associated with sugar cultivation. There are no known traditional beach and mountain access trails on the subject property nor did the CIA or Archaeological Field Assessment locate such features. In addition, archaeological field work, historical research, and personal interviews with individuals familiar with the site indicate that, other than Lahainaluna High School itself, there are no historic properties or significant cultural or religious activities which will be adversely impacted by the proposed project. The proposed action is not expected to have an adverse impact upon native Hawaiian cultural beliefs, practices, and resources.

9. Visual Resources

Existing Conditions. The project site overlooks Lahaina Town and the surrounding landscape. Scenic resources to the east, or *mauka* of the site, include the West Maui Mountains. To the west, or *makai*, lie views of the Pacific Ocean and the Island of Lana'i. To the north and south of the Lahainaluna High School Campus, extending generally parallel to the coastline, are broad expanses of vacant land formerly planted in sugarcane (**See:** Figures No. 6.1 - 6.5, "Site Photographs" and No. 10 "Coastal Scenic Resources Map").

Potential Impacts and Mitigation Measures. The proposed project lies at the *makai* limit of urban development in the area and does not encroach into any significant view corridors toward the ocean. As the project is internal to the Lahainaluna High School campus, it will also not impact *mauka* views relative to existing conditions. Furthermore, the building and landscape planting will be designed to integrate the project with the visual character of the surrounding campus. The proposed project therefore is not anticipated to significantly impact public view corridors, or the visual character of the site and its immediate environs (**See:** Figures No. 3.1-3.2, "Site Photographs").

B. SOCIO-ECONOMIC ENVIRONMENT

1. Population

Existing Conditions. The Island of Maui experienced relatively strong population growth during the past decade with the 2000 resident population reaching 117,644, a 29 percent increase over the 1990 population of 91,361. Population growth is expected to continue as the resident population for the year 2020 is projected to reach 160,090, an increase of 36 percent (Maui County Data Book, 2007).

From 1990 to 2000, the West Maui region experienced a similar growth rate as evidenced by a 23 percent increase in its resident population. During this period, the population increased from 14,574 in 1990 to 17,967 in 2000. For the year 2020, the resident population in the region is projected to increase to 25,431, a 41 percent gain over the 2000 population (SMS Research and Marketing Services, Inc., June 2002).

Potential Impacts and Mitigation Measures. The parcel is the site of the existing Lahainaluna High School. The proposed action does not involve a housing component nor will it generate a new or secondary demand for housing; therefore, it is not anticipated to increase the population of the immediate area or the County of Maui.

2. Economy

Existing Conditions. The visitor industry is a major component of the island's economy and the dominant economic force in the West Maui region. Visitor accommodations and facilities are situated in the town of Lahaina and the outlying areas of Kaanapali, Honokowai, Kahana, Napili, and Kapalua. The Kaanapali and Kapalua Resorts are popular visitor destinations in West Maui, while the historic town of Lahaina is the visitor, service, commercial, and residential center of the region. Agriculture also plays an important role in the region's economy. Maui Pine's pineapple fields occupy

portions of the intermediate uplands between Honokowai and Honolua, while small-scale diversified agriculture (e.g., coffee, seed corn) occurs on lands *mauka* of Honoapiilani Highway in the area between Kaanapali and Honokowai.

Potential Impacts and Mitigation Measures. On a short-term basis, the development of the proposed project will support the economy via direct and indirect construction-related employment, as well as through the purchase of construction materials and building-related services. In the long term, the proposed action could create one to two new part-time jobs as enrollment increases; therefore, the proposed action will generate a small but positive overall economic impact in the long term.

C. PUBLIC SERVICES

1. Recreational Facilities

Existing Conditions. The Maui Department of Parks and Recreation (DPR) operates and maintains a total of 19 parks in the West Maui region, as well as several community recreational facilities such as the Lahaina Civic Center, Lahaina Aquatic Center, and the Lahaina Recreation Center. In addition, privately-owned golf courses and tennis courts in the Kaanapali and Kapalua Resorts are open to the public.

Potential Impacts and Mitigation Measures. The proposed project will not have a significant impact upon recreational facilities nor will it trigger any County requirements for park dedication or assessment fees pursuant to Section 18.16.320, *Parks and Playgrounds*, Maui County Code.

2. Police and Fire Protection

Existing Conditions. The Maui Police Department is responsible for the preservation of the public peace, prevention of crime, and protection of life and property. Headquartered at the Lahaina Civic Center, the Department's Lahaina Patrol District is one of six such districts in Maui County. In addition to regular patrol duties, the Lahaina Patrol District has programs for a bike detail, citizen's patrol, parks patrol officer, school resource officer, parking enforcement officer, and visitor- and community-oriented policing. The district also has its own criminal investigation division.

The mandate of the Maui County Department of Fire and Public Safety is to protect life, property, and the environment from fires, hazardous material releases and other life-threatening emergencies. The department has 14 stations throughout the County

including ten stations on the island of Maui. In West Maui, the department has two stations, one in Napili and another at the Lahaina Civic Center.

Potential Impacts and Mitigation Measures. The proposed project is not anticipated to have an impact on the current service area limits for police and fire protection. Fire flow requirements for the project will comply with County fire code standards.

3. Schools

Existing Conditions. The State Department of Education (DOE) is responsible for several public schools in the West Maui area. Located in the town of Lahaina, these schools include King Kamehameha III Elementary School, Princess Nahienaena Elementary School, Lahaina Intermediate School, and Lahainaluna High School.

Potential Impacts and Mitigation Measures. The proposed project is not a population generator, but rather will serve both existing and increased future student populations. It will therefore have a positive impact on existing educational facilities, programs, and services.

4. Medical Facilities

Existing Conditions. Located in Wailuku, the approximately 200-bed Maui Memorial Medical Center provides acute and emergency health care services for the County of Maui. Various private care physicians and clinics in the West Maui region also provide medical care and out patient services. In addition, American Medical Response (AMR) provides 24-hour emergency medical service through ten ambulance facilities stationed throughout the County, including eight facilities on the island of Maui. Of the two ambulance facilities located in West Maui, one facility is situated in Lahaina, while the other facility is located in Napili.

Potential Impacts and Mitigation Measures. The proposed project is will not generate a demand for new or additional health care facilities or services or have an adverse impact upon existing medical facilities and emergency medical response.

5. Solid Waste

Existing Conditions. County landfills located in Hana, Central Maui, Lanai, and Molokai accept residential and commercial solid waste for disposal. In addition to the disposal of solid waste, the Central Maui Landfill, which is located near Puunene, contains recycling and composting facilities and also accepts green waste and used

motor oil. In the Lahaina area, a solid waste transfer station at Olowalu receives self-hauled residential refuse for transfer to the Central Maui Landfill. The Maui Demolition and Construction Landfill, a commercial facility near Maalaea, accepts construction and demolition waste for disposal. Lahainaluna High School contracts with a private waste hauler through a competitive bid process for disposal of solid waste generated at the school. In addition, a separate private contractor collects and disposes of grease collected in the Cafeteria grease interceptors.

Potential Impacts and Mitigation Measures. During the construction of the proposed project, cleared vegetation will be transported to the County's green waste recycling facility at the Central Maui Landfill for disposal. Construction waste will be hauled to the Maui Demolition and Construction Landfill for disposal. After build out, waste collection and disposal will continue to be handled by the private waste collection services currently serving the LHS campus. Procedures for the long-term disposition of recyclable materials will be evaluated by the Applicant for implementation if feasible. Since the proposed Cafeteria will be serving the existing student population, there is not expected to be an increase in waste generated, and therefore no adverse impacts are anticipated. From a long-range perspective, waste generated by the proposed project is also not expected to have an adverse effect upon solid waste collection and disposal services and facilities.

D. INFRASTRUCTURE

1. Water

Existing Conditions. The Maui Department of Water Supply (DWS) provides public water service for the West Maui region. In addition to the County, private water utilities such as the Kapalua Water Company and the Hawaii Water Service Company provide domestic water service for the Kapalua Resort and Kaanapali Resort, respectively. A 16-inch DWS waterline runs from the 300,000 gallon Kanaha Tank through the Lahainaluna campus. Existing waterlines servicing the Lahainaluna High School campus include 6-inch, 8-inch, and 12-inch transmission and distribution lines connecting to the County Water System.

Lahainaluna High School was formerly served by a private water system drawing from Kanaha Stream. In 1995, the State of Hawaii, Department of Education (DOE) and the Maui County Board of Water Supply entered into an agreement whereby a treatment plant and transmission lines were constructed at the Kanaha Stream surface intake, for connection to the County Water System as well as the Lahainaluna High School water

system. In exchange for the use of State lands for construction of the treatment and transmission system, the School receives up to 100,000 gallons per day (gpd) of potable water from the County system. Any potable water use beyond 100,000 gpd is charged to the DOE at prevailing Board of Water Supply rates (**See:** Appendix F, Water Connection Information). Existing potable water consumption at Lahainaluna High school averages approximately 92,500 gallons per day.

Potential Impacts and Mitigation Measures. The DOE enrollment projection for LHS for the year 2014 (which is as far out as the school projects) is 997, and the new building will be functionally replacing an existing building. Therefore, domestic water demand is not expected to increase significantly as a result of the proposed action, since the proposed action will not by itself generate an increase in enrollment, employment or associated water demand at the school. The proposed new cafeteria building is intended to accommodate a currently underserved existing student enrollment, rather than any anticipated increase in student population at the school. The size of the proposed cafeteria was determined according to a conceptual "Design Enrollment" (DE) provided in the DOE Facility Assessment and Development Schedule (FADS), dated January 2006. As discussed in Section II.E above, the LHS Cafeteria has been scaled back from the conceptual baseline defined by the DOE FADS for the Design Enrollment of 1,400. The kitchen, for example, is only 70% as large as the FADS call for. The overall cafeteria building is only 75% as large as the FADS guidelines specify.

Actual domestic water demand will be determined according to guidelines of the Department of Water Supply as part of the building permit application process; however, the proposed project is not expected to significantly impact water supply infrastructure.

2. Sewer

Existing Conditions. The LHS campus is currently served by the West Maui public sewer system, operated and maintained by the County of Maui. The collection, transmission, treatment, and disposal of the sewage fall under the jurisdiction of the Wastewater Reclamation Division (WWRD), a branch of the recently established Maui Department of Environmental Management (DEM). The WWRD operates a network of sewer lines and pump stations that conveys sewage to the Lahaina Wastewater Reclamation Facility at Honokowai for treatment and disposal. R-1 effluent, a by-product of the facility's treatment process, is used for golf course irrigation at the Kaanapali Resort. The Lahaina Wastewater Reclamation Facility has a design capacity of 9.0 million gallons per day (gpd). Current usage is approximately 5.0 million gpd, with an additional 2.0 million gpd already allocated to proposed future projects.

Potential Impacts and Mitigation Measures. The proposed project involves connection to the existing public sewer system. Wastewater flow for the proposed project is projected at 3480 gpd. The Proposing Agency acknowledges that sewer assessment fees may be required for treatment plant expansion costs and for funding (on a pro-rata basis) any necessary offsite improvements to the collection system and pump stations.

Detailed wastewater contribution calculations will be submitted to the DEM in conjunction with the building permit review and approval process. Because of its relatively limited scope and scale, the proposed project is not expected to have an adverse impact upon County wastewater collection systems and treatment facilities.

3. Drainage

Existing Conditions. Storm runoff to the east of the Industrial Arts Building, *mauka* of the cafeteria site, is intercepted by the roadway/driveway leading to the Industrial Arts Building. The road slopes toward the north and discharges the runoff either into Kanaha Gulch or into a drain inlet fronting the groundskeeper's cottage. The drain inlet discharges into Kanaha Gulch.

Runoff from the new cafeteria site flows overland down to Lahainaluna Road to a drain inlet located across from the driveway leading to the existing cafeteria. This drain inlet connects to the school's drainage system which discharges into the Lahainaluna Ditch. The drainage area is 3.08 acres with a runoff flow rate of 11.23 cfs. (**See:** Appendix D, Preliminary Drainage Report).

Potential Impacts and Mitigation Measures. The storm runoff will be separated into three drainage areas. Runoff from the north side of the new cafeteria will flow overland to Lahainaluna Road and combine with flows from the loading area including the kitchen roof and the portion of the new cafeteria roof that slopes to the west. This flow will follow the existing drainage pattern path down to the existing drain inlet. The drainage area is 1.34 acres with a flow rate of 5.07 cfs.

The second drainage area will collect storm runoff generated between the Industrial Arts Building and the new cafeteria including roof runoff that slopes to the east and to the south. The entry plaza and the accessible ramp areas are included in this drainage area. The drainage area is 0.59 acres with a flow of 3.37 cfs. This runoff will receive treatment to remove 80% of the total suspended solids (TSS) for a particle size of 110 microns and will also remove petroleum products.

The third drainage area is the area to the south of the Industrial Arts Building that is above the existing cafeteria. Offsite runoff will be collected into a drain inlet and will bypass the treatment system and be discharged back into the schools drainage system. This drainage area is 1.15 acres with a flow of 4.62 cfs. The total calculated flow due to the improvements is 13.06 cfs. This exceeds the predevelopment flow of 11.23 cfs by 1.83 cfs. To negate the increase in runoff due to the development, a detention system will be utilized to reduce the flows from the second drainage area to predevelopment conditions.

The detention system will consist of two 60-inch High Density Polyethylene (HDPE) pipes spaced five feet apart and connected on each end with concrete manholes. The outlet for the detention system consists of a 6-inch pipe with a 12-inch overflow pipe. The outflow pipe diameter was selected by comparing entrance control losses for various sizes of drain pipes, such that the outflow from the manhole will not exceed 1.99 cfs. While this detention system was designed to be low maintenance, debris and other trash could clog the pipes. Manhole openings on the detention structures will allow access for debris removal.

The treatment for water quality control proposed for the drainage improvements is a flow-through based, hydrodynamic separation system. The system utilizes a combination of vortex motion and flow control to remove sediment, oil and debris from the storm runoff. The water quality control facilities will be installed within Lahainaluna Road and will remain under the ownership of the Department of Education (**See:** Appendix D, Preliminary Drainage Report).

Examples of BMPs for controlling soil erosion and sedimentation from site runoff during the project's construction phase include, but are not limited to the following:

- Clearing shall be kept to the minimum necessary for equipment operation.
- Construction shall be sequenced to minimize the time of exposure of cleared surface areas.
- Stabilization shall be accomplished by protecting areas of disturbed soils from rainfall and runoff by use of structural controls such as PVC sheets, geotextile filter fabric, berms or sediment basins, or vegetative controls such as grass seeding and/or hydro-mulching.
- All slopes and grassed areas shall be graded as soon as final grades have been established. Grading to final grade shall be continuous, and any area in which work has been interrupted, delayed or exposed for more than 15 days shall be grassed in order to prevent dust, erosion, and silt runoff. Areas with imported

soils shall be grassed not more than 5 working days after final grades have been established.

- Temporary erosion controls shall not be removed before permanent erosion controls are in place and established.

- All control measures shall be checked and repaired as necessary (e.g., weekly, during dry periods, and within 24 hours after any rainfall event of 0.5 inches or greater within a 24-hour period). During prolonged rainfall, daily inspection will be required. The contractor shall maintain records of checks and repairs to structural and vegetative controls.

4. Roadways and Traffic

Existing Conditions. The subject parcel is accessed from Lahainaluna Road, which is connected to Honoapiilani Highway. Honoapiilani Highway, the main arterial connecting the West Maui region with the rest of the island, is owned and maintained by the State of Hawaii. Lahainaluna Road is maintained by the County of Maui (**See:** Figure No. 8, "Concept Site Plan").

Potential Impacts and Mitigation Measures. No additional students or employees are anticipated as a result of expanding the cafeteria at this time, and the cafeteria will not be open to persons from off-campus. Thus, there will be no change to existing access and egress traffic patterns of the LHS campus, and any changes to traffic and roadway facilities will be confined to within the school campus

The proposed action will not generate any additional vehicular trips, will not require changes to traffic patterns within or adjacent to the school campus, and will not require any roadway improvements. Therefore, no traffic impacts are anticipated as a result of expanding the LHS cafeteria (**See:** Appendix B, Traffic Impact Assessment Letter).

5. Electrical and Telephone

Existing Conditions. Maui Electric Company and Hawaiian Telcom provide electrical and telephone service to the West Maui region. In the vicinity of the project site, power and phone lines are placed on overhead utility poles along the south side of Lahainaluna Road.

Potential Impacts and Mitigation Measures. The proposed action will not produce additional demand for existing telephone and electrical services.

IV. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES, AND CONTROLS

A. STATE LAND USE LAW

The rules of the State Land Use Commission are set forth in Chapter 205, HRS. These rules establish four land use districts in the State of Hawaii into which all lands in the State are placed: Urban, Rural, Agricultural, and Conservation. The subject property is located in the State Urban District (**See**: Figure 3, State Land Use Map).

Analysis: The proposed public/quasi-public use of the subject parcel is a permissible land use in the State Urban District. The LHS campus is located in an area consisting of medium-density residential development along with agricultural and open space uses. The proposed action will not alter the general character of the immediate area, as it involves the construction of a school cafeteria on a previously developed school campus.

B. GENERAL PLAN OF THE COUNTY

The General Plan of the County of Maui (1990 Update) provides long-term goals, objectives, and policies directed toward improving living conditions in the County. As stated in the Maui County Charter:

> *"The purpose of the General Plan is to recognize and state major problems and opportunities concerning the needs and the development of the County and the social, economic and environmental effects of such development and set forth the desired sequence, patterns and characteristics of future development."*

The General Plan identifies five major themes as follows:

1. Protect Maui County's agricultural land and rural identity.
2. Prepare a directed and managed growth plan.
3. Protect Maui County's shoreline and limit visitor industry growth.
4. Maintain a viable economy that offers diverse employment opportunities for residents.
5. Provide for needed resident housing.

The following General Plan Objectives and Policies are applicable to the proposed project:

I. POPULATION, LAND USE, THE ENVIRONMENT AND CULTURAL RESOURCES

A. Population

Objective No. 1.: To plan the growth of resident and visitor population through a directed and managed growth plan so as to avoid social, economic and environmental disruptions.

Policies:

(b.) Balance population growth by achieving concurrency between the resident employee work force, the job inventory created by new industries, affordable resident/employee housing, constraints on the environment and its natural resources, public and private infrastructure and essential social services such as schools, hospitals, etc.

Analysis: The proposed action involves the upgrading of an existing school facility to both adequately serve an existing student population as well as provide for an anticipated increase in enrollment with future population growth in West Maui.

V. SOCIAL INFRASTRUCTURE

D. Education

Objective No. 1.: To provide Maui residents with continually improving quality educational opportunities which can help them better understand themselves and their surroundings and help them realize their ambitions .

Policies:

(e.) Support the State in its efforts to recruit quality teachers and develop expanded and upgraded facilities in a timely manner.

Analysis: The proposed action will provide an upgraded facility to adequately serve both existing and future student populations. As discussed in Section II.D above, the DOE Facility Assessment and Development Schedule (FADS), dated January 2006, calls for a new cafeteria at LHS of approximately 18,776 net usable square feet.

C. WEST MAUI COMMUNITY PLAN

Maui County has adopted nine community plans. Each community plan examines the conditions and needs of the planning region and outlines objectives, policies, planning standards and implementing actions to guide future growth and development in accordance with the Maui County General Plan. Each community plan serves as a relatively detailed agenda for implementing the broad General Plan themes, objectives and policies.

The Lahainaluna High School campus is located in the West Maui Community Plan region and the underlying parcels are designated for Public/Quasi-public use (**See:** Figure No. 4, "Community Plan Map"). The West Maui Community Plan was adopted by Ordinance No. 2476 and went into effect on February 27, 1996.

The following Community Plan objectives and policies are applicable to the proposed action:

SOCIAL INFRASTRUCTURE

Goal: *Develop and maintain an efficient and responsive system of public services which promotes a safe, healthy, and enjoyable lifestyle, and offers opportunities for self improvement and community well being.*

Education

Objectives and Policies:

1. *Ensure adequate school facilities and educational opportunities within the region.*

2. *Support the improvement and maintenance of existing school facilities.*

Analysis: The proposed action will enable the development of adequate facilities for the existing student enrollment as well as providing improved facilities for future enrollment; hence, it is in line with the policies and objectives of the West Maui Community Plan.

D. MAUI COUNTY ZONING

The subject property is currently zoned Interim District (**See:** Figure No. 5, "County Zoning Map"). Permissible uses in the Interim District as described in Chapter

19.02.030, Maui County Code (MCC), "Permitted Property Uses," include, but are not limited to:

4. *Day care nurseries, museums, churches, libraries, kindergartens, elementary schools, intermediate schools, high schools and universities;*

5. *Publicly owned buildings;*

Analysis: Pursuant to MCC Section 19.02.020, the Interim District was established for the purpose of providing interim regulations pending the formal adoption of a comprehensive zoning ordinance and map which are deemed as necessary in order:

"A. *To encourage the most appropriate use of land;*

B. To conserve and stabilize the value of property;

C. To prevent certain uses that will be detrimental to existing uses;

D. To promote the health, safety and the general welfare of the respective districts. (Prior code § 8-2.2)"

Construction of the proposed cafeteria building represents a permitted use within the Interim district; is an appropriate use of the land given the applicable State Land Use and Community Plan designations; and is an action that serves to promote the general welfare of the West Maui region. Therefore, the proposed project meets the intent and purpose of the Maui County Interim Zoning District.

The subject property is not located within the limits of Lahaina's Historic District. As such, the proposed action is not subject to historic district regulations which stipulate that the exterior of all new buildings constructed within these districts must be consistent with the architectural styles for the districts so that the general design character of the districts is maintained.

V. ENVIRONMENTAL ASSESSMENT SIGNIFICANCE CRITERIA

Since the proposed project involves the use of State lands and funds, an Environmental Assessment is required by Hawaii Revised Statutes (HRS), Chapter 343. A finding of no significant impact (FONSI) is anticipated and therefore an Environmental Impact Statement (EIS) will not be required for the proposed action. In accordance with Title 11, Department of Health, Chapter 200 and Subchapter 6, Section 11-200-12, Environmental Impact Statement Rules, and based on the detailed analysis contained within this document, the following conclusions are supported.

1. **The proposed action will *not* result in an irrevocable commitment to loss or destruction of natural or cultural resources.**

   Analysis. As documented in this report, the proposed project will not involve the loss or destruction of any natural or cultural resource (**See**: Section III).

2. **The proposed action will *not* curtail the range of beneficial uses of the environment.**

   Analysis. The subject property is within the State's Urban District and the proposed use is allowed by the existing Community Plan and County Zoning designations. There are no unique or important environmental or natural resources on the property, the use of which would be impacted by the project. Thus, the proposed action will not curtail the range of beneficial uses of the environment.

3. **The proposed action will *not* conflict with State or County long-term environmental policies and goals as expressed in Chapter 344, HRS, and those which are more specifically outlined in the Conservation District Rules.**

   Analysis. Development of the proposed project will take place in compliance with the State's long-term environmental goals. As documented in this report, appropriate mitigation measures will be implemented to minimize the potential for negative impacts to the environment, including near and off-shore coastal waters. The project will not have any impact on flora and fauna, and is not expected to have a negative impact on archeological or cultural resources.

4. **The proposed action will *not* substantially affect the economic or social welfare and activities of the community, county or state.**

Analysis. Short-term economic impacts can be expected to result from the increase in activity associated with construction at the site. In the long term, the development is not expected to create additional full-time jobs. Therefore, the proposed action is not expected to have any negative overall impacts on the socio-economic environment (**See**: Section III.B).

5. The proposed action will *not* substantially affect public health.

Analysis. There are no special or unique aspects of the project that will have a direct impact on public health.

6. The proposed action will *not* result in substantial secondary impacts.

Analysis. The proposed project is not a population generator nor does it trigger any Maui County residential workforce housing requirements. Increased activity at the site during the construction phase may result in a marginal increase in traffic and associated noise and air pollution. However, as analyzed in Section III of this report, the increase in the level of these impacts is minimal and with the incorporation of mitigation measures is not anticipated to substantially impact the environment.

7. The proposed action will *not* involve substantial degradation of environmental quality.

Analysis. Mitigation measures will be implemented during the construction phase in order to minimize negative impacts on the environment, especially with regards to construction runoff. Also, the design of the project has incorporated mitigation measures to minimize impacts to nearshore water quality that could arise from an increase in runoff generated on the site as a result of the project (See Section III for a discussion of drainage). Other environmental resources such as endangered species of flora and fauna, air and water quality, and archeological resources will not be significantly impacted by the subject project.

8. The proposed project will not produce cumulative impacts and does *not* have considerable effect upon the environment or involve a commitment for larger actions.

Analysis. The proposed project is internal to the existing Lahainaluna High School campus, and does not involve a commitment for larger action on behalf of the applicant or any public agency. The subject property is designated for urban uses by State, County, and Community Plan land use controls, and as such, is part of the planned future growth of the West Maui region. As described in this report, the project will not significantly impact public infrastructure and services including roadways, drainage

facilities, water systems, sewers and educational facilities. In addition, the project is not a population growth generator and will therefore not produce considerable effect on the environment nor require a commitment for larger actions by governmental agencies.

9. The proposed project will *not* affect a rare, threatened, or endangered species, or its habitat.

Analysis. As described in Section III of this report, there are no rare, threatened, or endangered species of flora and fauna at the project site.

10. The proposed action will *not* substantially or adversely affect air and water quality or ambient noise levels.

Analysis. As described in Section III of this report, there is short-term potential for negative impacts to air or water quality and ambient noise levels related to construction activities. Air, noise and dust impacts will be mitigated through implementation of standard mitigation measures as identified previously in this report. It is not anticipated that the proposed action will create significant long-term impacts to air or water quality and ambient noise levels.

11. The proposed action will *not* substantially affect or be subject to damage by being located in an environmentally sensitive area, such as flood plain, shoreline, tsunami zone, erosion-prone areas, estuary, fresh waters, geologically hazardous land or coastal waters.

Analysis. According to Panel Number 150003 0161C of the Flood Insurance Rate Map, August 3, 1998, prepared by the United States Federal Emergency Management Agency, the subject parcel is situated in Flood Zone C. Flood Zone C represents areas of minimal flooding (**See**: Figure No. 7, "Flood Insurance Rate Map"). The proposed project therefore should not be affected by or have adverse impacts upon its neighbors with regards to flood hazard potential.

12. The proposed action will *not* substantially affect scenic vistas or view planes identified in county or state plans or studies.

Analysis. As discussed in Section III of this report, there will be no significant change in the project's effect on *mauka* or *makai* views. Therefore, the proposed project is not expected to have any significant adverse effects on visual resources. Figures No. 6.1 – 6.5, "Site Photographs," and No. 10, "Coastal Scenic Resources Map," document the project's potential impacts on visual resources.

13. The proposed action will not require substantial energy consumption

Analysis. Given the scope of the project, it is not anticipated that the increase in energy consumption from construction of the proposed Cafeteria will be significant within the context of existing levels of power consumption or vehicular energy usage on the Lahainaluna High School campus, in the region, and on Maui.

VI. FINDINGS AND CONCLUSIONS

This HRS 343 Final Environmental Assessment analyzes the environmental and socio-economic impacts associated with the construction of a new Cafeteria Building , along with related site improvements, at the Lahainaluna High School campus.

The proposed action is not anticipated to result in significant environmental impacts to surrounding properties, near shore waters, natural resources, and/or archaeological and historic resources on the site or in the immediate area. Public infrastructure and services including roadways, sewer and water systems, medical facilities, police and fire protection, parks, and schools, are adequate to serve the project and are not anticipated to be significantly impacted by the proposed project. The proposed project is not anticipated to impact public view corridors and is not anticipated to produce significant adverse impacts upon the visual character of the site and its immediate environs.

The proposed action supports the existing mixture of residential, public/quasi-public and agricultural uses that characterize the immediate area. The subject parcel is located in the State Urban District, is designated for Public/Quasi-public use by the West Maui Community Plan, and is located in the Maui County Interim Zoning District. As such, the proposed action is consistent with the goals, objectives and policies of the West Maui Community Plan, State Land Use Law, and Maui County Zoning.

In light of the foregoing, the proposed construction of a new Cafeteria Building at Lahainaluna High School is not expected to have a significant impact on County infrastructure or the natural environment, and a Finding of No Significant Impact (FONSI) is warranted.

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3. FIGURES

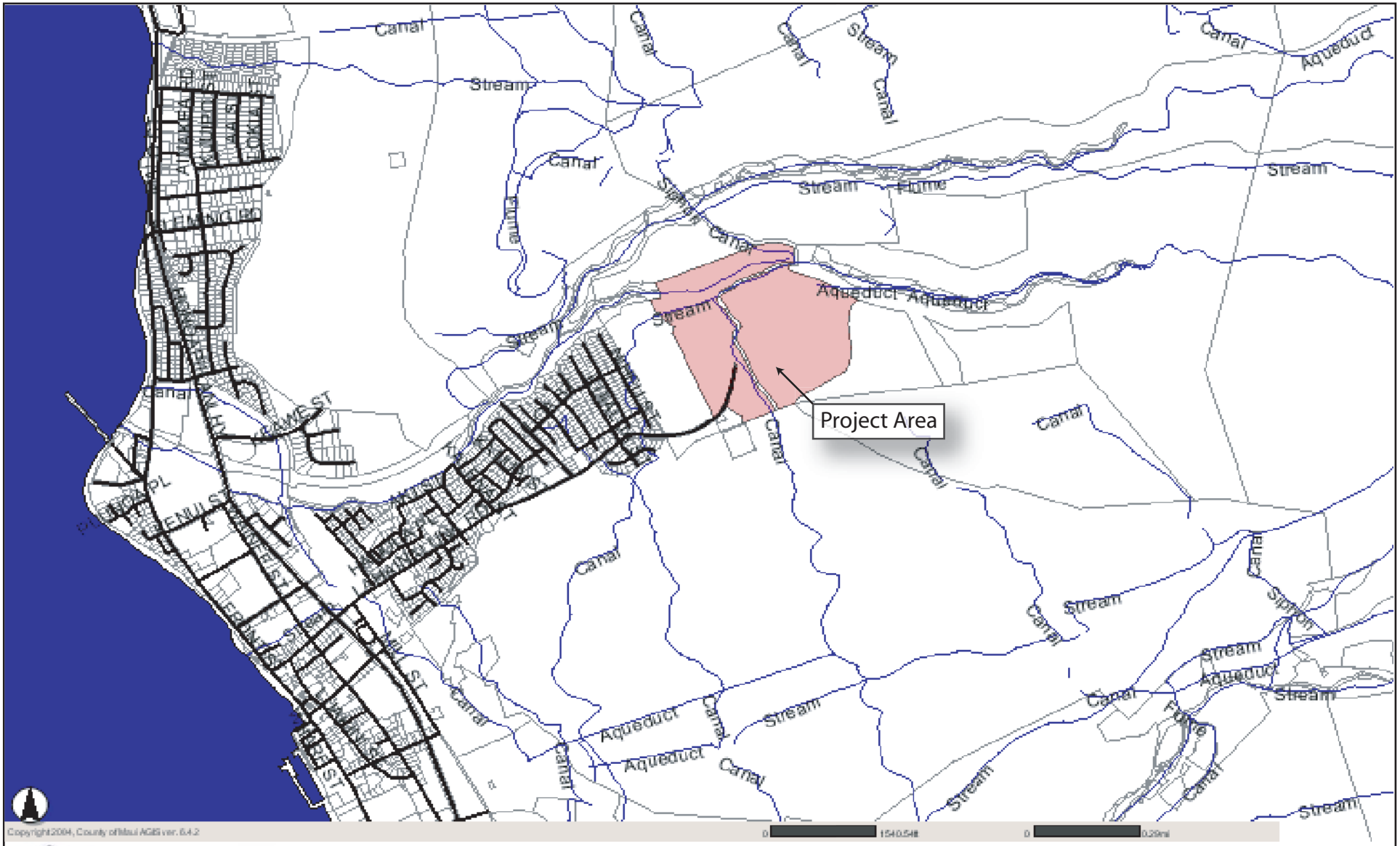


Figure 1.1

Regional Location Map	
Lahainaluna High School Cafeteria Building	CHRIS HART & PARTNERS, INC.

Figure 1.2

Aerial Location Map	CHRIS HART & PARTNERS, INC.
Lahainaluna High School Cafeteria Building	

BACK TO 2-4-6

BACK TO 2-4

BACK TO 2-0

Project Area

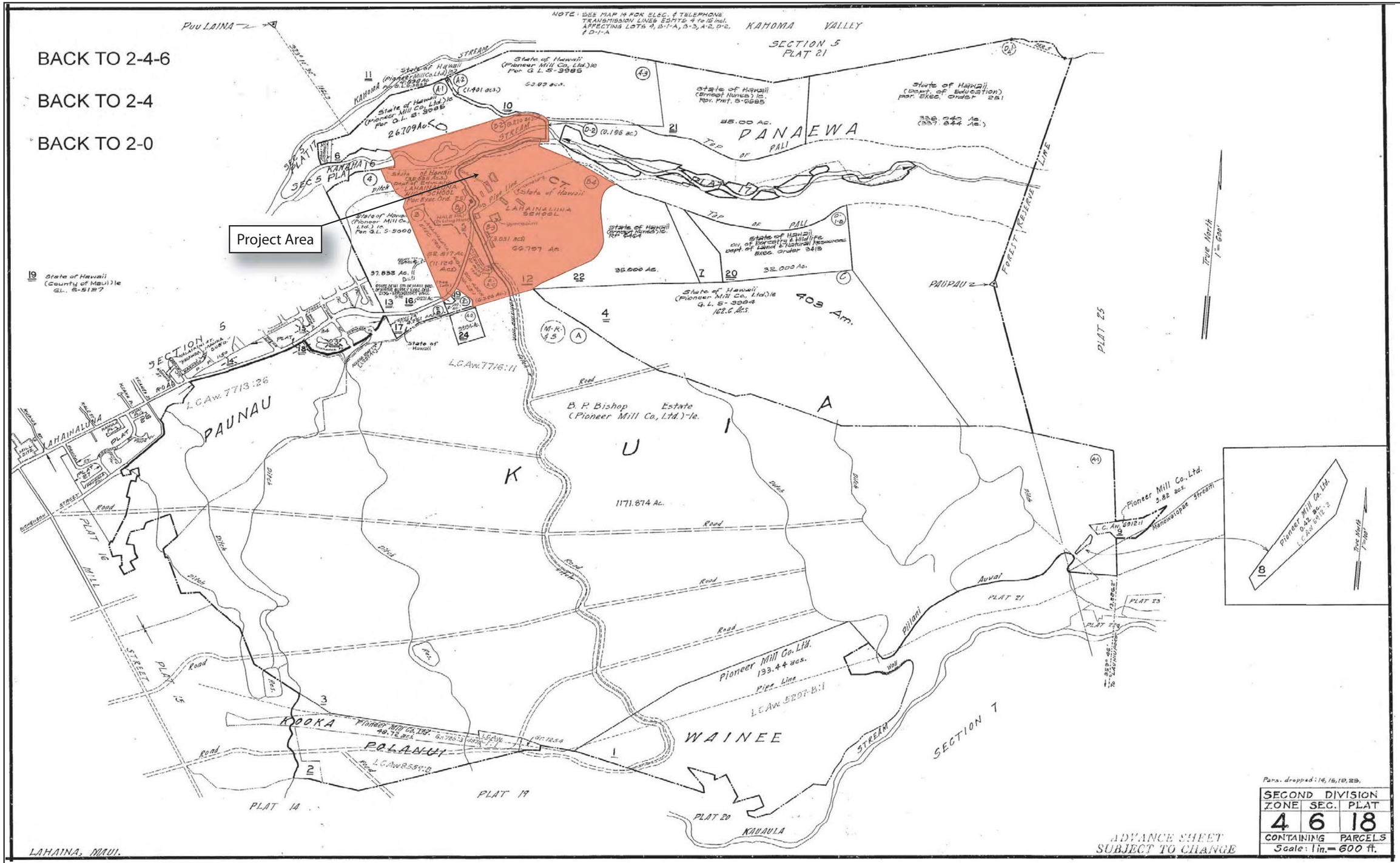


Figure 2

TMK Map

Lahainaluna High School
Cafeteria Building

CHRIS HART & PARTNERS, INC.

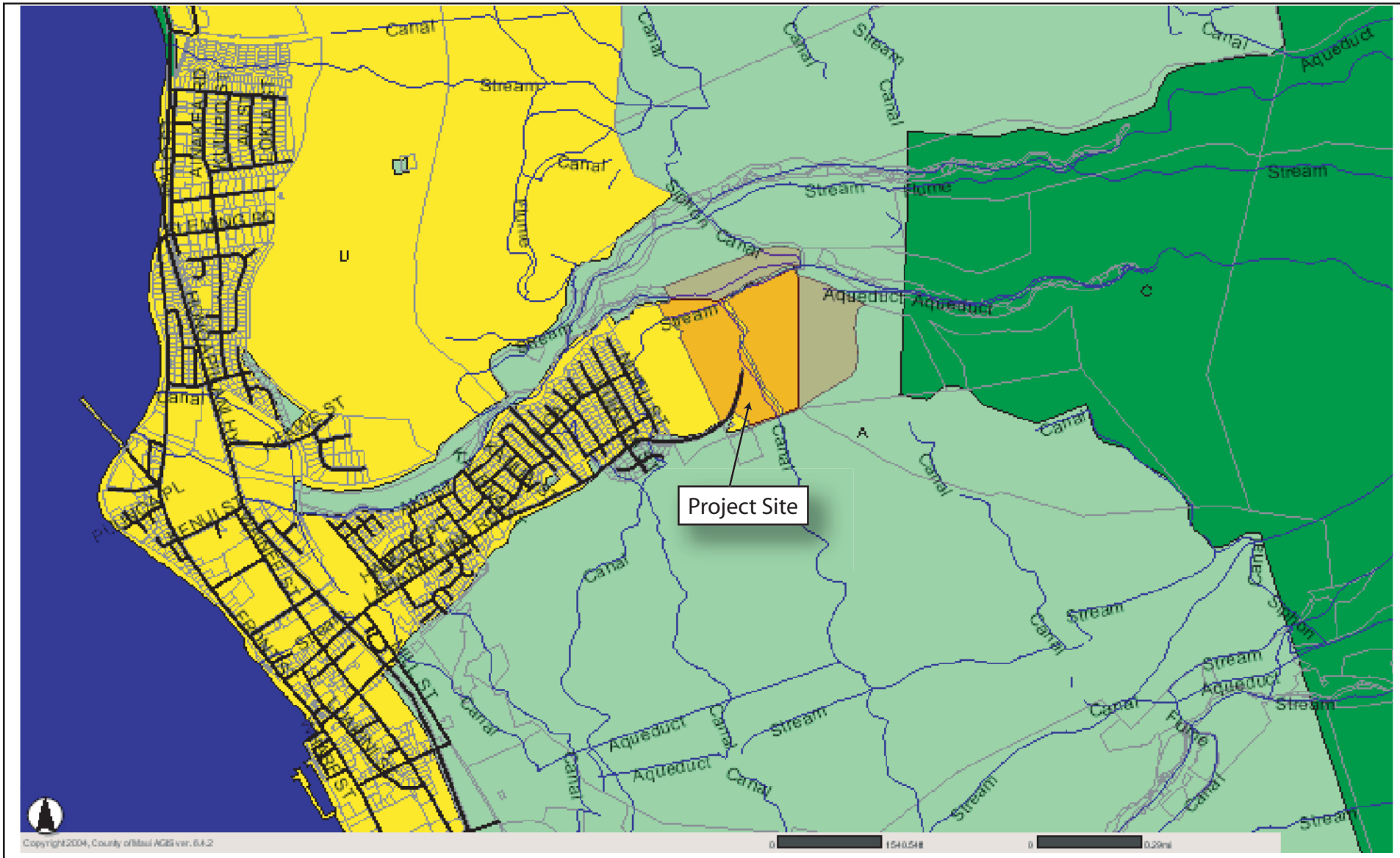
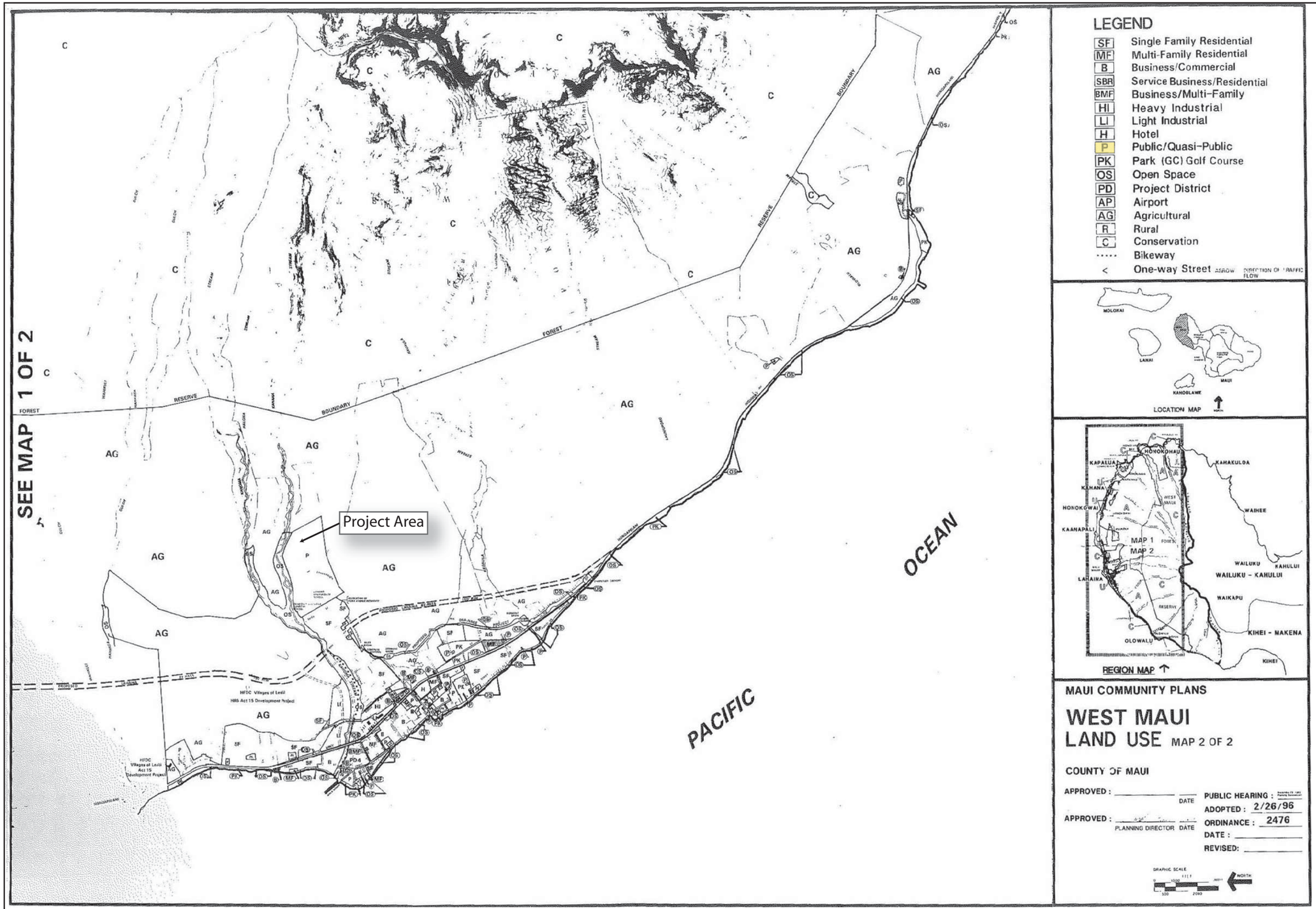


Figure 3

State Land Use Map

Lahainaluna High School
Cafeteria Building

CHRIS HART & PARTNERS, INC.



LEGEND

SF	Single Family Residential
MF	Multi-Family Residential
B	Business/Commercial
SBR	Service Business/Residential
BMF	Business/Multi-Family
HI	Heavy Industrial
LI	Light Industrial
H	Hotel
P	Public/Quasi-Public
PK	Park (GC) Golf Course
OS	Open Space
PD	Project District
AP	Airport
AG	Agricultural
R	Rural
C	Conservation
·····	Bikeway
<	One-way Street ARROW DIRECTION OF TRAFFIC FLOW

MAUI COMMUNITY PLANS

WEST MAUI
LAND USE MAP 2 OF 2

COUNTY OF MAUI

APPROVED: _____ DATE

APPROVED: _____ PLANNING DIRECTOR DATE

PUBLIC HEARING: _____

ADOPTED: 2/26/96

ORDINANCE: 2476

DATE: _____

REVISED: _____

GRAPHIC SCALE 1" = 1000' NORTH

Figure 4

Community Plan Map	CHRIS HART & PARTNERS, INC.
Lahainaluna High School Cafeteria Building	

April 7, 2009

COUNTY OF MAUI
DEPARTMENT OF PLANNING
ZONING AND FLOOD CONFIRMATION REQUEST FORM

Jason Medema, Planner, Chris Hart & Partners, Inc.
APPLICANT: FOR State Of Hawaii, Department of Education TELEPHONE: 808-242-1955
ADDRESS: 115 N. Market Street, Wailuku, HI 96793
PROJECT NAME: Lahainaluna High School Cafeteria Building
ADDRESS AND/OR LOCATION: 980 Lahainaluna Road, Lahaina, HI 96761
TMK: NUMBER(S): (2) 4-6-018:012 (por.)

ZONING INFORMATION

STATE LAND USE AG & Urban COMMUNITY PLAN P/QP - Public / Hawaii - Public
COUNTY ZONING Interim

OTHER SPECIAL DISTRICTS

___ Special Management Area
___ Shoreline Setback Area
___ Country Town Design District
___ Lahaina National Historic Landmark District
___ Maui Redevelopment Area
___ Other

DEPT OF PLANNING COUNTY OF MAUI RECEIVED '09 APR -7 P2:26

FLOOD INFORMATION

FLOOD HAZARD AREA* ZONE C

BASE FLOOD ELEVATION N/A MEAN SEA LEVEL, 1929 NATIONAL GEODETIC VERTICAL DATUM OR FOR FLOOD ZONE AO, FLOOD DEPTH ___

FLOODWAY [ ]Yes [✓]No

FLOOD DEVELOPMENT PERMIT IS REQUIRED [ ]Yes [✓]No

* For FLOOD HAZARD AREA ZONES B OR C; A FLOOD DEVELOPMENT PERMIT would be required if any work is done in any drainage facility or stream area that would reduce the capacity of the drainage facility, river, or stream, or adversely affect downstream property.

****

FOR COUNTY USE ONLY

REMARKS/COMMENTS:

☐ Additional information required.
☑ Information submitted is correct.
☐ Correction has been made and initialed.

REVIEWED AND CONFIRMED BY:

SIGNATURE AARON SHINMOTO DATE 4/9/09
ZONING ADMINISTRATION AND ENFORCEMENT DIVISION
Planning Program Administrator

(S:\ALL\FORMS\APPLICATION FORMS\SMAASSESSMENTAPP_REV0804.WPD)

Figure 5

S:\ALL\FORMS\Application Forms\SMAAssessmentApp_Rev0804.wpd

County Zoning Confirmation Form

Lahainaluna High School Cafeteria Building

CHRIS HART & PARTNERS, INC.

Photo 1. View across project site facing North-Northwest , from Southwest corner of site.

Photo 2. View across project site facing North-Northeast , from Southwest corner of site.

Figure 6.1

Site Photographs	CHRIS HART & PARTNERS, INC.
Lahainaluna High School Cafeteria Building	

Photo 3. Makai view, panning West to South from Northeast corner of project site.

Photo 4. Makai view, facing Northwest from Southeast corner of project site.

Figure 6.2

Site Photographs	CHRIS HART & PARTNERS, INC.
Lahainaluna High School Cafeteria Building	

Photo 5. Lana'i view, facing *makai* from North end of project site, along Lahainaluna Road.

Photo 6. Lana'i view, facing *makai* from directly below (West of) project site, along Lahainaluna Road.

Figure 6.3

Site Photographs	CHRIS HART & PARTNERS, INC.
Lahainaluna High School Cafeteria Building	

Photo 7. View through site, facing *mauka* from North-Northwest of project site, along Lahainaluna Road.

Photo 8. Shop building, located immediately *mauka* of project site.

Figure 6.4

Site Photographs	CHRIS HART & PARTNERS, INC.
Lahainaluna High School Cafeteria Building	

Photo 9. Existing cafeteria, facing *mauka* from South-Southwest corner of project site.

Photo 10. *Makai* view from shop building above project site; existing cafeteria in foreground.

Figure 6.5

Site Photographs	CHRIS HART & PARTNERS, INC.
Lahainaluna High School Cafeteria Building	

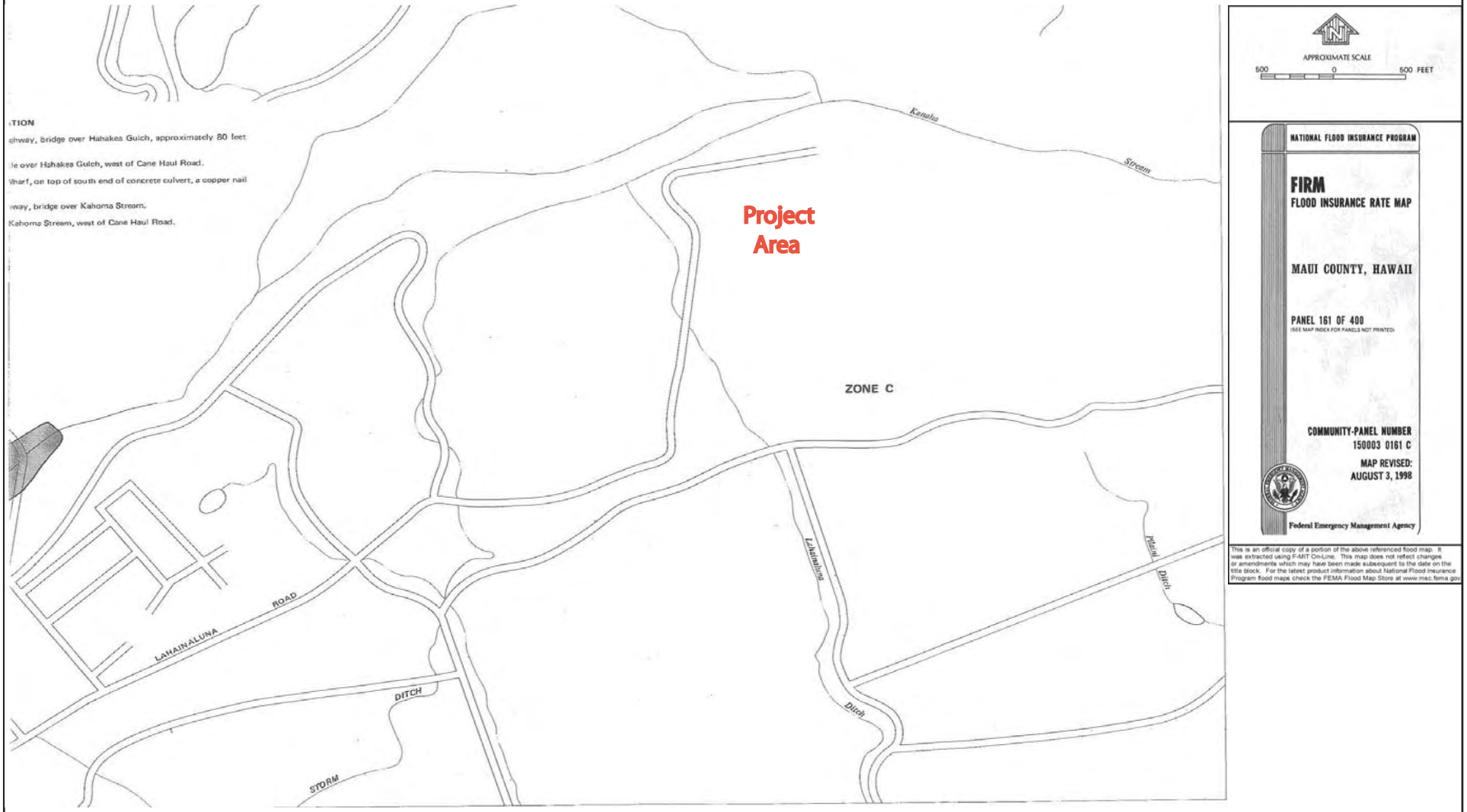
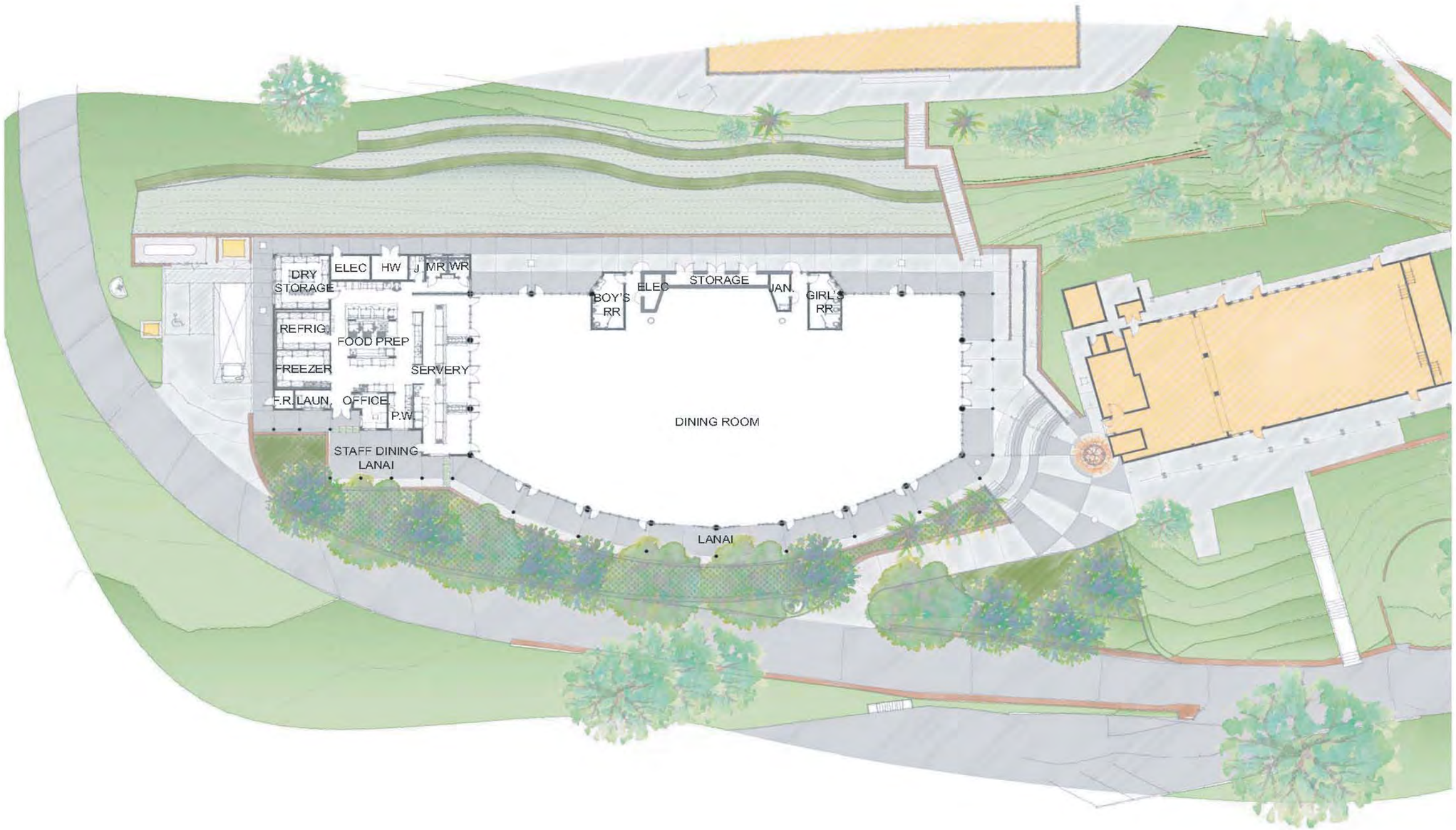


Figure 7

Flood Zone Map	CHRIS HART & PARTNERS, INC.
Lahainaluna High School Cafeteria Building	



1 A1.01 SITE PLAN

1/16" = 1'-0"

0' 8' 16' 32' 64'

LAHAINALUNA HIGH SCHOOL CAFETERIA

LAHAINA, MAUI, HAWAII

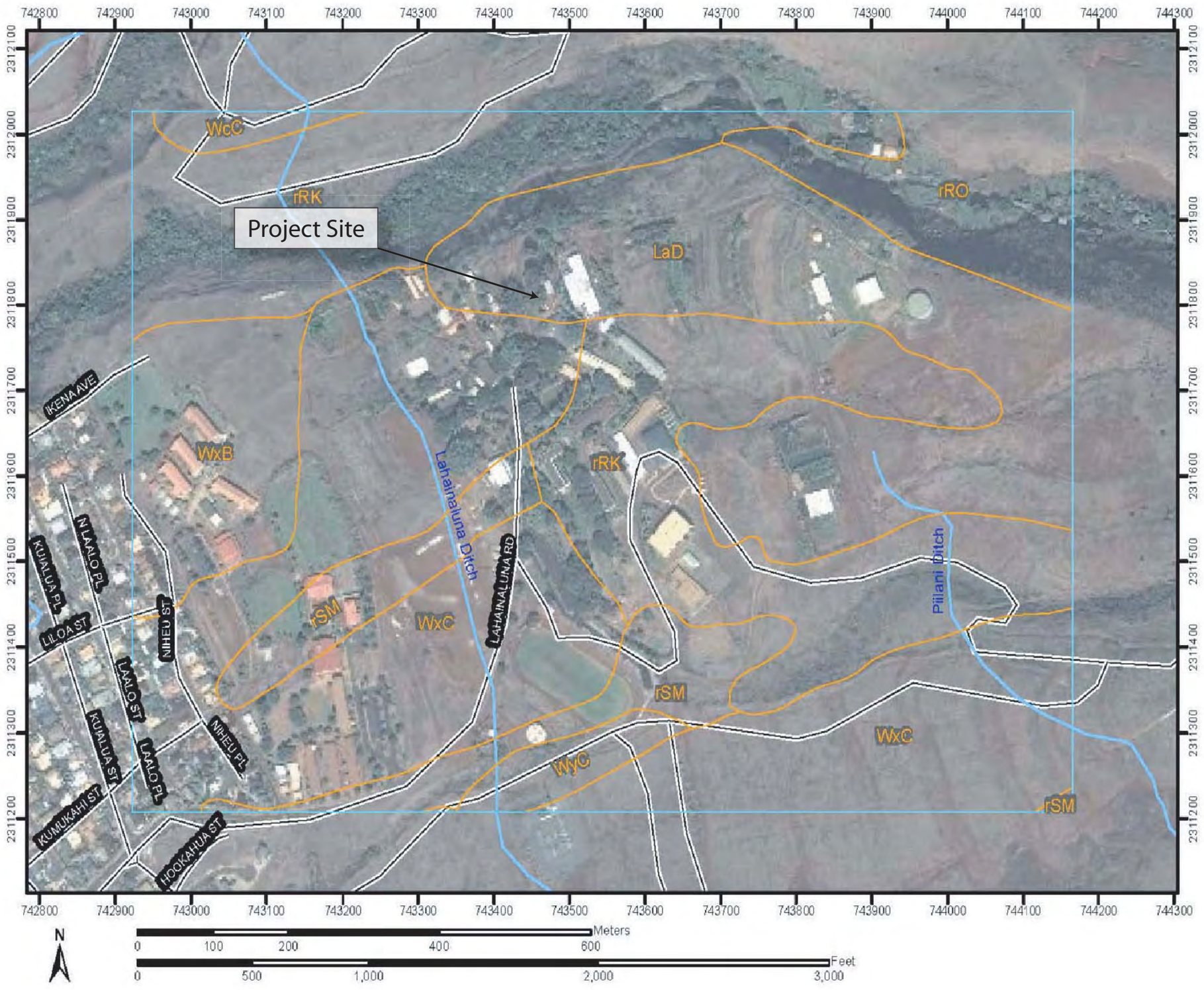
DESIGN MODIFICATIONS: OPTION 3

FERRARO CHOI

JANUARY 27, 2009

Figure 8

Concept Site Plan	CHRIS HART & PARTNERS, INC.
Lahainaluna High School Cafeteria Building	



Map Unit Legend

Island of Maui, Hawaii (HI980)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LaD	Lahaina silty clay, 15 to 25 percent slopes	48.0	19.1%
rRK	Rock land	69.8	27.8%
rRO	Rock outcrop	14.2	5.6%
rSM	Stony alluvial land	17.3	6.9%
WcC	Wahikuli stony silty clay, 7 to 15 percent slopes	2.0	0.8%
WxB	Wainee very stony silty clay, 3 to 7 percent slopes	16.5	6.6%
WxC	Wainee very stony silty clay, 7 to 15 percent slopes	79.6	31.7%
WyC	Wainee extremely stony silty clay, 7 to 15 percent slopes	4.0	1.6%
Totals for Area of Interest (AOI)		251.3	100.0%

Figure 9

Soils Map	CHRIS HART & PARTNERS, INC.
Lahainaluna High School Cafeteria Building	

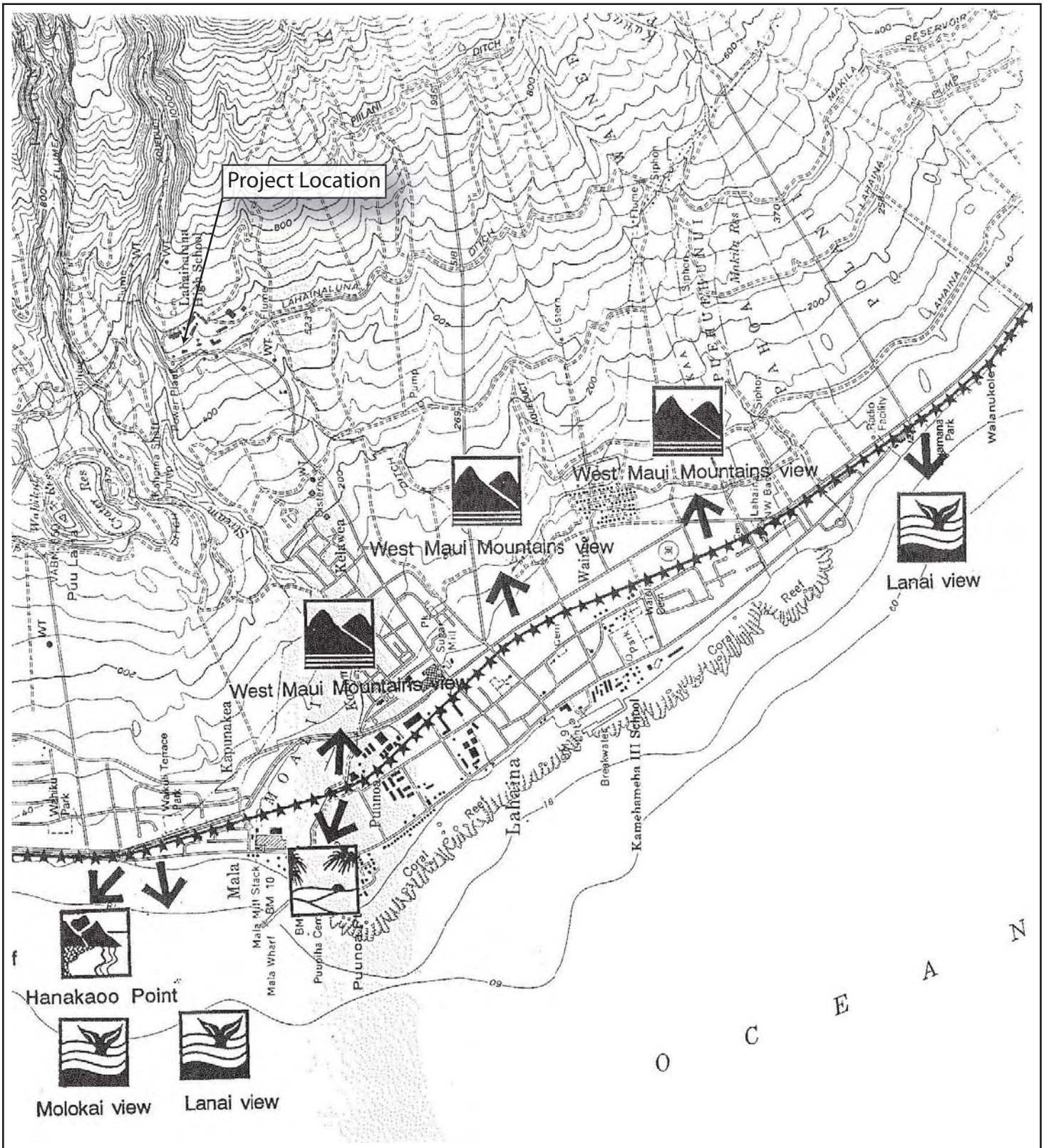


Figure 10

Coastal Scenic Resources Map

Lahainaluna High School
Cafeteria Building

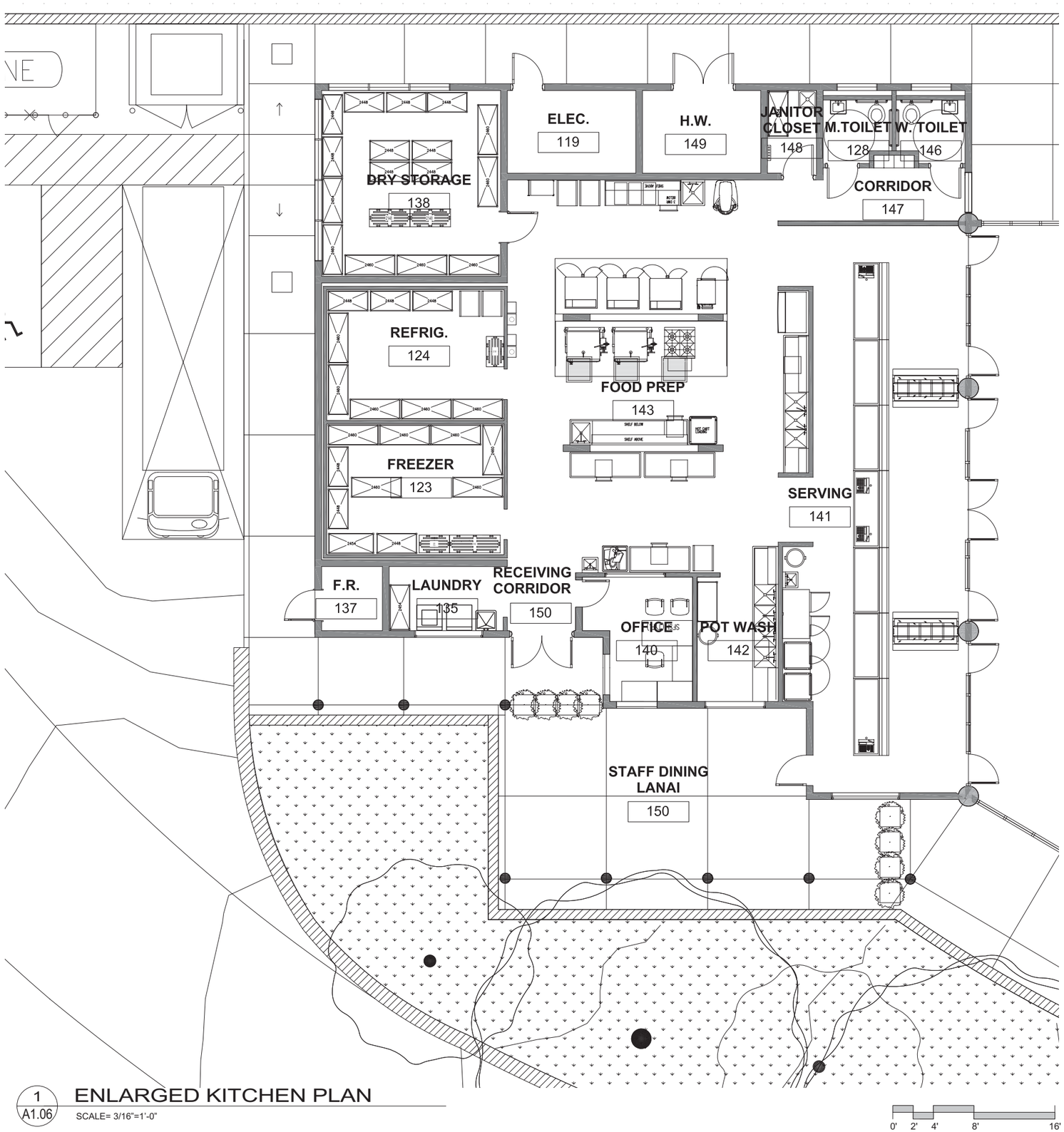
CHRIS HART & PARTNERS, INC.

Figure 11

Concept Architectural Drawings

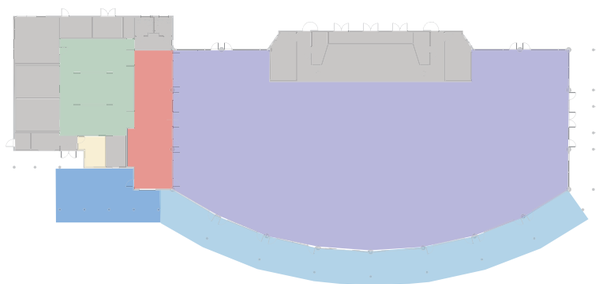
Lahainaluna High School Cafeteria Building

CHRIS HART & PARTNERS, INC.



1 A1.06 ENLARGED KITCHEN PLAN

SCALE= 3/16"=1'-0"



SPATIAL ADJACENCIES

FOOD PREPARATION

PRIVATE OFFICES

SERVERY

STUDENT DINING

STUDENT DINING LANAI

STAFF DINING LANAI

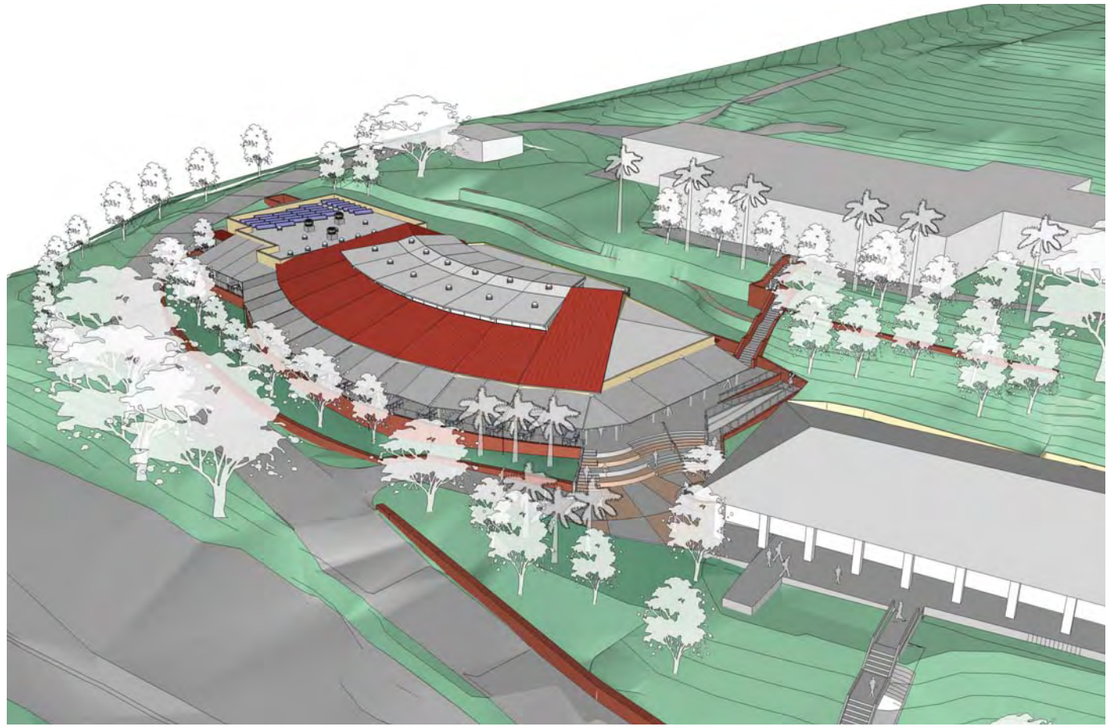
FERRARO CHOI

LAHAINALUNA HIGH SCHOOL CAFETERIA

LAHAINA, MAUI, HAWAII

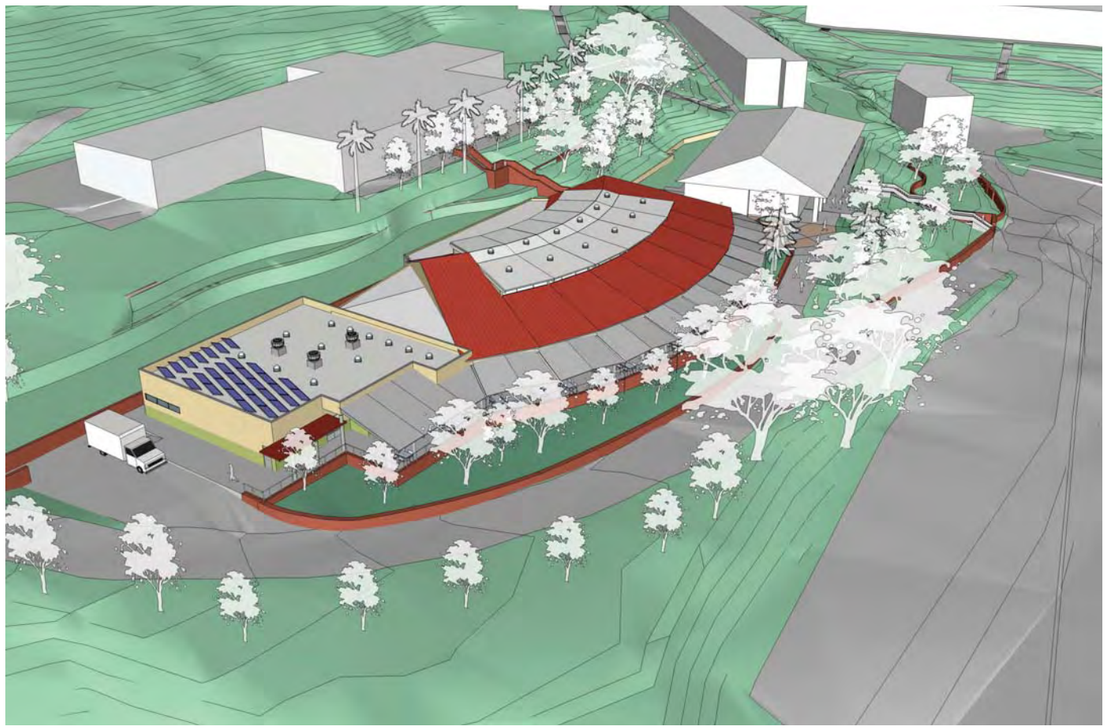
DESIGN MODIFICATIONS: OPTION 3

JANUARY 27, 2009

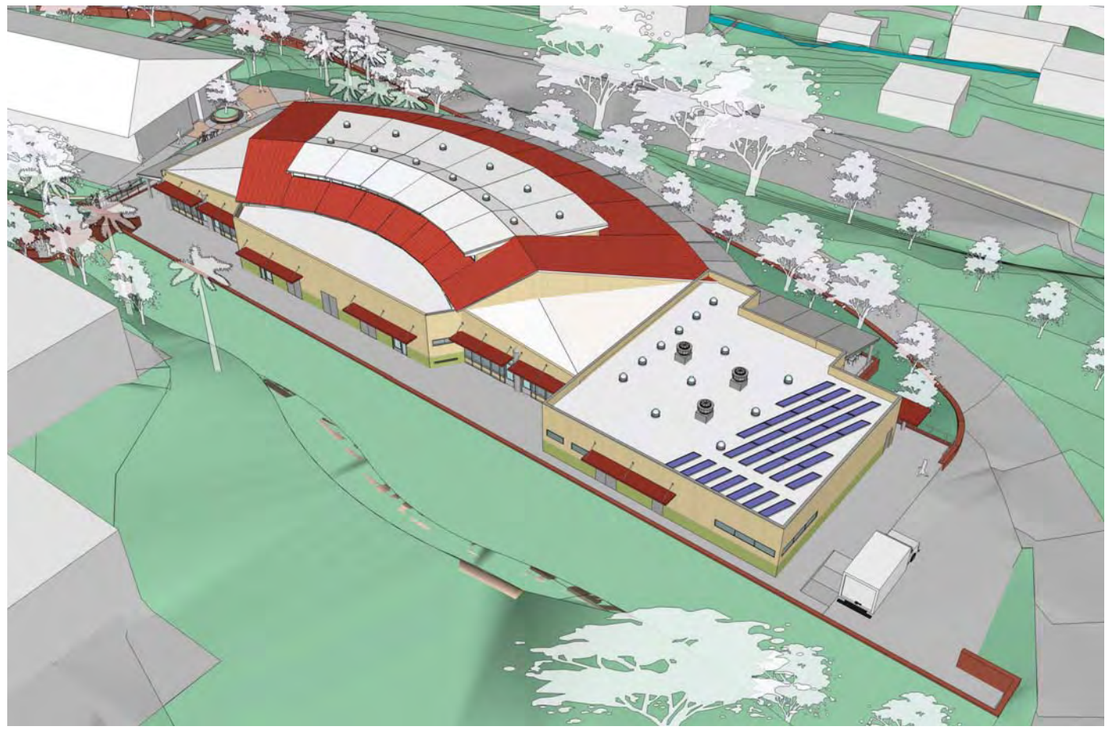


VIEW LOOKING NORTH

VIEW LOOKING NORTHWEST



VIEW LOOKING SOUTH



VIEW LOOKING SOUTHWEST

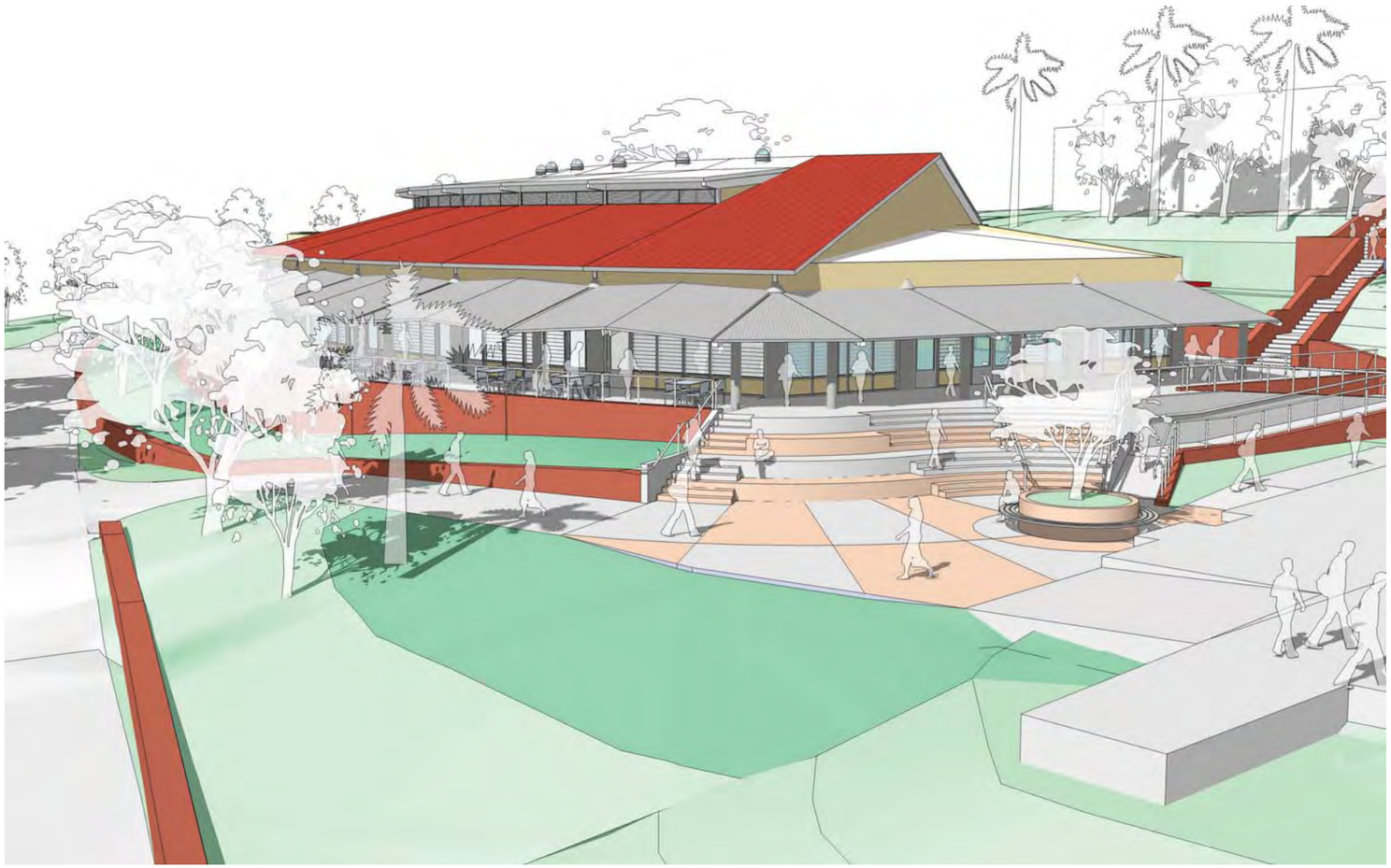
LAHAINALUNA HIGH SCHOOL CAFETERIA

LAHAINA, MAUI, HAWAII

DESIGN MODIFICATIONS: OPTION 3

FERRARO CHOI

JANUARY 27, 2009



VIEW LOOKING NORTH

VIEW LOOKING NORTHWEST

VIEW LOOKING SOUTHEAST

VIEW LOOKING SOUTH

VIEW LOOKING NORTHEAST

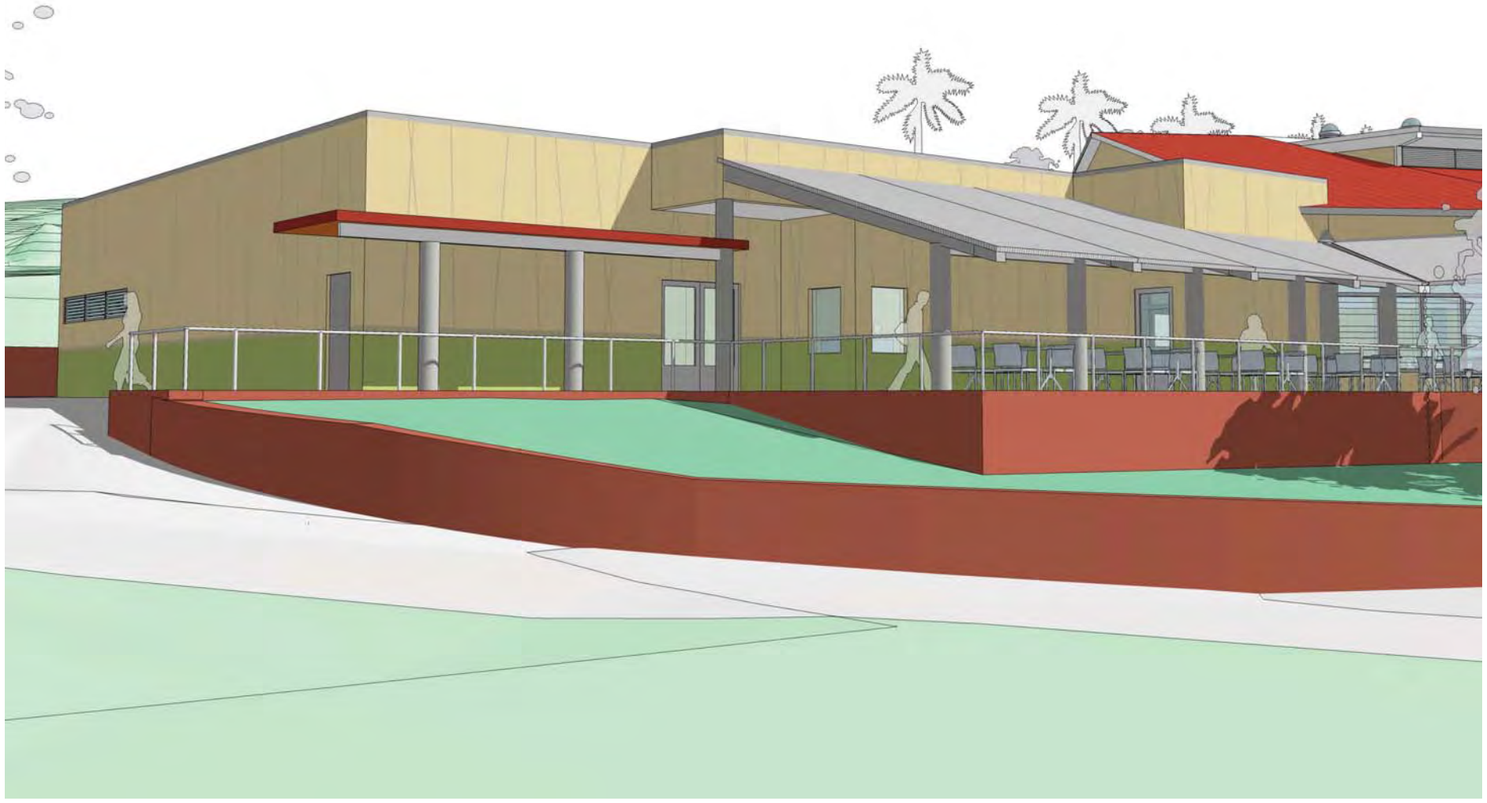
LAHAINALUNA HIGH SCHOOL CAFETERIA

LAHAINA, MAUI, HAWAII

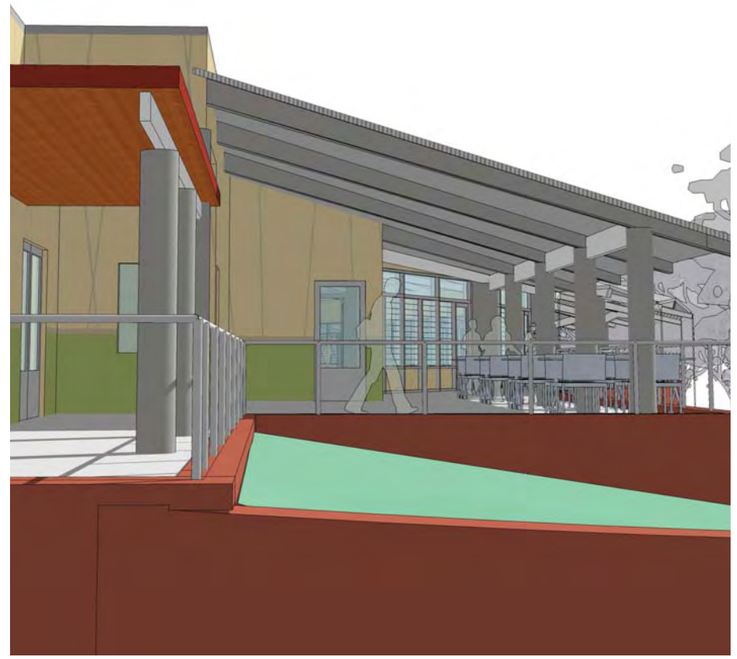
DESIGN MODIFICATIONS: OPTION 3

FERRARO CHOI

JANUARY 27, 2009



VIEW LOOKING EAST



VIEW LOOKING SOUTHEAST AT STAFF DINING LANAI

VIEW LOOKING SOUTH

LAHAINALUNA HIGH SCHOOL CAFETERIA

LAHAINA, MAUI, HAWAII

DESIGN MODIFICATIONS: OPTION 3

FERRARO CHOI

JANUARY 27, 2009

VIEW LOOKING NORTHEAST

VIEW LOOKING SOUTHEAST

VIEW LOOKING NORTHWEST

VIEW LOOKING SOUTHWEST

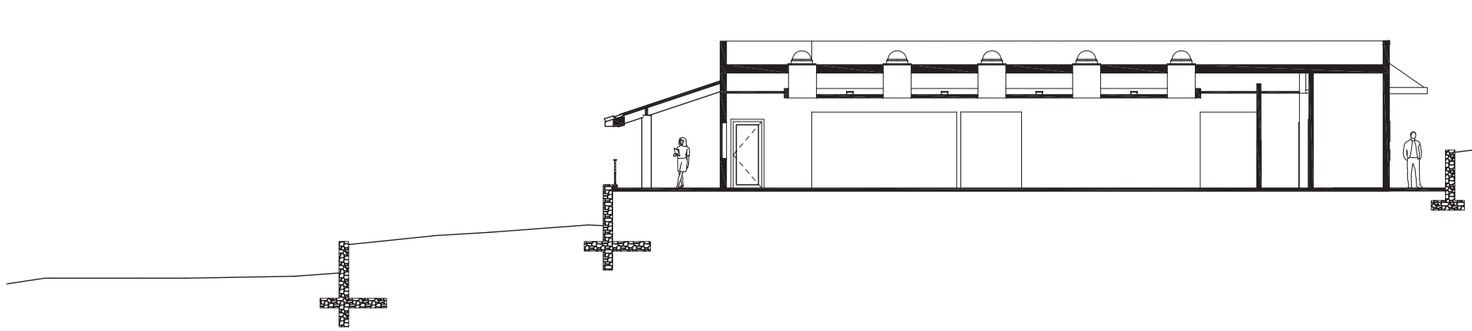
LAHAINALUNA HIGH SCHOOL CAFETERIA

LAHAINA, MAUI, HAWAII

DESIGN MODIFICATIONS: OPTION 3

FERRARO CHOI

JANUARY 27, 2009



SECTION THROUGH SERVERY

SECTION THROUGH DINING

SECTION THROUGH DINING CENTER

0' 4' 8' 16' 32'

SCALE: 1/8”=1’-0”

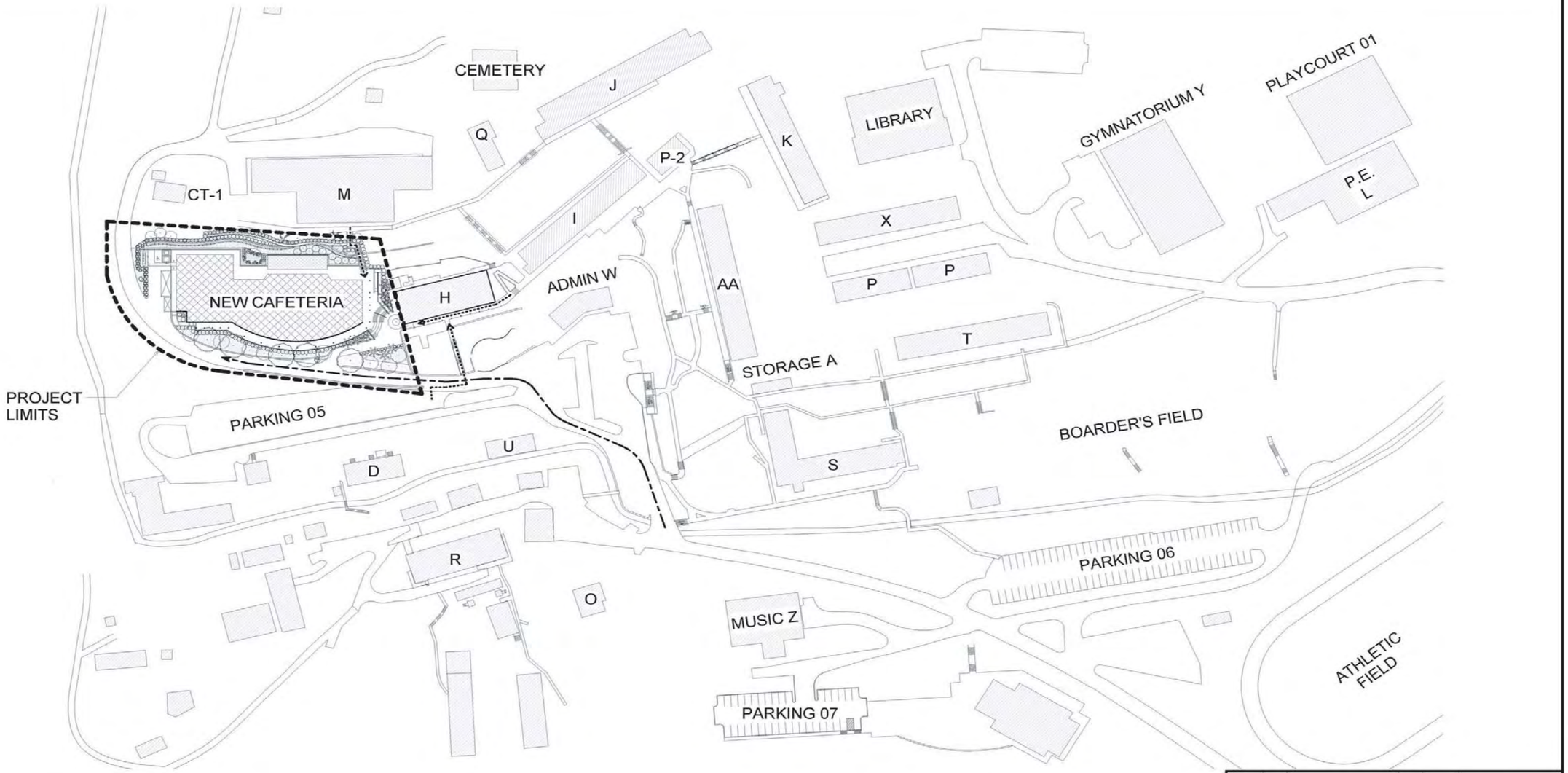
FERRARO CHOI

LAHAINALUNA HIGH SCHOOL CAFETERIA

LAHAINA, MAUI, HAWAII

DESIGN MODIFICATIONS: OPTION 3

JANUARY 27, 2009



1 G1.01 PARTIAL PLOT PLAN

1" = 60'-0"

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED

NOT FOR CONSTRUCTION

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DEPARTMENT OF EDUCATION
STATE OF HAWAII

LAHAINALUNA HIGH SCHOOL
CAFETERIA

LAHAINA MAUI HAWAII

PARTIAL PLOT PLAN

FERRARO CHOI & ASSOC. LTD.		JOB NO.	DRAWING NO.
DESIGNED BY: FCA	CHECKED BY: MA	Q54001-07	G1.01
DRAWN BY: BD	APPROVED BY: BB	DATE: 01/22/2009	SHEET OF SHTS
SCALE: 1" = 60'-0"			

FILE _____ DRAWER _____ FOLDER _____

Figure 12

Campus Plot Plan

Lahainaluna High School
Cafeteria Building

CHRIS HART & PARTNERS, INC.

4. APPENDICES

APPENDIX A:
Summary of Public and Agency Consultation on Draft Environmental Assessment

INDEX OF AGENCY COMMENTS AND RESPONSES

Federal

1. U.S. Army, Corps of Engineers

State

1. Department of Transportation (DOT)
2. Department of Land and Natural Resources (DLNR), State Historic Preservation Division
3. Department of Hawaiian Homelands (DHHL)
4. DOH, Maui District Health Office
5. DOH, Safe Drinking Water Branch
6. Department of Business Economic Development & Tourism (DBEDT), Office of State Planning
7. DOH, Wastewater Branch
8. Office of Hawaiian Affairs (OHA)

County

1. Department of Water Supply
2. Department of Fire Control & Public Safety
3. Police Department
4. Department of Parks & Recreation
5. Department of Planning
6. Department of Public Works
7. Department of Housing & Human Concerns
8. Department of Environmental Management

Other

1. Maui Electric Company (MECO)

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, HONOLULU
FORT SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF:

June 25, 2009

Regulatory Branch

File Number POH-2009-00207

Chris Hart & Partners, Inc.
Attn: Matthew M. Slepin
115 N. Market Street
Wailuku, HI 96793

Dear Mr. Slepin:

This letter responds to your transmittal dated June 8, 2009 requesting Department of the Army (DA) comments for the proposed construction of the Lahainaluna Cafeteria located in Lahaina, Maui, Hawaii at TMK (2) 4-6-018:012 (por.). We have reviewed the Draft Environmental Assessment [dEA] you submitted with respect to the Corps' authority to issue Department of the Army (DA) permits pursuant to Section 10 of the Rivers and Harbors Act (RHA) of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344).

Based on the information you submitted, it appears the **review area consists entirely of uplands** and is absent of waters of the U.S., including adjacent wetlands, subject to our jurisdiction. We anticipate any proposed development activities will not involve the placement or discharge of dredged and/or fill material into waters of the U.S.; therefore, **it appears a DA permit will not be required.** This determination does not relieve you of the responsibility to obtain any other permits, licenses, or approvals that may be required under County, State, or Federal law for your proposed work

Should you have any questions regarding this letter of comment, please contact Ms. Jessie Ann Pa'ahana of my staff at 438-7023 or by e-mail at *jessie.ann.paahana@usace.army.mil* and reference the Corps File No. **POH-2009-207** in all future correspondence related to this project.

Please be advised you can provide comments on your experience with the Honolulu District Regulatory Branch by accessing our web-based customer survey form at *http://per2.usace.army.mil/survey.html*.

Sincerely,

George P. Young, P.E.
Chief, Regulatory Branch

RECEIVED
JUN 29 2009
CHRIS HART & P... Inc.
Landscape Arch...

Cc: Jason 07/131

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

July 22, 2009

Mr. George P Young, P.E., Chief
Regulatory Branch
Department of the Army
U.S. Army Engineer District, Honolulu
Fort Shafter, HI 96858-5440

Dear Mr. Young:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your June 25, 2009 letter regarding the above referenced project. We are pleased to respond to your comments as follows:

We understand from your letter that the project area consists entirely of uplands and is absent waters of the United States, including adjacent wetlands, subject to your agency's jurisdiction. We also note that although a DA permit will not be required, this determination does not relieve the project of the requirement to obtain any other necessary State, County, or Federal permits.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File (CHP Project No. 07-131)

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

LINDA LINGLE
GOVERNOR

BRENNON T. MORIOKA
DIRECTOR

Deputy Directors
MICHAEL D. FORMBY
FRANCIS PAUL KEENO
BRIAN H. SEKIGUCHI
JIRO A. SUMADA

IN REPLY REFER TO:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

STP 8.3299

June 18, 2009

Mr. Matthew M. Slepin
Senior Associate Planner
Chris Hart & Partners
115 N. Market Street
Wailuku, Hawaii 96793

Dear Mr. Slepin:

Subject: Lahainaluna High School Cafeteria
Draft Environmental Assessment (DEA)

Thank you for requesting the State Department of Transportation's (DOT) review of the subject project to construct a new 21,000 gross square foot cafeteria building at the existing school site.

As the subject project is to replace an existing and outdated cafeteria, DOT does not expect that the subject project will generate any significant, adverse impacts to State transportation facilities.

DOT appreciates the opportunity to provide comments. If there are any questions, please contact Mr. David Shimokawa of the DOT Statewide Transportation Planning Office at (808) 587-2356.

Very truly yours,

Francis Paul Keeno

for BRENNON T. MORIOKA, PH.D., P.E.
Director of Transportation

c: Katherine Kealoha, Office of Environmental Quality Control

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

July 22, 2009

Mr. Brennan T. Morioka, Ph.D., P.E.
Director of Transportation
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, HI 96813-5097

Dear Mr. Morioka:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your June 18, 2009 letter regarding the above referenced project. We understand that based on the scope of the proposed project, DOT does not expect that the project will generate any significant, adverse impacts to State transportation facilities.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File (CHP Project No. 07-131)

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

KEN C. KAWAHARA
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

July 27, 2009

Matthew M. Slepin
Chris Hart and Partners
115 N. Market Street
Wailuku, HI 96793

LOG: 2009.2727
DOC: 14197

RECEIVED
JUL 28 2009
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

Dear Mr. Slepin:

SUBJECT: **Chapter 6E-8 Historic Preservation Review / New Cafeteria**
Permit # (None)
Building Owner: State of Hawaii
Location: Lahainaluna High School, Lahaina, HI
Tax Map Key: (2) 4-6-018:012

This letter is in response to your communication of July 23, 2009, received by our office July 24, 2009. Included was *HRS Chapter 343 Draft Environmental Assessment: Proposed Construction of a Cafeteria Building, Lahainaluna High School, (2) 4-6-018:012 (por.), Lahaina, Maui, Hawaii.*

Lahainaluna is the oldest school in the State. The project is to replace the existing cafeteria structure on campus with a new building to be erected on property previously used for faculty housing. The new building would be approximately 21,000 square feet in size to accommodate a projected student body of 1,400 persons.

Two sections of the *Draft* contain inaccuracies. Page 5 states that the school was first established on the site in 1931, on land donated to missionaries by Hoapili. The date should be 1831. Page 13 states that Kamehameha I moved his island capital from Lahaina to Honolulu in 1855. King Kamehameha I died in 1819. It was King Kamehameha III who moved the capital.

The *Draft* noted that Scientific Consultant Services, Inc., under the watch of archaeologist Michael Dega, Ph.D., conducted a field inspection on the proposed cafeteria site and located a five step stairway and basalt terrace wall. Based upon the results of the field inspection and informant interviews, it is possible that ground disturbing activities associated with the proposed cafeteria development may encounter subsurface features. It is recommended that an on-site archaeological monitoring program be instituted whenever ground disturbing activities are undertaken.

The *Draft* also illustrates that the tentative cafeteria design does not follow the historic design pattern of other buildings in the area: centered hipped roofs and rectangular structure footprints. This is not explained in the *Draft*.

Please contact Ross W. Stephenson via telephone at 692-8028 or email at ross.w.stephenson@hawaii.gov if you have questions.

Mahalo for the opportunity to comment.

Pua Aiu, Administrator, Hawaii Historic Preservation Division, DLNR

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

October 9, 2009

Ms. Pua Aiu
State Historic Preservation Division
Department of Land and Natural Resources
State of Hawaii
601 Kamokila Boulevard, Room 555
Kapolei, HI 96707

Dear Ms. Aiu:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your July 27, 2009 letter regarding the above referenced project. We are pleased to respond to your comments as follows:

We note from your letter the inaccuracies contained on pages 5 and 13 of the Draft Environmental Assessment. These inaccuracies will be corrected and the language in the Final EA will be changed to reflect the correct information.

Based upon communication with the State Historic Preservation Division (SHPD) subsequent to SHPD review of the Draft Environmental Assessment, archaeological monitoring will take place during all ground altering disturbance related to the proposed project (*please see attached*). An archaeological monitoring plan will be submitted to the SHPD office for review and approval prior to commencement of ground altering work.

The new cafeteria was designed in response to the school's desire for a semi-circular dining area that focuses upon the stage and takes advantage of ocean views coupled with sustainable design strategies that prioritize effective daylighting and natural ventilation. The school is very supportive of the new architectural design, and participated actively in its development.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File (CHP Project No. 07-131)

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ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

September 11, 2009

Mr. Ty Fukuroku, C.E.
County of Maui, DPWEM
Development Services Administration
250 South High Street
Wailuku, Hawai'i 96793
ty.fukuroku@mauicounty.gov
darlyn.atay@mauicounty.gov
building.permits@mauicounty.gov

LOG NO: 2009.2964
DOC NO: 0909PC11
Archaeology

SUBJECT: Chapter 6E-8 Historic Preservation Review – REVISED
Proposed Lahainaluna High School Cafeteria Grading and Grubbing Permit (GT 2009/0024) and Building Permits (BT 2009/0745 to BT 2009/0749)
Pana'ewa Ahupua'a, Lahaina District, Island of Maui
TMK: (2) 4-6-018:012 por.

Please Note: this letter serves as a revision to three earlier reviews of the same project (SHPD LOG NO: 2009.2024/DOC NO: 0906PC176; SHPD LOG NO: 2009.2923/DOC NO: 0907PC72; SHPD LOG NO: 2009.2049/DOC NO: 0907PC73) because we have received additional clarifying information.

Thank you for the opportunity to again review the aforementioned project, correspondence for which we received on September of 2009.

The project involves the construction of a new cafeteria building for the Lahainaluna High School campus.

We have recently reviewed the associated NPDES permit (SHPD LOG NO: 2009.2024; DOC NO: 0906PC176) and a copy of the Draft Environmental Assessment (SHPD LOG NO: 2009.2923; DOC NO: 0907PC72) for the project, at which time we stated our belief that because of its inception in 1831 as well as being the oldest school west of the Mississippi River, the entire Lahainaluna High School campus is considered historically significant. There is also good potential for identifying subsurface deposits related to activity prior to the existence of the school during ground altering activity associated with the proposed project.

While the Draft EA did include a summary of an archaeological field inspection conducted by Scientific Consultant Services, Inc. on February 9 of 2009, our original review stated that we did not agree with the recommendation for only precautionary archaeological monitoring during ground altering disturbance for the proposed project. Instead, we recommended that an archaeological inventory be conducted prior to the issuance of the associated permits.

However, a second archaeological field inspection conducted by Scientific Consultant Services, Inc. in August indicates that the area of potential effect for proposed cafeteria is underlain by numerous

underground utilities which would make the excavation of random subsurface trenches unproductive. We therefore revise the recommendation for an archaeological inventory survey to one of precautionary archaeological monitoring during all ground altering disturbance related to the proposed project, regardless of prior disturbance to subsurface deposits. Please note that this recommendation will require the submission of an appropriately prepared *monitoring plan* to this office for review and acceptance prior to such work commencing.

If you have any questions or comments regarding this letter, please contact the SHPD's Lead Maui Archaeologist, Ms. Patty Conte (Patty.J.Conte@hawaii.gov).

Aloha,

Nancy A. McMahon

Nancy McMahon, Deputy SHPO/State Archaeologist
State Historic Preservation Division

c: Mike Dega: shpdreply@scshawaii.com
Jeff Hunt, Director, Dept. of Planning, FAX (808) 270-7634

LINDA LINGLE
GOVERNOR
STATE OF HAWAII

MICAH A. KĀNE
CHAIRMAN
HAWAIIAN HOMES COMMISSION

KAULANA H. PARK
DEPUTY TO THE CHAIRMAN

ROBERT J. HALL
EXECUTIVE ASSISTANT

STATE OF HAWAI'I
DEPARTMENT OF HAWAIIAN HOME LANDS
P.O. BOX 1879
HONOLULU, HAWAI'I 96805

June 15, 2009

Mr. Chris Hart
Chris Hart & Partners, Inc.
115 N. Market Street
Wailuku, Maui, Hawaii 96792-1717

Dear Mr. Hart:

Subject: Draft Environmental Assessment
Lahainaluna High School Cafeteria
Job #: 07/131

Thank you for the opportunity to review the subject proposal. The Department of Hawaiian Home Lands has no comment to offer at this time. If you have any questions, please contact our Planning Office at (808) 620-9480.

Aloha and mahalo,

for Micah A. Kane, Chairman
Hawaiian Homes Commission

RECEIVED
JUN 17 2009
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning
07/131
cc: Jason

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

July 22, 2009

Mr. Micah A. Kane, Chairman
Hawaiian Homes Commission
Department of Hawaiian Homelands
State of Hawaii
P.O. Box 1879
Honolulu, HI 96805

Dear Mr. Kane:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your June 15, 2009 letter regarding the above referenced project. We understand that you have no comments at this time.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File (CHP Project No. 07-131)

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M. D.
DIRECTOR OF HEALTH

LORRIN W. PANG, M. D., M. P. H.
DISTRICT HEALTH OFFICER

STATE OF HAWAII
DEPARTMENT OF HEALTH
MAUI DISTRICT HEALTH OFFICE
54 HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2102

June 24, 2009

cc: Jason
07/131

Mr. Matthew M. Slepin
Senior Associate Planner
Chris Hart & Partners, Inc.
115 North Market Street
Wailuku, Hawai`i 96793

Dear Mr. Slepin:

Subject: Lahainaluna High School Cafeteria Draft Environmental Assessment

Thank you for giving us the opportunity to review and comment on this project. The following comments are offered:

1. National Pollutant Discharge Elimination System (NPDES) permit coverage may be required for this project. The Clean Water Branch should be contacted at 808 586-4309.

2. The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules, Chapter 11-46 "Community Noise Control". A noise permit may be required and should be obtained before the commencement of this project.

3. The wastewater generated from the project must be discharged into the County sewer system.

It is strongly recommended that the Standard Comments found at the Department's website: http://hawaii.gov/health/environmental/env-planning/landuse/landuse.html be reviewed, and any comments specifically applicable to this project should be adhered to.

Should you have any questions, please call me at 808 984-8230 or e-mail me at patricia.kitkowski@doh.hawaii.gov.

Sincerely,

Patti Kitkowski

Patti Kitkowski
Acting District Environmental Health Program Chief

c EPO

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

July 22, 2009

Ms. Patti Kitkowski
Acting District Environmental Health Program Chief
Maui District Health Office
Department of Health
State of Hawaii
54 High Street
Wailuku, HI 96793

Dear Ms. Kitkowski:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your June 24, 2009 letter regarding the above referenced project. We are pleased to respond to your comments as follows:

1. **NPDES Permit Coverage.** A National Pollutant Discharge Elimination System (NPDES) permit, if required, will be obtained prior to commencement of the proposed project.

2. **Noise Permit.** The Applicant is aware that the project is subject to maximum noise levels during the construction phase of the project as set forth in Hawaii Administrative Rules Chapter 11-46, "Community Noise Control." If required, a noise permit will be obtained prior to commencement of this project.

3. **Wastewater Discharge.** Wastewater generated by the proposed project will be discharged to the County sewer system.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File (CHP Project No. 07-131)

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O.BOX 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:
EMD/SDWB

June 22, 2009

CC: Jason 07/131

Mr. Jason Medema, Planner
Chris Hart and Partners, Inc.
115 N. Market Street
Wailuku, HI 96793

Dear Mr. Medema:

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (DEA)
PROPOSED CONSTRUCTION OF A CAFETERIA BUILDING FOR
LAHAINALUNA HIGH SCHOOL
LAHAINA, MAUI
TMK: (2) 4-6-018: 012 (PORTION)
REFERENCE NO. 09-095

Thank you for the opportunity to review and comment on the subject document. We have examined the DEA and have the following comments to offer:

1. Page 19 of the DEA states that, "Lahainaluna High School is served by a private water system that draws from the Kanaha Stream, mauka of the school campus." We have serious concerns about the lack of specific information on the entity providing water service to the school. The DEA must clearly identify the "private water system" that is referred to in this section. Previously, Lahainaluna High School was a public water system but subsequently became a service connection to the Maui Department of Water Supply. The DEA implies that the water service provider has changed.

2. Federal and state regulations define a public water system as a system that serves 25 or more individuals at least 60 days per year or has at least 15 service connections. All public water system owners and operators are required to comply with Hawaii Administrative Rules, Chapter 11-20, "Rules Relating to Potable Water Systems." Any water system which services the Lahainaluna High School would logically need to be a regulated public water system. Please understand that the term, public water system, does not

refer to the ownership of the system and could either be publicly or privately owned.

If you have any questions concerning drinking water, please contact me at 586-4258.

Sincerely,

STUART YAMADA, P.E., CHIEF
Safe Drinking Water Branch
Environmental Management Division

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

July 22, 2009

Mr. Stuart Yamada, P.E., Chief
Safe Drinking Water Branch
Environmental Management Division
Department of Health
State of Hawaii
P.O. Box 3378
Honolulu, HI 96801-3378

Dear Mr. Yamada:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your June 22, 2009 letter regarding the above referenced project. We are pleased to respond to your comments as follows:

We understand from your letter that the information included in the Draft Environmental Assessment raises concerns regarding the entity providing water service to the school. Specifically, Page 19 of the Draft Environmental Assessment states that "Lahainaluna High School is served by a private water system that draws from Kanaha Stream, *mauka* of the school campus." Please note that upon further research, the inclusion of the above statement was found to be based on an oversight.

Lahainaluna High School was formerly served by a private water system drawing from Kanaha Stream. In 1995, the State of Hawaii, Department of Education (DOE) and the Maui County Board of Water Supply entered into an agreement whereby a treatment plant and transmission lines were constructed at the Kanaha Stream surface intake, for connection to the County Water System as well as the Lahainaluna High School water system. In exchange for the use of State lands for construction of the treatment and transmission system, the School receives up to 100,000 gallons per day (gpd) of potable water from the County system. Any potable water use beyond 100,000 gpd is charged to the DOE at prevailing Board of Water Supply rates.

A copy of the 1995 agreement between DOE and the Board of Water Supply is attached for your reference. The statements in the Final Environmental Assessment will be changed to reflect this information. As the proposed project will not by itself generate an increase in enrollment or employment at the school, it is not expected to generate increased domestic water demand, and therefore no impacts to water supply infrastructure are anticipated.

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File (CHP Project No. 07-131)

LAHAINALUNA HIGH SCHOOL
COST-SHARING AGREEMENT FOR WATER SYSTEMS

THIS AGREEMENT, made and entered into this 3rd day of May, 1995, by and between the STATE OF HAWAII ("STATE") Department of Accounting and General Services, hereinafter referred to as "DAGS", by its Comptroller, Department of Education, hereinafter referred to as "DOE", by its Superintendent and Department of Land and Natural Resources, hereinafter referred to as "DLNR", by its chairperson; with the Board of Water Supply of the County of Maui, hereinafter referred to as the "BOARD".

WITNESSETH:

WHEREAS, DOE operates a private water system which presently services the Lahainaluna High School, hereinafter referred to as "STATE-owned property"; and

WHEREAS, the BOARD operates a public water system which presently services portions of the Lahaina area; and

WHEREAS, the DOE private water system and BOARD public water system both obtains their water from the Kanaha Valley Stream diverted through a stream intake, transmission and distribution system; and

WHEREAS, the DOE private water system and BOARD public water system are both subject to the terms and provisions of the Safe Drinking Water Act (P. L. 93-523), the Department of Health's Surface Water Treatment Rule, and amendments thereafter; and

WHEREAS, the BOARD has developed a plan to continue usage of the Kanaha Valley Stream surface water intake system and to construct the Lahaina Water Treatment Plant, hereinafter referred to as the "LWTP", to service the STATE-owned property and other users in the Lahaina area. The LWPT will be owned and operated by the BOARD after completion of construction; and

WHEREAS, the BOARD is required to comply with the provisions of the Surface Water Treatment Rule and the Safe Drinking Water Act; and

WHEREAS, the STATE desires to secure water service from the LWTP and participate in the costs for the construction of the LWTP with connections for the STATE-owned property; and

WHEREAS, the STATE, DAGS, DOE, DLNR, and BOARD, hereinafter

referred to as "Parties" intend that this executed AGREEMENT constitute an enforceable commitment to become a part of a BOARD regional drinking water system within the meaning of the Safe Drinking Water Act; and

NOW, THEREFORE, in consideration of the mutual promises hereinafter set forth, the Parties agree as follows:

1. This AGREEMENT can be amended only in writing signed by all of the above Parties hereto.

2. The "PROJECT" is generally described and shown in Exhibit A and B.

3. The BOARD shall be responsible for the design and construction of the PROJECT as follows:

(1). Engage consultant services needed for all engineering and design of the PROJECT at the BOARD's expense.

(2) Have overall responsibility to prepare, review and approve the construction plans and specifications for the PROJECT. The Project construction plans will be approved by DAGS.

(3) Award and administer the construction contract of the PROJECT.

(4) Have authority and power in its discretion to approve changes in the plans and specifications during the course of the construction of the PROJECT and the responsibility to resolve any disputes.

4. The BOARD will be responsible for all cost to operate and maintain the PROJECT.

5. The STATE agrees to participate in the construction of the PROJECT to the sum ONE MILLION TWO HUNDRED TWENTY THOUSANDS AND NO/100 DOLLARS (1,220,000.00).

6. The STATE shall delegate required funds to the BOARD within 60 days of execution of this agreement.

7. The BOARD and STATE shall be responsible to meet all Department of Health's requirements for their respective Compliance Schedules.

8. Subject to the approval by the Board of Land and Natural Resources, the STATE shall process executive orders and easements of the STATE-owned property for

the PROJECT (as required). Land issues will be handled as follows:

(1) STATE shall provide and grant:

(a) Executive Order to the BOARD (up to 5 acres) for the LWTP facility.

(b) Easement(s) to the BOARD for access to the LWTP facility and the Kanaha Valley Stream intake (as required).

(c) Easement(s) to the BOARD for drinking water distribution lines, storage tanks, drainlines, utility lines pump stations and appurtenant structures (as required).

(d) Actively participate with the BOARD and others in resolving drainage overflow issues for the PROJECT with the neighboring landowner.

(e) The BOARD the right to ingress and egress on the through the STATE-owned properties for the purpose of its officers, employees, engineering consultants, and construction contractors performing land surveying, engineering studies, and construction of the Project.

(f) Easement(s) to the utility companies for electrical and telephone service (as required).

(2) The BOARD shall provide all necessary metes and bounds descriptions for the above easements and LWTP site.

(3) The BOARD shall be responsible for liability, operational control, and maintenance of land and easements provided by the STATE for the PROJECT which are used solely by the BOARD. The BOARD and STATE shall be jointly responsible for the liability and maintenance of land and easement areas which are jointly used by the BOARD and STATE.

9. The BOARD shall provide potable water service to the STATE-owned land with the following understanding:

(1) Provide potable water from the LWTP at the designated waterline connections shown in Exhibit B.

(2) Provide potable water from the BOARD's share of the diverted Kanaha Stream waters. The BOARD's share of the diverted Kanaha Stream waters is described in Agreement dated June 7, 1982. Refer to Exhibit C.

(3) Provide potable water up to 100,000 gallons per day in compensation for the land and easements received by the BOARD from the STATE for the PROJECT. The STATE shall pay the BOARD for potable water consumption greater than 100,000 gallons per day at the regular BOARD rates effective at the time of water consumption. The volume of water consumed shall be determined based on the daily average of two month periods.

(4) Provide the STATE-owned property 300,000 gallons of water storage for fire protection purposes. The storage shall be provided at the 1 million gallon finish water storage tank of the LWTP. Water consumed by the Lahainaluna High School for fire protection purposes shall be provide by the Board in compensation for the land and easements received by the BOARD from the STATE for the PROJECT.

(5) The STATE acknowledges that the BOARD may not be able to provide potable water and fire protection storage water to the STATE-owned property on a continuous basis due to lack of stream flow from the Kanaha Stream, problems with the Kanaha Stream intake, transmission line and LWTP.

(6) The BOARD acknowledges that the STATE has first priority of 17.7% for the distribution of the waters diverted form the Kanaha Valley Stream through Pioneer's existing diversion system.

10. The STATE shall review and approve the design of the PROJECT's connections to the potable waterline and fire protection waterline of the New LHS Water System.

11. The STATE shall allow the BOARD to use (for any purpose) the portion of the STATE's diverted Kanaha Stream waters not utilized by the STATE-owned property in compensation for water service from the LWTP. The STATE's share of the diverted Kanaha Stream waters is described in Agreement dated June 7, 1982. Refer to Exhibit C.

12. The BOARD shall provide water service to the Lahainaluna High School subject to conservation

measures which may be imposed by the BOARD whenever it is determined by Section 3.2 "Conservation Measures and Interruption of Water Supply" of the Rules and Regulations of the Department of Water Supply County of Maui (January 7, 1977).

13. This AGREEMENT shall be binding upon and inure to the benefit of the successors and assigns of the respective Parties.

IN WITNESS WHEREOF the parties hereto have executed these presents as of the day and year first above written.

BOARD OF WATER SUPPLY
COUNTY OF MAUI

~~Byron Walters~~ Marie Kimmey
Its Chairman

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

By
Its Comptroller

STATE OF HAWAII
DEPARTMENT OF EDUCATION

By
Its Superintendent

APPROVED AS TO FORM

Deputy Attorney General, State of Hawaii
April 13, 1995

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

By
Its Chairperson

Approved as to form:

Deputy Attorney General
State of Hawaii

Approved as to Form
and Legality

John S. Rapacz
Deputy Corporation Counsel
County of Maui

STATE OF HAWAII)
) SS.
COUNTY OF MAUI)

On this 3rd day of May, 1995, before me appeared Marie Kimmey, to me personally known, who, being by me duly sworn, did say that she is the Chairperson of the BOARD OF WATER SUPPLY of the County of Maui, and that the seal affixed to the foregoing instrument is the lawful seal of the said BOARD OF WATER SUPPLY, and that the said instrument was signed and sealed on behalf of the said BOARD OF WATER SUPPLY, and the said Marie Kimmey acknowledged the said instrument to be the free act and deed of said BOARD OF WATER SUPPLY.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

Notary Public, State of Hawaii

My commission expires: 4/19/98

CITY & COUNTY OF) SS.
~~COUNTY OF MAUI~~)
HONOLULU

On this 18th day of November, 1994, before me appeared ROBERT P. TAKUSHI, to me personally known, who, being by me duly sworn, did say that he/she is the Comptroller of the DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES, STATE OF HAWAII, and that the seal affixed to the foregoing instrument is the lawful seal of the said DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES, and that the said instrument was signed and sealed on behalf of the said DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES, and the said ROBERT P. TAKUSHI acknowledged the said instrument to be the free act and deed of the said DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

Notary Public, State of Hawaii

My commission expires: June 7, 1995

STATE OF HAWAII)
) SS.
COUNTY OF MAUI)

On this _____ day of _____, 19___, before me appeared _____, to me personally known, who, being by me duly sworn, did say that he/she is the Superintendent of the DEPARTMENT OF EDUCATION, STATE OF HAWAII, and that the seal affixed to the foregoing instrument is the lawful seal of the said DEPARTMENT OF EDUCATION, and that the said instrument was signed and sealed on behalf of the said DEPARTMENT OF EDUCATION, and the said _____ acknowledged the said instrument to be the free act and deed of the said DEPARTMENT OF EDUCATION.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

_____
Notary Public, State of Hawaii

My commission expires:_____

STATE OF HAWAII)
) SS.
COUNTY OF MAUI)

On this _____ day of _____, 19___, before me appeared _____, to me personally known, who, being by me duly sworn, did say that he/she is the Chairperson of the BOARD OF LAND AND NATURAL RESOURCES of the State of Hawaii, and that the seal affixed to the foregoing instrument is the lawful seal of the said BOARD OF LAND AND NATURAL RESOURCES, and that the said instrument was signed and sealed on behalf of the said BOARD OF LAND AND NATURAL RESOURCES, and the said _____ acknowledged the said instrument to be the free act and deed of the said BOARD OF LAND AND NATURAL RESOURCES.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

_____
Notary Public, State of Hawaii

My commission expires:_____

Proposed Water System

The L-WTP will be located adjacent to the existing Lahainaluna High school gravity filter fenced site. The basic components within the 5 acre L-WTP fenced site will be a Treatment Plant (TP) building, Chlorinator/ Ammoniator (C/A) building, sludge lagoons, a septic tank/leaching field wastewater system and an access driveway.

The site will be grassed for erosion control. Stormwater runoff, which currently sheet flows across the site, will be diverted around the site to desilting basins located just below the L-WTP.

The current 8-foot wide paved access road to the school's existing 0.1 MG steel tank will be widened and extended to the proposed facilities.

The water treatment system, office/control room and storage facilities, will be housed within the TP building. The TP building will be a pre-fabricated, rigid-frame, aluminum building, approximately 20 feet high. The finish floor elevation will be 745.0 feet. Treated water will be chlorinated and stored within a clearwell located under the building. The finish floor elevation of the clearwell well be approximately 732.0 feet.

The separate concrete masonry unit (CMU) C/A building will house the chlorinator and ammoniator units. The C/A building will have a finish floor elevation of 745.0 feet and will be 13 feet high, with 1,075 square feet of floor area.

A standby generator system with diesel fuel day tank will be housed within weatherproof enclosures and installed just outside the TP building. The day tank will draw fuel from an aboveground, 1,000 gallon diesel fuel tank within the WTP fenced site. This generator system will provide total standby power for the L-WTP. The fuel tank will have sufficient capacity to provide fuel for several days of standby power generation.

EXHIBIT "A"

The sludge lagoons will be a dual cell system with a common wall. These lagoons will receive backwash water from the filtration units and allow for separation of the settleable solids (sludge) from the liquid portion (decant) under quiescent conditions. The dual cell concept is to allow for dewatering of the sludge within the inactive cell by evaporation.

The septic tank/leaching field system will receive wastewater from the restroom and washdown facilities within the two buildings. The wastewater flow is anticipated to be less than 100 gallons per day.

The L-WTP will operate at an approximate capacity of 1.2 MGD with 0.3 MGD of standby. Approximately 1.1 MGD of treated water will be used by the County and 0.1 MGD by Lahainaluna School.

The L-WTP will incorporate provisions for future expansion for an ultimate capacity of 2.5 MGD. These provisions will primarily be space allocation for an additional filtration unit(s), and associated piping connections. The future unit(s) would be housed within the same building.

During drought conditions, the average total flow at the screen box could be less than 1.0 MGD. Under such circumstances only one, or two, of the filtration units is expected to be operating.

The finish water will be pumped from the clearwell to a 1.0 MG finish water reservoir just above the L-WTP site, at an elevation of 802.0 feet. The elevation of the finish water reservoir allows for sufficient pressure to operate a fire protection sprinkler system within the C/A building, and an exterior fire hydrant. The elevation of the finish water reservoir will also allow for gravity flow to the Kanaha Reservoir, via a tap into DWS's existing water line. The existing waterline between the existing divider box and this tap would be cut and plugged to prevent future conveyance of untreated water to Kanaha Reservoir.

The 1.0 MG finish water reservoir will include 0.30 MG of storage to satisfy Lahainaluna High School's potable demand and fire protection requirements. The remaining storage is considered surplus storage for fire protection and filter backwashing for the L-WTP, and to accommodate DWS's area-wide (Lahaina Southern District) storage requirements.

Water distributed among the three parties (i.e., Lahainaluna School, DWS and PMCo) would be metered and manually regulated by control valves.

A common drain line along the access road to the proposed facilities will convey overflow/washout water from existing and proposed facilities to Kanaha Stream. The existing facilities include the screen box, and the school's 0.1 MG concrete and 0.1 MG steel reservoirs. Overflow/washout waters from these existing facilities currently discharge at various points along the top bank of Kanaha Stream. Also proposed are two desilting basins to detain storm runoff from the treatment plant site.

LAHAINA WATER TREATMENT PLANT
CONSTRUCTION COST ESTIMATE

1.	Site Preparation	$790,000
2.	Treatment Plant Building	$980,000
3.	Ammoniator/Chlorinator Building	$200,000
4.	Sludge Lagoons	$410,000
5.	0.5 MG Presedimentation Reservoir	$1,050,000
6.	Yard Piping	$590,000
7.	Domestic Water & Wastewater Systems	$30,000
8.	Flow Meters	$90,000
9.	Filtration System	$2,330,000
10.	Chlorination System	$120,000
11.	Ammoniation System	$70,000
12.	Process Piping	$70,000
13.	Chlorine Scrubber	$170,000
14.	Water Pressure Booster System	$26,000
15.	Finish Water Pumps	$40,000
16.	Lagoon Decant Pumps	$60,000
17.	1.0 MG Finish Water Reservoir	$1,190,000
18.	Laboratory Equipment and Supplies	$5,000
19.	Instrumentation	$390,000
20.	Fuel System	$18,000
21.	Electrical	$600,000
22.	Filter Influent Pumps	$11,000
23.	Chemical Feed System	$70,000
24.	Misc. Including Testing & Disinfecting	$100,000
TOTAL 1993 CONSTRUCTION COST (ROUNDED)		$9,410,000

EXHIBIT "A"

SUBJECT TO CHANGE
SCHEMATIC FLOW THRU PLAN
12" RAW WATER LINE
12" DRAIN LINE
6" FIRE LINE
LEACHING FIELD
5' OVERFLOW LINE
21" DRAIN LINE

EXHIBIT B

Lahainaluna High School Potable Water Usage

12/31/03	0	0	$0.00
10/31/03	1229	10*1.42+15*1.91+1204*2.25	$2,751.85
08/31/03	2125	10*1.42+15*1.91+2100*2.25	$4,767.85
06/30/03	1365	10*1.42+15*1.91+1340*2.25	$3,057.85
04/30/03	757	10*1.42+15*1.91+732*2.25	$1,689.85
02/28/03	0	0	$0.00
12/31/02	0	0	$0.00
10/31/02	478	10*1.42+15*1.91+453*2.25	$1,062.10
08/31/02	1294	10*1.42+15*1.91+1269*2.25	$2,898.10
06/30/02	0	0	$0.00
04/30/02	0	0	$0.00
02/28/02	25	10*1.42+15*1.91	$42.85
12/31/01	2616	10*1.42+15*1.91+2591*2.25	$5,872.60
10/31/01	3112	10*1.42+15*1.91+3087*2.25	$6,988.60
08/31/01	3275	10*1.42+15*1.91+3250*2.25	$7,355.35
06/30/01	3738	10*1.35+15*1.82+3713*2.14	$7,986.62
04/30/01	2456	10*1.35+15*1.82+2431*2.14	$5,243.14
02/28/01	726	10*1.35+15*1.82+701*2.14	$1,540.94
12/31/00	1380	10*1.35+15*1.82+1355*2.14	$2,940.50
10/31/00	4989	10*1.35+15*1.82+4964*2.14	$10,663.76
08/31/00	3095	10*1.35+15*1.82+3070*2.14	$6,610.60
06/30/00	5987	10*1.29+15*1.73+5962*2.04	$12,201.33
04/30/00	5604	10*1.29+15*1.73+5579*2.04	$11,420.01
02/29/00	3199	10*1.29+15*1.73+3174*2.04	$6,513.81
12/31/99	3604	10*1.29+15*1.73+3579*2.04	$7,340.01
10/31/99	5130	10*1.29+15*1.73+5105*2.04	$10,453.05
08/31/99	3771	10*1.29+15*1.73+3746*2.04	$7,680.69
06/30/99	3733	10*1.23+15*1.65+3078*1.94	$6,008.37
04/30/99	3388	10*1.23+15*1.65+3363*1.94	$6,561.27
02/28/99	2917	10*1.23+15*1.66+2892*1.94	$5,647.53
12/31/98	4940	10*1.23+15*1.65+4916*1.94	$9,572.15
10/31/98	6460	10*1.23+15*1.65+6435*1.94	$12,520.95
08/31/98	6203	10*1.23+15*1.65+6178*1.94	$12,022.37
			$179,414.10

LINDA LINGLE
GOVERNOR
THEODORE E. LIU
DIRECTOR
MARK K. ANDERSON
DEPUTY DIRECTOR
ABBEY SETH MAYER
DIRECTOR
OFFICE OF PLANNING

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

OFFICE OF PLANNING
235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax: (808) 587-2824

Ref. No. P-12615

June 17, 2009

Mr. Matthew Slepin
Senior Associate Planner
Chris Hart & Partners
115 North Market Street
Wailuku, Maui, Hawaii 96793

Dear Mr. Slepin:

Subject: Draft Environmental Assessment (DEA) for
Lahainaluna High School Cafeteria
TMK: (2)4-6-018:012 (por.), Lahaina, Maui, Hawaii

Thank you for the opportunity to review and comment upon the Draft Environmental Assessment (DEA) for the Lahainaluna High School Cafeteria. The Office of Planning has no comments at this time. In so stating, the Office offers no judgment of either the adequacy of the document itself or the merits of the proposed project.

If you have any questions, please contact our Land Use Division at 587-2842.

Sincerely,

Abbey Seth Mayer
Director

cc: Jasm 07/131

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

July 22, 2009

Mr. Abbey Seth Mayer
Director
Department of Business, Economic Development and Tourism
Office of Planning
State of Hawaii
235 South Beretania Street, 6th Floor
Honolulu, HI 96804

Dear Mr. Mayer:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your June 17, 2009 letter regarding the above referenced project. We understand from your letter that you have no comment on the proposed project at this time.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File (CHP Project No. 07-131)

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME LEINAALA FUKINO, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801

In reply, please refer to:
EMD / WB
EPO-M4 6 018 005

June 22, 2009

RECEIVED
JUN 24 2009
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

Mr. Chris Hart
Chris Hart & Partners, Inc.
115 N. Market Street
Wailuku, Hawaii 96793

Dear Mr. Hart:

Subject: HRS Chapter 343 Draft Environmental Assessment
Proposed Construction of a Cafeteria Building
Lahainaluna High School, Lahaina, Maui, Hawaii
TMK (2) 4-6-018: 012 (portion) 21,000 square foot

We have reviewed the document on the subject project submitted which proposes to construct a new, approximately 21,000 square foot, full service cafeteria building along with related site improvements at Lahainaluna High School.

We have the following comments to offer. The subject project is located in the Critical Wastewater Disposal Area (CWDA) as determined by the Maui County Wastewater Advisory Committee where no new cesspools will be allowed.

We have no objections to the proposal and offer our recommendation for approval as the domestic wastewater needs of the project will be handled via connection to the Lahaina Wastewater Reclamation Facility's sewer system.

All wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, "Wastewater Systems." We do reserve the right to review the detailed wastewater plans for conformance to applicable rules. Should you have any questions, please contact the Planning & Design Section of the Wastewater Branch at (808) 586-4294.

Sincerely,

TOMAS S. SEE, P.E., CHIEF
Wastewater Branch

c: DOH's Environmental Planning Office Mr. Jiacai Liu, Mr. Phillip Anderson (EPO 09-095)
DOH-WWB, Maui – Mr. Roland Tejano

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

July 22, 2009

Mr. Thomas S. See, P.E., Chief
Wastewater Branch
Department of Health
State of Hawaii
P.O. Box 3378
Honolulu, HI 96801

Dear Mr. See:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your June 22, 2009 letter regarding the above referenced project. We are pleased to respond to your comments as follows:

We understand from your letter that the proposed project is located in the Critical Wastewater Disposal Area (CWDA) as determined by the Maui County Wastewater Advisory Committee, where no new cesspools will be allowed.

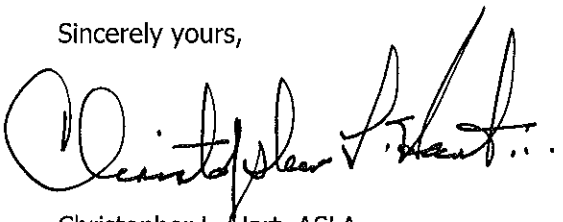
The proposed project will connect to existing sewer lines at the project site, and will not involve the construction of any new cesspools. As acknowledged in your letter, domestic wastewater needs will be handled via connection to the Lahaina Wastewater Reclamation Facility's sewer system.

We understand that all wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, "Wastewater Systems," and that the Wastewater Branch reserves the right to review detailed wastewater plans for conformance to applicable rules.

Thank you for your consideration of this application and for your recommendation of approval. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

Sincerely yours,



Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File (CHP Project No. 07-131)

PHONE (808) 594-1888

FAX (808) 594-1865

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813

HRD09/4271B

CC: Susan

07/13/1

June 25, 2009

Matthew Slepin
Chris Hart & Partners
115 N. Market Street
Wailuku, Maui, 96793-1706

RE: Request for comments on the proposed cafeteria building, Lahainaluna High School (LHS), draft environmental assessment, Lahaina, Maui, TMKs: (2) 4-6-018:005, 012 and 019.

Aloha e Matthew Slepin,

The Office of Hawaiian Affairs (OHA) is in receipt of the above-mentioned letter dated June 8, 2009. OHA has reviewed the project and offers the following comments.

OHA understands that this proposal is for the construction of a new, approximately 21,000 square foot, full-service cafeteria building along with related site improvements in a previously disturbed area on school grounds located within the state Urban District. We also see that the current cafeteria is undersized for current use, let alone projected future demands. As such, we are supportive of this project as we know it.

We do have the following suggestions to better help shape this proposal that the applicant may want to consider:

OHA notes that since this is a state Department of Education proposal, Hawaii Revised Statutes §196-9 *Energy efficiency and environmental standards for state facilities, motor vehicles, and transportation fuel* should apply. OHA advocates that the applicant should implement, to the extent possible, the goals of §196-9 during planning, budget preparation and program implementation of this facility.

Landscaping not only adds beauty to your property, but also helps control erosion by reducing the amount and speed of runoff. Ground covers are one of the best erosion controls and

include any plant material that covers the ground surface so the soil cannot be seen from above and rain does not strike directly upon it. As such, OHA would like to suggest that the project area be landscaped with drought tolerant native or indigenous species that are common to the area. Any invasive species should also be removed. Doing so would not only serve as practical water-saving landscaping practices, but also serve to further the traditional Hawaiian concept of mālama ʻāina and create a more Hawaiian sense of place. This would also help to reduce the amount of impervious surfaces in the project area, thereby reducing runoff as well. Tree and landscape planting to shade paved parking areas and provide shade and cooling to building elements and outdoor use areas should also be considered.

Thank you for the opportunity to comment. If you have further questions, please contact Grant Arnold by phone at (808) 594-0263 or e-mail him at granta@oha.org.

ʻO wau iho nō me ka ʻoiaʻiʻo,

Clyde W. Nāmuʻo
Administrator

C: OHA Maui CRC

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

October 14, 2009

Mr. Clyde W. Namu'o
Administrator
Office of Hawaiian Affairs
State of Hawaii
711 Kapi'olani Blvd.
Honolulu, HI 96813

Dear Mr. Namu'o:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your June 25, 2009 letter regarding the above referenced project. We are pleased to respond to your comments as follows:

1. Energy Efficiency Measures.

As much as possible for a mostly naturally ventilated building, the building is designed for a high degree of energy efficiency, including variable-rate kitchen exhaust and zoned make-up air. A solar thermal hot water system has been included to meet the kitchen's hot water demands.

The project is registered with the U.S. Green Building Council (USGBC), and designed the building around LEED Silver rating. Multiple LEED-based criteria in the design documents include retaining a commissioning agent to perform fundamental building systems commissioning.

2. Landscape Planting.

Soil embankments north of the proposed cafeteria will be planted with a native Hawaiian sedge, Ma'u'u 'aki 'aki (*Fimbristylis cymosa*) for the purpose of erosion control. Ma'u'u 'aki 'aki is also being used on most other areas disturbed by new grading. Ilima papa (*Sida fallax*) will be used as another groundcover on the south side adjacent to the cafeteria lanai.

Gold trees (*tabebuia donnell-smithii*) with initial planting size of 90 gallons, 12'-14' height, will be placed on the south side of the building. Gold tree is a non-invasive, climate-adapted species suitable for the project site, which will provide much additional shade for south facing windows. This will serve to mitigate the need for mechanical cooling of the building and will help minimize associated energy consumption.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File

CHARMAINE TAVARES
MAYOR

JEFFREY K. ENG
DIRECTOR
ERIC H. YAMASHIGE P.E. L.S.
DEPUTY DIRECTOR

DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2155
Telephone (808) 270-7816 ! Fax (808) 270-7833

cc: Jasm
w/attachments
07/31

July 24, 2009

Mr. Matthew M. Slepin
Chris Hart & Planners, Inc.
115 N. Market Street
Wailuku, HI 96793

SUBJECT: Lahainaluna High School Construction of a Cafeteria Building
TMK: (2) 4-6-018: 1012 (por.)

Dear Mr. Slepin:

Thank you for the opportunity to comment on this Draft Environmental Assessment (DEA).

Water System and Source Availability
The Final EA should delineate all existing and proposed sources and uses of potable and non-potable water for the project.

Lahainaluna High School (LHS) receives potable water from the Maui DWS system. The main source for the system at this location is the Lahaina Treatment Plant, with the Kanaha and Waipuka wells providing additional supply as needed. There is currently no additional source available in the West Maui system according to system standards. New source development projects include upgrades to the Lahaina and Mahinahina Treatment Plants. In addition review of potential sites for groundwater wells and raw water storage is under way. If additional meter capacity is required, the Department may delay issuance of meters until new sources are on line. Existing potable consumption averages about 92,500 gallons per day (gpd).

LHS also utilizes non-potable water for agricultural and other uses, and is a signatory to the 1995 "Lahainaluna High School Cost-Sharing Agreement for Water Systems," between the Department of Education, the Department of Accounting and General Services, The Department of Land and Natural Resources and the Board of Water Supply. According to the terms of this agreement, the Board supplies up to 100,000 gallons per day of water for potable consumption to the school without charge. Beyond 100,000 gallons per day, the school pays at normal rates. The agreement also provides for distribution of waters diverted through the existing Pioneer Mill diversion system from the Kanaha Valley Stream. The school is entitled to a 17.7% share of diverted water for non-potable use. Existing non-potable consumption averages about 276,850 gpd.

Infrastructure
The Final EA should specify that the applicant will provide source, storage and transmission , as well as water service for domestic, fire and irrigation use, and backflow prevention according to

system standards. A description of any infrastructure changes to accommodate the proposed project should be provided. Fixture unit calculations for domestic and irrigation use will be reviewed during the building permit process.

A 16" DWS line runs from the 300,000 gallon Kanaha Tank down through the parcel. The Draft EA notes 6, 8 and 12 inch distribution lines on site as well. No DWS hydrants are located on the property. The Final EA should clarify fire protection to the site.

Anticipated Consumption

The Final EA should discuss existing and anticipated consumption of potable and non-potable water in relation to the cafeteria project, considering such factors as increased capacity, service to students and boarders, use for functions and special events and any pertinent changes to landscaping. It should also note consumption impacts of the overall anticipated enrollment expansion which the cafeteria project is designed to accommodate.

The proposed project is designed to accommodate an anticipated enrollment increase of roughly 43% . We anticipate that with such an increase, consumption would increase between 22,500 and 42,500 gpd, for an overall school consumption somewhere between 115,000 gpd and 135,000 gpd, Of this increase, roughly 8,500 would be estimated to occur at the cafeteria.

LHS currently draws an average of 276,850 gallons per day of non-potable water from the Kanaha Stream. It is not clear from the DEA whether any additional non-potable water will be required for landscaping the area immediately surrounding the cafeteria. Such uses, if any, should be described in the Final EA.

We note that the Department of Water Supply's Lahaina Treatment Plant also uses water from the Kanaha Valley Stream. Given the anticipated expansion of enrollment, and consequent potential increase of outdoor activities, the applicant should work closely with the Department of Water Supply to ensure that the timing of non-potable withdrawals does not interfere with treatment plant operations.

Conservation

In order to reduce demand in the Lahaina system the following conservation measures should be specified in the Final EA, and included in project implementation..

1) Low Flow Fixtures
   Maui County Code Subsection 16.20A.680 requires the use of low-flow water fixtures. Even more efficient fixtures are both available and tested for consumer satisfaction. The applicant should utilize EPA *WaterSense* certified high-efficiency toilets and other fixtures whereever possible. Information on such fixtures may be found at http://www.epa.gov/WaterSense/pp/index.htm
   a. Select high efficiency toilets that use 1.28 gallons per flush or less.
   b. Select high efficiency urinals that use 0.5 gallons per flush or less.
   c. Select bathroom sink faucets with fixtures that do not exceed 1 gpm at 60 psi.
2) Select ice machines which are air cooled.
3) Select air cooled or closed-system recirculating refrigeration systems.
4) Pre-rinse spray valves on dishwashers shall have a flow rate equal to or less than 1.6 gpm at 60 psi.

5) Food steamers should be self-contained "boilerless" or "connectionless" models.
6) Wok stoves should be "waterless woks".
7) Ware washing units shall have flow rates of less than 1 gallon per rack.
8) Maintain fixtures to prevent leaks. A simple, regular program of repair and maintenance can prevent the loss of hundreds or even thousands of gallons a day.

Pollution Prevention

The DEA states that drainage mauka of the site discharges runoff into Kanaha Gulch. We note that an old auwai runs along portions of the south side of the stream. The DEA states that with proposed drainage mitigation run-off after the project will be mitigated to pre-project conditions. In the event that any proposed site work could result in increased drainage discharges to the stream, care should be taken to protect both water resources and any historical water conveyance structures that may be affected. The DEA should identify any such concerns and delineate any protective measures intended to protect the stream and or auwai.

Drainage, including a basic treatment system, is addressed in the EA. In order to protect water resources during construction, we also recommend that Best Management Practices designed to minimize infiltration and runoff. The following mitigation measures should be implemented during construction:

9) Prevent cement products, oil, fuel and other toxic substances from falling or leaching into the ground or entering storm drains by using proper containment and maintenance practices;
   a. Place storm drain covers or a similarly effective containment device on all nearby drains to prevent dirty runoff and loose particles from entering the storm drainage system;
   b. Place covers at the beginning of the work day and remove accumulated materials before removing the covers at the end of the work day. If storm drains are not present, use dikes, berms or other methods to prevent the flow of contaminated run-off to nearby streams.
   c. Sweep street gutters, sidewalks, driveways, and other paved surfaces near the demolition area at the end of each work day. Ensure proper disposal of loose debris.
   d. Maintain vehicles and equipment to prevent leakage of oil or other fluids.
10) Retain ground cover until the last possible date;
11) Stabilize denuded areas by sodding or planting as soon as possible--replanting should include soil amendments, fertilizers and temporary irrigation, and use high seeding rates to ensure rapid stand establishment; and
12) Avoid fertilizers and biocides, or apply only during periods of low rainfall to minimize chemical run-off.

Should you have any questions, please contact our Water Resources and Planning Division at 244-8550.

Sincerely,

Jeffrey K. Eng
Director

c: Engineering Division
attachments:
Water Conservation Checklists for
Schools
Restaurants
Multi-pass Cooling Systems
Plant Brochure

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

October 9, 2009

Mr. Jeffrey K. Eng
Director
Department of Water Supply
County of Maui
200 South High Street
Wailuku, HI 96793-2155

Dear Mr. Eng:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your July 24, 2009 letter regarding the above referenced project. We are pleased to respond to your comments as follows.

Water System and Source Availability

As noted in your letter, Lahainaluna High School (LHS) receives potable water from the Maui DWS system. We understand that if additional meter capacity is required, the Department may delay issuance of meters until new sources are on line. Detailed water demand calculations will be provided as part of the building permit application process. No significant increase in potable water demand is anticipated as a result of the proposed project.

In addition, we note that LHS utilizes non-potable water for agricultural purposes and is a signatory to the 1995 "Lahainaluna High School Cost Sharing Agreement for Water Systems." The information in your letter concerning the Cost Sharing Agreement is correctly noted. The Cost Sharing Agreement will be discussed in the Final Environmental Assessment (FEA) for the proposed project.

Infrastructure

The FEA will specify that the Applicant will provide source, storage, and transmission as well as water service for domestic, fire and irrigation use, and backflow prevention according to system standards. An 8-inch water line on the north side of the cafeteria will provide domestic water service. Adjacent to the 8-inch water line is a 6-inch irrigation main that will serve the proposed irrigation system for the new cafeteria. A description of any infrastructure changes to accommodate the proposed project will be provided if necessary. Fixture unit calculations for domestic and irrigation use will be provided during the building permit process.

No DWS fire hydrants are present on the site; however, four (4) hydrants off the school distribution system, which is owned by the Department of Education (DOE), surround the project site along Lahainaluna Road. The closest hydrant is located along Lahainaluna Road near the service driveway to the existing cafeteria, fronting the project site.

Anticipated Consumption

The proposed new cafeteria building is intended to accommodate a currently underserved existing student enrollment, and is not being constructed in response to any increase in student population at the school. The size of the proposed cafeteria was determined according to a conceptual "Design Enrollment" (DE) provided in the DOE Facility Assessment and Development Schedule (FADS), dated January 2006.

The FADS requirements for cafeterias vary for elementary, intermediate and high schools. Cafeterias increase in size at each level, with the largest size serving high schools. DOE FADS for high school cafeterias statewide are based upon a conceptual DE of 1400 students, but this should not be construed with actual enrollment, which can vary widely from district to district. Each new cafeteria design begins with the FADS as a baseline, but is then tailored to address specific conditions and constraints. Such was the case at LHS.

As designed, the LHS Cafeteria is significantly smaller than as defined by the DOE FADS for the DE of 1400. The kitchen for example, is only 70% as large as the FADS call for. The overall cafeteria building is only 75% as large as the FADS call for.

Actual school enrollment is a function of population trends and physical number of classrooms provided. DOE expects the actual enrollment at LHS to remain fairly constant for many years. There are no plans to construct additional classrooms. The DOE enrollment projection for LHS for the year 2014, which is as far out as the school projects, is 997. This projected number is very close to the current enrollment of 977, and since the new cafeteria will be replacing the existing cafeteria, no significant increase in consumption is anticipated.

Conservation

In order to reduce demand in the Lahaina system, conservation measures including, but not limited to, those identified in your letter will be implemented as part of the proposed project.

Pollution Prevention

No increase in drainage discharge is anticipated as a result of the proposed project. The Applicant has applied for a National Pollutant Discharge Elimination System (NPDES) General Permit (NOI Form C) for construction water discharge with the Department of Health.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File (CHP Project No. 07-131)

CHARMAINE TAVARES
MAYOR

JEFFREY A. MURRAY
CHIEF

ROBERT M. SHIMADA
DEPUTY CHIEF

COUNTY OF MAUI
DEPARTMENT OF FIRE AND PUBLIC SAFETY
FIRE PREVENTION BUREAU

780 ALUA STREET
WAILUKU, HAWAII 96793
(808) 244-9161
FAX (808) 244-1363

June 17, 2009

Mr. Matthew M. Slepin, Land Planner
115 N. Market Street
Chris Hart & Partners, Inc.
Wailuku, Maui, HI 96793

Subject: Draft Environmental Assessment for proposed Lahainaluna High School Cafeteria, Lahaina, HI, TMK: (2) 4-6-018:012 (por.)

Dear Mr. Slepin,

The Department of Fire and Public Safety has reviewed the information that was provided in regards to the Lahainaluna High School Cafeteria EA. We have no concerns or comments at this time. A detailed review of this project will be conducted by our office during the building permit application process.

Please feel free to contact Captain Val Martin of our Fire Prevention Bureau at 244-9161 if there are any questions or concerns regarding this subject.

Sincerely,

Valerie Brandon
Firefighter I
Fire Prevention Bureau

For: Valeriano F. Martin
Captain
Fire Prevention Bureau

CC: Jason 07/13/1

RECEIVED
JUN 23 2009
CHRIS HART & Partners
Landscape Architecture

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

July 22, 2009

Mr. Valeriano F. Martin
Captain
Fire Prevention Bureau
Department of Fire and Public Safety
County of Maui
780 Alua Street
Wailuku, HI 96793

Dear Mr. Martin:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your June 17, 2009 letter regarding the above referenced project. We understand that you have no objections to the proposed project at this time. We also understand that a detailed review of the project will be conducted by your office during the building permit application process.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File (CHP Project No. 07-131)

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

POLICE DEPARTMENT
COUNTY OF MAUI

CHARMAINE TAVARES
MAYOR

OUR REFERENCE

YOUR REFERENCE

55 MAHALANI STREET
WAILUKU, HAWAII 96793
(808) 244-6400
FAX (808) 244-6411

GARY A. YABUTA
CHIEF OF POLICE

CLAYTON N.Y.W. TOM
DEPUTY CHIEF OF POLICE

July 13, 2009

cc: Jason
07/31

Mr. Matthew M. Slepin
Senior Associate
Chris Hart & Partners, Inc.
115 N. Market Street
Wailuku, HI 96793

Dear Mr. Slepin:

SUBJECT: Lahainaluna High School Cafeteria EA

This is in response to your letter dated June 8, 2009, requesting comments on the above subject.

We have reviewed the information submitted for the above mentioned project and have enclosed our comments and recommendations at this time. Thank you for allowing us to review this project.

Very truly yours,

Assistant Chief Wayne T. Ribao
for: Gary A. Yabuta
Chief of Police

c: Jeffrey Hunt, Maui County Dept. of Planning

COPY

CONCUR:
AC W. [illegible]
7/13/09

TO : **GARY YABUTA, CHIEF OF POLICE**

VIA : **CHANNELS**

FROM : **SCOTT PERRY, POLICE OFFICER II, DISTRICT IV**

SUBJECT : **DRAFT ENVIRONMENTAL ASSESSMENT LAHAINALUNA HIGH SCHOOL CAFETERIA**

Sir, This to/from is being written as after my evaluation of a Draft Environmental Assessment for a new Lahainaluna High School Cafeteria.

The Lahainaluna High School cafeteria Project will build a new cafeteria on the campus of Lahainaluna High School which will built next to an existing cafeteria. The project site will is on the northern side of the school property and is entirely contained within the campus. Thus, there will be no change to existing access and egress traffic patterns of the Lahainaluna High School campus, and any changes to traffic and roadway facilities will be confined to within the school campus.

The proposed action will not generate any additional vehicular trips, will not require changes to traffic patterns within or adjacent to the school campus, and will not require any roadway improvements. Therefore, no traffic impacts are anticipated as a result of expanding the Lahainaluna High School cafeteria.

Submitted for your information.

Scott PERRY E9241
070809/1120 hours

NO IMPACT TO THE POLICE.
[signature] 1612
7/8/09 1125

Noted:
[signature]
7/8/09

NO IMPACT.
[signature] 7/8/09

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

October 8, 2009

Mr. Gary A. Yabuta
Chief
Police Department
County of Maui
55 Mahalani Street
Wailuku, HI 96793

Dear Mr. Yabuta:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your July 13, 2009 letter regarding the above referenced project. We note that based upon your assessment of the proposed project, no additional vehicle trips will be generated, and no changes to traffic patterns or roadway improvements will be required. We understand from your letter that you anticipate no impacts to Police services as a result of the proposed project.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File (CHP Project No. 07-131)

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

CHARMAINE TAVARES
Mayor

TAMARA HORCAJO
Director

ZACHARY Z. HELM
Deputy Director

(808) 270-7230
FAX (808) 270-7934

DEPARTMENT OF PARKS & RECREATION

700 Hali'a Nakoa Street, Unit 2, Wailuku, Hawaii 96793

June 23, 2009

Mr. Matthew M. Slepin
Chris Hart & Partners
115 N. Market Street
Wailuku, Hawaii 96793

SUBJECT: Lahainaluna High School Cafeteria Draft Environmental Assessment

Dear Mr. Slepin:

We have reviewed the proposed project and have no comments or objections to submit at this time.

Thank you for the opportunity to review and comment on this matter. Please feel free to contact me or Mr. Patrick Matsui, Chief of Parks Planning and Development at 270-7387 should you have any other questions.

Sincerely,

TAMARA HORCAJO
Director of Parks & Recreation

c: Patrick T. Matsui, Chief of Parks Planning and Development

TH:PTM:do

Cc: Jason 07/31

RECEIVED
JUL
CHRIS
Landsc... ...ning

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

July 22, 2009

Ms. Tamara Horcajo
Director
Department of Parks and Recreation
County of Maui
700 Hali'a Nakoa Street, Unit 2
Wailuku, HI 96793

Dear Ms. Horcajo:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your June 23, 2009 letter regarding the above referenced project. We understand from your letter that you have no comments or objections with regard to the proposed project.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File (CHP Project No. 07-131)

CHARMAINE TAVARES
Mayor

JEFFREY S. HUNT
Director

KATHLEEN ROSS AOKI
Deputy Director

CC: Jason 07/131

COUNTY OF MAUI
DEPARTMENT OF PLANNING

June 18, 2009

Mr. Matthew M. Slepin, Senior Associate Planner
Chris Hart & Partners, Inc.
115 North Market Street
Wailuku, Hawaii 96793

Dear Mr. Slepin:

SUBJECT: COMMENTS IN PREPARATION OF A DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR THE PROPOSED LAHAINALUNA HIGH SCHOOL CAFETERIA, LOCATED AT 980 LAHAINALUNA ROAD, LAHAINA, ISLAND OF MAUI, HAWAII; TMK: (2) 4-6-018:012 (POR.) (EAC 2009/0024)

The Department of Planning (Department) is in receipt of the above-referenced document for the proposed Lahainaluna High School Cafeteria project. The Department understands the proposed action includes the following:

1. The Environmental Assessment (EA) has been prepared in support of the construction of a new, approximately 21,000 square feet, full-service cafeteria building along with related site improvements, at the Lahainaluna High School (LHS) campus.

Based on the foregoing, the Department provides the following comments in preparation of the Draft EA:

1. The land use designations for the project area are as follows:

   a. State Land Use - Urban
   b. West Maui Community Plan - Public/Quasi-Public
   c. County Zoning - Interim
   d. Other – (None identified)

Please include the Department on the distribution list of the further environmental documents related to this project.

Thank you for the opportunity to comment. Should you require further clarification, please contact Staff Planner Kurt Wollenhaupt by email at kurt.wollenhaupt@mauicounty.gov or by phone at (808) 270-1789.

Sincerely,

CLAYTON I. YOSHIDA, AICP
Planning Program Administrator

for JEFFREY S. HUNT, AICP
Planning Director

xc: Kurt F. Wollenhaupt, Staff Planner
Project File
General File

JSH:CIY:KFW:vb
K:\WP_DOCS\PLANNING\EAC\2009\0024_Lahainaluna High School Cafe\EAC_Comments.DOC

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

July 22, 2009

Mr. Jeffrey S. Hunt, AICP
Planning Director
Department of Planning
County of Maui
250 S. High Street
Wailuku, HI 96793

Dear Mr. Hunt:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your June 18, 2009 letter regarding the above referenced project. Your understanding of the proposed project and the applicable land use designations for the project area, as described in your letter, are accurate. As advised, we will continue to include the Planning Department on the distribution list for any further environmental documents related to this project.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File (CHP Project No. 07-131)

CHARMAINE TAVARES
Mayor

MILTON M. ARAKAWA, A.I.C.P.
Director

MICHAEL M. MIYAMOTO
Deputy Director

Telephone: (808) 270-7845
Fax: (808) 270-7955

RALPH NAGAMINE, L.S., P.E.
Development Services Administration

CARY YAMASHITA, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
200 SOUTH HIGH STREET, ROOM NO. 434
WAILUKU, MAUI, HAWAII 96793

June 30, 2009

CC Jason
07/13/

Mr. Matthew M. Slepin
Senior Associate Planner
CHRIS HART & PARTNERS
115 North Market Street
Wailuku, Maui, Hawaii 96793

Dear Mr. Slepin:

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR PROPOSED LAHAINALUNA HIGH SCHOOL CAFETERIA BUILDING TMK (2) 4-6-018:012 (POR.)

We reviewed the subject application and have the following comments:

1. The plans submitted for this project do not adequately show sufficient details to determine whether the project is compliant with building codes. We will review the project for building code requirements during the building permit application process.

2. The applicant shall be responsible for all required improvements, as required by Hawaii Revised Statutes, Maui County code and rules and regulations.

3. As applicable, construction plans shall be designed in conformance with Hawaii Standard Specifications for Road and Bridge Construction dated 2005 and Standard Details for Public Works Construction, 1984, as amended.

4. As applicable, worksite traffic-control plans/devices shall conform to "Manual on Uniform Traffic Control Devices for Streets and Highways", 2003.

5. On the Soils Map, Figure 9, "Ikena Avenue" is mis-labeled. Ikena Avenue does not run parallel to Kanaha Gulch.

Please call Michael Miyamoto at (808) 270-7845 if you have any questions regarding this letter.

Sincerely,

MILTON M. ARAKAWA, A.I.C.P.
Director of Public Works

MMA:MMM:ls
xc: Highways Division
Engineering Division
K:\WP_DOCS\LUCA\PERMITS\CZM\46018012_por_Lahainaluna_HS_Cafe_dea_ls.wpd

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

July 22, 2009

Mr. Milton Arakawa, AICP
Director
Department of Public Works
County of Maui
200 South High Street, Room 434
Wailuku, HI 96793

Dear Mr. Arakawa:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your June 30, 2009 letter regarding the above referenced project. We are pleased to respond to your comments as follows:

1. **Compliance with Applicable Building Codes.** We acknowledge that the concept plans included in the Draft Environmental Assessment (EA) do not contain sufficient detail to determine compliance with building codes. We understand that you will review the project for building code requirements during the Building Permit phase of the process, once construction drawings have been generated.

2. **Required Improvements.** We acknowledge that the Applicant will be responsible for all required improvements, as required by Hawaii Revised Statutes, Maui County Code, and rules and regulations.

3. **Conformance with Specifications for Road and Bridge Construction.** Where applicable, construction plans will be designed in conformance with Hawaii Standard Specifications for Road and Bridge Construction, dated 2005, and Standard Details for Public Works Construction, 1984, as amended.

4. **Worksite Traffic Control.** Worksite traffic control plans and devices will conform to "Manual on Uniform Traffic Control Devices for Streets and Highways, 2003."

5. **Soils Map.** We note that "Ikena Avenue" is mislabeled on the Soils Map, Figure 9. This will be corrected in the preparation of the Final EA.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File (CHP Project No. 07-131)

DEPARTMENT OF
HOUSING AND HUMAN CONCERNS
COUNTY OF MAUI

CHARMAINE TAVARES
Mayor

LORI TSUHAKO
Director

JO-ANN T. RIDAO
Deputy Director

2200 MAIN STREET • SUITE 546 • WAILUKU, HAWAII 96793 • PHONE (808) 270-7805 • FAX (808) 270-7165
MAILING ADDRESS: 200 SOUTH HIGH STREET • WAILUKU, HAWAII 96793 • EMAIL director.hhc@mauicounty.gov

June 29, 2009

Mr. Mathew M. Slepin
Senior Associate Planner
Chris Hart & Partners
115 N. Market Street
Wailuku, Hawaii 96793

Dear Mr. Slepin:

SUBJECT: Draft Environmental Assessment
Lahainaluna High School Cafeteria

The Department has reviewed the Draft Environmental Assessment for the above subject project. Based on our review, we have determined that the subject project is not subject to Chapter 2.96, Maui County Code. At the present time, the department has no additional comments to offer.

Please call Mr. Wayde Oshiro of our Housing Division at 270-7355 if you have any questions.

Sincerely,

for LORI TSUHAKO, LSW, ACSW
Director of Housing and Human Concerns

cc: Housing Division

RECEIVED
JUL 0 1 2009
CHRIS HART & PARTNERS, INC.
Landscape Architecture + Land Planning

cc: Jason 07/131

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

July 22, 2009

Ms. Lori Tsuhako, LCW, ACSW
Director of Housing and Human Concerns
Department of Housing and Human Concerns
County of Maui
2200 Main Street Suite 546
Wailuku, HI 96793

Dear Ms. Tsuhako:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your June 29, 2009 letter regarding the above referenced project. We understand from your letter that the proposed project is not subject to Chapter 2.96, Maui County Code, and that your department has no additional comments.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

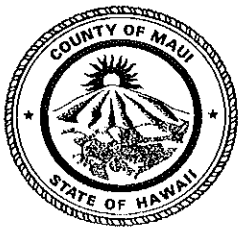
cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File (CHP Project No. 07-131)

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

CHARMAINE TAVARES
Mayor

CHERYL K. OKUMA, Esq.
Director

GREGG KRESGE
Deputy Director



TRACY TAKAMINE, P.E.
Solid Waste Division

DAVID TAYLOR, P.E.
Wastewater Reclamation
Division

COUNTY OF MAUI
DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT
2200 MAIN STREET, SUITE 100
WAILUKU, MAUI, HAWAII 96793

July 2, 2009

Mr. Matthew Slepin
Chris Hart & Partners
115 N. Market Street
Wailuku, Hawaii 96793

SUBJECT: **LAHAINALUNA HIGH SCHOOL CAFETERIA**
DRAFT ENVIRONMENTAL ASSESSMENT
TMK (2) 4-6-018:012 (POR.), LAHAINA

We reviewed the subject application and have the following comments:

1. Solid Waste Division comments:

   a. Construction waste goes to C&D Landfill; recycle when possible.

2. Wastewater Reclamation Division (WWRD) comments:

   a. Although wastewater system capacity is currently available as of 7/2/2009, the developer should be informed that wastewater system capacity cannot be ensured until the issuance of the building permit.
   b. Wastewater contribution calculations are required before building permit is issued.
   c. Developer is not required to pay assessment fees for this area at the current time.
   d. Developer is required to fund any necessary off-site improvements to collection system and wastewater pump stations.
   e. Commercial kitchen facilities within the proposed project shall comply with pre-treatment requirements (including grease interceptors, sample boxes, screens etc.)
   f. Non-contact cooling water and condensate should not drain to the wastewater system.

If you have any questions regarding this memorandum, please contact Gregg Kresge at 270-8230.

Sincerely,

Cheryl K. Okuma, Director

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

July 22, 2009

Ms. Cheryl K. Okuma, Esq.
Director
Department of Environmental Management
County of Maui
2200 Main Street, Suite 100
Wailuku, HI 96793

Dear Ms. Okuma:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your July 2, 2009 letter regarding the above referenced project. We are pleased to respond to your comments as follows:

1. Solid Waste Division Comments.

a. Construction and demolition waste will be deposited at the Construction and Demolition Landfill in Maalaea. Where possible, construction and demolition waste materials will be recycled.

2. Wastewater Reclamation Division Comments.

a. The Applicant understands that, although system capacity is currently available as of July 2009, wastewater system capacity cannot be ensured until issuance of the Building Permit.

b. The Applicant is aware that wastewater contribution calculations are required before issuance of building permits.

c. The Applicant notes that assessment fees are not required for the project area at the present time.

d. The Applicant acknowledges the requirement to fund any necessary off-site improvements to collection systems and wastewater pump stations.

e. Commercial kitchen facilities within the proposed project will comply with pre-treatment requirements, including grease interceptors, sample boxes, screens, etc.

f. Non-contact cooling water and condensate will not drain to the wastewater system.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File (CHP Project No. 07-131)

Maui Electric Company, Ltd. • 210 West Kamehameha Avenue • PO Box 398 • Kahului, Maui, HI 96733-6898 • (808) 871-8461

CC: Jason 07/13

June 12, 2009

Mr. Matthew M. Slepin, Senior Associate Planner
Chris Hart & Partners Inc.
115 N. Market St.
Wailuku, Hawaii 96793

Dear Mr. Slepin,

Subject: Draft Environmental Assessment for the Proposed Construction of a Cafeteria Building, Lahainaluna High School
980 Lahainaluna Road
Lahaina, Maui, Hawaii
TMK: (2) 4-6-018:012 (por.)

Thank you for allowing us to comment on the Draft Environmental Assessment for the subject project.

In reviewing our records and the information received, Maui Electric Company (MECO) has no objection to the subject project at this time. However, we request clarification on statements made regarding the potential impacts and mitigation measures for electrical service on page 23, item 5 of the Infrastructure Section. Typically, the construction of a new Cafeteria building would increase the electrical service demand. Thus, we highly encourage the customer to submit an electrical service request so that any service upgrade/addition can be provided on a timely basis.

Should you have any questions or concerns, please call me at 871-2340.

Sincerely,

R. Okazaki

Ray Okazaki
Staff Engineer

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

October 9, 2009

Mr. Ray Okazaki
Staff Engineer
Maui Electric Company, Inc.
210 West Kamehameha Ave.
Kahului, HI 96732

Dear Mr. Okazaki:

RE: HRS Chapter 343 Draft Environmental Assessment (EA) for a proposed Cafeteria Building at Lahainaluna High School, Lahaina, Maui, Hawaii; TMK: (2) 4-6-018:012 (por).

Thank you for your June 12, 2009 letter regarding the above referenced project. We understand that you have no objections to the proposed project at this time.

The design of the new cafeteria building incorporates ambitious energy efficiency goals, which should result in a minimal increase in energy demand relative to the Lahainaluna High School Campus as a whole. The Applicant has submitted an electrical service request to ensure that any necessary service upgrades or additions can be provided on a timely basis.

Thank you for your consideration of this application. Should you have any further questions, please contact myself, or Mr. Jason Medema, Planner, at 242-1955.

Sincerely yours,

Christopher L. Hart, ASLA
President
Landscape Architect / Planner

cc. Mr. Bill Brooks, AIA, LEED-AP, Principal, Ferraro Choi Architects, Inc.
Mr. Ben Miura, State of Hawaii, Department of Education
Project File

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

APPENDIX B:
DOE Facility Assessment and Development Schedule

4 FACILITIES ASSESSMENT and DEVELOPMENT SCHEDULE #

2 State of Hawaii FADS Department of Education #

SCHOOL NAME —2c NEW	Lahainaluna HS				YRE-MT	No
DISTRICT:	Maui		COMPLEX:	Lahainaluna	Air-Con ?	No
GRADE ORGANIZATION:	BOTT:	9	TOP:	12	RAINFALL	

CURRENT ENROLLMENT	
REGULAR ENROLLMENT	n/a
SPEC ED ENROLLMENT	
PROJECTED SPECIAL EDUCATION ENROLMENT @ DESIGN	210

SPED TCHR(S) or % ENROLL		15.0%

DESIGN ENROLLMENT	1400
REGULAR ENROLLMENT	1190
SPECIAL ED @ 15.0% of DE	210

10 MONTH ENROLLMENT = 1400	
EDSPEC PERMANENT CLASSROOMS	
GENERAL CLRM	26
FINE ARTS CLRM	2
SCIENCE CLRM	6
MAX. ADJUSTMENT	14
SPEC ED —2c(12/CLRM)	18
PERMANENT CR.	66 +7 Supp
Supplementals Built as Permanent Clsrm	
PEAK PORTABLES	7
TOTAL ALL CLRM	73 +7 Port

\b24

Max School Area = 175304		NEW	Unit	Ed Spec	Existing	+	NEW	Total
COMPONENT: [—2c—i#¯]=Req'(		WORK	Area	Area	Area	-	Flr Area	Area
::	Selected Area = EDSPEC	BUDGET $			PROJECT:			
-5FE	School Summary - New Support —7FNew Area: (+/-) Excess/Deficit, (e) EDSF							
	Administrative Center	1		11505		—2	11505	11505
	Library Media Center	1		9654		—2	9654	9654
	Cafeteria/Multipurpose	1		14970		—2	14970	14970
	Kitchen ((conv)	1		4675		—2	4675	4675
	Custodial Service Center	1		600		—2	600	600
	Faculty Center	3	980	2940	0	—2	2940	2940
	Computer Resource Center	2	1200	2400	0	—2	2400	2400
	Itinerant Special Educat'n	1		330	0	—2	330	330
	Teacher Center(s)			0	0			
		0		1200	0	—2	0	0
	PE Locker Shower	1		8860		—2	8860	8860
	Athletic Locker Shower	1		10140		—2	10140	10140
	Gymnasium	1		22030		—2	22030	22030
	Adult Education Center				0		0	0
	Auditorium (optional)			By Design	0			0
	Staff Parking (DE/8)	Stalls	1/8	175	0			175
	Visitor Pkg (5 Stalls/499 DE)	Stalls		15	0			15
	Student Pkg (no. of stalls to be determined per local conditions on a school by school basis)							

Max School Area = 175304	NEW	Unit	Ed Spec	Existing	+	NEW	Total
COMPONENT: [—2c—i#]=Req'	WORK	Area	Area	Area	-	Flr Area	Area
Dining/Multi-Purpose	1						

Design Enrollment (DE)	1400		Shared Dining/Multi-Purpose DE				
Student Dining Room	1	12000	12000				12000
0-300 3600							
301-1000 DEx12							
1001-2000 12000							
2001-up DE*6							
Permanent Stage Area	1	990	990				990
Chair Storage	1	250	250				250
Amplifier Area	1	70	70				70
Hallway	1	Area by Designer					0
Boy's Dressing/Storage Room	1	180	180				180
Girl's Dressing/Storage Room	1	180	180				180
Boy's Toilet	1	160	160				160
Girl's Toilet	1	160	160				160
Custodial Closet	1	80	80				80
Staff Dining Room	1	900	900				900
Total Area Cafe/Multipurpose			**14970**				**14970**

CONTINUED

Selected Area = EDSPEC **BUDGET $** **PROJECT:**

Custodial Service Center	1						

Custodial Service Center	1						
Off/stor./repair area	1	290	290				290
Locker area	1	60	60				60
Tool room	1	160	160				160
Restroom w/ Shower	1	90	90				90
							0
Total Area Custodial Service Center			**600**				**600**

Total Area Custodial Service			**600**				**600**
Total Area Cafe/Multipurpose			**14970**				**14970**
Total Area Cafe & Custodial			**15570**				**15570**

Max School Area = 175304	NEW	Unit	Ed Spec	Existing	+	NEW	Total
COMPONENT: [—2c—i#]=Req'd	WORK	Area	Area	Area	-	Flr Area	Area
CONTINUED							
:: Selected Area = EDSPEC	conv Kitchen:			PROJECT:			
Food Service - Kitchen	**1**	**CONVENTIONAL KITCHEN FOR:**					**1400**
SERV - CONV - PREP ??	**conv**						
Food preparation area	1	1100	1100				1100
Dry Storage	1	600	600				600
Walk-in Refrigerator	1	200	200				200
Walk-in Freezer	1	240	240				240
Serving Area	1	1325	1325				1325
Recycle Area	1	220	220				220
Trash Can Wash Area	1	50	50				50
Pot & Pan Washing Area	1	180	180				180
							0
Transport Cart Storage Area	1	100	100				100
Manager's Office	1	180	180				180
Lockers and Restrooms	2	140	280				280
Laundry/Utility Area	1	200	200				200
Heater room	1	**Area by Designer**					
Elec, Comm, & Compress Rm	3	**Area by Designer**					
Food Kiosks? —2b(Y or N) =	y						
Total Area of Kitchen			**4675**				**4675**
Selected Area = EDSPEC	**BUDGET $**			**PROJECT:**			
Cafetorium/Multi-Purpose		**Notes and Comments**					

APPENDIX C:
Traffic Impact Assessment Letter

Phillip Rowell and Associates
47-273 'D' Hui Iwa Street Kaneohe, Hawaii 96744 Phone: (808) 239-8206 FAX: (808) 239-4175 Email:prowell@hawaiiantel.net

March 23, 2009

Chris Hart & Partners, Inc.
115 Market Street
Wailuku, Maui, 96793

Attn: Mr. Jason Medema

Re: Traffic Impact Assessment
Lahainaluna High School Cafeteria Expansion

Dear Jason:

This letter is in response to your inquiry relative to the viability of the Traffic Impact Analysis Report (TIAR) for the proposed expansion of the Lahainaluna High School Cafeteria. My understanding of the project is as follows:

1. The proposed expansion of the cafeteria is to accommodate a deficiency of capacity to accommodate the existing student enrollment, not an increase in the number of students. Students currently have to sit outside during lunch as there are no seats inside the existing cafeteria.

2. No additional employees are anticipated as a result of expanding the cafeteria.

3. The cafeteria will not be open to persons from off the school campus.

4. There will be no changes to the access and egress traffic patterns of the school campus. Any changes to the traffic and roadway facilities will be confined to the school campus.

As the project will not generate additional traffic and there will be no changes to the traffic patterns within of adjacent to the school campus, there will be no noticeable traffic impacts as a result of expanding the high school cafeteria.

There may be some short term impacts associated with construction activities. In order to mitigate these impacts, the following is recommended:

1. The arrivals and departures of construction workers should be restricted to off peak hours, and

2. Deliveries of construction materials and supplies should also be restricted to off peak hours.

I trust the above responds to your concerns. If you have questions, please do not hesitate to call.

Very truly yours,
PHILLIP ROWELL AND ASSOCIATES

Phillip J. Rowell, P.E.
Principal

APPENDIX D:
Archaeological Field Inspection

Ms. Patty J. Conte
SHPD-Maui
130 Mahalani Street
Wailuku, HI 96793

February 9, 2009

Re: Field Inspection of an Approximate 0.75-acre Lot for the Proposed New Cafeteria at Lahainaluna High School in Panaewa Ahupua`a, Lahaina District, Island of Maui [TMK:(2) 4-6-018: 012 (por.)]

Dear Ms. Conte:

At the request of Chris Hart and Partners, Inc., Scientific Consultant Services, Inc. (SCS) conducted an archaeological Field Inspection at the proposed development site for a new cafeteria at Lahainaluna High School in Lahaina, Panaewa Ahupua`a, Lahaina District, Island of Maui, Hawai`i [TMK: (2) 4-6-018: 012 (por.)] (Figures 1 and 2). The Field Inspection was conducted by SCS archaeologist David Perzinski, B.A, on February 3, 2009, under the direction of Michael Dega, Ph.D (Principle Investigator).

The request for Field Inspection was made to satisfy State of Hawai`i Historic Preservation Division (SHPD) review requirements outlined in a letter from the SHPD to the client (Log No. 17180, Doc No.9605kd14) dated May 14, 1996 in which several field visits were conducted then prior to work on construction of parking lots. The field inspections, at that time, were negative and SHPD ruled the areas as "no effect." Despite extensive alteration in historic and more recent times, a Field Inspection was requested of the presently proposed cafeteria location due to the historic nature of the subject parcel. The purpose of the current Field Inspection was to determine the presence or absence of architecture, midden deposits, and artifact deposits on the surface of the project area, as well as assess the potential for the presence of subsurface cultural deposits.

Location and Current Status

The project area measures approximately 37,000 square feet and occurs at an elevation of 560 feet A.M.S.L. The area is bounded to the east by a classroom annex, to the west and north by an access road, and to the south by the existing cafeteria. The parcel is sloped from east to west and contains monkeypod trees (*Albizia saman)*, plumeria and manicured grass. In addition, a classroom structure, propane tank, plant nursery, and a concrete slab with chairs and benches are currently occupying a portion of the project area

Field Methods

The Field Inspection of the parcel was conducted by SCS archaeologist David Perzinski, B.A., on February 3, 2009, under the direction of Michael Dega, Ph.D. The purpose of the pedestrian survey was to assess the parcel for the presence or absence of

surface features and deposits. A 100% pedestrian survey was conducted and numerous photographs were taken to document the current condition of the parcel. No subsurface testing was conducted during the Field Inspection.

Results

Through on-site discussions with Ray Camacho, superintendent of the Lahainaluna High School cafeteria, it was indicated that a portion of the parcel at one time contained housing for the school teachers and staff. Though none of the original structures still stand, two features were identified that are thought to be related to the staff housing. The features include an historic stone staircase and basalt terrace wall that form the northern and northeastern boundary of the parcel.

The five-step stairway is located on the northeastern portion of the parcel and is constructed of rounded basalt cobbles and concrete (Figure 3). The steps rise approximately 1 meter and lead to a level, non-manicured terrace area. At the base of the steps, the ground surface is covered in landscaping fabric for the school's plant nursery.

The basalt terrace wall is located along the eastern border of the parcel and is constructed of cut basalt blocks and basalt boulders (Figure 4). The terrace wall is stacked four courses to a height of approximately 70 cm and curves from the southwest to northeast before straightening and continuing in a northern direction. The terrace wall appears historic in origin with modern modifications and improvements.

Conclusions

Though a majority of the parcel has undergone repeated historic and recent grading and ground disturbing activities, the field inspection identified two historic features which are likely related to the original staff housing which was located in the current project area portion of the property. The school was opened in 1831 and is listed as the oldest school west of the Mississippi River. The location of the proposed cafeteria expansion will be in an area that once contained the housing for the school's staff. Therefore, it is possible that subsurface features (i.e. historic house foundations, trash pits, etc.) are located below existing grade and could be encountered during construction activities. It is equally possible that such features could have been removed/graded during repeated building on the parcel through time.

Based on the results from the field inspection and the historic significance of the project area, it is possible that ground disturbing activities associated with the proposed cafeteria expansion may encounter subsurface features. Though the above findings were limited, the previous use of this portion of the project area suggests that additional subsurface properties could be encountered. It is our estimation, based on this Field Inspection, that the proposed undertaking be subjected to an on-site archaeological monitoring program during ground disturbing activities. As the extent of ground disturbance remains speculative at present, we would recommend initial, full-time Monitoring during ground altering construction. If the results of Monitoring are negative after a short period, we would contact the SHPD to suspend full-time Monitoring and call

for intermittent Monitoring. Prior to construction work, an Archaeological Monitoring Plan would be prepared for SHPD review.

Thank you again for reviewing this document and your advice on conducting the Field Inspection. Please call (597-1182) if you have any questions or concerns about this letter.

Best regards,
David Perzinski B.A.,
Michael Dega, Ph.D.
Scientific Consultant Services, Inc.

Figure 1: Portion of USGS Lahaina Quadrangle Showing Project Area

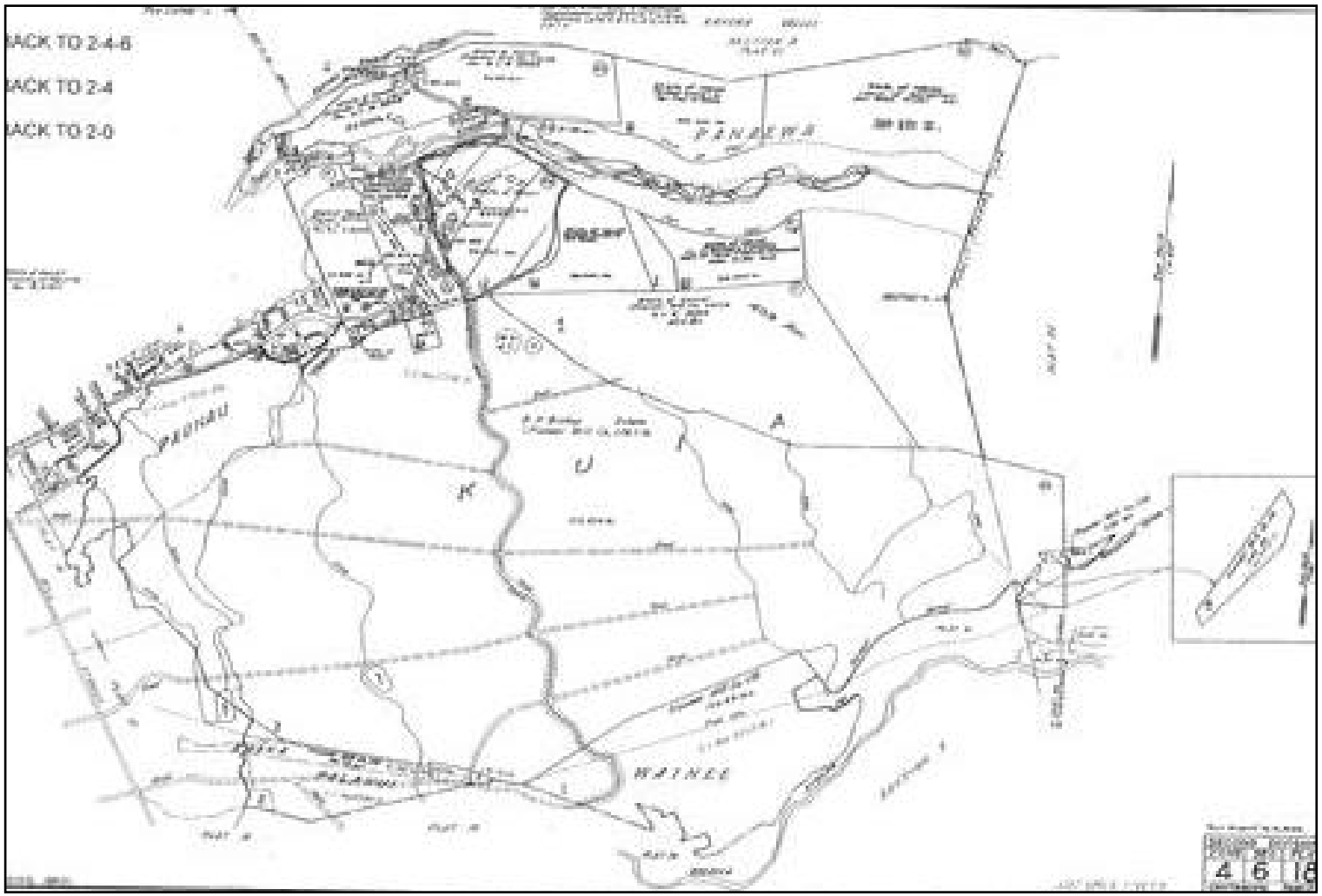


Figure 2: Tax Map Key [TMK: (2) 4-6-018: 012 (por.)] Showing Project Area

Figure 3: View Northeast of Staircase Feature

Figure 4: View East of Cut Basalt Terrace Wall

APPENDIX E:
Preliminary Drainage Report

DRAINAGE REPORT

Lahainaluna High School Cafeteria

At Lahaina, Maui, Hawaii

Tax Map Key: 2nd Div 4-06-018:23

Prepared for

Maui School District
Department of Education
State of Hawaii
54 High Street
Wailuku, Maui, Hawaii 96793

Prepared By

Kim & Shiroma Engineers, Inc.
1314 King Street Suite 325
Honolulu, Hawaii 96814

May, 2009

4/30/10

_____
This work was prepared by me
or under my supervision.

TABLE OF CONTENTS

LIST OF EXHIBITS

INTRODUCTION

PROJECT DESCRIPTION

A new cafeteria is proposed for Lahainaluna High School adjacent to Lahainaluna Road in Lahaina, Maui, Hawaii (TMK 4-06-18:12). The area to be improved is about 1.26 acres and was previously developed. The new cafeteria building and other site improvements will cover approximately 0.90 acres of hard surface and the remaining 0.36 acres will be landscaped.

Lahainaluna High School is located on the slopes of the West Maui Moutains and is located at the upper end of Lahainaluna Road. Lahaina Intermediate School and Pricess Nahienaena Elementary School is to the west, Kanaha Gulch and Stream is to the north and agricultural lands are to the east and south.

FLOOD HAZARD EVALUATION

Zone C, area of minimal flooding, based on FEMA's Flood Insurance Rate Map, Maui County, Hawaii, Panel No. 150030161 C, revised August 3, 1998.

EXISTING SOILS CONDITION

According the "Soils Survey of Islands of Kauai, Oahu, Maui, Molokai and Lanai", U.S. Department of Agriculture Soils Conservation Services, the soil at the project site is WxC, Wainee very stony silty clay, 7 to 15 percent slopes. This series consists of well-drained soils on alluvial fans on the island of Maui. These soils developed in alluvium derived from weathered basic igneous rock. They are gently to moderately sloping. Permeability is moderately rapid. Runoff is slow to medium, and the erosion hazard is slight to moderate.

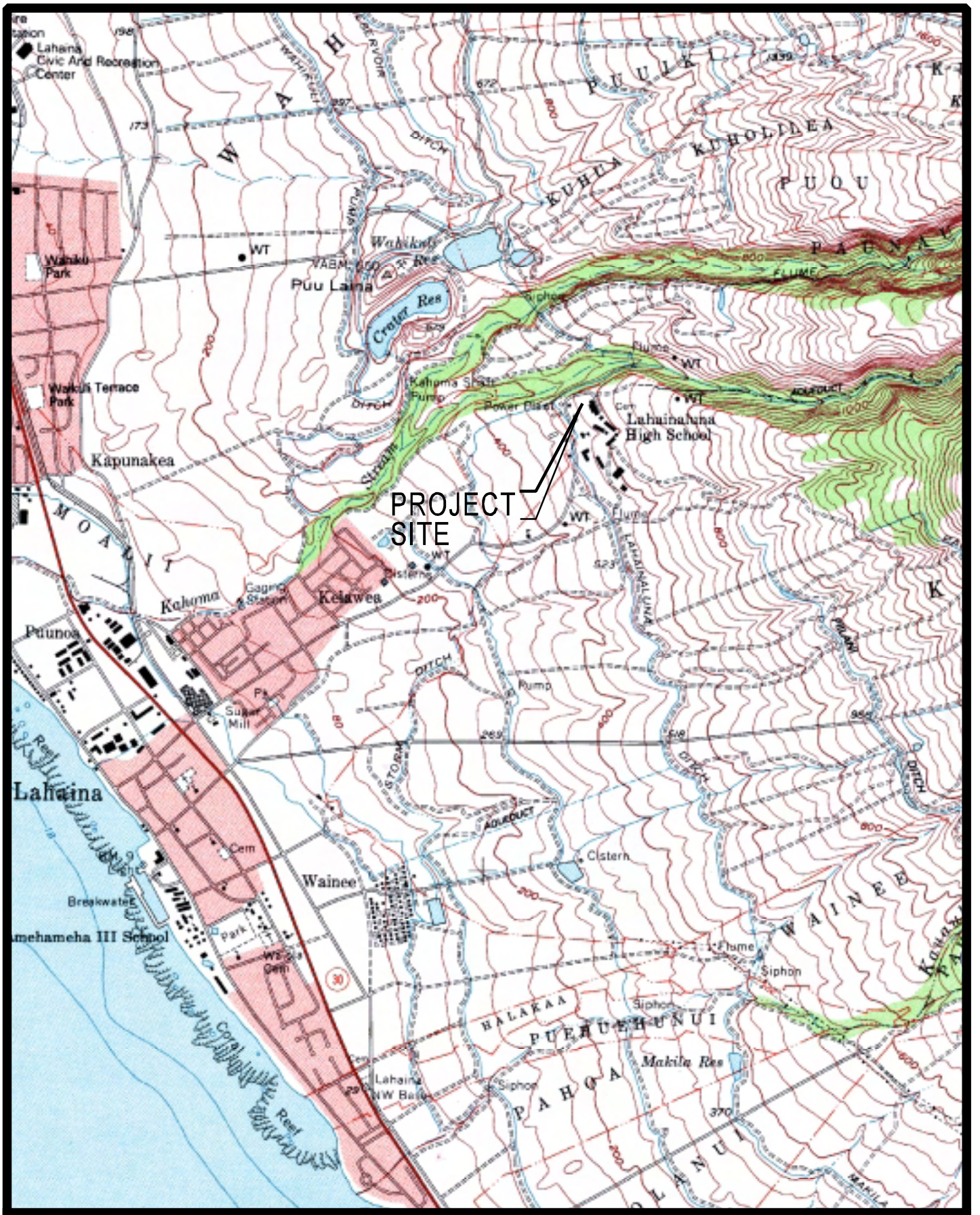
HYDROLOGY

Hydrologic calculations are based upon the design criteria established by the "Rules for the design of Storm Drainage Facilities in the County of Maui", herein referred to the "Storm Drainage Standards".

Storm runoff generated by drainage basins of 100 acres or less will be estimated by the Rational Method based on a one hour rainfall with a recurrence interval of 10 years and for detention purposes, a recurrence interval of 50 years.

EXISTING SITE DRAINAGE

The new cafeteria site is situated near the end of Lahainaluna Road. To the south is the existing cafeteria building, to the east is the Industrial Arts building and Lahainaluna Road is to the north and west. A grounds keeper cottage is to the northeast of the new cafeteria.



USGS MAP
LAHAINA QUADRANGLE
SCALE: 1"= 2,000'

N

LAHAINALUNA HIGH SCHOOL

LOCATION MAP

EXHIBIT

A

Storm runoff to the east of the Industrial Arts Building is intercepted by the roadway/driveway leading to the Industrial Arts Building. The road slopes toward the north and discharges the runoff either into Kanaha Gulch or into a drain inlet fronting the grounds keeper cottage. The drain inlet discharges into Kanaha Gulch.

Runoff from the new cafeteria site flows overland down to Lahainaluna Road to a drain inlet located across from the driveway leading to the existing cafeteria. This drain inlet connects to the school's drainage system which discharges into the Lahainaluna Ditch.

The drainage area is 3.08 acres with flow rate of 11.23 cfs.

PROPOSED DRAINAGE SYSTEM

DESCRIPTION

The storm runoff will be separated into three drainage areas. Runoff from the north side of the new cafeteria will flow overland to Lahainaluna Road and combine with flows from the loading area including the kitchen roof and the portion of the new cafeteria roof that slopes to the west. This flow will follow the existing drainage pattern path down to the existing drain inlet. The drainage area is 1.34 acres with a Q of 5.07 cfs.

The second drainage area will collect storm runoff generated between the Industrial Arts Building and the new cafeteria including roof runoff that slopes to the east and to the south. The entry plaza nd the accessible ramp areas are included in this area. The drainage area is 0.59 acres with a flow of 3.37 cfs. This runoff will receive treatment to remove 80% of the total suspended solids (TSS) for a particle size of 110 micron and will also remove petroleum product

The third drainage area is the area to the south of the Industrial Arts Building that is above the existing cafeteria. This offsite runoff will be collected into a drain inlet and will bypass the treatment system and be discharged back into the schools drainage system. The drainage area is1.15 acres with a flow of 4.62 cfs.

The total calculated flow due to the improvements is 13.06 cfs. This exceeds the predevelopment flow of 11.23 cfs by 1.83 cfs. To negate the increase in runoff due to the development, a detention system will be utilized to reduce the flows from the second drainage area to predevelopment conditions.

DETENTION SYSTEM

The TR55 program "Urban Hydrology for Small Watershed" was used to calculate the hydrographs for the detention system. Pond-2 "Detention Pond Design and Analysis" was used to size the detention system.

The detention system will consist of two 60-inch High Density Polyethylene (HDPE) pipes spaced five feet apart and connected on each end with concrete manholes. The outlet for the detention system consists of an 6-inch pipe with a 12-inch overflow pipe.

The outflow pipe diameter was selected by comparing entrance control losses for various size drain pipes such that the outflow from the manhole will not exceed 1.99 cfs.

While this detention system was designed to be low maintenance, debris and other trash could clog the pipes. Manhole openings on the detention structures will allow access for debris removal.

PROPOSED STORM WATER QUALITY FACILITIES

The treatment for water quality control proposed for the drainage improvements is a flow-through based, hydrodynamic separation system. The system utilizes a combination of vortex motion and flow control to remove sediment, oil and debris from the storm runoff. The water quality control facilities will be installed within Lahainaluna Road and will remain under the ownership of the Department of Education.

Design calculations for the flow-through systems are as follows:

1. On site flows collected and flowing through the system.

   WQFR= C x 0.4" x A, C= 0.82, A= 0.59 Ac
   = 0.82 x 0.4 x 0.59= 0.19 cfs

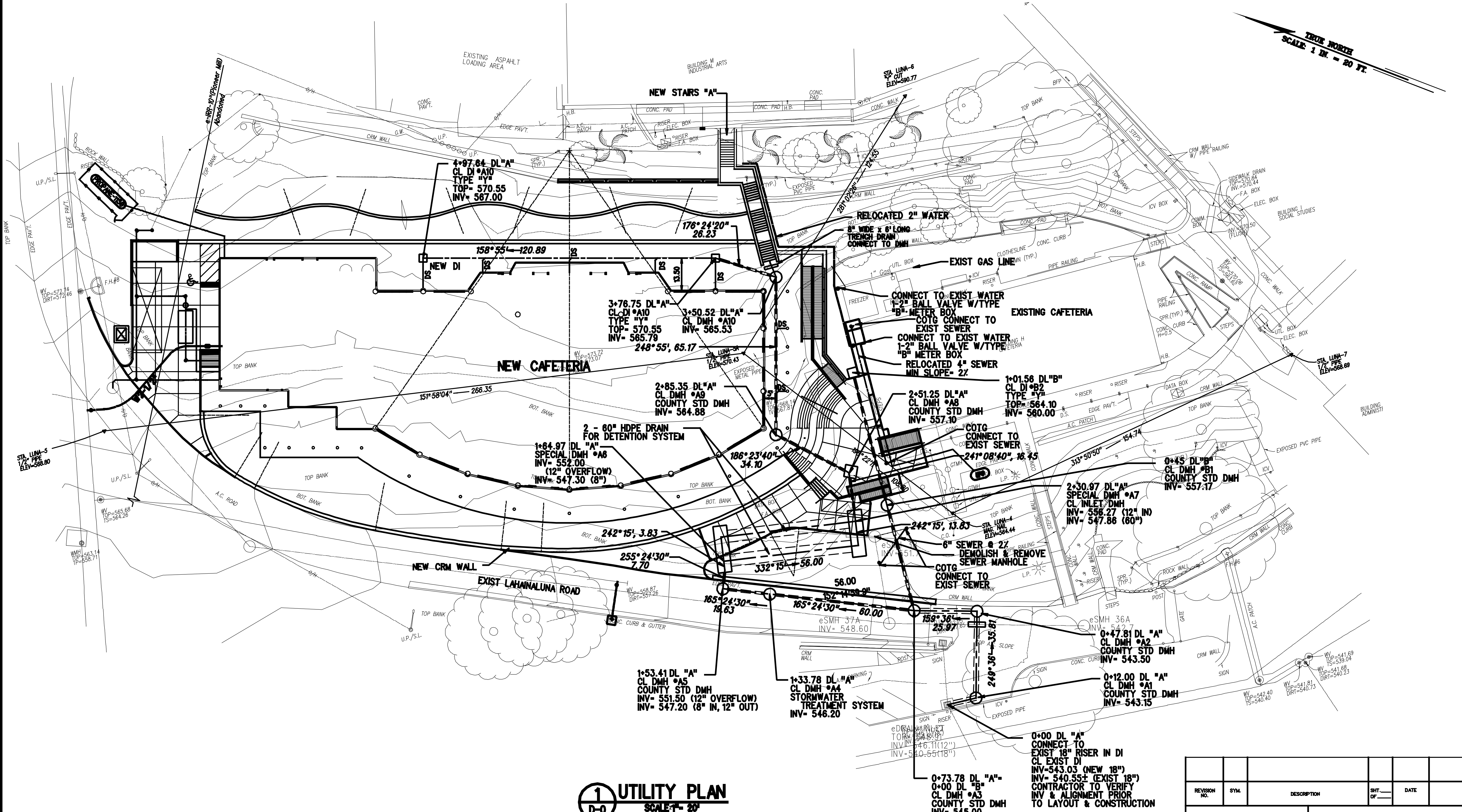
A single filtration unit is proposed to be on-line and treat 0.19 cfs of storm runoff. The hydrodynamic separation system is a precast concrete structure installed underground with access via manhole covers. A manhole cover is situated over the top slab for maintenance purposes. The system works with a standing water depth of 3.5-feet. This standing water depth created by the baffle and weir prevents the oils, grease and floatables from passing through the system. Maintenance of the system will be by a vacuum truck to suck out the accumulated debris, oils, grease and floatables.

A maintenance schedule for the system is necessary. Inspection of the System should occur after any significant rain event or every quarter to record the accumulation of grit in the sump. Vacuuming of the sump should occur when the measurement between the top of the accumulated grit and the water surface in the sump area is 6-inches or less. Floating trash can be removed by nets.

To remove the accumulation of oil, grease and other hydrocarbons, it may be preferable to use absorbent pads rather than to dispose of an oil/water emulsion created by vacuuming the oily surface layer. Total volume of the sump is 0.5 cy.

CONCLUSIONS

The proposed site improvements will increase the overall runoff by approximately 1.83 cfs from 11.23 cfs to 13.06 cfs. The proposed detention system will reduce the flow back to predevelopment condition.


TRUE NORTH
SCALE: 1 IN. = 20 FT.
EXISTING ASPHALT LOADING AREA
BUILDING M INDUSTRIAL ARTS
NEW STAIRS "A"
STA. LUNA-6 "X" CUT ELEV=590.77
4+97.64 DL"A"
CL DI #A10
TYPE "Y"
TOP= 570.55
INV= 567.00
RELOCATED 2" WATER
8" WIDE x 6' LONG TRENCH DRAIN CONNECT TO DMH
176°24'20" 26.23
158°55'- 120.89
NEW DI
EXIST GAS LINE
CONNECT TO EXIST WATER 1-2" BALL VALVE W/TYPE "B" METER BOX
COTG CONNECT TO EXIST SEWER
CONNECT TO EXIST WATER 1-2" BALL VALVE W/TYPE "B" METER BOX
RELOCATED 4" SEWER MIN SLOPE= 2%
EXISTING CAFETERIA
3+76.75 DL"A"
CL DI #A10
TYPE "Y"
TOP= 570.55
INV= 565.79
3+50.52 DL"A"
CL DMH #A10
INV= 565.53
248°55', 65.17
NEW CAFETERIA
151°58'04" - 266.35
2+85.35 DL"A"
CL DMH #A9
COUNTY STD DMH
INV= 564.88
2+51.25 DL"A"
CL DMH #A8
COUNTY STD DMH
INV= 557.10
1+01.56 DL"B"
CL DI #B2
TYPE "Y"
TOP= 564.10
INV= 560.00
2 - 60" HDPE DRAIN FOR DETENTION SYSTEM
1+64.97 DL "A"
SPECIAL DMH #A6
INV= 552.00 (12" OVERFLOW)
INV= 547.30 (8")
186°23'40" 34.10
COTG CONNECT TO EXIST SEWER
241°08'40", 18.45
0+45 DL"B"
CL DMH #B1
COUNTY STD DMH
INV= 557.17
2+30.97 DL"A"
SPECIAL DMH #A7
CL INLET DMH
INV= 556.27 (12" IN)
INV= 547.86 (60")
STA. LUNA-5 1/2" PIPE ELEV=568.80
STA. LUNA-7 1/2" PIPE ELEV=568.69
242°15', 3.83
242°15', 13.83
6" SEWER @ 2%
DEMOLISH & REMOVE SEWER MANHOLE
COTG CONNECT TO EXIST SEWER
255°24'30" 7.70
332°15'- 56.00
NEW CRM WALL
EXIST LAHAINALUNA ROAD
165°24'30" 19.63
165°24'30" - 80.00
159°36' 25.97
eSMH 37A INV= 548.60
eSMH 36A INV= 542.7
0+47.81 DL "A"
CL DMH #A2
COUNTY STD DMH
INV= 543.50
249°36'- 35.81
1+53.41 DL "A"
CL DMH #A5
COUNTY STD DMH
INV= 551.50 (12" OVERFLOW)
INV= 547.20 (8" IN, 12" OUT)
1+33.78 DL "A"
CL DMH #A4
STORMWATER TREATMENT SYSTEM
INV= 546.20
0+12.00 DL "A"
CL DMH #A1
COUNTY STD DMH
INV= 543.15
0+00 DL "A"
CONNECT TO EXIST 18" RISER IN DI
CL EXIST DI
INV=543.03 (NEW 18")
INV= 540.55± (EXIST 18")
CONTRACTOR TO VERIFY INV & ALIGNMENT PRIOR TO LAYOUT & CONSTRUCTION
0+73.78 DL "A"=
0+00 DL "B"
CL DMH #A3
COUNTY STD DMH
INV= 545.00

1 / D-0 UTILITY PLAN
SCALE: 1"= 20'

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED

DEPARTMENT OF EDUCATION
STATE OF HAWAII

LAHAINALUNA HIGH SCHOOL
CAFETERIA

LAHAINA MAUI HAWAII

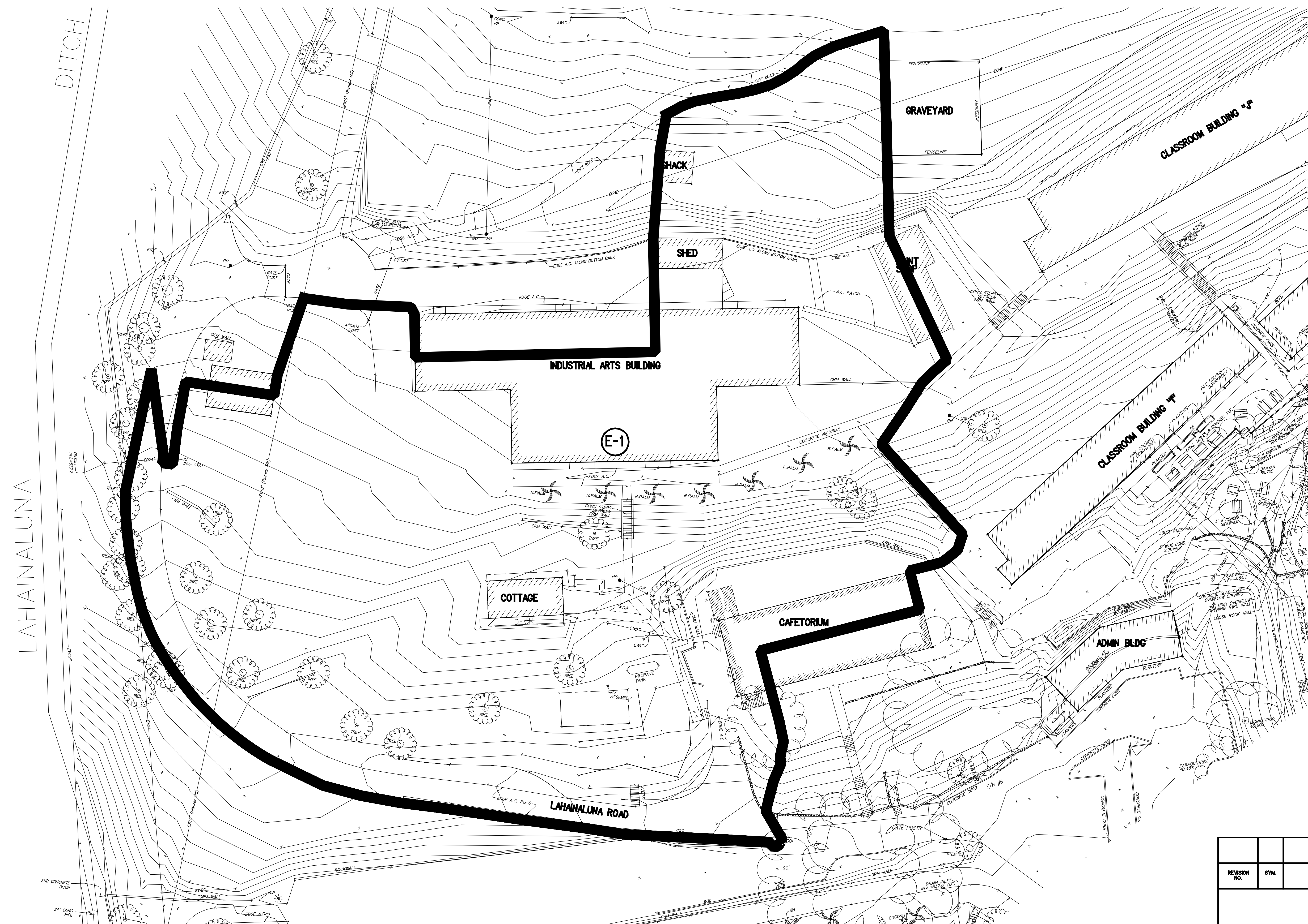
DRAINAGE PLAN

KIM & SHIROMA ENGINEERS, INC.		DOE JOB NO.	DRAWING NO.
DESIGNED BY: CTS	CHECKED BY: CTS	Q54001-07	D-0
DRAWN BY: KSE	APPROVED BY: CTS	DATE	SHEET
SCALE: AS NOTED		MAY, 2009	OF SHTS

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. OBSERVATION OF CONSTRUCTION AS DEFINED IN HAR TITLE 16, CHP 115

KIM & SHIROMA ENGINEERS, INC.

FILE ____ DRAWER ____ FOLDER ____



1/D-1 EXISTING DRAINAGE CONDITION
SCALE: 1" = 20'

TRUE NORTH
SCALE: 1 IN. = 30 FT.

EXISTING HYDROLOGIC DATA	
	E-1
A= (Ac)	3.08
L= (Ft)	600
Ht= (Ft)	75
S (Ft/Ft)	0.125
C=	0.81
I(10)=	2.5
Tc=	16
I (in/hr)	4.5
Q=(cfs)	11.23

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED

DEPARTMENT OF EDUCATION
STATE OF HAWAII

LAHAINALUNA HIGH SCHOOL
CAFETERIA

LAHAINA | MAUI | HAWAII

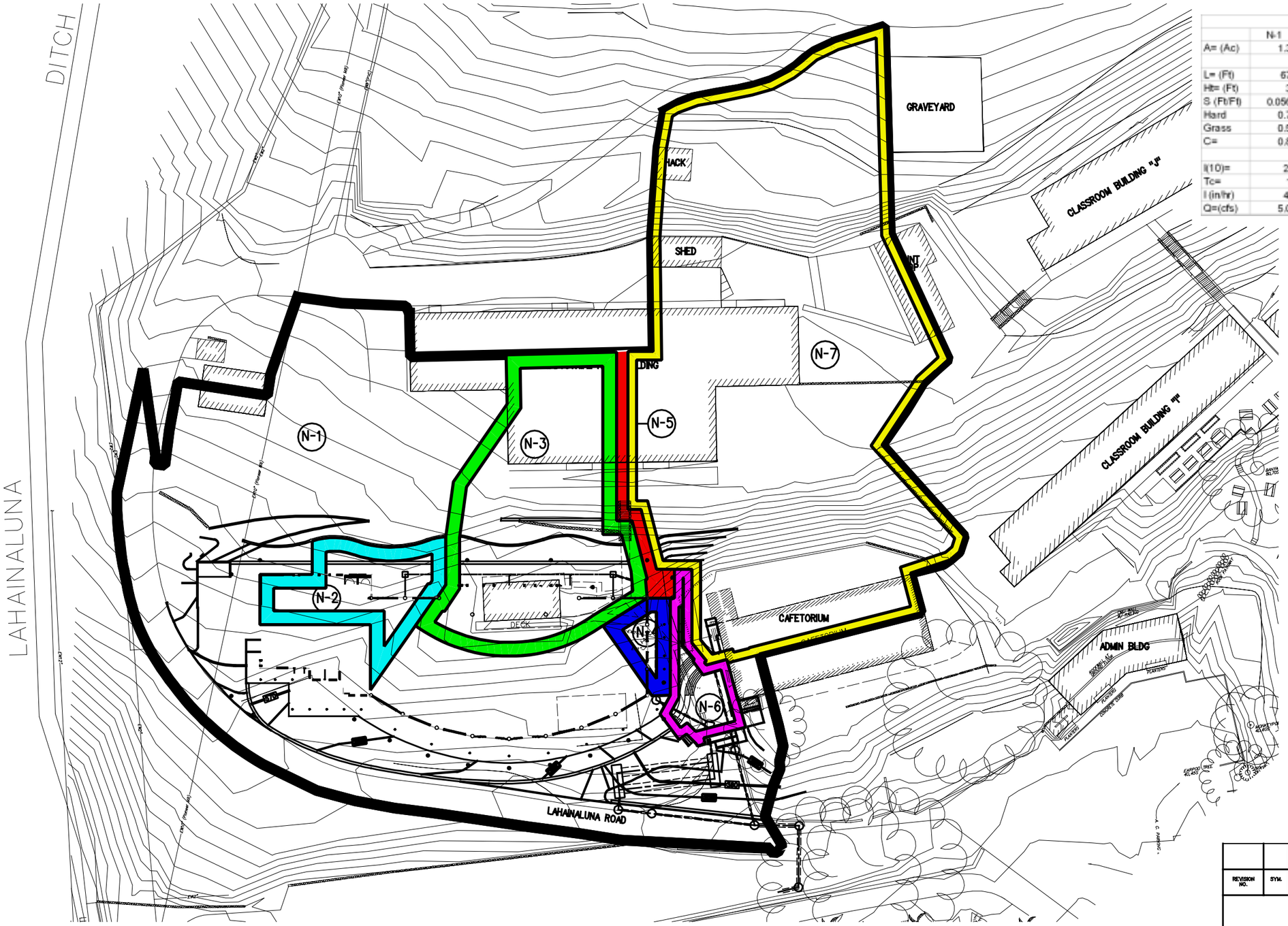
EXISTING DRAINAGE CONDITION

KIM & SHIROMA ENGINEERS, INC.		DOE JOB NO.	DRAWING NO.
DESIGNED BY: CTS	CHECKED BY: CTS	Q54001-07	D-1
DRAWN BY: KSE	APPROVED BY: CTS	DATE MAY, 2009	SHEET OF SHTS
SCALE: AS NOTED			

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. OBSERVATION OF CONSTRUCTION AS DEFINED IN HAR TITLE 16, CHP 115

KIM & SHIROMA ENGINEERS, INC.

FILE ____ DRAWER ____ FOLDER ____



PROPOSED HYDROLOGIC DATA

	N-1	N-2	N-3	N-4	N-5	N-6	N-7
A= (Ac)	1.34	0.11	0.37	0.03	0.03	0.05	1.15
L= (Ft)	675	90	200	40	150	90	450
Ht= (Ft)	38		19.5				60
S (Ft/Ft)	0.0563	0.0200	0.0975	0.0200	0.1300	0.0550	0.1333
Hard	0.78	0.88	0.23	0.88	0.88	0.03	0.41
Grass	0.56		0.14			0.02	0.74
C=	0.84	0.88	0.84	0.88	0.88	0.84	0.82
I(10)=	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Tc=	16	3	8	3	3	16	11
I (in/hr)	4.5	7.5	6.6	7.5	7.5	4.5	4.9
Q=(cfs)	5.07	0.73	2.05	0.2	0.2	0.19	4.62

1 D-1 **PROPOSED DRAINAGE CONDITION**
SCALE: 1"= 20'

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED

DEPARTMENT OF EDUCATION
STATE OF HAWAII

LAHAINALUNA HIGH SCHOOL
CAFETERIA

LAHAINA MAUI HAWAII

PROPOSED DRAINAGE SYSTEM

KIM & SHIROMA ENGINEERS, INC.		DOE JOB NO.	DRAWING NO.
DESIGNED BY: CTS	CHECKED BY: CTS	Q54001-07	D-2
DRAWN BY: KSE	APPROVED BY: CTS	DATE	SHEET
SCALE: AS NOTED		MAY, 2009	OF SHTS

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTITUTES ALL OR PORTIONS OF CONSTRUCTION AS DEFINED IN HAR TITLE 16, CHP 115
KIM & SHIROMA ENGINEERS, INC.

FILE ____ DRAWER ____ FOLDER ____

Tm = 10 Years

ONE HOUR RAINFALL i= 2.50

LAHAINALUNA HIGH SCHOOL

DRAIN LINE "A"

DRAIN INLET NO.	PIPE NO.	Q (cfs) INLET	Q (cfs) PIPE	V (fps) ACTUAL	V (fps) FULL FLOW	DEPTH OF FLOW (ft)	PIPE SIZE (in)	PIPE LENGTH (ft)	SLOPE (ft / ft) FRIC-TION SLOPE (sf)	SLOPE (ft / ft) PIPE SLOPE (s)	FRICTION HEAD LOSS (ft)	INLET INVERT	MANHOLE LOSSES (ft) A	B	C	D	TOTAL	ENTRANCE CONTROL LOSSES	H.G. ELEV. (ft) DOWN	UP	FINISH ELEV.	REMARKS
EXIST DI												543.03								544.53	548.91	
	1		7.99	19.15	4.52	0.43	18	12	---	0.0100	---											PF
DMH #1		0.00										543.15	0.12	0.00	0.10	0.00	0.21	1.58	544.53	544.83	549.10	
	2		7.99	6.64	4.52	0.97	18	35.82	---	0.0098	---											PF
DMH #2		0.00										543.50	0.12	0.00	0.10	0.00	0.21	1.58	544.83	545.18	551.50	
	3		7.99	12.79	4.52	0.58	18	25.96	---	0.0578	---											PF
DMH #3		4.62 0.00										545.00	0.12	0.03	0.10	0.36	0.60	1.58	545.58	547.03	553.00	
	4		3.37	7.21	4.29	0.58	12	60	---	0.0200	---											PF
DMH #4		0.00										546.20	0.10	0.00	0.09	0.00	0.19	1.17	547.03	547.45	556.00	
	5		3.37	10.07	4.29	0.44	12	19.66	---	0.0509	---											PF
DMH #5		0.00										547.20	0.50	0.00	0.56	0.00	1.06	1.17	547.64	548.93	557.00	
	6		3.37	9.65	9.65	0.67	8	11.33	0.0778	0.0265	0.88											FF
Det 1		0.00										547.50	0.50	1.16	0.56	0.00	2.21	#N/A	549.81	552.02	558.00	
	7		3.37	22.07	4.29	0.25	12	20.29	---	0.4731	---											PF
DMH #6		0.73										557.10	0.10	0.11	0.09	0.11	0.41	1.17	557.35	558.46	564.50	
	8		2.64	15.92	3.36	0.26	12	34.1	---	0.2282	---											PF
DMH #7		2.05										564.88	0.07	0.17	0.05	0.03	0.31	0.99	565.14	565.94	570.85	
	9		0.59	3.58	0.75	0.26	12	65.17	---	0.0100	---											PF
DMH 38		0.20										565.53	0.00	0.00	0.00	0.03	0.04	0.62	565.94	566.17	570.85	
	10		0.39	3.25	0.50	0.21	12	26.23	---	0.0099	---											PF
DI #8		0.20										565.79	0.00	0.00	0.00	0.02	0.02	0.59	566.17	566.40	570.85	
	11		0.19	2.57	0.24	0.15	12	120.89	---	0.0100	---											PF
DI #9		0.19										567.00	0.00	0.00	0.00	0.02	0.02	0.56	567.15	567.58	570.85	

Tm = 10 Years

ONE HOUR RAINFALL i= 2.50

LAHAINALUNA HIGH SCHOOL

DL "B"

DRAIN INLET NO.	PIPE NO.	Q (cfs)		V (fps)		DEPTH OF FLOW (ft)	PIPE		SLOPE (ft / ft)		FRICTION HEAD LOSS (ft)	INLET INVERT	MANHOLE LOSSES (ft)					ENTRANCE CONTROL LOSSES	H.G. ELEV. (ft)		FINISH ELEV.	REMARKS
		INLET	PIPE	ACTUAL	FULL FLOW		SIZE (in)	LENGTH (ft)	FRIC-TION SLOPE (sf)	PIPE SLOPE (s)			A	B	C	D	TOTAL		DOWN	UP		
DMH #3												545.00								547.03	553.00	
	1		4.62	19.86	5.88	0.34	12	45	---	0.2704	---											PF
DMH B1		0.00										557.17	0.19	0.00	0.18	0.00	0.37	1.55	557.51	558.90	562.50	
	2		4.62	10.85	5.88	0.53	12	56.56	---	0.0500	---											PF
DI #B2		4.62										560.00	0.19	0.54	0.18	0.02	0.92	1.55	560.53	561.75	564.10	

TR-55 TABULAR HYDROGRAPH METHOD
Type I Distribution
(24 hr. Duration Storm)

Executed: 05-03-2009 08:41:10
Watershed file: --> 0725LHS .WSD
Hydrograph file: --> 0725LHS .HYD

0725 LAHAINALUNA HIGH SCHOOL CAFETORIUM
STORMWATER DETENTION SIZING

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
Kitchen	0.11	98.0	0.10	0.00	10.00	9.76	0 .10
Middle	0.37	89.0	0.10	0.00	10.00	8.66	.02 .10
Roof 2	0.03	98.0	0.10	0.00	10.00	9.76	0 .10
Stairs	0.03	98.0	0.10	0.00	10.00	9.76	0 .10
Pervious	0.05	92.0	0.10	0.00	10.00	9.03	.02 .10

* Travel time from subarea outfall to composite watershed outfall point.
Total area = 0.59 acres or 0.00092 sq.mi
Peak discharge = 4 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<<

Subarea Description	Input Values Tc (hr)	* Tt (hr)	Rounded Values Tc (hr)	* Tt (hr)	Ia/p Interpolated (Yes/No)	Ia/p Messages
Kitchen	0.10	0.00	**	**	No	Computed Ia/p < .1
Middle	0.10	0.00	**	**	No	Computed Ia/p < .1
Roof 2	0.10	0.00	**	**	No	Computed Ia/p < .1
Stairs	0.10	0.00	**	**	No	Computed Ia/p < .1
Pervious	0.10	0.00	**	**	No	Computed Ia/p < .1

* Travel time from subarea outfall to composite watershed outfall point.
** Tc & Tt are available in the hydrograph tables.

TR-55 TABULAR HYDROGRAPH METHOD
Type I Distribution
(24 hr. Duration Storm)

Executed: 05-03-2009 08:41:10
Watershed file: --> 0725LHS .WSD
Hydrograph file: --> 0725LHS .HYD

0725 LAHAINALUNA HIGH SCHOOL CAFETORIUM
STORMWATER DETENTION SIZING

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
Kitchen	1	10.0
Middle	3	10.1
Roof 2	0	0.0
Stairs	0	0.0
Pervious	0	0.0
Composite Watershed	4	10.1

TR-55 TABULAR HYDROGRAPH METHOD
Type I Distribution
(24 hr. Duration Storm)

Executed: 05-03-2009 08:41:10
Watershed file: --> 0725LHS .WSD
Hydrograph file: --> 0725LHS .HYD

0725 LAHAINALUNA HIGH SCHOOL CAFETORIUM
STORMWATER DETENTION SIZING

Composite Hydrograph Summary (cfs)

Subarea Description	9.0 hr	9.3 hr	9.6 hr	9.9 hr	10.0 hr	10.1 hr	10.2 hr	10.3 hr	10.4 hr
Kitchen	0	0	0	0	1	1	1	0	0
Middle	0	0	0	1	2	3	2	1	1
Roof 2	0	0	0	0	0	0	0	0	0
Stairs	0	0	0	0	0	0	0	0	0
Pervious	0	0	0	0	0	0	0	0	0
Total (cfs)	0	0	0	1	3	4	3	1	1

Subarea Description	10.5 hr	10.6 hr	10.7 hr	10.8 hr	11.0 hr	11.2 hr	11.4 hr	11.6 hr	11.8 hr
Kitchen	0	0	0	0	0	0	0	0	0
Middle	1	0	0	0	0	0	0	0	0
Roof 2	0	0	0	0	0	0	0	0	0
Stairs	0	0	0	0	0	0	0	0	0
Pervious	0	0	0	0	0	0	0	0	0
Total (cfs)	1	0	0	0	0	0	0	0	0

TR-55 TABULAR HYDROGRAPH METHOD
Type I Distribution
(24 hr. Duration Storm)

Executed: 05-03-2009 08:41:10
Watershed file: --> 0725LHS .WSD
Hydrograph file: --> 0725LHS .HYD

0725 LAHAINALUNA HIGH SCHOOL CAFETORIUM
STORMWATER DETENTION SIZING

Composite Hydrograph Summary (cfs)

Subarea Description	12.0 hr	12.3 hr	12.6 hr	13.0 hr	13.5 hr	14.0 hr	14.5 hr	15.0 hr	15.5 hr
Kitchen	0	0	0	0	0	0	0	0	0
Middle	0	0	0	0	0	0	0	0	0
Roof 2	0	0	0	0	0	0	0	0	0
Stairs	0	0	0	0	0	0	0	0	0
Pervious	0	0	0	0	0	0	0	0	0
Total (cfs)	0	0	0	0	0	0	0	0	0

Subarea Description	16.0 hr	17.0 hr	18.0 hr	20.0 hr	24.0 hr
Kitchen	0	0	0	0	0
Middle	0	0	0	0	0
Roof 2	0	0	0	0	0
Stairs	0	0	0	0	0
Pervious	0	0	0	0	0
Total (cfs)	0	0	0	0	0

TR-55 TABULAR HYDROGRAPH METHOD
Type I Distribution
(24 hr. Duration Storm)

Executed: 05-03-2009 08:41:10
Watershed file: --> 0725LHS .WSD
Hydrograph file: --> 0725LHS .HYD

0725 LAHAINALUNA HIGH SCHOOL CAFETORIUM
STORMWATER DETENTION SIZING

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
9.0	0	12.8	0
9.1	0	12.9	0
9.2	0	13.0	0
9.3	0	13.1	0
9.4	0	13.2	0
9.5	0	13.3	0
9.6	0	13.4	0
9.7	0	13.5	0
9.8	1	13.6	0
9.9	1	13.7	0
10.0	3	13.8	0
10.1	4	13.9	0
10.2	3	14.0	0
10.3	1	14.1	0
10.4	1	14.2	0
10.5	1	14.3	0
10.6	0	14.4	0
10.7	0	14.5	0
10.8	0	14.6	0
10.9	0	14.7	0
11.0	0	14.8	0
11.1	0	14.9	0
11.2	0	15.0	0
11.3	0	15.1	0
11.4	0	15.2	0
11.5	0	15.3	0
11.6	0	15.4	0
11.7	0	15.5	0
11.8	0	15.6	0
11.9	0	15.7	0
12.0	0	15.8	0
12.1	0	15.9	0
12.2	0	16.0	0
12.3	0	16.1	0
12.4	0	16.2	0
12.5	0	16.3	0
12.6	0	16.4	0
12.7	0	16.5	0

TR-55 TABULAR HYDROGRAPH METHOD
Type I Distribution
(24 hr. Duration Storm)

Executed: 05-03-2009 08:41:10
Watershed file: --> 0725LHS .WSD
Hydrograph file: --> 0725LHS .HYD

0725 LAHAINALUNA HIGH SCHOOL CAFETORIUM
STORMWATER DETENTION SIZING

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
16.6	0	20.4	0
16.7	0	20.5	0
16.8	0	20.6	0
16.9	0	20.7	0
17.0	0	20.8	0
17.1	0	20.9	0
17.2	0	21.0	0
17.3	0	21.1	0
17.4	0	21.2	0
17.5	0	21.3	0
17.6	0	21.4	0
17.7	0	21.5	0
17.8	0	21.6	0
17.9	0	21.7	0
18.0	0	21.8	0
18.1	0	21.9	0
18.2	0	22.0	0
18.3	0	22.1	0
18.4	0	22.2	0
18.5	0	22.3	0
18.6	0	22.4	0
18.7	0	22.5	0
18.8	0	22.6	0
18.9	0	22.7	0
19.0	0	22.8	0
19.1	0	22.9	0
19.2	0	23.0	0
19.3	0	23.1	0
19.4	0	23.2	0
19.5	0	23.3	0
19.6	0	23.4	0
19.7	0	23.5	0
19.8	0	23.6	0
19.9	0	23.7	0
20.0	0	23.8	0
20.1	0	23.9	0
20.2	0		
20.3	0		

Quick TR-55 Version: 5.46 S/N: 1315460208

>>>>> DETENTION STORAGE ESTIMATE <<<<<

LAHAINALUNA HIGH SCHOOL CAFETERIA
KSE JOB NO 0725

CALCULATED
DISK FILE: 0725LHS .DET

Drainage Area (acres) .59 0.0009 sq.mi.
Rainfall Distribution (Type) I

	Storm #1	Storm #2	Storm #3
Frequency (years)	10	50	100
Peak Inflow, qi (cfs)	3	4	5
Inflow Runoff, Q (in)	6.05	9.03	10.02
Peak Outflow, qo (cfs)			
qo/qi Ratio	0.000	0.000	0.000
* Vs/Vr Ratio	0.660	0.660	0.660
Inflow Volume, Vr (ac-ft)	0.3	0.4	0.5
STORAGE VOLUME, Vs (ac-ft)	0.2	0.3	0.3

Summary of Volume Computations

C0	0.660	0.660	0.660
C1	-1.760	-1.760	-1.760
C2	1.960	1.960	1.960
C3	-0.730	-0.730	-0.730
* Vs/Vr	0.660	0.660	0.660

$$* \quad Vs/Vr = C0 + (C1*(qo/qi)) + (C2*(qo/qi)^2) + (C3*(qo/qi)^3)$$

Graphical Peak Discharge File Used for Inflow Data:
0725LHS1.GPD

POND-2 Version: 5.16 S/N: 1295160179

>>>>> OUTFLOW HYDROGRAPH ESTIMATOR <<<<<

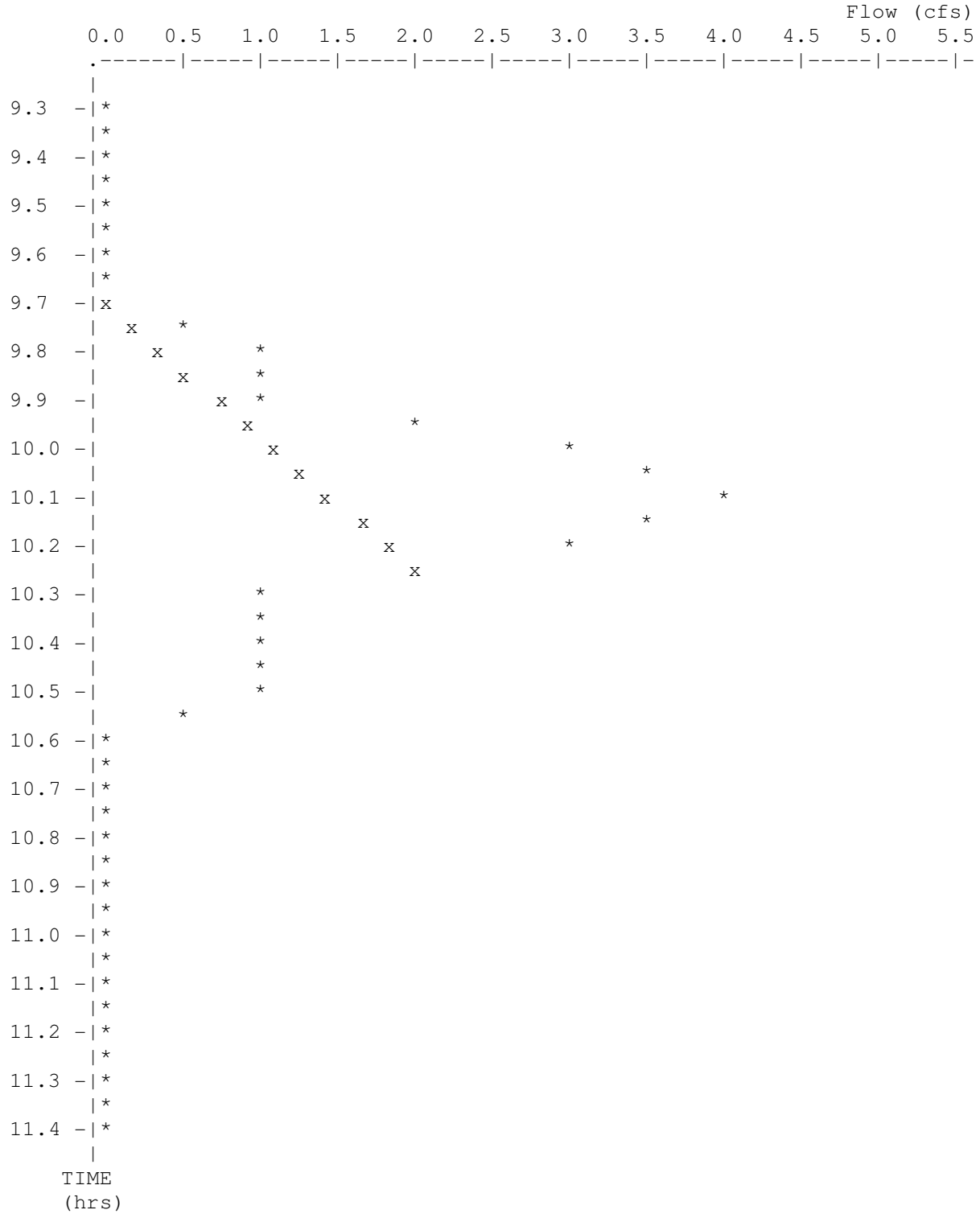
Inflow Hydrograph: 0725LHS .HYD
Qpeak = 4.0 cfs

Estimated Outflow: ESTIMATE.EST
Qpeak = 2.0 cfs

Approximate Storage Volume
(computed from t= 9.70 to 10.25 hrs)

2,100 cubic-ft

POND-2 Version: 5.16 S/N: 1295160179
Plotted: 05-03-2009



* File: 0725LHS .HYD Qmax = 4.0 cfs
x File: ESTIMATE.EST Qmax = 2.0 cfs

Lahainaluna HS
Drainage Study
Maui County, Hawaii

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use		Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
N-1	Open space; grass cover < 50%	(poor)	B	.36	79
	Open space; grass cover > 75%	(good)	B	.2	61
	Paved parking lots, roofs, driveways		B	.78	98
	Total Area / Weighted Curve Number			1.34	87
N-2	Paved; curbs and storm sewers		B	.11	98
	Total Area / Weighted Curve Number			.11	98
N-3	Open space; grass cover < 50%	(poor)	B	.1	79
	Open space; grass cover > 75%	(good)	B	.04	61
	Paved parking lots, roofs, driveways		B	.23	98
	Total Area / Weighted Curve Number			.37	89
N-4	Paved parking lots, roofs, driveways		B	.03	98
	Total Area / Weighted Curve Number			.03	98
N-5	Paved parking lots, roofs, driveways		B	.03	98
	Total Area / Weighted Curve Number			.03	98
N-6	Commercial & business		B	.05	92
	Total Area / Weighted Curve Number			.05	92
N-7	Open space; grass cover < 50%	(poor)	B	.5	79
	Open space; grass cover > 75%	(good)	B	.24	61
	Paved parking lots, roofs, driveways		B	.41	98
	Total Area / Weighted Curve Number			1.15	82

WinTR-55 Current Data Description

--- Identification Data ---

User: KSEngineer
Project: Lahainaluna HS
SubTitle: Drainage Study
State: Hawaii
County: Maui
Filename: G:\0725post.w55

Date: 5/3/2009
Units: English
Areal Units: Acres

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	Tc
N-1	North Side	Outlet	1.34	87	0.100
N-2	Kitchen	Reach 1	0.11	98	0.100
N-3	Middle	Reach 2	0.37	89	0.100
N-4	Roof 2	Reach 4	0.03	98	0.100
N-5	Stairs	Reach 3	0.03	98	0.100
N-6	Pervious	Reach 5	0.05	92	0.100
N-7	South Side	Reach 6	1.15	82	0.100

Total area: 3.08 (ac)

--- Storm Data --

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
4.0	6.0	7.0	8.0	10.0	11.0	3.0

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type I
Dimensionless Unit Hydrograph: <standard>

APPENDIX F:
Water Connection Information

LAHAINALUNA HIGH SCHOOL
COST-SHARING AGREEMENT FOR WATER SYSTEMS

THIS AGREEMENT, made and entered into this 3rd day of May, 1995, by and between the STATE OF HAWAII ("STATE") Department of Accounting and General Services, hereinafter referred to as "DAGS", by its Comptroller, Department of Education, hereinafter referred to as "DOE", by its Superintendent and Department of Land and Natural Resources, hereinafter referred to as "DLNR", by its chairperson; with the Board of Water Supply of the County of Maui, hereinafter referred to as the "BOARD".

WITNESSETH:

WHEREAS, DOE operates a private water system which presently services the Lahainaluna High School, hereinafter referred to as "STATE-owned property"; and

WHEREAS, the BOARD operates a public water system which presently services portions of the Lahaina area; and

WHEREAS, the DOE private water system and BOARD public water system both obtains their water from the Kanaha Valley Stream diverted through a stream intake, transmission and distribution system; and

WHEREAS, the DOE private water system and BOARD public water system are both subject to the terms and provisions of the Safe Drinking Water Act (P. L. 93-523), the Department of Health's Surface Water Treatment Rule, and amendments thereafter; and

WHEREAS, the BOARD has developed a plan to continue usage of the Kanaha Valley Stream surface water intake system and to construct the Lahaina Water Treatment Plant, hereinafter referred to as the "LWTP", to service the STATE-owned property and other users in the Lahaina area. The LWPT will be owned and operated by the BOARD after completion of construction; and

WHEREAS, the BOARD is required to comply with the provisions of the Surface Water Treatment Rule and the Safe Drinking Water Act; and

WHEREAS, the STATE desires to secure water service from the LWTP and participate in the costs for the construction of the LWTP with connections for the STATE-owned property; and

WHEREAS, the STATE, DAGS, DOE, DLNR, and BOARD, hereinafter

referred to as "Parties" intend that this executed AGREEMENT constitute an enforceable commitment to become a part of a BOARD regional drinking water system within the meaning of the Safe Drinking Water Act; and

NOW, THEREFORE, in consideration of the mutual promises hereinafter set forth, the Parties agree as follows:

1. This AGREEMENT can be amended only in writing signed by all of the above Parties hereto.

2. The "PROJECT" is generally described and shown in Exhibit A and B.

3. The BOARD shall be responsible for the design and construction of the PROJECT as follows:

(1) Engage consultant services needed for all engineering and design of the PROJECT at the BOARD's expense.

(2) Have overall responsibility to prepare, review and approve the construction plans and specifications for the PROJECT. The Project construction plans will be approved by DAGS.

(3) Award and administer the construction contract of the PROJECT.

(4) Have authority and power in its discretion to approve changes in the plans and specifications during the course of the construction of the PROJECT and the responsibility to resolve any disputes.

4. The BOARD will be responsible for all cost to operate and maintain the PROJECT.

5. The STATE agrees to participate in the construction of the PROJECT to the sum ONE MILLION TWO HUNDRED TWENTY THOUSANDS AND NO/100 DOLLARS (1,220,000.00).

6. The STATE shall delegate required funds to the BOARD within 60 days of execution of this agreement.

7. The BOARD and STATE shall be responsible to meet all Department of Health's requirements for their respective Compliance Schedules.

8. Subject to the approval by the Board of Land and Natural Resources, the STATE shall process executive orders and easements of the STATE-owned property for

the PROJECT (as required). Land issues will be handled as follows:

(1) STATE shall provide and grant:

(a) Executive Order to the BOARD (up to 5 acres) for the LWTP facility.

(b) Easement(s) to the BOARD for access to the LWTP facility and the Kanaha Valley Stream intake (as required).

(c) Easement(s) to the BOARD for drinking water distribution lines, storage tanks, drainlines, utility lines pump stations and appurtenant structures (as required).

(d) Actively participate with the BOARD and others in resolving drainage overflow issues for the PROJECT with the neighboring landowner.

(e) The BOARD the right to ingress and egress on the through the STATE-owned properties for the purpose of its officers, employees, engineering consultants, and construction contractors performing land surveying, engineering studies, and construction of the Project.

(f) Easement(s) to the utility companies for electrical and telephone service (as required).

(2) The BOARD shall provide all necessary metes and bounds descriptions for the above easements and LWTP site.

(3) The BOARD shall be responsible for liability, operational control, and maintenance of land and easements provided by the STATE for the PROJECT which are used solely by the BOARD. The BOARD and STATE shall be jointly responsible for the liability and maintenance of land and easement areas which are jointly used by the BOARD and STATE.

9. The BOARD shall provide potable water service to the STATE-owned land with the following understanding:

(1) Provide potable water from the LWTP at the designated waterline connections shown in Exhibit B.

(2) Provide potable water from the BOARD's share of the diverted Kanaha Stream waters. The BOARD's share of the diverted Kanaha Stream waters is described in Agreement dated June 7, 1982. Refer to Exhibit C.

(3) Provide potable water up to 100,000 gallons per day in compensation for the land and easements received by the BOARD from the STATE for the PROJECT. The STATE shall pay the BOARD for potable water consumption greater than 100,000 gallons per day at the regular BOARD rates effective at the time of water consumption. The volume of water consumed shall be determined based on the daily average of two month periods.

(4) Provide the STATE-owned property 300,000 gallons of water storage for fire protection purposes. The storage shall be provided at the 1 million gallon finish water storage tank of the LWTP. Water consumed by the Lahainaluna High School for fire protection purposes shall be provide by the Board in compensation for the land and easements received by the BOARD from the STATE for the PROJECT.

(5) The STATE acknowledges that the BOARD may not be able to provide potable water and fire protection storage water to the STATE-owned property on a continuous basis due to lack of stream flow from the Kanaha Stream, problems with the Kanaha Stream intake, transmission line and LWTP.

(6) The BOARD acknowledges that the STATE has first priority of 17.7% for the distribution of the waters diverted form the Kanaha Valley Stream through Pioneer's existing diversion system.

10. The STATE shall review and approve the design of the PROJECT's connections to the potable waterline and fire protection waterline of the New LHS Water System.

11. The STATE shall allow the BOARD to use (for any purpose) the portion of the STATE's diverted Kanaha Stream waters not utilized by the STATE-owned property in compensation for water service from the LWTP. The STATE's share of the diverted Kanaha Stream waters is described in Agreement dated June 7, 1982. Refer to Exhibit C.

12. The BOARD shall provide water service to the Lahainaluna High School subject to conservation

measures which may be imposed by the BOARD whenever it is determined by Section 3.2 "Conservation Measures and Interruption of Water Supply" of the Rules and Regulations of the Department of Water Supply County of Maui (January 7, 1977).

13. This AGREEMENT shall be binding upon and inure to the benefit of the successors and assigns of the respective Parties.

IN WITNESS WHEREOF the parties hereto have executed these presents as of the day and year first above written.

BOARD OF WATER SUPPLY
COUNTY OF MAUI

~~Byron Walters~~ Marie Kimmey
Its Chairman

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

By _____
Its Comptroller

STATE OF HAWAII
DEPARTMENT OF EDUCATION

By _____
Its Superintendent

APPROVED AS TO FORM

Deputy Attorney General, State of Hawaii
April 13, 1995

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

By _____
Its Chairperson

Approved as to form:

_____

Deputy Attorney General
State of Hawaii

Approved as to Form
and Legality

John S. Rapacz
Deputy Corporation Counsel
County of Maui

STATE OF HAWAII)
) SS.
COUNTY OF MAUI)

On this 3rd day of May, 1995, before me appeared Marie Kimmey, to me personally known, who, being by me duly sworn, did say that she is the Chairperson of the BOARD OF WATER SUPPLY of the County of Maui, and that the seal affixed to the foregoing instrument is the lawful seal of the said BOARD OF WATER SUPPLY, and that the said instrument was signed and sealed on behalf of the said BOARD OF WATER SUPPLY, and the said Marie Kimmey acknowledged the said instrument to be the free act and deed of said BOARD OF WATER SUPPLY.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

Notary Public, State of Hawaii

My commission expires: 4/19/98

CITY & COUNTY OF) SS.
~~COUNTY OF MAUI~~)
HONOLULU

On this 18th day of November, 1994, before me appeared ROBERT P. TAKUSHI, to me personally known, who, being by me duly sworn, did say that he/she is the Comptroller of the DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES, STATE OF HAWAII, and that the seal affixed to the foregoing instrument is the lawful seal of the said DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES, and that the said instrument was signed and sealed on behalf of the said DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES, and the said ROBERT P. TAKUSHI acknowledged the said instrument to be the free act and deed of the said DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

Constancia Valdez
Notary Public, State of Hawaii

My commission expires: June 7, 1995

STATE OF HAWAII)
) SS.
COUNTY OF MAUI)

On this _____ day of _____, 19___, before me appeared _____, to me personally known, who, being by me duly sworn, did say that he/she is the Superintendent of the DEPARTMENT OF EDUCATION, STATE OF HAWAII, and that the seal affixed to the foregoing instrument is the lawful seal of the said DEPARTMENT OF EDUCATION, and that the said instrument was signed and sealed on behalf of the said DEPARTMENT OF EDUCATION, and the said _____ acknowledged the said instrument to be the free act and deed of the said DEPARTMENT OF EDUCATION.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

_____
Notary Public, State of Hawaii

My commission expires:_____

STATE OF HAWAII)
) SS.
COUNTY OF MAUI)

On this _____ day of _____, 19___, before me appeared _____, to me personally known, who, being by me duly sworn, did say that he/she is the Chairperson of the BOARD OF LAND AND NATURAL RESOURCES of the State of Hawaii, and that the seal affixed to the foregoing instrument is the lawful seal of the said BOARD OF LAND AND NATURAL RESOURCES, and that the said instrument was signed and sealed on behalf of the said BOARD OF LAND AND NATURAL RESOURCES, and the said _____ acknowledged the said instrument to be the free act and deed of the said BOARD OF LAND AND NATURAL RESOURCES.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

_____
Notary Public, State of Hawaii

My commission expires:_____

Proposed Water System

The L-WTP will be located adjacent to the existing Lahainaluna High school gravity filter fenced site. The basic components within the 5 acre L-WTP fenced site will be a Treatment Plant (TP) building, Chlorinator/ Ammoniator (C/A) building, sludge lagoons, a septic tank/leaching field wastewater system and an access driveway.

The site will be grassed for erosion control. Stormwater runoff, which currently sheet flows across the site, will be diverted around the site to desilting basins located just below the L-WTP.

The current 8-foot wide paved access road to the school's existing 0.1 MG steel tank will be widened and extended to the proposed facilities.

The water treatment system, office/control room and storage facilities, will be housed within the TP building. The TP building will be a pre-fabricated, rigid-frame, aluminum building, approximately 20 feet high. The finish floor elevation will be 745.0 feet. Treated water will be chlorinated and stored within a clearwell located under the building. The finish floor elevation of the clearwell well be approximately 732.0 feet.

The separate concrete masonry unit (CMU) C/A building will house the chlorinator and ammoniator units. The C/A building will have a finish floor elevation of 745.0 feet and will be 13 feet high, with 1,075 square feet of floor area.

A standby generator system with diesel fuel day tank will be housed within weatherproof enclosures and installed just outside the TP building. The day tank will draw fuel from an aboveground, 1,000 gallon diesel fuel tank within the WTP fenced site. This generator system will provide total standby power for the L-WTP. The fuel tank will have sufficient capacity to provide fuel for several days of standby power generation.

The sludge lagoons will be a dual cell system with a common wall. These lagoons will receive backwash water from the filtration units and allow for separation of the settleable solids (sludge) from the liquid portion (decant) under quiescent conditions. The dual cell concept is to allow for dewatering of the sludge within the inactive cell by evaporation.

The septic tank/leaching field system will receive wastewater from the restroom and washdown facilities within the two buildings. The wastewater flow is anticipated to be less than 100 gallons per day.

The L-WTP will operate at an approximate capacity of 1.2 MGD with 0.3 MGD of standby. Approximately 1.1 MGD of treated water will be used by the County and 0.1 MGD by Lahainaluna School.

The L-WTP will incorporate provisions for future expansion for an ultimate capacity of 2.5 MGD. These provisions will primarily be space allocation for an additional filtration unit(s), and associated piping connections. The future unit(s) would be housed within the same building.

During drought conditions, the average total flow at the screen box could be less than 1.0 MGD. Under such circumstances only one, or two, of the filtration units is expected to be operating.

The finish water will be pumped from the clearwell to a 1.0 MG finish water reservoir just above the L-WTP site, at an elevation of 802.0 feet. The elevation of the finish water reservoir allows for sufficient pressure to operate a fire protection sprinkler system within the C/A building, and an exterior fire hydrant. The elevation of the finish water reservoir will also allow for gravity flow to the Kanaha Reservoir, via a tap into DWS's existing water line. The existing waterline between the existing divider box and this tap would be cut and plugged to prevent future conveyance of untreated water to Kanaha Reservoir.

The 1.0 MG finish water reservoir will include 0.30 MG of storage to satisfy Lahainaluna High School's potable demand and fire protection requirements. The remaining storage is considered surplus storage for fire protection and filter backwashing for the L-WTP, and to accommodate DWS's area-wide (Lahaina Southern District) storage requirements.

Water distributed among the three parties (i.e., Lahainaluna School, DWS and PMCo) would be metered and manually regulated by control valves.

A common drain line along the access road to the proposed facilities will convey overflow/washout water from existing and proposed facilities to Kanaha Stream. The existing facilities include the screen box, and the school's 0.1 MG concrete and 0.1 MG steel reservoirs. Overflow/washout waters from these existing facilities currently discharge at various points along the top bank of Kanaha Stream. Also proposed are two desilting basins to detain storm runoff from the treatment plant site.

LAHAINA WATER TREATMENT PLANT
CONSTRUCTION COST ESTIMATE

1.	Site Preparation	$790,000
2.	Treatment Plant Building	$980,000
3.	Ammoniator/Chlorinator Building	$200,000
4.	Sludge Lagoons	$410,000
5.	0.5 MG Presedimentation Reservoir	$1,050,000
6.	Yard Piping	$590,000
7.	Domestic Water & Wastewater Systems	$30,000
8.	Flow Meters	$90,000
9.	Filtration System	$2,330,000
10.	Chlorination System	$120,000
11.	Ammoniation System	$70,000
12.	Process Piping	$70,000
13.	Chlorine Scrubber	$170,000
14.	Water Pressure Booster System	$26,000
15.	Finish Water Pumps	$40,000
16.	Lagoon Decant Pumps	$60,000
17.	1.0 MG Finish Water Reservoir	$1,190,000
18.	Laboratory Equipment and Supplies	$5,000
19.	Instrumentation	$390,000
20.	Fuel System	$18,000
21.	Electrical	$600,000
22.	Filter Influent Pumps	$11,000
23.	Chemical Feed System	$70,000
24.	Misc. Including Testing & Disinfecting	$100,000
TOTAL 1993 CONSTRUCTION COST (ROUNDED)		$9,410,000

EXHIBIT "A"

** SUBJECT TO CHANGE
SCHEMATIC FLOW THRU PLAN
EXHIBIT "B"
16" RAW WATER LINE
12" DRAIN LINE
6" OVERFLOW LINE
6" FIRE LINE
LEACHING FIELD
TRUE NORTH

EXHIBIT B

Lahainaluna High School Potable Water Usage

12/31/03	0	0	$0.00
10/31/03	1229	10*1.42+15*1.91+1204*2.25	$2,751.85
08/31/03	2125	10*1.42+15*1.91+2100*2.25	$4,767.85
06/30/03	1365	10*1.42+15*1.91+1340*2.25	$3,057.85
04/30/03	757	10*1.42+15*1.91+732*2.25	$1,689.85
02/28/03	0	0	$0.00
12/31/02	0	0	$0.00
10/31/02	478	10*1.42+15*1.91+453*2.25	$1,062.10
08/31/02	1294	10*1.42+15*1.91+1269*2.25	$2,898.10
06/30/02	0	0	$0.00
04/30/02	0	0	$0.00
02/28/02	25	10*1.42+15*1.91	$42.85
12/31/01	2616	10*1.42+15*1.91+2591*2.25	$5,872.60
10/31/01	3112	10*1.42+15*1.91+3087*2.25	$6,988.60
08/31/01	3275	10*1.42+15*1.91+3250*2.25	$7,355.35
06/30/01	3738	10*1.35+15*1.82+3713*2.14	$7,986.62
04/30/01	2456	10*1.35+15*1.82+2431*2.14	$5,243.14
02/28/01	726	10*1.35+15*1.82+701*2.14	$1,540.94
12/31/00	1380	10*1.35+15*1.82+1355*2.14	$2,940.50
10/31/00	4989	10*1.35+15*1.82+4964*2.14	$10,663.76
08/31/00	3095	10*1.35+15*1.82+3070*2.14	$6,610.60
06/30/00	5987	10*1.29+15*1.73+5962*2.04	$12,201.33
04/30/00	5604	10*1.29+15*1.73+5579*2.04	$11,420.01
02/29/00	3199	10*1.29+15*1.73+3174*2.04	$6,513.81
12/31/99	3604	10*1.29+15*1.73+3579*2.04	$7,340.01
10/31/99	5130	10*1.29+15*1.73+5105*2.04	$10,453.05
08/31/99	3771	10*1.29+15*1.73+3746*2.04	$7,680.69
06/30/99	3733	10*1.23+15*1.65+3078*1.94	$6,008.37
04/30/99	3388	10*1.23+15*1.65+3363*1.94	$6,561.27
02/28/99	2917	10*1.23+15*1.65+2892*1.94	$5,647.53
12/31/98	4940	10*1.23+15*1.65+4915*1.94	$9,572.15
10/31/98	6460	10*1.23+15*1.65+6435*1.94	$12,520.95
08/31/98	6203	10*1.23+15*1.65+6178*1.94	$12,022.37
			$179,414.10

APPENDIX G:
Property Owners Within 500 Feet

Canal
Stream
Aqueduct
Flume

TMK	OWNER	C/O	ADDRESS	CSZ
246017011	ADAMS,RENEE K TRUST		P O BOX 165	WAILUKU HI 96793
246017012	MICHEL HANS FRITZ		1404 OLONA PL	LAHAINA HI 96761 0000
246017012	MICHEL,HANS FRITZ			
246018003	BISHOP B P TR EST		P O BOX 3466	HONOLULU HI 96801
246018004	STATE OF HAWAII			
246018005	STATE OF HAWAII			
246018006	STATE OF HAWAII			
246018007	STATE OF HAWAII			
246018010	STATE OF HAWAII			
246018011	PIONEER MILL CO., LTD	KAANAPALI DEVELOPMENT CORP.	275 LAHAINALUNA RD	LAHAINA HI 96761 1524
246018011	STATE OF HAWAII			
246018012	STATE OF HAWAII			
246018022	NUNES,ERNEST		505 LAHAINALUNA RD	LAHAINA HI 96761
246018022	STATE OF HAWAII			