



TED H.S. HONG
ATTORNEY AT LAW, LLC

EMPLOYMENT,
WORKPLACE LAW & LITIGATION

January 19, 2022

Hon. Jonathan Likeke Scheuer
Chairperson
Land Use Commission
P.O. Box 2359
Honolulu, Hawai'i 96804-2359



RE: Agenda Item
SP21-413, CONNECTIONS NEW CENTURY PUBLIC
CHARTER SCHOOL/Community Based Education
Support Services (CBESS) (SPP 12-000138) (Hawaii)

Hearing: January 19-20, 2022: 9:00 a.m.

Dear Chairperson Scheuer and Commissioners:

In response to questions from the Chair on January 19, 2022, please find the responses as follows and attached. The responses are grouped in the following order:

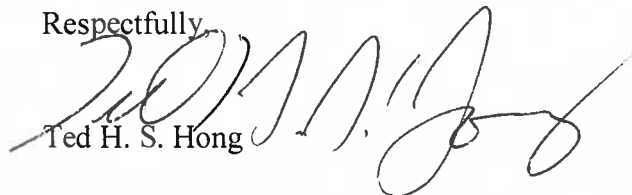
- Response #1: Sec. 15-15-95(a), Hawaii Administrative Rules ("HAR"), Owner's Authorization.
- Response #2: DLNR, Historic Preservation concurrence
- Response #3: Infiltration of runoff into Kaumana Cave.
- Response #4: Cultural Impact Assessment
- Response #5: Construction Schedule
- Response #6: Alternative Locations

The documents are only relevant excerpts from the ICA Record on Appeal and **organized in chronological order**, as:

ICA Record on Appeal vol. #
Description
Date
Pdf page number in the ICA Record on Appeal.

Thank for your patience in this matter.

Respectfully,


Ted H. S. Hong

cc: Client

P.O. Box 4217, HILO, HI 96720

TELEPHONE: (808) 933-1919

FAX: (808) 935-8281

WEB: TEDHONGLAW.COM

**SP21-413, CONNECTIONS NEW CENTURY PUBLIC CHARTER SCHOOL/Community
Based Education Support Services (CBESS) (SPP 12-000138) (Hawaii)**

Response #1: Sec. 15-15-95(a), Hawaii Administrative Rules (“HAR”), Owner’s Authorization.

<u>ICA, Record on Appeal, volume #:</u>	<u>Description:</u>	<u>Date:</u>	<u>Pdf page #:</u>
Part 2 of 4	DLNR FONSI	October 22, 2010	110
	Public Notice - Intention to Direct Lease	May 1, 2010	107
	Sec. 171-95, Hawaii Revised Statutes (“HRS”)		
	Sec. 171-95.5, HRS		
Part 2 of 4	Issuance of Direct Lease to Connections, New Century Public Charter School for School Purposes, Kaumana, Hawaii, Tax Map Key: (3) 2-5-6:141	January 13, 2011	1038-1043 (1040-41; 43)
	Fee Owner’s Letter of Authorization	July 9, 2012	482; 71
	Letter to County of Hawaii Planning Director from DLNR, District Land Agent	October 2, 2012	452
	Office of Planning, DBEDT letter to County of Hawaii Planning Director	October 3, 2012	454-457

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 22, 2010

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

PAUL J. CONRY
ACTING FIRST DEPUTY

LENORE K. OHYS
ACTING DEPUTY DIRECTOR - WATER

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

Katherine Puana Kealoha, Esq., Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawai'i 96813

Dear Ms. Kealoha,

Subject: Finding of No Significant Impact (FONSI) for Connections Public Charter
School Master Plan, TMK (3) 2-5-006:141, South Hilo, Hawai'i

The Department of Land and Natural Resources has reviewed the comments received during the thirty (30) day public comment period which began on August 23, 2010. The agency has determined that this project will not have significant environmental effects and has issued a FONSI. Please publish this notice in the next available OEQC Environmental Notice.

We have emailed a completed OEQC Publication Form to your office and submitted one hard copy and one .pdf format of the Final Environmental Assessment.

If there is anything we can help you with or if you have any questions, please do not hesitate to contact Charlene Unoki from my Land Division at 587-0433. Thank you.

Sincerely,

Paul J. Conry
for *ML* Laura H. Thielen
Chairperson

Public Notice - Direct Lease to Public Charter Schools

PUBLIC NOTICE
INTENTION TO DIRECT LEASE

Pursuant to Sections 171-16(c), Hawai'i Revised Statutes, the Board of Land and Natural Resources hereby gives notice of its intent to lease 70.150 acres of State land situate at Ponoehawai, Kukuau 2nd, SouthHilo, Hawai'i; and, identified as Tax Map Key: (3) 2-5-06:141 to the Connections New Century Public Charter School [§ 171-95.5]. This lease shall enable the lessee to utilize said parcel for its school.

Pursuant to Section 171-43, Hawaii Revised Statutes, and the minimum rent policy established by the Board at its meeting of May 13, 2005 under Agenda Item D-19, the annual rent will be set at \$480.00.

Information related to this proposed direct lease may be reviewed during office hours at the Department of Land and Natural Resources, Land Division, 75 Aupuni Street, Rm. #204, Hilo, Hawai'i; and, at the offices of the Land Division on the Islands of Kaua'i, Maui, and O'ahu. Call, or write to any of these offices to request information in an alternate format.

DONE at the office of the Department of Land and Natural Resources this 1st day of May, 2012.

||||| BOARD OF LAND AND NATURAL RESOURCES
||||| /s/
||||| William J. Aila, Jr., Chairperson

Date of Publication: (Tuesday) May 1, 2012

>> [Download Notice and Bid Packet](#) <<

D. DISPOSITION TO GOVERNMENT AGENCIES AND PUBLIC UTILITIES

§171-95 Disposition to governments, governmental agencies, public utilities, and renewable energy producers. (a) Notwithstanding any limitations to the contrary, the board of land and natural resources may, without public auction:

- (1) Sell public lands at such price and on such other terms and conditions as the board may deem proper to governments, including the United States, city and county, counties, other governmental agencies authorized to hold lands in fee simple and public utilities;
- (2) Lease to the governments, agencies, public utilities, and renewable energy producers public lands for terms up to, but not in excess of, sixty-five years at such rental and on such other terms and conditions as the board may determine;
- (3) Grant licenses and easements to the governments, agencies, public utilities, and renewable energy producers on such terms and conditions as the board may determine for road, pipeline, utility, communication cable, and other rights-of-way;
- (4) Exchange public lands with the governments and agencies;
- (5) Execute quitclaim deeds to the governments and agencies, with or without consideration, releasing any claim to the property involved made upon disputed legal or equitable grounds, whenever the board in its discretion deems it beneficial to the State; and
- (6) Waive or modify building and other requirements and conditions contained in deeds, patents, sales agreements, or leases held by the governments and agencies whenever such waiver or modification is beneficial to the State.

(b) In any disposition to public utilities under this section:

- (1) The sale price or lease rental shall be no less than the value determined in accordance with section 171-17(b); provided that such sale price or lease rental may be on a nominal basis, if the board finds that such easement is required in connection with a government project;
- (2) The board shall provide that in case the land ceases to be used at any future time for the use for which the disposition was made, the board shall have the right to repurchase the land at the original sale price or fair market value, whichever is lower, and to purchase improvements thereon at the depreciated value or fair market value, whichever is lower;
- (3) Disposition shall not be made to any public utility if the utility has suitable lands of its own;
- (4) The disposition to public utilities shall be subject to disapproval by the legislature by two-thirds vote of either the senate or the house of representatives or by majority vote of both, in any regular or special session next following the date of the disposition; and
- (5) For the purposes of this section, the definition of "public utility" as defined in section 269-1 is hereby incorporated herein by reference.

(c) For the purposes of this section, "renewable energy producer"

means:

- (1) Any producer or developer of electrical or thermal energy produced by wind, solar energy, hydropower, geothermal resources,

landfill gas, waste-to-energy, ocean thermal energy conversion, cold seawater, wave energy, biomass, including municipal solid waste, biofuels or fuels derived from organic sources, hydrogen fuels derived primarily from renewable energy, or fuel cells where the fuel is derived primarily from renewable sources that sell all of the net power produced from the demised premises to an electric utility company regulated under chapter 269 or that sells all of the thermal energy it produces to customers of district cooling systems; provided that up to twenty-five per cent of the power produced by a renewable energy producer and sold to the utility or to district cooling system customers may be derived from fossil fuels; or

- (2) Any grower or producer of plant or animal materials used primarily for the production of biofuels or other fuels; provided that nothing herein is intended to prevent the waste product or byproduct of the plant or animal material grown or produced for the production of biofuel, other fuels, electrical energy, or thermal energy, from being used for other useful purposes. [L 1962, c 32, pt of §2; am L 1963, c 40, §§1, 2, 3; am L 1965, c 239, §35; Supp, §103A-90; HRS §171-95; am L 1983, c 179, §1; am L 2002, c 102, §1; am L 2007, c 205, §5; am L 2008, c 90, §2; am L 2016, c 220, §1]

[Previous](#)

[Vol103_Ch0121-0200D](#)

[Next](#)

[\$171-95.5] Lease to public charter schools. Notwithstanding any limitations to the contrary, the board may lease to charter schools, at nominal consideration, by direct negotiation and without recourse to public auction, public lands and buildings under the control of the department. Except as provided in this section, the terms and conditions of sections 171-33 and 171-36 shall apply. The lands and buildings leased under this section shall be used by the charter schools for educational purposes only. This section shall not apply to conversion charter schools. [L 2006, c 298, §23]

[Previous](#)

[Vol103_Ch0121-0200D](#)

[Next](#)

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Land Division
Honolulu, Hawaii 96813

January 13, 2011

Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

PSF No.: 08HD-018

HAWAII

Issuance of Direct Lease to Connections New Century Public Charter School for School
Purposes, Kaumana, Hawaii, Tax Map Key: (3) 2-5-6:141.

APPLICANT:

Connections New Century Public Charter School, whose business and mailing address is
174 Kamehameha Avenue, Hilo, Hawaii 96720.

LEGAL REFERENCE:

Section 171-95.5, Hawaii Revised Statutes, as amended.

LOCATION:

Government lands situated at Ponoahawai, Kaumana, Kukuau 2nd, South Hilo, Hawaii,
identified as Tax Map Key: (3) 2-5-6:141, as shown on the attached map labeled Exhibit
"A".

AREA:

72.430 acres, more or less.

ZONING:

State Land Use District: Agriculture
County of Hawaii CZO: A-1A

TRUST LAND STATUS:

Section 5(b) lands of the Hawaii Admission Act
DHHL 30% entitlement lands pursuant to the Hawaii State Constitution:
YES ___ NO X

D-4

CURRENT USE STATUS:

Vacant.

Encumbered by Grant of Non-Exclusive Easement bearing Land Office Deed No. S-28322, GTE Hawaiian Telephone Co. Inc., for telephone circuit facilities purposes.

Encumbered by Grant of Non-Exclusive Easement bearing Land Office Deed No. S-28353, GTE Hawaiian Telephone Co. Inc., for telephone transmission purposes.

CHARACTER OF USE:

School purposes.

LEASE TERM:

Sixty-five (65) years

COMMENCEMENT DATE:

The first day of the month to be determined by the Chairperson.

ANNUAL RENT:

\$480 per annum (Minimum Rent Policy approved by the Land Board on May 13, 2005, Agenda Item D-19.)

METHOD OF PAYMENT:

Semi-annual payments, in advance.

RENTAL REOPENINGS:

At the 10th, 20th, 30th, 40th, 50th, 60th years of the lease term, by staff or independent appraisal.

PERFORMANCE BOND:

Twice the annual rental amount.

PROPERTY CHARACTERISTICS:

Utilities utilities are available.

Slope - 4% to 6%

Elevation - 725-900 ft.

Rainfall - 193.2 inches per year.

SCS Soil Series - Lava flows, pahoehoe.

Land Study Bureau - D300 has a productivity rating of "c" for grazing, "d" for sugarcane and orchard and "e" for vegetables and forage.

Legal access to property - Staff has verified that there is legal access to the property off of Kaumana Drive and Edita Street.

Subdivision - Staff has verified that the subject property is a legally subdivided lot.

Encumbrances - Staff has verified that the following encumbrances exist on the property:

Grant of Non-Exclusive Easement bearing Land Office Deed No. S-28322, GTE

Hawaiian Telephone Co. Inc., for telephone circuit facilities purposes and Grant of Non-

Exclusive Easement bearing Land Office Deed No. S-28353, GTE Hawaiian Telephone Co. Inc., for telephone transmission purposes.

CHAPTER 343 - ENVIRONMENTAL ASSESSMENT:

The Final Environmental Assessment for the subject project was published in the OEQC's Environmental Notice on November 8, 2010 with a finding of no significant impact (FONSI).

DCCA VERIFICATION:

Place of business registration confirmed:	YES <u>X</u>	NO ___
Registered business name confirmed:	YES <u>X</u>	NO ___
Applicant in good standing confirmed:	YES <u>X</u>	NO ___

APPLICANT REQUIREMENTS:

Applicant shall be required to:

- 1) Pay for the costs of public notice pursuant to section 171-16 and
- 2) Provide survey maps and descriptions according to State DAGS standards and at Applicant's own cost.

BACKGROUND:

The Land Board at its meeting of March 28, 2008, under agenda Item D-5, granted approval in principle of a lease to Connections New Century Public Charter School for school purposes and authorization for Connections New Century Public Charter School to comply with Chapter 343, Hawaii Revised Statutes, as amended. One of the conditions placed by the Land Board was that should the Connections New Century Public Charter School fail to

obtain satisfactory compliance with Chapter 343, Hawaii Revised Statutes, as amended, within twenty-four (24) months, the Land Board's approval shall be rescinded.

The Land Board at its meeting of December 11, 2009, under agenda Item D-5, granted Connections New Century Public Charter School until December 31, 2010 to obtain satisfactory compliance with Chapter 343, Hawaii Revised Statutes, as amended. By letter dated November 12, 2009, Ms. Celia Shen, Planner for Wil Chee-Planning, Inc. on behalf of Mr. John Thatcher, Chief Executive Officer of Connections Public Charter School, requested seven to eight months extension to revise the conceptual master plan and environmental assessment. During the 30-day public comment period of the draft environmental assessment, they were informed that a significant segment of Kaumana Cave underlies the upper portion of the project site (above Edita Street), and could be impacted by the development as represented in the conceptual master plan. After reviewing the information shared by concerned speleologists, Connections New Century Public Charter School decided to revise the conceptual master plan to avoid impacting Kaumana Cave by limiting development of the major school facilities to the lower portion of the project site (below Edita Street).

The Final Environmental Assessment for the subject project was published in the OEQC's Environmental Notice on November 8, 2010 with a finding of no significant impact (FONSI). The 30-day challenge period ended on December 8, 2010.

BACKGROUND ON APPLICANT:

Connections Public Charter School was chartered by the State Board of Education in 2000, and authorized under signature of the Governor of the State of Hawaii, the President of the State Board of Education and the State Superintendent of Schools. Connections opened in August 2000, with 184 students in grades K-6. By August 2001, the school has expanded to a K-12 program with a total of 360 students. The need and desire for this unique charter school is evidenced by an enrollment waiting list and is further illustrated by the broad-based community representation in the operation of the school.

The school's faculty has been recognized for their innovative work, which has resulted in the school being designed as a "Demonstration Site" for the University of Hawaii Manoa Curriculum Research and Development Group. This designation has resulted in Connections becoming a major clearinghouse for emerging curriculum, as well as a center for teacher development.

Connections is based in the Hilo area. Currently, the elementary and middle school is located in the Kress Building on Kamehameha Avenue in downtown Hilo. The Kress building is owned by the school's affiliated non-profit organization. The high school is presently located in leased facilities at the Nani Mau Gardens, just outside of Hilo town

For long-term planning and budgeting, the school would prefer to not lease property from private owners. The desire to vacate the leased facilities in which the high school operates has provided the impetus to explore options for consolidating all of Connections academic programs at a single location. Consolidation provides an attractive option for management, operational, and financial reasons. Thus, began a search for suitable properties on which to develop new facilities for the school. In coordination with DLNR, the Kaumana property was identified by the school as a potential site for the new campus.

The master plan was prepared to guide the development of the new campus that would co-locate its elementary, middle, and high schools on a single property, would allow for program expansion, and improve the quality of education the school can provide its students. Connections would like to add a sustainable agricultural program to their academic offerings. At present, Connections does not have a pre-kindergarten program, but may choose to implement one in the future if demand exists and if adequate facilities can be provided.

ANALYSIS:

The subject property is currently vacant. Besides 2 easements, we have no records of any past dispositions.

The current zoning is agriculture. The proposed use is allowed.

Applicant qualifies for a direct lease pursuant to Section 171-95(a)(2) and 95.5, Hawaii Revised Statutes, as amended. Charter signed by Governor, Chairperson of the Board of Education and Superintendent of Education on May 5, 2000.

The master plan would guide development of a new campus. The new campus would consolidate all of Connections existing academic programs at a single location, plus provide land area, and facilities to expand their academic offerings. Facilities included in the master plan would accommodate the elementary, intermediate, and high school programs and supporting services; an agricultural program; a small dormitory facility; and a pre-Kindergarten (pre-K) program. The master plan proposes facilities to support approximately 380 K through grade 12 students, 30 non-traditional students, and 25 pre-K students.

The proposed campus is intended to be a school within a forest. The lower parcel consists of 35 acres where all of the major school facilities are proposed to be located. The upper parcel consists of 37 acres where a proposed walkway would be constructed to provide access and viewing opportunities within the forested area. This area will support educational programs including reforestation projects.

Applicant has not had a lease, permit, easement or other disposition of State lands terminated within the last five years due to non-compliance with such terms and conditions.

RECOMMENDATION: That the Board:

1. Find that the public interest demands the issuance of a new direct lease to the Connections New Century Public Charter School for School Purposes.
2. Subject to the Applicant fulfilling all of the Applicant requirements listed above, authorize the issuance of a direct lease to the Connections New Century Public Charter School, covering the subject area under the terms and conditions cited above, which are by this reference incorporated herein and further subject to the following:
 - A. The standard terms and conditions of the most current non-profit lease document form, as may be amended from time to time;
 - B. Review and approval by the Department of the Attorney General; and
 - C. Such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State.

Respectfully Submitted,



Charlene Unoki
Assistant Administrator

APPROVED FOR SUBMITTAL:



William J. Aila, Jr., Interim Chairperson

FEE OWNER'S LETTER OF AUTHROIZATION

Tax Map Key: (3)2-5-06:141
Ponohawaii, Kukuau 2nd, South Hilo, Hawaii
County and State of Hawaii

The undersigned Intend to execute a Direct Lease with the State of Hawaii for the real property above-identified, and hereby authorize Ted H.S. Hong, Esq to apply for execute and process any and all County governmental permit applications, and to participate in proceedings related to above said real property.

A photostatic or facsimile copy of this executed authorization shall also be considered as effective and valid a the original.

Sandra Kelley

It's: Community Based Education Support Services

Friends of Connections

174 Kamehameha AVE.

HILO, HI. 96720

Subscribed and sworn to before me this

9th day of July 2012.

Cory T. Watanabe

Name: CORY T. WATANABE

Notary Public, State of Hawaii

My commission expires: 3/7/14



Doc. Date: undated # Pages: 2

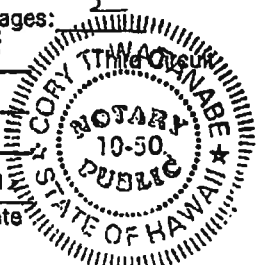
Name: CORY T. WATANABE

Doc. Description: Fee Owners Letter of Authorization

Cory T. Watanabe
Signature

2012/07/09
Date

NOTARY CERTIFICATION



FEE OWNER'S LETTER OF AUTHORIZATION

Tax Map Key: (3)2-5-06:141
Ponohawaii, Kukuau 2nd, South Hilo, Hawaii
County and State of Hawaii

The undersigned intend to execute a Direct Lease with the State of Hawaii for the real property above-identified, and hereby authorize Ted H.S. Hong, Esq to apply for execute and process any and all County governmental permit applications, and to participate in proceedings related to above said real property.

A photostatic or facsimile copy of this executed authorization shall also be considered as effective and valid as the original.

Ted H.S. Hong

It's: Connections New Century Public Charter School
174 Kamehameha AVE.
HILO, HI. 96720

Subscribed and sworn to before me this

9th day of July 2012.

Cory T. Watanabe

Name: CORY T. WATANABE

Notary Public, State of Hawaii

My commission expires: 2/7/14



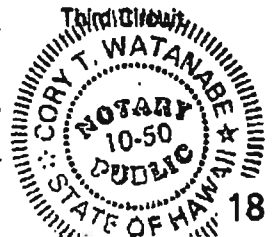
Doc. Date: undated # Pages: 2

Name: CORY T. WATANABE

Doc. Description: Fee Owner's Letter of Authorization

Cory T. Watanabe 7/9/12
Signature Date

NOTARY CERTIFICATION



NEIL ABERCROMBIE
GOVERNOR OF HAWAII

PLANNING DEPARTMENT
COUNTY OF HAWAII



2012 OCT -2 PM 2: 59



WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

75 Aupuni Street, Room-204
Hilo, Hawaii 96720
PHONE: (808) 961-9590
FAX: (808) 961-9599

October 2, 2012

Ref. No.: 08HD-018
Author: LD-GH

The Honorable Bobby Jean Leithead-Todd, Director
County of Hawaii Planning Department
101 Pauahi Street, Suite 3
Hilo, Hawaii 96720

Subject: Connections New Century Public Charter School Special Permit
Application and Processing, Ponohawai, Kukuau, 2nd, South Hilo, Hawaii
Tax Map Key: 3rd/2-5-06:141.

Dear Ms. Leithead-Todd:

On May 1, 2012, pursuant to Section 171-16(c), Hawaii Revised Statutes, the Board of Land and Natural Resources gave notice of its intent to lease 70.150 acres of State land situate at Ponohawai, Kukuau 2nd, South Hilo, Hawaii and identified at Tax Map Key: (3)2-5-006:141 to Connections New Century Public Charter School ("Lessee"). The request for the direct lease of State lands shall allow the Lessee to utilize said parcel for its school.

The pending direct lease is currently being drafted by the State Attorney General's Office. At its own costs and expense, Connections is allowed to continue with the processing of a Special Permit Application that will enable the Lessee to utilize the State parcel for its school.

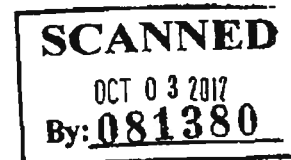
Should you have any questions, please feel free to call our Hawaii District Land Office at (808) 961-9590.

Sincerely,

A handwritten signature in black ink, appearing to read "Gordon C. Heit".

Gordon C. Heit
District Land Agent

cc: Central Files
District Files
Ted Hong





**DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM**

NEIL ABERCROMBIE
GOVERNOR
RICHARD C. LIM
DIRECTOR
MARY ALICE EVANS
DEPUTY DIRECTOR
JESSE K. SOUKI
DIRECTOR
OFFICE OF PLANNING

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

2012 OCT -8 AM 9:17
PLANNING DEPARTMENT
COUNTY OF HAWAII

Ref. No. P-13733

October 3, 2012

Ms. Bobby Jean Leithead Todd, Director
Planning Department
County of Hawai'i
101 Pauahi Street, Suite 3
Hilo, Hawai'i 96720

Attention: Mr. Jeff Darrow

Dear Ms. Leithead Todd:

Subject: Special Permit Application (SPP 12-000138)
Connections New Century Public Charter School, Kaumana Campus
Tax Map Key No. (3) 2-5-006: 141, 70.15 acres
Kaumana, Hilo, Hawai'i

The Office of Planning (OP) has reviewed the subject application and has no objection to the proposed application, subject to the comments and recommendations in this letter.

Background

The applicant is seeking a special permit to develop a K-12 charter school campus with dormitory facilities, a sustainable agriculture program, and a forestry/conservation program on an approximately 70-acre parcel of land in Kaumana, owned by the State of Hawai'i. In January 2011, the Board of Land and Natural Resources (BLNR) approved the applicant's request for a general lease of the property for school purposes. On May 1, 2012, the BLNR published a notice of its intent to lease the property to Connections New Century Public Charter School (Connection PCS). The county requires a letter of authorization from the fee owner for special permit applications; the application does not include a fee owner's letter of authorization from the Department of Land and Natural Resources (DLNR).

Development of the Kaumana Campus would allow Connections PCS to consolidate and expand its existing educational programs, which are currently housed in leased facilities at Nani-Mau Gardens outside of Hilo town and the Kress Building in downtown Hilo, approximately 2.5 miles from the Kaumana parcel. Projected enrollment for the school is approximately 380 K-12 students and 25 intergenerational students. The school would have approximately 67 full-time

SCANNED
OCT 08 2012
By: 081446

Ms. Bobby Jean Leithead Todd

Page 2

October 3, 2012

and part-time employees. The applicant plans to develop the proposed school campus and facilities in five to six phases with full buildout in 16 to 25 years.

The parcel is located within the State Agricultural District and is zoned A-1a (Agriculture, 1-acre minimum lot size) by the county. The property's Land Study Bureau (LSB) overall master productivity rating is 'D', and is not classified under the Agricultural Lands of Importance to the State of Hawai'i (ALISH) system. The property is currently vacant and unused. The parcel is designated as Low Density Urban on the county's General Plan's Land Use Plan Allocation Guide (LUPAG) map. The Low Density Urban designation allows for public facilities such as schools.

Pursuant to Hawai'i Administrative Rules (HAR) §§15-15-95 and -96, and Hawai'i Revised Statutes (HRS) §205-6, a special permit application for any property greater than 15 acres located in a State Agricultural District requires the approval of both the county planning commission and the State Land Use Commission (LUC). Special permits approved by the county planning commission that require LUC approval must be forwarded to the LUC within sixty days following the county planning commission decision. Within forty-five days after receipt of the county planning commission's decision, the LUC shall act to approve, approve with modification, or deny the petition. The LUC may impose additional restrictions as may be necessary or appropriate in granting the approval, including the adherence to representations made by the applicant.

Assessment

The Office believes the proposal meets the guidelines in HAR §15-15-95, for determining an "unusual and reasonable use" for the purpose of granting a special permit pursuant to HRS §205-6:

1. The proposed use would not be contrary to HRS Chapters 205 and 205A, and the rules of the LUC in that: (a) the pahoehoe soils of the 1880-1881 lava flow overlying the property are unsuitable for conventional agriculture; (b) there is and has been no agricultural use of the property; and (c) the applicant proposes to incorporate a sustainable agriculture program into the school curriculum;
2. The proposed use would not adversely affect the surrounding low density residential properties provided that: (a) roadway improvements and traffic management measures are adopted to minimize the impact of increased traffic on local roads and residences in the vicinity of the school; and (b) the project's drainage system improvements are designed, constructed, and maintained to ensure the runoff generated by the project is retained onsite and stormwater

Ms. Bobby Jean Leithead Todd

Page 3

October 3, 2012

overflow from Kaumana Cave does not adversely impact downstream receiving streams and properties;

3. The proposed use would not unreasonably burden public agencies to provide or expand public facilities and services as the applicant will be responsible for any infrastructure and utility improvements required by the project;
4. There are no unusual conditions, trends, or needs that have arisen to unconditionally justify the granting of the application. However, the suitability of the soils on the site are less than suitable for conventional agriculture, and the lands surrounding the property have been developed into low-density residential neighborhoods with urban expansion from Hilo town; and
5. The land is not high quality agricultural land and is less suited for conventional field crops and farming due to the low productivity of the soils of the overlying 1880-1881 lava flow.

Recommendations

The Office commends the applicant for its decision to redesign the campus plan in response to concerns raised in the environmental review process, such that the school facilities are consolidated on the lower site to avoid direct impacts to the Kaumana Cave system underlying the upper site. OP recommends that the applicant be required to comply with representations and recommended mitigation measures contained in the application, the Final Environmental Assessment (FEA), and supporting documents for the design, construction, and operation of the project with respect to:

1. Siting of the campus facilities is limited to the lower site as proposed in the Preferred Alternative to avoid disturbance to the Kaumana Cave system and the relatively undisturbed native vegetation on the upper site, and a 100-foot buffer from the Kaumana Cave for all structures is maintained, and the applicant complies with HRS Chapter 6D, the Hawai'i cave protection law;
2. Proposed mitigation, as stated in the FEA, to halt all construction activity and contact the proper authorities, including DLNR, to assess any lava tube and its contents should an entrance to the Kaumana Cave system or previously unknown segments are encountered or inadvertently created during construction on the lower site;
3. Comments and recommendations from the DLNR State Historic Preservation Division regarding the proposed project;

Ms. Bobby Jean Leithead Todd
Page 4
October 3, 2012

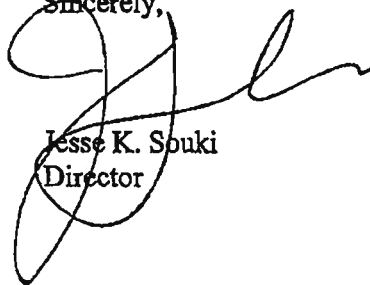
4. Proposals for the development and maintenance of potable and non-potable water, wastewater, and drainage systems for the project;
5. Mitigation measures proposed in the FEA to be taken to avoid adverse impacts to endangered and threatened native species known to be in the area—the Hawaiian hoary bat, Hawaiian hawk, Hawaiian petrel, and Newell's shearwater;
6. Traffic improvements and other mitigation measures recommended in the project's Traffic Impact Analysis Report; and
7. Implementation of proposed sustainability measures to be incorporated into campus, site, and building design, construction, and operations.

Other Comments

While the applicant and landowner have the discretion to apply for a Special permit for the proposed project, the proposed school will be developed over an extended time period and will establish a permanent use and facility on land in the Agricultural District. Pursuant to HAR §15-15-95(e), the county planning commission must impose time limits on project development and the duration of a Special permit. The applicant and fee owner may wish to consider whether reclassification to the State Rural or Urban Districts may be appropriate in the future to facilitate permitting of planned facilities.

Thank you for the opportunity to review and comment on this application. Should you have any questions, please call Ruby Edwards, Land Use Division, at (808) 587-2817.

Sincerely,



Jesse K. Souki
Director

c: Mr. Daniel Orodener, LUC
Mr. Gordon Heith, Hawai'i Land Office, DLNR
Mr. Ted Hong, Esq., CBESS/Friends of Connections

**SP21-413, CONNECTIONS NEW CENTURY PUBLIC CHARTER SCHOOL/Community
Based Education Support Services (CBESS) (SPP 12-000138) (Hawaii)**

Response #2: DLNR, Historic Preservation Concurrence

<u>ICA, Record on Appeal, volume #:</u>	<u>Description:</u>	<u>Date:</u>	<u>Pdf page #:</u>
Part 2 of 4	Archaeological Assessment Survey of the Connections Charter School, Kaumana Property	December, 2008	321-321
	SHPD Letter, Chapter 6E-8 Historic Preservation Review	February 17, 2009	375
	SHPD, Memorandum	September 24, 2009	376
	Petition for Special Permit, Sec. 8	July, 2012	89-90
Part 3 of 4	SHPD Letter, Chapter 6E-8 Historic Preservation Review	April 11, 2013	1055

**ARCHAEOLOGICAL ASSESSMENT SURVEY
OF THE
CONNECTIONS CHARTER SCHOOL
KADMANA PROPERTY
SOUTH HILO DISTRICT
ISLAND OF HAWAII**



Pacific Legacy: Exploring the past, informing the present, enriching the future.

Hawaii Offices:
Kailua, Oahu
Waialua, Maui
Hilo, Hawaii
California Offices:
Santa Cruz
Berkeley
Cameron Park
Oakland
Quartz Hill

**ARCHAEOLOGICAL ASSESSMENT SURVEY
OF THE
CONNECTIONS CHARTER SCHOOL
KADMANA PROPERTY
SOUTH HILO DISTRICT
ISLAND OF HAWAII**

Prepared by:
Rowland B. Reeve, M.A.
and
Paul L. Cleghorn, Ph.D.
Pacific Legacy, Inc.
30 Auilike Street, Suite 301
Kailua, HI 96734
(808) 263-4800

Prepared for:
Will Chee - Planning & Environmental
1018 Palm Drive
Honolulu, HI 96814

December 2008

ABSTRACT

At the request of Wil Chee Planning and Environmental, Inc., Pacific Legacy Inc. conducted an archaeological assessment survey of a 72.34 acre property (TMK (3) 2-2-006:141) located within the *ahupua'a* of Pomaunawai, District of South Hilo, on the island of Hawaii. The property is intended to serve as the future campus of the Connections Charter School. No previous archaeological investigations had been conducted in this area. Prior to the field survey, an examination of geologic maps revealed that the project area rests completely within the land covered by the 1880-1881 Mauna Loa lava flow. This historic *pahele* flow would have destroyed any pre-existing archaeological structures which might have been located within the project area. For this reason, few archaeological remains were anticipated to be found. In order to determine whether any archaeological sites did exist on the property, Pacific Legacy archaeologists conducted a pedestrian survey of the project area. The dense nature of the area's vegetation made survey conditions difficult. In all, a total of 12 transects were walked. These transects were spaced throughout the project property, providing a representative sample of all areas. No archaeological sites were noted along any of the transects. This suggests that human activity within the area since the time of the 1880-1881 flow has been minimal, probably being limited to the passages of the occasional pig hunter. Given the relatively recent nature of the area's geology and the fact that no structural features were noted during the survey, it is felt that the development of the Kaunama parcel will not impact any archaeological resources. Underground lava tubes are, however, known to exist within the area of the 1881 flow. The main entrance to the Kadamaa Cave complex is located just west of the property on the opposite side of the road. One lava tube, known to run beneath the western half of the property, end another located just outside the property boundary were investigated and found to be subject to periodic flooding during times of heavy rainfall. Such flooding would have washed away any cultural remains or human burials previously entombed within the caves. Due to the dense nature of the vegetation presently covering the property, there exists the possibility that as of yet undiscovered lava tubes may exist within the project area. It is suggested therefore that an archaeological monitor be on call during construction activities in order to inspect any previously undiscovered lava tubes that may be encountered.

TABLE OF CONTENTS

1.0 INTRODUCTION 1
 1.1 Project area 1
 2.0 HISTORIC BACKGROUND 9
 2.1 Pre-Contact Period 9
 2.2 Historic Period 9
 3.0 FIELD INVESTIGATIONS 10
 3.1 Field Methods 10
 3.2 Findings 14
 4.0 SUMMARY AND RECOMMENDATIONS 15
 5.0 REFERENCES 16

LIST OF FIGURES

Figure 1. Location of the Kaunama assessment survey area. 2
 Figure 2. The land divisions surrounding the Kaunama assessment survey area. 3
 Figure 3. The Kadamaa assessment survey area. 4
 Figure 4. Aerial photograph of the Kaunama assessment survey area. 5
 Figure 5. Geology of the Kaunama assessment survey area. 6
 Figure 6. Vegetation in the upper project area as seen from Edilia Drive (View West). 8
 Figure 7. Vegetation in lower project area (View South). 11
 Figure 8. Survey beam cutting transect through dense *hilie* fern (View West). 11
 Figure 9. The location of survey transects within the project area. 12
 Figure 10. Vegetation in upper project area (note figure in lower left). 13
 Figure 11. Trail through upper project area (View East). 13

Frontispiece: The dense vegetation encountered within the project area (View South).



At the request of WJI Chee-Planning and Environmental, Inc., Pacific Legacy Inc. conducted an archaeological assessment survey of a 72.34 acre property (TMK (3) 2-2-0063(4)) located within the *aliupua'a* of Punalahuwa, District of South Hilo, on the island of Hawaii. The property is intended to serve as the future campus of the Connections Charter School.

1.0 INTRODUCTION

1.1 PROJECT AREA

The project area is located on the lower slopes of the shield dome volcano of Mauna Loa, Inland of the town of Hilo (Figure 1). While the bulk of the property is situated within the *aliupua'a* of Punalahuwa, a very small sliver along the southern edge falls within the *aliupua'a* of Kukuau 2 (Figure 2). The project area is situated east of the settlement of Kaunama and immediately south of Kaunama Drive. The property is divided into almost equal halves by Edith Street, which runs southeast from Kaunama Drive cutting down through the center of the project area (Figure 3). As can be seen in aerial photographs, the parcel is edged along much of its perimeter by residential houses (Figure 4). The majority of these houses are of relatively recent construction, having been built within the last 10 to 15 years. Just west of the complex, on the far side of Kaunama Drive, is the main entrance to the Kaunama Lava tube complex, which has been designated as Kaunama Caves County Park. A branch of this lava tube complex runs under the western half of the project area, ending at an opening along the western edge of Edith Street.

The property is situated between approximately 600 and 900 feet in elevation. Its western (upper) half extends from about the 750 to 900 foot contours, while its eastern (lower) half extends from about the 600 to 750 foot level. The terrain is gently sloping from west to east. The underlying geology of the project area is distinct from that of the lands lying immediately north and south of it, for it rests completely within the course of the 1880-1881 lava flow (Figure 5). This narrow tongue of *psilochae* lava originated on the slopes of Mauna Loa and flowed down slope toward Hilo, halting just two miles short of the town. The lavas of the 1880-1881 flow are Kuu Basalts and consist of relatively smooth surfaced *pillchae* that has been disturbed by uplifts and pressure fractures (Wolfe and Morris 1996:11-12). Very little soil has developed atop the flow, and the official soil designation for the area is simply "lava flow, *pillchae*" (FLW) (Sato 1973:34).

The closest source of potable water is the Waipahoehoe Stream, which flows north of the project area, passes close to its eastern corner, and eventually feeds into the Waioa River. Waipahoehoe can be translated as "pillchae (smooth lava) water" (Pukui et al. 1974:227). The rainfall within the area is between 4000 millimeters (c. 160 inches) and 5000 millimeters (c. 200 inches) annually. Despite the lack of soil, this relatively high rainfall has resulted in the area being blanketed in dense vegetation.



Figure 1. Location of the Kaunama assessment survey area.



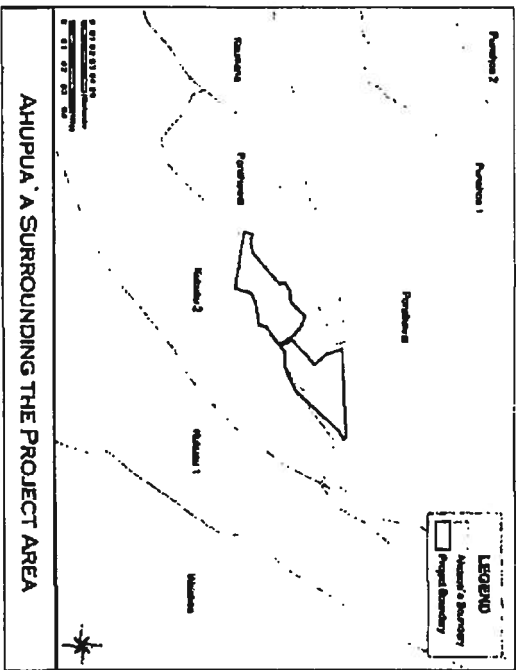


Figure 2. The land divisions surrounding the Kaduna assessment survey area.

Archaeological Assessment
 Kaduna
 Ibe Dike, Ibeafé
 December 2008

3



Figure 3. The Kaduna assessment survey area.

Archaeological Assessment
 Kaduna
 Ibe Dike, Ibeafé
 December 2008

4



The composition of the vegetation covering the project area, though relatively similar, differs slightly between the western and eastern halves of the property. The western (upland) half of the project area is covered almost exclusively in native vegetation. This consists of an open canopy forest of scattered *ohia* (*Metrosideros sp.*) trees with an understory of *uhia* (*Dicranopteris linearis*) fern (Figure 6). The *uhia* ferns form a dense tangle of inter-twining fronds. This mat of vegetation, which in places stands up to 8 or more feet in height, makes passage through the area difficult. It also makes it virtually impossible to examine the ground surface more than a meter on either side of the cut trail.

In the eastern (lower) half of the project area, the vegetation is slightly thinner in places, with a mix of native and non-native species. The non-natives are more common along the outer edges of the property. The dominant non-native species is strawberry guava (*Psidium cattleianum*), which grows in dense stands along the southern boundary of the project area.

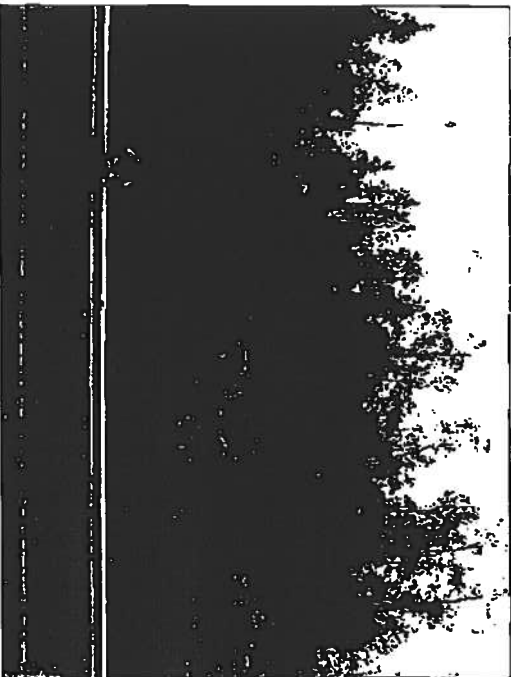


Figure 6. Vegetation in the upper project area as seen from Eddie Drive (View West).

Archaeological Assessment
 Kaimanua
 Mānoa District, Hawaii
 December 2008



Archaeological Assessment
 Kaimanua
 Mānoa District, Hawaii
 December 2008



20 HISTORIC BACKGROUND

2.1 PRE-CONTRACT PERIOD

There is very little evidence for any human activity within the project area during the pre-Contact period. Boundary Commission testimony indicates that bird hunting was carried out in the forests further inland at a place known as Kalapalapaniū ("the boundary between Waialaka and Kaunama rime mauna to Kalapalapaniū, an *oima* and place where we used to catch birds" Boundary Commission Books 21). It is probable that the forested area around what is now Kaōmama settlement

2.2 HISTORIC PERIOD

At the time of the Mahele, ʻAina (land division, also known as the Great Mahele) in the 1840s, when the private ownership of land was first established in the Hawaiian Islands, two parcels adjacent to the project area were awarded to native claimants.

Land Court Award parcel 8521-B was awarded to George Hui'eu Davis, the son of Isaac Davis, an advisor to Kamehameha I. From his father, George Hui'eu Davis (sometimes referred to in land court and other early documents as C. D. Hui'eu or George Hui'eu) inherited claim to the *aliʻi* of Kukua, 2 in the district of Hilo, Waikoloa in South Kohala and Kīlīea in South Kona. Unlike many Land Court Award claims, which contain information on the use of the property at the time of the claim (what was grown on it, whether there was a house there, etc.) George Hui'eu Davis' claim covers such a wide area that the document contains no direct information on the Kukua parcel.

The Land Court Award parcel (number 4893) is located immediately north the project area. It was claimed by an individual named Kukualea, indicating that there was at least some human activity around the project area in the early historic period.

During the years 1880 and 1891, a lava flow that originated on the slopes of Mauna Loa passed down through the *aliʻi* of Pōhakuwai burying everything in its path (Figure 5). As this flow approached and threatened Hilo, the people of the town called upon Princess Ruth Keelikōlani Kanoʻani Kanoʻihoʻa for help. Princess Ruth was well known and loved for her adherence to traditional Hawaiian ways. The residents of the threatened community requested that she intercede on their behalf with the volcano goddess Pele, whose fiery flow was threatening their homes. Hawaiian language newspapers of the time reported that Princess Ruth journeyed to the lower edge of the flow where she chanted and made offerings to the goddess. That evening she lay down to sleep in the path of the lava. The next morning the flow had stopped in front of the sleeping princess (Sliwa n.d.:3). Though it spared Hilo, the 1890-1891 flow did inundate the present project property. This lava would have destroyed any evidence of previous human activity in the area.

Archaeological Assessment
Kaunama
Hilo District, Hawaii
December 2008



3.0 FIELD INVESTIGATIONS

3.1 FIELD METHODS

Since no previous archaeological investigations had been conducted within the project area, a pedestrian field survey of the property was performed. This survey was undertaken by Pacific Legacy archaeologists Rowland B. Reeve and Jeremy Schabell over the two day period of November 6th and November 7th, 2008. Justin Thatcher, a resident of Kaunama who is familiar with the subject property, graciously volunteered to act as guide during the survey. The field crew was also accompanied by biologist Steven Montgomery who was conducting an entomological survey of the project area. Paul Cleghorn, Ph.D. served as the Principle Investigator for the project.

Given the geologic history of the project area, few archaeological remains were anticipated to be encountered during the survey. On various pig hunting forays into the project area, Mr. Thatcher had noted the presence of what appeared to be badly disturbed historic walls near the course of Waipahoehoe Stream, just outside the property, and had found historic bottles associated with these walls. As a result, it was felt that the greatest potential for encountering sites was in eastern (lower) half of the project area, at its eastern corner and along its northern edge where the property lies closest to Waipahoehoe Stream. Field survey was therefore begun in the eastern half of the project area. The first transect line started at the property's eastern corner and ran along its northern boundary. It soon became apparent that the dense nature of the area's vegetation and the resulting lack of visibility (Figures 7 and 8) would make it impossible to run an expanded sweep line with team members spread out every 10 to 20 meters. For safety reasons the survey team was kept in close proximity as it moved along each transect line.

In all, a total of 12 transects were walked. Those transects were spaced throughout the project property, providing a representative sample of all areas. Four relatively lengthy transects were run through the eastern (lower) half of the project area, while 1 long and 7 shorter transects were run through the property's western (upper) half (Figure 9). Fortunately, the Connecticut Charter School had previously cut a roughly 2 to 3 meter wide trail down the center of the western half of the project property and it was possible not only to use this trail as a transect, but to cut transects perpendicular to it extending out to the edges of the property (figures 10 and 11).

Archaeological Assessment
Kaunama
Hilo District, Hawaii
December 2008





Figure 7. Vegetation in lower project area (View South).



Figure 8. Survey team cutting transect through dense *ahii* fern (View West).

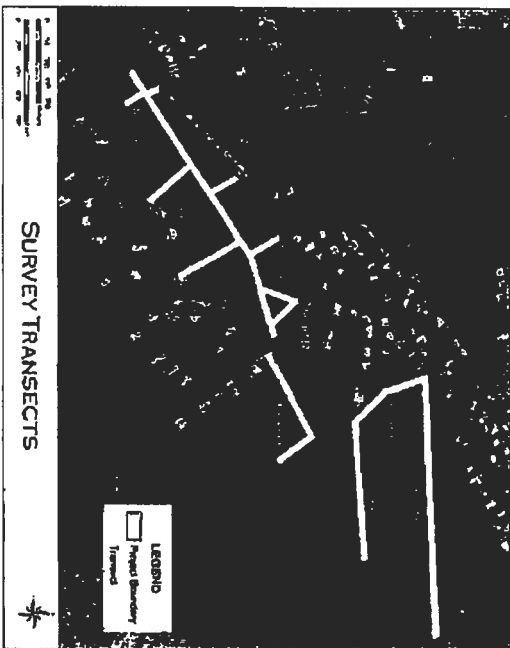


Figure 9. The location of survey transects within the project area.

Archaeological Assessment
 Kaneohe
 Hilo District, Hawaii
 December 2008

11

Archaeological Assessment
 Kaneohe
 Hilo District, Hawaii
 December 2008

11





Figure 10. Vegetation in upper project area (note figure in lower left).



Figure 11. Trail through upper project area (View East).

3.2 FINDINGS

No archaeological sites were encountered along any of the transects walked during the course of the survey. This was not surprising given the relatively recent nature of the area's geology. Even in those areas closest to Waipahoehoe Stream there is not enough soil development to have encouraged agricultural activity within the area following the 1880-1881 lava flow. It appears that, following the flow, all permanent human use of the project area ceased. At present the area appears to be visited only by the occasional pig hunter.

It is impossible to tell what, if any, archaeological sites may have existed in the project area prior to 1880. Boundary commission records indicate that bird hunting was carried out in the forest further *mauka* (inland), and we know that the more *unika* (coastal) villages of Hilo was a major pre-Corbet settlement and agricultural area. As for Kauaima itself, it may have held scattered homesteads, probably located along the course of Waipahoehoe Stream. If such a homestead did exist within the project area, it would have been destroyed by the 1880-1881 lava flow.

Underground lava tubes are known to exist within the area of the 1880-1881 flow. The main entrance to the Kauaima Cave complex rests just north of the property on the opposite side of the road. One lava tube runs beneath the western half of the property and the entrance to another is located just outside the property boundary. Both of these tubes were investigated during the present survey. They were found to be subject to periodic flooding during times of heavy rain. Such flooding would have washed away any cultural remains or human burials previously extant within the caves.

4.0 SUMMARY AND RECOMMENDATIONS

No archaeological surface features were encountered during the survey of the Kaimama project parcel. Any sites that may have existed in the project area prior to the 1880-1881 lava flow would have been destroyed at that time. The absence of sites suggests that human activity within the property since 1880 has been minimal, probably being limited to the passage of an occasional pig hunter. Given this lack of observed structural features, and taking into consideration the relatively recent nature of the project area's geology, it is felt that the development of the Kaimama parcel will not impact any archaeological resources.

Due to the dense nature of the vegetation presently covering the property, there exists the possibility that as of yet undiscovered lava tubes may exist within the project area. Such tubes have the potential to contain human remains. It is therefore suggested that an archaeological monitor be on call during any construction activities in order to inspect any previously undiscovered lava tubes that may be encountered.

5.0 REFERENCES

Boundary Commission Books

These five volumes of statements and testimony regarding land boundaries presented before the Board of Commissioners for Boundaries are preserved on microfilm in the Archives of the State of Hawaii.

Pukui, Mary Kawena, Samuel Elbert and Estlin Mookini
1974 *Place Names of Hawaii*. University of Hawaii Press, Honolulu.

Sato, H., H. W. Ikeda, R. Paeth, R. Smythe, and M. Takehiro, Jr.
1973 *Soil Survey of the Island of Hawaii, State of Hawaii*. United States Department of Agriculture, Soil Conservation Service, Washington.

Silva, Kalema
n.d. "Princess Ruth Kō'elikekani, Hawaiian Ali'i" in *Biography Hawaii: Five Lives, A Series of Public Remembrances*. Center for Biographical Research, University of Hawaii at Mānoa, Honolulu
(<http://www.kawaii.edu/biograph/biohl/ruthguide.pdf>).

Wolke, Edward W. and Jean Morris
1996 *Geologic Map of the Island of Hawaii: Map # 1-2524-A and accompanying pamphlet*, published by the United States Department of the Interior, U. S. Geological Survey.



LINDA LINGOLE
GOVERNOR OF HAWAII



**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES**

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

LAURA E. TETELJEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RUSSELL V. TERUJI
FIRST DEPUTY

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

February 17, 2009

Judy Mariant
Will Chee Planning & Environmental
1018 Palm Drive
Honolulu, Hawaii 96814

LOG NO: 2009.0099
DOC NO: 0902MD23
Archaeology

Dear Ms. Mariant:

**SUBJECT: Chapter 6E-8 Historic Preservation Review –
Request for Comment on Various Permits Associated with the New
Construction/Establishment of the Connections New Century Public Charter School
Kaumana & Kukuau 2nd Ahupna`a, South Hilo District, Island of Hawaii
TMK: (3) 2-5-006:141**

Thank you for the opportunity to comment on the aforementioned project, which we received on February 3, 2009. The entire property is within the 1880-1881 lave flow. A branch of the Kaumana lava tube complex runs underneath a portion of this site; care should be taken when planning construction in this area as there are known burials within other portions of this system and there is the potential of historic properties being located within the lava tube under this property.

We determine that no historic properties will be affected by this project because:

- Intensive cultivation has altered the land
- Residential development/urbanization has altered the land
- Previous grubbing/grading has altered the land
- An accepted archaeological inventory survey (AIS) found no historic properties
- SHPD previously reviewed this project and mitigation has been completed
- Other: *This parcel is entirely within the 1880-1881 lava flow.*

In the event that historic resources, including human skeletal remains, cultural materials, lava tubes, and lava blisters/bubbles are identified during the construction activities, all work needs to cease in the immediate vicinity of the find, the find needs to be protected from additional disturbance, and the State Historic Preservation Division, Hawaii Island Section, needs to be contacted immediately at (808) 933-7653. If you have questions about this letter please contact Morgan Davis at (808) 933-7650.

Aloha,

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

LINDA LINGLE
GOVERNOR OF HAWAII



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

RUSSELL Y. TROUT
FIRST DEPUTY

KEN C. KAWAHARA
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCES MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING

FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAOLOA WE 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 24, 2009

Log No. 2009.3291
Doc No. 0909TD24

MEMORANDUM

TO: Morris M. Atta, Land Division
P.O. Box 621
Honolulu, Hawai'i 96809

FROM: Pua Aju, Administrator

SUBJECT: Chapter 6E-7 and 6E-8 Historic Preservation Review -
Draft Environmental Assessment, Connections New Century Public Charter School
Ponahawai Ahupua'a, South Hilo District, Island of Hawai'i
TMK: (3) 2-2-06: 141

Thank you for requesting our comments regarding the subject DEA, which was received in our office August 17, 2009. The proposed project involves the construction of a new public charter school campus encompassing approximately 72 acres on state-owned land. The campus is divided into two sections (upper and lower) by the existing Edita Street.

Our office has previously commented on this project in a February 17, 2009 letter to Judy Mariant of Will Chee Planning (Log 2009.0099, Doc 0902MD23). In this correspondence, we indicated that there were no known historic properties within the project area, but that a branch of the Kaūmana lava tube complex runs beneath a portion of the project area and that, "...there is the potential of historic properties being located within the lava tube under this property." We recommended that care be taken when planning construction in the area overlying the lava tube. The plans presented in the EA indicate that several buildings may be directly over or very close to the cave. Information provided in Dr. Stone's testimony dated September 4, 2009, suggests that usage of the cave may have begun shortly after its formation circa 1881. If use occurred during the early twentieth century, we believe it is important to document the nature of that use, and to ensure that if significant historic sites are present, that they be afforded appropriate mitigation measures and/or preservation prior to the onset of construction activities that could cause collapses.

Attached to the DEA is a report entitled *Archaeological Assessment Survey of the Connections Charter School Kaūmana Property, South Hilo District, Island of Hawaii*, Reeve and Cleghorn 2008). The fieldwork described in this report found no evidence of historic properties within the project area; however, the study did not include an examination of the portion of the Kaūmana Cave that runs beneath the upper campus area. We did not have an opportunity to review this assessment report prior to its publication in the DEA.

We cannot make an accurate determination of project effects until after the archaeologists return to the project area and conduct a more thorough investigation of the Kaūmana Cave beneath the project area. We are sending a letter to the consulting firm requesting additional fieldwork and revisions to the assessment report. We also recommend that the EA be revised to include accurate information regarding the presence/absence of historic properties within the cave. Please contact Theresa Donham at (808) 933-7653 if you have any questions or comments.

Drive, Edita Street, and Melemanu Street. West of the property, on the far side of Kaūmana Drive, is the main entrance to the Kaūmana Cave, which has been designated as Kaūmana Caves County Park. Undeveloped land bounds most of the southern boundary of the lower parcel.

The Property is zoned A-1a (Agricultural – minimum 1 acre lot size). Lands south of the Property are also zoned for Agriculture (A-10a and A-20a). Lands to the immediate north are zoned predominantly for Single Family Residential use (RS-10 and RS-15), with some Open-zoned areas, which include the Kaūmana Caves County Park and a strip of land abutting the lower parcel. Land beyond some of the residences on the north side of Kaūmana Drive is zoned for Agriculture (A-3a and FA-2a).

7. FLOOD INSURANCE RATE MAP

The Federal Emergency Management Agency (FEMA) has classified the area in which the Property is located, as Zone X. Zone X is land with no recognized flood potential and is located outside both the 100-year and 500-year floodplain. This classification means that the property is located outside of the 0.2 percent annual chance floodplain, and that no base flood elevations or depths are shown for this zone (NFIP, 2009). The risk of flooding from large surface water flood events is low.

Although rare, high flow events have been known to occur from storm water that flows through Kaūmana Cave. Water that naturally seeps into Kaūmana Cave during periods of high rainfall along with surface runoff from the upper regions of Kaūmana Drive that enter into Kaūmana Cave can create high flow conditions. As storm waters are channeled through Kaūmana Cave, there is the potential that water volume could be high enough to exit the cave system through the opening on Edita Street. From the Edita Street exit, storm water then flows through a concrete channel running parallel to, and alongside Edita Street, where it is directed into a culvert underneath the road and into an intermittent stream that borders the lower parcel's southern boundary. During very severe storms, water has been known to overtop the concrete channel and flow across Edita Street, resulting in some flooding of adjacent areas.

8. ARCHAEOLOGICAL RESOURCES

An archaeological assessment survey of the Property was conducted in 2008 by Pacific Legacy, Inc. At the request of the State Historic Preservation Division (SHPD), a supplemental field inspection of Kaūmana Cave was also conducted by Pacific Legacy, Inc. These two reports are included as Appendices E and F in the Final EA (Exhibit B). The following summarizes the findings of both reports.

8.1 Field Investigations of Surface Area

Research has found little evidence of human activity in the project area during the pre-Contact period. Boundary commission records indicate that bird hunting was carried out in the forests further inland and that Hilo was a major pre-Contact settlement and agricultural area. At the time of the Māhele 'Āina in the 1840s (also known as the Great Māhele), two parcels adjacent to

the project area were awarded to native claimants. The first parcel was part of an inherited claim to three land areas: Kukuau 2 in Hilo, Waikoloa in South Kohala, and Ki'ilae in South Kona. Because the claim covers such a large area, the document does not have any direct information about the Kukuau parcel. The second parcel, located immediately north of the project area, was claimed by an individual named Kukuleau. This indicates that there was at least some human activity in the area during that period. Kaūmana may have held scattered homesteads, probably near Waipahohoe Stream, but these would have been destroyed by the 1880-1881 lava flow.

The entire project area is situated on the 1880-1881 lava flow and as a result it is surmised that any pre-existing archaeological or historic sites within the project area would have been destroyed by the flow. During the field investigation, no archaeological sites were encountered and it appears that subsequent to the 1880-1881 flow, permanent human use of the area stopped.

8.2 Field Inspection of Kaumana Cave

An archaeological investigation was conducted of the accessible portion of Kaūmana Cave that underlies the Property's upper parcel. One of the purposes of this inspection was to verify previous accounts of historic elements within the cave, which include petroglyphs (names chipped into the cave's walls) and electrical insulators on the cave walls. The portion of the cave that underlies the Property's lower parcel was not inspected as it is believed to be inaccessible.

The field inspection found an abundance of pecked names near the cave entrance at the county park. Deeper into the cave, the pecked names become more sporadic with occasional dense concentrations. The deepest concentration of names encountered were roughly 850 feet from the cave entrance, which would place this location directly beneath Kaūmana Drive, outside the project site. Beyond that point only two sets of pecked names were noted, both of which appear to be recent. In addition to the pecked names, numerous names have been spray painted onto the cave walls. No names that appear to be older than 50 years were found in the cave segment that underlies the upper parcel. The field inspection also found no evidence of "electrical insulators attached to the cave wall." The inspection report concluded that with the exception of the pecked names, no historic elements were encountered in the accessible portion of Kaūmana Cave that underlies the project site.

By letter dated August 17, 2010, Connections Public Charter School (through Wil Chee – Planning & Environmental) requested a letter of "no effect" from SHPD based on the findings of the archaeological assessment survey and the field inspection of Kaūmana Cave. SHPD did not provide a response within the 30-day limit. To date, no response has been received from SHPD. Correspondence with SHPD is attached as Exhibit E.

9. FLORAL AND FAUNAL RESOURCES

A biological assessment, which encompassed flora, vertebrates and invertebrates, was completed for the Property in 2008-2009. The assessment concluded that there is nothing unique about the project site or its vegetation and the construction and operation of the school would not adversely impact native avian or mammalian resources in the project area. The following discussion

NEIL ADPROMBIF



**HISTORIC PRESERVATION DIVISION
DEPARTMENT OF LAND AND NATURAL RESOURCES**

601 Kamohala Boulevard, Suite 555
Kapolei, HI 96806

WILLIAM L. ALU, JR.

ESTHER KIVANA

WILLIAM TAM

April 11, 2013

Mr. Paul Nash, P.E.
Atlas Engineering, LLC.
P.O. Box 11188
Hilo, Hawai'i 96721
(c o z p nash@yahoo.com)

LOG NO: 2012.3020
DOC NO: 1304TD01
Archaeology

Dear Mr. Nash:

**Subject: Chapter 6E-42 Historic Preservation Review –
Hawai'i County Grading Permit for Construction of a Property Boundary Fence
Ponahawai Ahupua'a, South Hilo District, Island of Hawai'i
TMK: (3) 2-5-006: 141**

Thank you for requesting our review of the proposed application, which was received in our office October 9, 2012. We apologize for the delayed response. The permit is for after the fact work to install a fence along the property boundary of an approximately 41-acre portion of the 72.34-acre parcel. The parcel is owned by the State of Hawaii and leased to Connections Charter School. The work consisted of grading and grubbing along a 25 foot wide path to allow access for wire fence installation around the area identified as the lower campus. Total area affected by the work was 4.3 acres.

The project area was subjected to an archaeological field survey, during which no historic properties were identified (Reeve & Cleghorn 2010). Dense vegetation restricted surface visibility during the survey; however, the entire parcel is situated on a late 19th century lava flow, which limits the likelihood of surface archaeological resources. Our office previously requested that the full extent of a known lava tube system (Kaumana Cave) be examined beneath this parcel in order to verify whether historic properties are present in subterranean contexts (Letter dated September 24, 2009, Log 2009.3291, Doc. 0909TD2). Additional fieldwork was conducted within the cave, and it was concluded that the cave was beneath the upper campus area only, and that no historic properties were present within the portions of the cave that run beneath the upper campus area (Reeve 2010).

Given the negative findings of the surface survey, and the absence of any newly discovered cave openings during the subject ground work, we believe that no historic properties were affected by this project.

Please contact Theresa K. Donham at (808) 933-7653 if you have any questions or concerns regarding this letter.

Aloha.

Theresa K. Donham
Archaeology Branch Chief

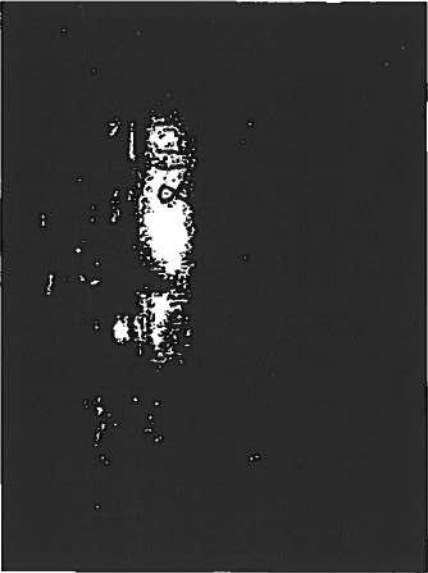
Exhibit A.20

**SP21-413, CONNECTIONS NEW CENTURY PUBLIC CHARTER SCHOOL/Community
Based Education Support Services (CBESS) (SPP 12-000138) (Hawaii)**

Response #3: Infiltration of runoff into Kaumana Cave

<u>ICA, Record on Appeal, volume #:</u>	<u>Description:</u>	<u>Date:</u>	<u>Pdf page #:</u>
Part 2 of 4	Archaeological Field Inspection of Kaumana Cave	June 2010	322-329
	Office of Environmental Quality Control	November 8, 2010	1056
	Final EA: Sec. 1.6, Summary of Potential Impacts and Mitigation Measures, "Soils and Surface Water"	July, 2012	113
	Final EA: Sec. 2.1.2, Project Features, "Rainwater Collection"	July, 2012	124
	Final EA: Sec. 2.1.2, Project Features, "Infrastructure"	July, 2012	125
	Final EA: Sec. 3.1.2, Project Features, Sec. 3.1.2, Mitigation Measures	July, 2012	157-160
	Final EA: Sec. 3.3, Hydrology, Surface Water, and Groundwater	July, 2012	162-164
	Final EA: Sec. 3.4.1, Potential Impacts, "Proposed Action: Flood Hazards"	July, 2012	166
	Final EA: Sec. 3.9.1, Potential Impacts, "Drainage"	July, 2012	179
	Final EA: Sec. 3.10, Historic and Cultural Resources, "Field Inspection of Kaumana Cave."	July, 2012	181

ARCHAEOLOGICAL FIELD INSPECTION
OF KAUMANA CAVE,
SOUTH HILO DISTRICT
ISLAND OF HAWAII



Pacific Legacy: Exploring the past, informing the present, enriching the future.

CULTURAL
RESOURCES
CONSULTANTS

Headquarters
Kailua, Oahu
1944 Kalia Road
Honolulu, Hawaii

California Office
Anaheim
12111
Orange Blvd.
Orange, CA 92667

ARCHAEOLOGICAL FIELD INSPECTION
OF KAUMANA CAVE,
SOUTH HILO DISTRICT
ISLAND OF HAWAII

Prepared by:
Rowland B. Reeve, M.A.

Pacific Legacy, Inc.
30 Auulike Street, Suite 301
Kailua, HI 96734
(808) 263-4800

Prepared for:
WU One Planning & Environmental
1018 Paloa Drive
Honolulu, HI 96814

June 2010

This brief report presents the results of an archaeological field inspection conducted within a portion of the Kaunama Cave located in Hilo, Hawaii. It is intended to serve as an addendum to the "Archaeological Assessment Survey of the Connections Charter School Kaunama Property, South Hilo District, Island of Hawaii," a report prepared for Wil Chee Planning by Pacific Legacy Inc. and submitted in December of 2008. This initial report documented the surface examination of a 72.34 acre property (TMK (3) 2-2-006:141) located within the *ahupua'a* of Pookahawai District of South Hilo, on the island of Hawaii (Figure 1). The property is intended to serve as the future campus of the Connections Charter School. The Archaeological Assessment Survey found no surface archaeological remains to be present within the two parcels that comprise the property (Figure 2).

An examination of geological maps undertaken at the time of the Assessment Survey revealed that the project area rests completely within the land covered by the 1880-1881 Mauna Loa lava flow. This historic *paohoe* flow would have destroyed any pre-existing archaeological structures which might have been located within the project area. The flow, however, also created a number of subsurface lava tubes, some of which run beneath the survey property. Just west of the property, on the far side of Kaunama Drive, is located the main entrance to the Kaunama lava tube complex, which has been designated as Kaunama Caves County Park. A branch of this lava tube complex runs under the western half of the project area, ending at an opening along the western edge of Edith Street. This opening has been burned to prevent access, and a culvert has been dug to divert flood waters flowing out of the cave from crossing Edith Street. Conversations with local residents indicated that this and other tubes in the area are subject to periodic flooding during times of heavy rainfall. At the time the Assessment Survey was conducted it was felt that such flooding would have washed away any cultural remains or human burials that might have been previously extant within the caves.

Following completion of the Archaeological Assessment Survey, Dr. Fred D. Stone, a geology professor at the University of Hawaii at Hilo, raised concerns as to the possibility that historic remains might rest within the section of Kaunama Cave that extends beneath the project area. These concerns were included among comments he made to the draft Environmental Assessment for the Connections Charter School property (Stone 2009). According to Dr. Stone, "Party visitors to the cave clipped their names and dates into the glassy lava tube lining, and this is now part of the cave history. Electrical insulators attached to the cave wall indicate that at some past date, the cave had been wired for visitors" (Stone 2009:10). In order to address Dr. Stone's concerns and to determine whether any historic elements did indeed exist within the limits of the Connections Charter School parcel, an archaeological field inspection of the cave was undertaken.

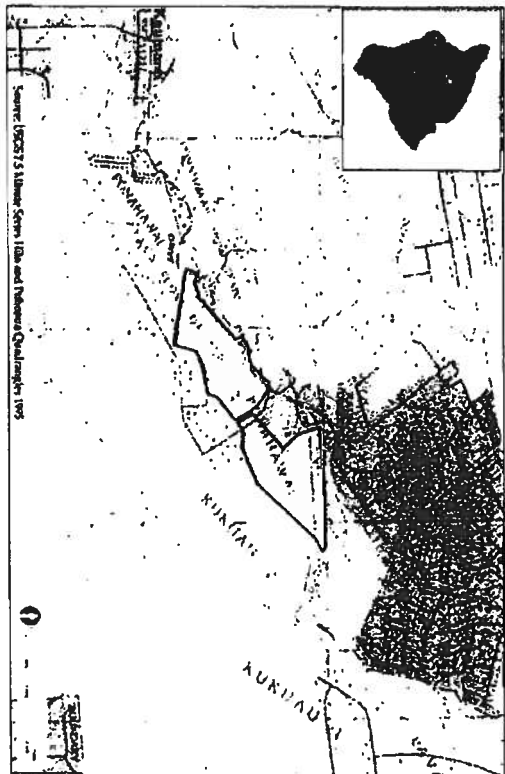


Figure 1. Connections Charter School Kaunama property. Archaeological Assessment project area.
Archaeological Field Inspection
Kaunama Cave, Pookahawai
South Hilo District, Hawaii, Island
June 2010





Figure 2. Aerial photograph of the Kaumana Archaeological Assessment Survey project area.
 Archaeological Field Inspection
 Kaumana Cave, Punalu'u
 South Hilo District, Hawaii's Island
 June 2010

This archaeological field inspection was conducted on the 14th of June, 2010 by Pacific Legacy archaeologist Rowland Reeve. He was accompanied by Mr. John Daichter, headmaster of the Connections Charter School. A map of the cave system, showing its relationship to the surface property boundaries, had been prepared by Will Cree Planning from existing sources (including both a 1953 survey and a 1992 Hawaii County survey of the lava tube). This map was utilized as a guide while exploring the cave. The "Punalu'u Road Extension Environmental Impact Study: Kaumana Cave" (Stone 1992), a report prepared in 1992 by Dr. Stone, which provides a detailed description of the cave, was also used for reference during the field inspection.

The inspection was begun at the Kaumana Caves County Park entrance. A thorough examination was made of the lava tube as it extended *maui* (down slope) as far as the barred exit at Edia Street. Although a map of the cave extending for half a mile beyond this point was prepared in 1953 by Cretes, Moore and Carroll (Stone 1992:3), at present this lower portion of the tube is no longer accessible, having been sealed off by the construction of Edia Street. Due to the lack of access, it is impossible to say for certain whether any historic properties exist within this lower section of the cave. However, descriptions of the more *maui* portions of the tube provided by members of the Hilo Lions Club who explored the cave to a distance of 4,700 feet in 1953 (Friday 1997) make no mention of any cultural remains. The Lions themselves did, however, leave behind a banner and document which now, if they still exist, could be considered historic elements.

No attempt was made to examine the branch of the lava tube running west from the County Park entrance, as it extends away from the Connections Charter School project area.

Although the walls and ceiling of the lava tube were thoroughly examined, no evidence was found of the "electrical insulators attached to the cave wall" that were mentioned by Dr. Stone (Stone 2009:10).

In contrast, the "names and dates [scribbled] into the glassy lava tube lining" (Stone 2009:10) were clearly in evidence. An abundance of pecked names were found in the illuminated area directly inside the entrance. Further back into the cave the names became more sporadic, with dense concentrations along stretches where the walls were smooth and glassy (Figure 3). An annotated version of the Will Cree Planning map (Figure 4) shows the approximate locations of these names concentrations in relation to the Connections Charter School project area, while a more detailed map from the 1953 survey shows the main concentrations (Figure 5). The deepest concentration of names was encountered at approximately 650 feet in from the entrance, almost directly beneath Kaumana Drive. This is well west of the Connections Charter School property. Beyond this point only two sets of pecked names were noted, both of which appear to be of relatively recent age. In addition, several names had been spray painted onto the cave walls. No names that appeared to be older than 50 years in age were found within those sections of the cave that run below the Connections Charter School property.



Figure 3. Concentration of oases pecked into the glassy lava surface of the cave wall.
 Archaeological Field Inspection
 Konauna Cove, Punaluu
 South Hilo District, Hawaii Island
 June 2010

5

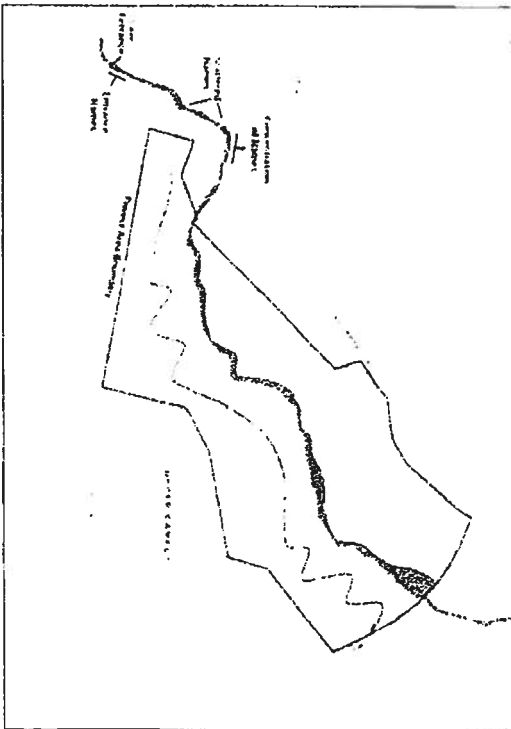


Figure 4. Relative locations of historic names within Konauna Cove.
 Archaeological Field Inspection
 Konauna Cove, Punaluu
 South Hilo District, Hawaii Island
 June 2010

5



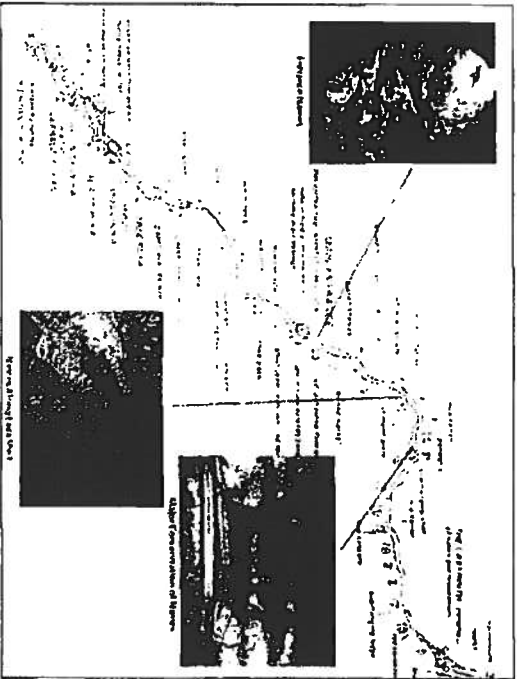


Figure 5. Location of an archaeological field inspection (base map from 1953 survey).

Archaeological Field Inspection
Kaunama Cave, Honolulu
South Hill District, Hawaii Island
June 2010

2

U.S. National
Park Service

Though many of these pecked names are clearly modern, others appear (based upon the dates associated with them) to stretch back into the early 20th century. Photographs of a number of these historic names have been included at the end of this report. The earliest date noted was 1915 (Figure 6). Other early names and with dates are from the late 1900s, the 1920s and the 1930s (Figure 7). Several names appear to be associated with a visit to the cave made in 1919 by the Niippon Jushinko Club (Figure 8). Other names date from the Second World War and appear to have belonged to servicemen visiting the cave (Figure 9).

The names and dates pecked into the walls of Kaunama Cave provide a unique and valuable historic record. None of these names, however, are likely to be impacted by development planned for the Connections Charter School property. Not only do none of these historic names occur in the deeper sections of the cave that run beneath the school property, but the present plan for the property calls for construction to take place only within the *mauka* parcel, east of Editha Street. All construction within this lower parcel is planned to be located well away from the projected extent of the cave (based upon the 1953 map). The more *mauka* parcel (west of Editha Street) is planned to be set aside as a natural area used only for educational programs and reforestation projects. The sole structure within this upper parcel would be a raised wooden walkway that would extend the length of the parcel. This walkway would be elevated off the ground, requiring only shallow footings and posts to support it. It would also be located outside a 100-foot buffer around the cave.

With the exception of the carved names, no historic elements were noted during the field inspection of Kaunama Cave. Any portable historic remains that may once have been present are likely to have been washed away by periodic flooding. As Dr. Stone indicated in his 1992 report, "According to residents across the road from this [the Editha Street] entrance, during heavy rains in the mid-1970s, Kaunama Cave flooded and water gushed from the cave and covered Editha Street" (Stone 1992:5).

In summary, the present archaeological field inspection encountered no historic remains within those accessible portions of Kaunama Cave that extend beneath the Connections Charter School property. The use of both the upper and lower Kaunama parcels by the Connections Charter School, as presently planned, should have no impact on any historic properties present within the lava tube.

Archaeological Field Inspection
Kaunama Cave, Honolulu
South Hill District, Hawaii Island
June 2010

3

U.S. National
Park Service



Figure 6. This 1915 date is the earliest noted in the cave.



Figure 7. Initials dating from a 1917 visit to the cave.

Archaeological Field Inspection
 Kaimama Cave, Punaluani
 South Hilo District, Hawaii's Island
 June 2010

9

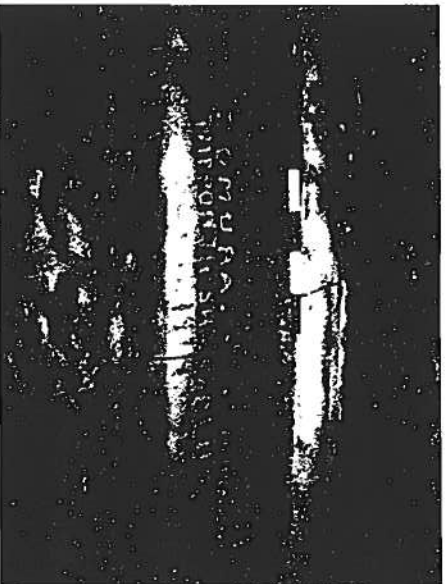


Figure 8. Names from the Nippon Jin Shaku Club visit in 1919.



Figure 9. The name of a U. S. Marine who visited the cave in World War II.

Archaeological Field Inspection
 Kaimama Cave, Punaluani
 South Hilo District, Hawaii's Island
 June 2010

10



REFERENCES

- Halliday, William R.
1997 The Hilo Lions Club 1953 Katamana Cave Expedition. Report 97-02, Hawaii Speleological Survey of the National Speleological Society. Typscript in the University of Hawaii Hilo Library.
- Stone, Fred D.
1992 Fuhinako Road Extension Environmental Impact Study: Katamana Cave.
- 2009 Comments on the Draft E.A. for Connections Charter School in Katamana. Submitted to WVI Chief Planning & Environmental.

Archaeological Field Inspection
Katamana Cave, Punaikawa
South Hilo District, Hawaii Island
June 2010



HAWAII (HRS 343)

7. Connections Public Charter School Master Plan (FEA)

Island: Hawaii
District: South Hilo
TMK: (3) 2-5-06:141
Permits: Special Permit, NPDES, Wastewater system, Water reuse, Building, Grading
Applicant: Connections Public Charter School, 174 Kamehameha Avenue, Hilo, HI 96720. John L. Thatcher II, CEO; (866) 961-3664
Approving Agency: Dept of Land and Natural Resources, Land Division, 1151 Punchbowl Street, Room 220 Honolulu, HI 96813. Charlene Unoki, 587-0426
Consultant: Wil Chee - Planning & Environmental, 1018 Palm Drive, Honolulu, HI 96814. Cella Shen, 596 4688; cshen@wcpohawaii.com
Comments: FEA accepted by the Approving Agency. There is no comment period

A conceptual master plan to guide the development of a new campus in Kaumana, South Hilo, Hawaii, has been developed for Connections Public Charter School. The new campus would consolidate all of Connections' existing academic programs (elementary, intermediate, and high schools) at a single location, plus provide land area to expand their academic offerings to include an agricultural program and a forestry/conservation program. The campus would accommodate approximately 400 students.

The project is not expected to cause any significant adverse long-term impacts to the environment. However, potential short-term, temporary impacts could occur during the construction period. These include impacts on the acoustical environment, air quality, soils, fauna, and lava tube collapse. Adherence to all applicable regulations and permit conditions, and implementation of construction site BMPs and other protective/mitigation measures would minimize the effects of any construction-related impacts. Though the project site is in the State Land Use Agriculture district and is zoned Agriculture by the County of Hawaii, no loss of agricultural lands will occur as the site is undeveloped. The project would not adversely affect traffic and circulation in the project area.

The project would result in beneficial impacts by improving educational services and opportunities for Hilo's children. A new campus would allow Connections to continue teaching at its high educational standards and the proposed agricultural program would provide local children with marketable skills for working in and developing small sustainable agricultural operations.

8. The Villages of Aina Lea (FEIS)

Island: Hawaii
District: South Kohala
TMK: (3) 6-8-01:25, 36, 37 (por.), 38, 39 and 40 (por.) and (3) 6-8-02:19 (por.)
Permits: Special Permit to permit construction of the project's Wastewater Treatment Plant, subdivision approval, and various construction related permits, County approval to a change from the existing multiple zoning designations to a single "Project District" zoning
Applicant: DW Aina Lea Development, LLC, 68-4747 Queen Kaahumanu Highway, Kamuela, HI 96743. Email: management@ainalea.com, 845-9945
Accepting Authority: Hawaii County Planning Department, 101 Pauahi Street, Suite 3, Hilo, HI 96720. B J Lelthead Todd, Planning Director, Phone: (808) 961-8288 FAX: (808) 961-8742
Consultant: J M Leonard Planning, LLC, James M. Leonard, AICP, 1100 Ainalako Road, Hilo, HI 96720. Email: jleonard@mac.com, 896-3459
Comments: FEIS accepted by the Accepting Authority. There is no comment period

- Provide the land area necessary to establish an agricultural program as part of the curriculum. Facilities needed to support the agricultural program include greenhouses, a horse barn, and land area for cultivation.

Building a new campus from the ground up would provide the opportunity to develop academic facilities that are tailored to Connections' specific educational philosophy and approach to teaching and learning, and would provide a unique learning environment for this multi-cultural, globally-oriented charter school.

1.6 Summary of Potential Impacts and Mitigation Measures

The Proposed Action is not expected to cause any significant adverse long-term impacts to the environment. However, potential short-term, temporary impacts could occur during the construction period. These include impacts on the acoustical environment, air quality, soils, fauna, and lava tube collapse. The following protective/mitigation measures would be implemented to minimize the potential for these short-term, temporary impacts.

Acoustical Environment: Construction activities that generate noise would be conducted in compliance with applicable regulations. If construction noise is expected to exceed the DOH's maximum permissible property line noise levels, a permit per HAR 11-46, *Community Noise Control*, would be obtained and additional mitigation measures could be imposed by DOH.

Air Quality: Construction activities would be conducted in compliance with all applicable air quality regulations, including provisions contained in HAR 11-60.1-33 *Fugitive Dust*. Construction site best management practices (BMPs) to minimize dust and emissions would be implemented. BMPs may include erection of dust screens around the construction site, frequent watering of unpaved roadways and bare areas, and paving and/or landscaping bare earth areas as soon as practicable, among other management practices.

Soils and Surface Water: Implementation of protective measures during construction would minimize any impacts on soils and reduce the potential for sediment-laden runoff to affect water resources. Typical measures include erosion control devices such as cut-off ditches, temporary ground cover vegetation, and various soil stabilization and protection materials. Adherence to construction site BMPs and conditions of the grading permit and NPDES permit should prevent any potential effects to soils and surface water.

Fauna: To reduce the potential for affecting Hawaiian hoary bats, it is recommended that clearing and grubbing not be undertaken during the birthing and pup rearing season. If clearing cannot be avoided during this period, it is recommended that a survey be conducted to verify if bats are present on-site.

To avoid disturbance to nesting Hawaiian Hawks, tree clearing should be avoided during the breeding season from March to September. If tree clearing must be conducted during this period, it is recommended that a survey be conducted to verify if any Hawaiian Hawks are present. If nesting activity is detected, consultation with the USFWS would be required.

well as sustainable strategies and technologies for energy and water use, would be integrated wherever feasible. Examples of sustainable strategies and technologies for energy and water use being considered in the preliminary conceptual plans include the following:

- Temperature Control – Building orientation would help to regulate internal temperatures. The majority of buildings would be oriented to minimize morning and evening heat gain. South facades would be properly shaded using energy and heat reflection tools, such as strategically placed large eaves and overhangs, landscaping, light shelves, and vertical louvers. Roofs would be insulated and light in color to minimize heat absorption.
- Air Movement – Buildings would be constructed to maximize utilization of natural air movement for cross-ventilation, providing slightly larger air outlets than inlets, employing stack ventilation strategies and clerestory windows, cupola (barn), thermal chimneys, ridge vents, and ceiling fans.
- Lighting – North light would be maximized through the use of clerestory windows and glare minimized through the use of shading devices and large overhangs. Translucent structural roofing could also be used to provide additional natural light penetration.
- Energy Production – Use of high-efficiency, unobtrusive, photovoltaic laminates (solar panels) would be used, and southern roof exposure angles would be oriented for maximum solar gain.
- Water Efficient Fixtures – Use of water efficient fixtures such as waterless urinals, high efficiency toilets or low/dual-flush toilets would help reduce the potable water demand. Further reducing the demand for potable water would be the utilization of captured rainwater for toilet flushing.
- Rainwater Collection – The campus would include a rainwater collection system designed to capture rainwater from building rooftops for use in toilets, janitorial purposes, and for the needs of the agricultural program.
- Use of Recycled Water – Use of recycled water for irrigation and other non-potable water uses as allowed by applicable regulations.

Landscaping

For the upper parcel, no landscaping is proposed as it is Connections' intention to maintain the existing native 'ōhi'a forest. For the lower parcel, minimal landscaping is proposed. Excluding the built-up and cultivated areas, the existing vegetation would serve as the primary landscape material. There could be some replacement of existing vegetation with other varieties of trees and shrubs, particularly near the Edita Street side of the lower parcel and along the driveway leading into the campus. As well, Connections intends to clear the evasive species growing within the lower parcel, which could be replaced with outplanted native species.

Where intentional landscaping would be provided, such as in the immediate vicinity of buildings, native plants that are well-suited to the localized environment and that require minimal maintenance would be used. There would also be some manicured, grassed areas such as the play fields.

Agricultural Program

With the new campus, Connections would like to incorporate an agricultural program into their academic offerings. The agricultural program would provide students with hands-on experience in sustainable agricultural practices and would emphasize small sustainable agricultural techniques. An area of approximately 17 acres is allocated for the agricultural/cultivation area. The agricultural area comprises the eastern portion of the lower parcel. Agricultural program facilities would include greenhouses, a 6-horse barn, and cultivated gardens. Cultivated gardens would be limited to the lower section of the property, which is currently populated largely by non-native trees and weeds. Cultivated crops may include vegetables, taro, fruit trees, native plants, and ornamental plants. The agricultural program may also include some livestock (e.g., chickens, goats, pigs, and horses).

Infrastructure

Electrical, telecommunication and potable water infrastructure is available to the project site. As stated earlier, the project will achieve, at a minimum, LEED Silver certification. A higher certification will be striven for, if financially feasible. Project features to achieve LEED certification would reduce demand for electricity and potable water. These include the use of photovoltaics and an extensive rainwater catchment system. To support the rainwater catchment system, a minimum of two cisterns or tanks—a catchment tank and a reservoir tank—would be needed. These tanks are shown conceptually on Figures 2-3 and 2-5. During design development the actual number and size of these tanks would be determined based on amount of captured rainfall to be collected and the amount of reserves needed to support the campus' non-potable water uses.

The Kaūmana area is not served by a municipal wastewater system. Therefore, like all the surrounding properties, Connections would have to provide its own wastewater system as part of the project. A biological wastewater treatment system is being considered and likely will be implemented for the school. One well-known and established system is called the "Living Machine." This type of system is Connections' preferred option over a conventional septic system. Biological treatment systems are on-site, environmentally friendly systems that mimic the cleansing functions of wetlands and consist of a settling tank and series of tanks/systems (underground or aboveground, depending on the specific design of the system) that progressively clean the wastewater. Bacteria, plants, and other organisms, such as snails and fish, are used to break down and digest the organic pollutants. It is an odor free process. The end product is R-2 quality water that can be reused for non-potable uses such as some agricultural irrigation or can be released safely back into the environment. On the campus site plan, an approximately 12,000-square-foot area has been set aside for the biological treatment system. This area is shown by the dashed rectangle on Figure 2-5. This area is based on early rough estimates of wastewater volumes. However, during design development, estimated volumes would be refined as they can be based on fixtures counts and also take into account water reduction features included in the project. Thus it is expected that this set aside area would be substantially smaller in size than what is shown on the conceptual master plan.

2.1.3 Project Phasing and Construction

Full build out of the new school is projected to be completed by the year 2022. However, the timetable for development is difficult to determine, as it is highly dependent on the ability of the

trees, 'ōhelo berry, a'ali'i and Pacific false stag horn or 'uluhe will develop in areas with high precipitation (Sato, et al., 1973).

The Keaukaha Rocky Muck soils in the northern portion of the site are well-drained, thin organic soils that overlay the pāhoehoe lava bedrock. A typical profile contains soils that are dark in color and acidic due to the accumulation of decomposing vegetation and high rainfall (Sato, et al., 1973). The soil covering the pāhoehoe lava is rapidly permeable, runoff is medium and the erosion hazard is slight.

3.1.1. Potential Impacts

PROPOSED ACTION

During construction activities such as clearing, grading, and excavation for utility and drainage improvements, soils and topography would be altered in the areas to be developed. Exposed soils are susceptible to erosion, especially during periods of heavy rain. Wind erosion can also result in some unavoidable and negligible loss of soil. Silty runoff is another possible impact that requires mitigation. All of these disturbances would be localized, short-term, and temporary.

Prior to construction activities the contractor would develop and implement a site-specific best management practices (BMP) plan that would identify the most effective erosion, sedimentation, runoff and dust control measures to reduce the amount of soil and sediment transport from construction activities. With adherence to BMPs, no significant adverse short-term, direct or indirect impacts to topography or soils are anticipated as a result of the Proposed Action.

The risk of damage to school facilities and injury to construction workers and school personnel caused by lava tube roof collapse would be minimized by siting and limiting major development to an area of the lower parcel that is not underlain by known lava tubes. Precautionary measures would be implemented, as warranted, to minimize the potential for encountering unknown voids in areas slated for development.

In the long-term, Connection's building design concept would minimize the disruption of soils and topography at the project site. The project would incorporate and maximize the use of the existing natural landscape into the campus design, leaving much of the site undisturbed. From a conceptual approach, the design involves the construction of small-scale, elevated structures supported by shallow concrete pier foundations (Figures 2-6 through 2-8). Use of the concrete pier foundations will keep floor elevations above the existing grade and will greatly minimize disturbance to soils and topography.

ALTERNATIVES

For all alternatives, the potential impacts to topography and soils would be similar to the Proposed Action. The only difference is that areas on both the upper and lower parcels would be disturbed, thus resulting in a greater surface area that is disrupted. Under the No Action alternative, topography and soils would not be affected.

3.1.2 Mitigation Measures

Where warranted, site-specific geotechnical surveys would be conducted to determine the potential for subsurface voids beneath areas to be developed. If subsurface voids are identified,

an engineering solution could be applied to allow construction over the void or the siting of the structure could be adjusted to keep away from the void altogether.

If any segment of a lava tube should be encountered during construction, construction activity would be stopped and the proper authorities, including the Department of Land and Natural Resources would be contacted, so that an assessment can be made.

Implementation of protective measures during construction would minimize any impacts on topography, geology and soils. Typical measures include erosion control devices such as cut-off ditches, temporary ground cover vegetation, and various soil stabilization and protection materials.

3.2 Kaūmana Cave

Kaūmana Cave is a lava tube cave that formed during the 1880-1881 eruption of Mauna Loa (USGS, 1997 and 1995). There is some discrepancy in the literature regarding the length of Kaūmana Cave. The author of *The World's Longest Lava Tube Caves* provides a total length of 2,544 meters (1.58 miles), though admits that this length is underestimated (Crawford, n.d). Despite these discrepancies in the estimated length, only a small segment of Kaūmana Cave underlies the proposed project site, and is directly relevant to this project. Refer to Figures 2-3 through 2-5 to see the alignment of Kaūmana Cave, as it relates to the project site and the proposed campus plan.

The depth of Kaūmana Cave, as a whole, averages 12 feet below ground surface. This estimate was provided in a technical report conducted in 1967 by von Seggern and Adams, in which the accuracy of electromagnetic mapping of Hawaiian lava tubes was tested using Kaūmana Cave as a case study. von Seggern and Adams used data provided by H.T. Stearns and G.A. Macdonald from a 1946 study involving Kaūmana Cave, in which they state that Kaūmana Cave has an "areal extent as 24 square miles and its estimated volume as 3×10^8 cubic yards, implying an average thickness of 12 feet" (von Seggern & Adams, 1967, p. 18). Through their study, von Seggern and Adams (1967) estimated the thickness of the ground between Kaūmana Cave and the surface in three widely-separated locations and found the thickness to be 24 feet, 24 feet, and 27 feet respectively. von Seggern and Adams (1967) concluded that the average depth of 12 feet for Kaūmana Cave, as provided by Stearns and Macdonald, may still be correct if the flanks of the flow are closer to the ground surface than the lava tube itself. However, the average depth of Kaūmana Cave, according to their observations was between 24 and 27 feet. Based on more recent surveys, some researchers believe the roof thickness of the cave could be as little as 5 to 10 feet in some places (P. Kambesis and Dr. F. Stone, letters dated September 3, 2009 and September 4, 2009, respectively).

The only legal access to Kaūmana Cave is through a collapsed skylight in a county park that is located west of the project site, across Kaūmana Drive. A stairway was built to provide public access into the cave. From the entrance in the county park, Kaūmana Cave extends both upslope and downslope. The downslope portion crosses beneath Kaūmana Drive, runs below a handful of residences along Kaūmana Drive, and continues downslope under the upper parcel of the project site. This segment of Kaūmana Cave ends at Edita Street, which separates the upper and

lower parcels of the project site. At Edita Street, there is another opening to the cave. This opening is artificial, having been created during the construction of Edita Street. Metal bars were placed across the opening to prevent entry or exit at Edita Street; however, the bars have been vandalized and bent to allow a person to squeeze into the cave (Stone, 1992). Unauthorized access to the cave at this location is in violation of the Hawai'i Cave Protection Law, which requires written consent from the property owner prior to entry into a cave (the Hawai'i Cave Protection Law is discussed further below). The length and alignment of this cave segment has been documented. The most recent known surveys were conducted in 1992 by Island Survey, Inc. for the Puainako Street Extension and Widening project (Okahara and Associates, 2000) and the Hawaii Speleological Survey in 1993 (Halliday, 1997).

Kaūmana Cave does extend downslope of Edita Street; however, this portion of the cave is believed to be inaccessible. When Edita Street was built in the 1950s, the cave was truncated and portions of the roof deliberately collapsed, thus preventing access to the portion of the cave downslope of Edita Street. The majority of this cave segment underlies the properties located directly northwest of the project site's lower parcel. A small segment of the cave likely crosses the northernmost corner of the lower parcel.

This lower segment of the cave was mapped during a 1953 cave expedition conducted by members of the Hilo Lions Club. They explored 4,700 feet of the lava tube, from the main entrance at the county park until passage through the cave was no longer possible, including the approximately 1,200 feet of the cave below Edita Street, which is no longer accessible. The Lions Club members produced a map of this expedition, which provides the location and dimensions of Kaūmana Cave, as well as descriptions of the cave's characteristics (Halliday, 1997). This map served as the basis for the cave alignment across the lower parcel shown in Figures 2-3 and 2-5. As stated previously, there are no known entrances into the lower segment of cave, and it appears that members of the Hilo Lions Club were the last persons known to document this segment of the cave.

Kaūmana Cave provides many resources to those interested in the unique attributes and ecological characteristics of lava tubes. It provides educational and recreational opportunities; and research opportunities for biologists, speleologists, volcanologists, hydrologists, and geologists. Kaūmana Cave is visited by members of the local population; scholars and speleologists in the global community; as well as tourists visiting the Hilo area. Kaūmana Cave can provide an important contribution to the understanding of adaptation and survival of cave invertebrates. Some educators recommend taking students on field trips to the cave for educational fieldwork, and using the cave's resources for long-term scientific studies.

The biological characteristics of Kaūmana Cave were examined by Dr. Fred Stone in 1992 for an environmental impact statement conducted for the Puainako Street Extension and Widening project EIS (Okahara and Associates, 1993). During this biological survey, Dr. Stone addressed the close relationship that cave organisms have with the roots of the 'ōhia trees that grow into the lava tube. In Hawaii's lava tubes, tree roots are often the primary source of water and nutrients for cave flora and fauna (Howarth, 1972). In Kaūmana Cave, the roots of 'ōhi'a trees play an important role in the cave ecosystem. Sections of the cave with a low level of biodiversity coincide with areas devoid of 'ōhi'a tree roots—areas where the trees have been cleared at the

surface (Stone, 1992). Dr. Stone's 1992 study identified more than 15 species of endemic cave invertebrates that have colonized Kaūmana Cave. More recently, Dr. Francis Howarth in a letter dated September 4, 2009 has indicated that there are several noteworthy species within Kaūmana Cave, including crickets, moths, and planthoppers, among others. Two of these species—the Hawai'i cave water treader (*Cavaticovelia aaa*) and the Hawai'i cave rock cricket (*Caconemobius varius*)—are listed by the USFWS as species of concern. In addition, there are microorganisms that grow on the cave's walls. Otherwise known as "cave slime," these microorganisms are of scientific interest to microbiologists and other researchers (Dr. F. Stone and Dr. P. Boston, letters dated September 4, 2009 and September 6, 2009, respectively).

Currently, portions of Kaūmana Cave are used, or have been used, as illegal dump sites. Common household garbage, automobile waste, agricultural waste, pesticides, raw sewage, and other varieties of waste have been observed in the lava tube (Halliday, 1999 and 2003). The best-known garbage dump is located just downslope from Kilua Street. In spite of the fact that there are no documented dump sites directly beneath the upper parcel, flood can water push debris from the upslope areas of the cave toward the segment that underlies the upper parcel of the project site. Halliday (2003) suggested that as flood waters move through the cave, it is possible that residual products from illegal dump sites may be present in flood waters that exit Kaūmana Cave on Edita Street.

Cave Protection Law - In 2002, the State of Hawai'i passed the Hawai'i Cave Protection Law. Amended in 2008 and included in the HRS as Chapter 6D, the Hawai'i Cave Protection Law defines how caves are to be protected, what types of actions and resources warrant state intervention, and the responsibilities of landowners who have caves on their property. Among other pertinent inclusions in the Hawai'i Cave Protection Law, the following sections are relevant to Kaūmana Cave, as it relates to this project:

- §6D-2 prohibits any person from intentionally, knowingly, or recklessly breaking, harming, or damaging caves, their surfaces, or the resources within the cave.
- §6D-3 prohibits any person from dumping waste, garbage, litter, sewage, or toxic substances into a cave. However, new septic systems are permitted in proximity to caves, if they are installed with solid tanks and surface leach fields that prevent sewage from flowing into the cave.
- §6D-4 prohibits the disturbance of native organisms in a cave. This section also ensures that surface activities on the land above a cave shall not be prohibited or constrained in any way by inclusion of this section.
- §6D-7 prohibits entry into a cave, by any person, without prior written consent from the property owner. The segment of Kaūmana Cave that underlies the project site is owned by the State of Hawai'i, Department of Land and Natural Resources.

Development of surface lands situated above known caves and lava tubes are not necessarily prohibited under Hawaii's Cave Protection Law. Further, provisions of the cave protection law do not apply to caves inadvertently encountered during the normal course of construction activities, provided that any protection and mitigation measures identified during the HRS 343 environmental review and land use permitting conditions are followed.

could require an engineering solution to design a structural foundation that spans the lava tube or concrete piers may be required to pierce the cave roof to reach stable bedrock on the cave floor. In addition, these alternatives would require clearing some of the 'ōhi'a trees above the cave, which could have significant indirect effects to the cave ecosystem.

The No Action alternative would result in no impact on Kaūmana Cave.

3.2.2 Mitigation Measures

Although the Proposed Action limits all construction to beyond the 100-foot buffer zone, the following additional protective measures should be undertaken. The cave alignment should be verified prior to initiating construction and delineating boundaries of the 100-foot buffer. During construction, the boundaries of the buffer zone should be clearly marked with brightly colored surveyors tape or similar. Construction personnel should be fully informed of Kaūmana Cave, adherence to the buffer zone, and the potential risk of working within vicinity of the cave.

If, during construction on the lower parcel, an entrance to the inaccessible portion of Kaūmana Cave is found or inadvertently created, or if previously unknown segments of the Kaūmana Cave system are encountered, all construction activity in the vicinity of the find would cease immediately and the proper authorities, including the Department of Land and Natural Resources, contacted to assess the lava tube and its contents.

3.3 Hydrology, Surface Water, and Groundwater

Rainfall is abundant in the Hilo area, with the project area receiving between 160 and 200 inches of rain annually (Juvik and Juvik, 1998). Much of the rainfall percolates into the ground, recharging the underground aquifers. During periods of heavy precipitation, runoff can be problematic if the amount and rate of runoff exceeds the percolation rate of the underlying ground surface.

Surface Water

There are no perennial streams, lakes or ponds within the project site or in the immediate vicinity. The nearest perennial stream is Waipahoehoe Stream, which flows north of the project site and feeds into the Wailoa River. There is topographical evidence that indicates the presence of an intermittent stream south of the lower parcel that drains towards Alenaio Stream. Runoff that flows through Kaūmana Cave to the concrete channel along Edita Street feeds into this intermittent stream. Inland waters in the vicinity of the project site are designated as class 2 waters and the nearest marine water to the project site is Hilo Bay, which is designated as class A waters.

Groundwater

The project site is located within the Northeast Mauna Loa Aquifer Recharge Zone (Juvik and Juvik, 1998). With the highly permeable pāhoehoe flows, which are characteristic of the project site, precipitation quickly percolates into the ground where it recharges this aquifer resource. The Mauna Loa Aquifer Recharge Zone provides a sustainable yield of approximately 740 million gallons per day (gpd) of fresh water for the residents, forests, and ecosystems within the zone, including the town of Hilo and surrounding area.

Kaūmana Cave

Given the high level of annual rainfall in the Hilo area, there does exist the potential for the presence of stream water in the Kaūmana cave system throughout the year, although water is not present in the cave at all times. Halliday notes that, "the lower 2.2 km of this cave (from Kilua Road to Edita Street) lacks stream flow unless rainfall exceeds ~20 cm within a period of 2-3 days: a common occurrence in all seasons" (2003, p. 72) and that, "in periods of normal rainfall, running water sometimes is audible beneath the floor of this section of the cave" (2003, p. 72).

Contrary to some of the literature, lava tubes do not generally function as groundwater conduits. Halliday notes that "groundwater conduit flow is almost exclusively a floodwater phenomenon" (2003, p. 72). In this same article, Halliday notes that Kaūmana Cave is a known conduit for floodwaters, and debris transported by floodwaters has been observed several meters above the floor of the cave, indicating that water levels in the cave have the potential to rise several meters above the cave floor (2003 and 1999). Flooding is caused both by natural seepage through the cave walls and surface runoff that is diverted from the upper parts of Kaūmana Drive into the cave. Floodwaters in Kaūmana Cave emerge at the Edita Street opening, where it flows into a concrete channel that runs parallel and adjacent to Edita Street. From this channel, water passes under Edita Street through a culvert and discharges into the intermittent stream discussed above. During severe storm events, the concrete channel has been known to overtop and flood Edita Street. Risk and impacts from flooding is addressed in Section 3.4. Intensive flooding from a record-breaking rainfall in 2000 caused the cave to overflow through a ceiling vent upslope from the project site (Halliday, 2003), which also indicates that, on occasion floodwater can reach extremely high levels in the cave.

3.3.1 Potential Impacts

PROPOSED ACTION

There are no anticipated long-term impacts to hydrology, surface water or groundwater resulting from the Proposed Action. As a result of the Proposed Action, there would be an increase in impermeable surfaces, thereby increasing the amount of surface runoff. However, final engineering plans for the site would include site drainage plans that provide swales or drain inlets that direct runoff from newly paved areas into detention basins or drywells, where it would be retained until it percolates into the ground. The Proposed Action would be implemented in compliance with applicable the regulations contained in HAR 11-54 and meet the criteria set forth in the antidegradation policy (HAR 11-54-1.1), designated uses (HAR 11-54-3), and water quality criteria (HAR 11-54-4 through 11-54-8). Any discharges of wastewater or stormwater into State surface waters would obtain the necessary National Pollution Discharge Elimination System (NPDES) permit in accordance with HAR 11-55. A rain catchment system for roof runoff would be implemented, which would help reduce the amount of surface runoff. If warranted, site engineering plans may also need to accommodate potential flood water exiting Kaūmana Cave at Edita Street. Potential storm drainage impacts are addressed in Section 3.4.

The construction contractor would develop and implement a site-specific BMP plan to minimize potential impacts to ground and surface water sources during construction. Required permits such as a County of Hawai'i grading permit and a NPDES permit for construction-related storm water discharge would also impose permit conditions, which must be adhered to by the

construction contractor.

ALTERNATIVES

Similar to the Proposed Action, Alternatives 1, 2 and 3 would not adversely affect surface or groundwater resources. The No Action alternative would have no effect on the existing ground or surface waters in the area.

3.3.2 Mitigation Measures

No mitigation is warranted or proposed. Adherence to applicable regulations, construction site BMPs and conditions of the grading permit and NPDES permit should prevent any potential effects to hydrology, surface water and ground water.

3.4 Natural Hazards

Flood Hazards

Flood events on the Island of Hawai'i are generally associated with severe rainstorms, storm surge, or tsunami inundation. The island is geologically young, and in many areas enough time has not passed for the formation of defined watercourses. Poorly defined watercourses often flow and overflow during storm events. The South Hilo district is particularly impacted by this problem due to high amounts of rainfall. The Federal Emergency Management Agency (FEMA) has classified the area in which the project site is located, as Zone X. Zone X are lands with no recognized flood potential and are located outside both the 100-year and 500-year floodplain. This classification means that the project site is located outside of the 0.2 percent annual chance floodplain, and that no base flood elevations or depths are shown for this zone (NFIP, 2009). The risk of flooding from large surface water flood events is low.

Although the risk is low, there is hazard from large, infrequently occurring flood events from water discharged from Kaūmana Cave. Water that naturally seeps into Kaūmana Cave during periods of high rainfall along with surface runoff from the upper regions of Kaūmana Drive that are diverted into Kaūmana Cave can create flood conditions. As flood waters are channeled through Kaūmana Cave, as has been noted by Halliday (2003 and 1999), there is potential that the water volume could be high enough to exit the cave system through the opening on Edita Street, as noted by Stone (1992) and Halliday (2003 and 1999). From the Edita Street exit, storm water then flows through a concrete channel running parallel to, and alongside Edita Street, where it is directed into a culvert underneath the road and into an intermittent stream that borders the lower parcel's southern boundary. During severe storms, water has been known to overtop the concrete channel and flow across Edita Street, thus creating a flood risk for the project site, as well as for the surrounding neighborhood.

Volcanic Hazards

The Island of Hawai'i was developed from the eruptions of five volcanoes: Kohala, Hualalai, Mauna Kea, Mauna Loa, and Kilauea. Of these, Mauna Loa and Kilauea are active today. Hilo is located just 30 miles north of Kilauea, and is situated in the saddle zone between Mauna Kea and Mauna Loa. The saddle zone on the eastern flanks of these two volcanoes is a natural dip in the topography of the island created from overlapping lava flows from their historic eruptions. This topographic dip increases the probability that lava flows originating from the northeastern rift

them occurring on the south flank of Kilauea or Mauna Loa. The dates, locations, and magnitudes of these earthquakes are summarized in Table 3-1.

Table 3-1. Earthquakes Magnitude 6.0 or Greater since 1868 on the Island of Hawaii

Year	Date	Location	Magnitude
1868	March 28	Mauna Loa South Flank	7.0
1868	April 2	Mauna Loa South Flank	7.9
1929	October 5	Hualalai	6.5
1941	September 29	Kaoiki between Kilauea and Moana Loa	6.0
1950	May 29	Mauna Loa SW rift Zone	6.2
1951	April 22	Kilauea	6.9
1951	August 21	Kona	6.3
1952	May 23	Kona	6.9
1954	March 30	Kilauea south flank	6.0
1962	June 27	Kaoiki	6.5
1973	April 26	Honomu	6.1
1975	November 29	Kilauea south flank	7.2
1983	November 16	Kaoiki	6.5
1989	June 25	Kilauea south Flank	6.1
2006	October 15	Kiholo Bay	6.7

Source: USGS, 2006

3.4.1 Potential Impacts

PROPOSED ACTION

Flood Hazards

Under the Proposed Action, major school facilities would be developed on the project site's lower parcel. The architectural concept of the campus envisions most of the buildings and structures to be elevated above ground level, thus reducing the risk to damage from flooding if the concrete channel along Edita Street should overtop. In conformance with applicable regulations, any additional storm water runoff generated by the Proposed Action would be contained within the property's boundary and site improvements would not alter the existing drainage patterns of surrounding properties. Thus, the Proposed Action would not increase the risk of flooding to neighboring or downslope parcels. Site-specific measures would be developed to control drainage and runoff resulting from impermeable surfaces and placement of new structures at the project site. During design development, detailed engineering studies would be conducted in order to develop appropriate drainage plans, which would take into account any measures that might be needed to address the potential flood hazard posed by the conditions along Edita Street.

Volcanic Hazards

Any development within this area of South Hilo is subject to the hazard of damage from lava flows and other volcanic hazards. There are no practical measures to avoid this impact.

are areas where wastewater disposal has the potential to cause adverse effects to the environment and human health because of hydrogeological conditions. Wastewater systems located in CWDAs may be subject to more stringent requirements that meet higher effluent standards, as determined by DOH's director. Adherence to applicable standards and regulations, and proper maintenance and operation of the system should ensure no significant direct or indirect adverse impacts to the environment or to human health.

Drainage

As a result of the Proposed Action, some existing vegetated areas would be covered with impermeable surfaces, thereby reducing percolation and increasing the volume of surface runoff. However, site improvements would include a drainage system, which may include drywells or detention/retention areas of sufficient capacity to accommodate runoff from impermeable surfaces. Therefore, implementation of the Proposed Action would not significantly increase the flow of stormwater or adversely impact existing storm drainage facilities serving the area.

Under the Proposed Action, existing natural drainage patterns generally would be kept the same. In undisturbed areas, stormwater would be allowed to continue its existing flow patterns. Vegetation would retard surface flow and some of the water will percolate into the porous substrate as it flows across the site. In addition, drainage improvements would be constructed to accommodate surface runoff from paved areas, and if warranted, potential flood water exiting Kaūmana Cave. Drainage improvements would include a network of swales, inlets and drainage lines to direct runoff through the campus, and a series of detention basins. The detention basins would be designed to accommodate on-site runoff by containing the bulk of the flow and allowing it to percolate into the ground and/or to evaporate. Because the underlying ground surface is so porous, the basins would be dry most of the time. The sizes and number of detention basins will be designed when the final engineering plans for the site are developed.

Solid Waste

Currently, Connections has a contract with a private refuse collection service that picks up the solid waste and takes it to the dump. Connections intends to extend their existing contract, and have the same private service collect and dispose of solid waste generated at its new campus.

The Proposed Action would not be a major generator of, and would not result in, significant increases in the accumulation or disposal of solid waste. In addition, Connections intends to promote ecologically sound principals and run a "green" school. The school will implement a comprehensive recycling program that would be a part of daily campus operations. Onsite separation bins for plastic, glass, metal, cardboard, aluminum and paper will be located in food preparation and serving areas, as well as in other appropriate locations throughout the campus.

ALTERNATIVES

Under Alternatives 1, 2 and 3 impacts to existing utility systems would be similar to the proposed action. The No Action alternative would have no effect on existing utilities and infrastructure.

historic sites within the project area would have been destroyed. Consequently, the project site contains very little evidence of any human activity during the Pre-Contact period. During the field investigation, no archaeological sites were encountered and it appears that subsequent to the 1880-1881 flow, permanent human use of the area stopped (Ibid.). Today much of the area surrounding the project site has been subdivided for single family residences.

Field Inspection of Kaūmana Cave

At the request of DLNR's State Historic Preservation Division (SHPD), an archaeological investigation was conducted of the accessible portion of Kaūmana Cave that underlies the project site's upper parcel. One of the purposes of this inspection was to verify previous accounts of historic elements within the cave, which include petroglyphs (names chipped into the cave's walls) and electrical insulators on the cave walls. Dr. Stone, in his September 4, 2009 comment letter on the original Draft EA for this project, also mentioned there are no burials in the cave and that ti wrapped offerings are left just inside the cave entrance, which is within the county park. The portion of the cave that underlies the project site's lower parcel was not inspected as it is believed to be inaccessible.

The field inspection found an abundance of pecked names near the cave entrance at the county park. Deeper into the cave, the pecked names become more sporadic with occasional dense concentrations. The deepest concentration of names encountered were roughly 850 feet from the cave entrance, which would place this location directly beneath Kaūmana Drive, outside the project site. Beyond that point only two sets of pecked names were noted, both of which appear to be recent. In addition to the pecked names, numerous names have been spray painted onto the cave walls. No names that appear to be older than 50 years were found in the cave segment that underlies the upper parcel. The field inspection also found no evidence of "electrical insulators attached to the cave wall," which were mentioned by Dr. Stone in his comment letter (2009). The inspection report (Pacific Legacy, 2010) concluded that with the exception of the pecked names, no historic elements were encountered in the accessible portion of Kaūmana Cave that underlies the project site. If there were any portable cultural material or human burials in the cave, it likely would have been removed by now or washed away by one of the episodic floods (Ibid.).

Cultural Resources

In the late 1990s, one of the proposed alternative routes for the Puainako Street Extension and Widening project ran directly through the project site. Based upon work performed in support of that project's EIS, no evidence of traditional cultural properties or practices were identified to occur within that project area, which encompasses Connection's project site (Okahara and Associates, 2000). This conclusion was based on several archaeological surveys, archival research, oral interviews and the lack of claimants offering knowledge of such resources.

Findings of the archaeological investigation conducted for the Proposed Action seem to support the conclusions made in the Puainako Street Extension and Widening project EIS. No archaeological surface features were encountered during the investigation. The absence of sites suggests that human activity at the project site has been limited since 1880, with the exception of an occasional pig hunter (Pacific Legacy, 2008).

**SP21-413, CONNECTIONS NEW CENTURY PUBLIC CHARTER SCHOOL/Community
Based Education Support Services (CBESS) (SPP 12-000138) (Hawaii)**

Response #4: Cultural Impact Assessment

<u>ICA, Record on Appeal, volume #:</u>	<u>Description:</u>	<u>Date:</u>	<u>Pdf page #:</u>
Part 2 of 4	Letter from Department of Hawaiian Home Lands	August 19, 2009	242
	Letter from Office of Hawaiian Affairs	September 2, 2010	239-240
	Final EA: Appendix "G."	July, 2012	330-333
	Final EA: Cultural Assessment Information Form (sent with all letters)	July, 2012	334-335

LIMELIGHTS
OFFSHORE
STATE OF HAWAII



STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS

1430 KALANIANA'OLE
HONOLULU, HAWAII 96813

WILL CHEE
CHAIRMAN
PLANNING & ENVIRONMENTAL
DEPARTMENT OF HAWAIIAN HOME LANDS
1010 PALM DRIVE
HONOLULU, HAWAII 96814



WILL CHEE - PLANNING & ENVIRONMENTAL

May 7, 2010

Kaulana Park, Chairperson (Designated)
Department of Hawaiian Home Lands
P.O. Box 1879
Honolulu, HI 96805

Subject: Draft Environmental Assessment for Connections Public Charter School Master Plan,
South Hilo, Hawai'i, TMK (3) 2-5-006:141

Dear Mr. Park,

We have received your letter dated August 19, 2009 informing us that you have no comments at this time concerning the subject Draft EA. Thank you for participating in the environmental review process with us.

Due to the nature of other comments we received on the Draft EA, Connections Public Charter School (CPCS) and Will Chee - Planning & Environmental (WCP) have decided to reconfigure the site plan for this project. Concern was expressed from geologists, members of the scientific community, and other interested persons that the Draft EA did not adequately address potential environmental impacts on Kaulana Cave resulting from the proposed project. After further research and review, it was determined that reconfiguring the campus layout to avoid the cave and any potential conflicts was prudent.

Therefore, CPCS and WCP are preparing a Revised Draft EA for this project, which will address the modified campus layout, any potential effects on Kaulana Cave and mitigation measures, as warranted. We will provide your agency with a copy of the Revised Draft EA upon its completion.

Sincerely,

Will Chee
Will Chee
Planner

cc. John L. Thatcher II, CEO Connections Public Charter School

Providing Services Since 1976
Lead the Planning and Environmental Consultants

1010 Palm Drive • Honolulu, Hawai'i 96814 • Phone 808-596-4888 • Fax 808-697-1861 • E-Mail wcp@wcp-hawaii.com

Will Chee - Planning & Environmental
Actn: Celia Shen, Senior Planning
1010 Palm Drive
Honolulu, Hawaii 96814

Ms. Shen:

Subject: Draft Environmental Assessment for Connections
New Century Public Charter School Master Plan

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,

Daniel Iyama
Daniel Iyama
Chairman (Designated)
Hawaiian Homes Commission



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPOLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

Sincerely,

Celia Shen
Planner

cc: John L. Thatcher II, CEO Connections Public Charter School

September 2, 2009

HRD09/4592

Celia Shen
Wildlife Planning and Environmental
1018 Palm Drive
Honolulu, HI 96814

RE: Draft Environmental Assessment for Connections New Century Public Charter
School Master Plan, Elio, Hawai'i Island, TMK: (3) 2-5-006:141.

Aloha e Celia Shen,

The Office of Hawaiian Affairs (OHA) is in receipt of your letter requesting comments on the above-referenced project. Connections New Century Public Charter School Master Plan proposes to construct a new campus on 72 acres of vacant, state-owned land in South Hilo, Hawai'i Island. About 12.5 acres of the site would be built-up to include roads, parking, fields, gardens, an administrative center, cafeteria, classrooms and dormitory. The school is expected to serve fewer than 300 students. OHA has reviewed the project and offers the following comments.

The applicant states that a previous Cultural Impact Assessment for a separate project concluded that there was no evidence that traditional cultural practices are conducted at the project site. However, this CIA was not included in the DEHA's appendix. OHA requests the opportunity to review the CIA, which apparently was completed for the Puainako Street Extension and Widening project. We ask whether recent interviews of cultural practitioners have been conducted or is the applicant planning to completely rely on a CIA that appears to be more than 10 years old. We note that the pictures in the archaeological assessment appear to show trails going through the forest on the project site. These trails may be used by cultural practitioners.

OHA appreciates that an archaeological monitor will be called on site to inspect any previously undisturbed lava tubes encountered during construction activities. We recommend that if a lava tube is discovered, construction activities around the lava tube should be stopped until an archaeological monitor can inspect the tube. We agree with the archaeological assessment that such lava tubes have the potential to contain cultural deposits or Native



WPCHEE - PLANNING & ENVIRONMENTAL

Colin Sloan
September 2, 2009
Page 2

Hawaiian remains. If construction activities are allowed to continue around the lava tube before an archaeological monitor arrives to inspect it, the tube may collapse endangering whatever may be inside. We will rely on the applicant's assurances that should fori kōpuna or Native Hawaiian cultural or traditional deposits be found during the construction of the project, work will cease, and the appropriate agencies will be contacted pursuant to applicable law.

The applicant indicates that it will preserve much of the native forest found on the project site by incorporating the forest into the school design. We applaud this design concept and request further information regarding exactly how much of the forest will be impacted by the project. We recommend that the applicant consider replanting native plants removed from the site to other areas. While the native forests found on the project site are not endangered, they are still valuable, precious and becoming increasingly rare with the urbanization of our islands. OHA further suggests that any native plants that cannot be replanted be offered to cultural practitioners for use. In addition, we appreciate that the applicant plans to conduct reforestation efforts at the project site by planting 100 and 1000.

Further, OHA notes that the subject land is designated as Section 5(b) Ceded Lands, which hold a considerable amount of sentimental, historical and legal significance for Native Hawaiians and OHA. These lands were illegally taken from the Hawaiian Kingdom after the 1893 overthrow and later transferred ("ceded") by the United States government to the State of Hawaii upon statehood. Today, the state holds the Ceded Lands corpus in trust for Native Hawaiians and the general public. OHA requests that the Ceded Lands status of the project site be clearly indicated in the Final EA. Identifying and documenting Ceded Lands in such a manner will help with the creation of a comprehensive Ceded Lands inventory.

Thank you for the opportunity to comment. If you have further questions, please contact Sterling Wong by phone at (808) 594-0248 or e-mail him at sterlingw@oha.org.

'O wau iho nō me ka 'ōia'i'o.

(Signature)

Clyde W. Nānu'u
Administrator

C: OHA Hilo CRC Office

Katherine Kezloha, Director
Office of Environmental Quality Control
235 South Bereniana Street, Suite 702
Honolulu, HI 96813

May 7, 2010

Clyde W. Nānu'u, Administrator
Office of Hawaiian Affairs
711 Kapi'olani Boulevard, Suite 500
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment for Connections Public Charter School Master Plan,
South Hilo, Hawaii, TMK (3) 2-5-006:141

Dear Mr. Nānu'u,

Thank you for your comments dated September 2, 2009 concerning the subject Draft EA. Due to the nature of other comments we received, Connections Public Charter School (CPCS) and WPCHEE - Planning & Environmental (WCP) have decided to reconfigure the site plan for this project. Concern was expressed from speleologists, members of the scientific community, and other interested persons that the Draft EA did not adequately address potential environmental impacts on Kālaniana'ōhe'e Cave resulting from the proposed project. After further research and review, it was determined that reconfiguring the campus layout to avoid the cave and any potential conflicts was prudent.

Development of major school facilities are now being proposed within the lower portion of the parcel, below Edith Street. While a small segment of Kālaniana'ōhe'e Cave may underlie a portion of the lower parcel's northern corner, indications are that this segment was closed off when Edith Street was constructed in the 1950s, and is likely inaccessible. Due to safety and other concerns, the revised campus plan will maintain a minimum 100-foot buffer between any school facility and the cave.

Therefore, CPCS and WCP are preparing a Revised Draft EA for this project, which will address the modified campus layout, any potential effects on Kālaniana'ōhe'e Cave and mitigation measures, as warranted. We will provide your agency with a copy of the Revised Draft EA upon its completion.

Providing Services Since 1976
Lead Use Planners and Environmental Consultants

1018 Palm Drive • Honolulu, Hawaii 96814 • Phone 806-866-4886 • Fax 808-597-1851 • E-Mail wpc@wpc-hawaii.com

Appendix G

Cultural Impact Assessment Correspondence



WJ CHEE - PLANNING & ENVIRONMENTAL

April 23, 2010

Edith Kanaka'ole Foundation
1500 Kalamansole Avenue
Hilo, HI 96720-4914

Dear Sirs/Madams,

Subject: Environmental Assessment for Connections Public Charter School
Alupapa'a of Ponahawai, District of South Hilo, TMK (3) 2-5-006:141

Connections Public Charter School (CPCS) is proposing to develop a new campus in Kaunama, Hilo, Hawai'i, on lands to be leased from the State Department of Land and Natural Resources (DLNR). The new campus would allow CPCS to expand their educational offerings, consolidate their elementary, intermediate and high school programs at one location, and develop a campus that would be a model of sustainable development.

The property on which CPCS would like to develop their new campus is approximately 72 acres in size and is identified by TMK (3) 2-5-006:141 (refer to Enclosure Figure 1). It is situated on the lower slopes of Mauna Loa, inland from the town of Hilo, at an elevation that ranges between 600-900 feet. The parcel is located off of Kalamana Drive and is separated into two sections, at its narrowest point, by Edita Street. The property is bounded along much of its perimeter by residences on Kalamana Drive, Edita Street and Melonimu Street (refer to Enclosure Figure 2). West of the property, on the other side of Kalamana Drive, is the main entrance to the Kalamana lava tube complex, which has been designated as Kalamana Caves County Park. A branch of this lava tube complex runs under the western half of the project area, caving at an opening along the western edge of Edita Street.

The property is currently undeveloped. The upper or western portion of the property (above Edita Street) is mostly covered by native vegetation consisting of an open canopy forest of 'ohia trees with an understory of uluhe fern. The lower or eastern portion of the property (below Edita Street) is covered by a mix of native and non-native species, such as strawberry guava.

WJ Chee - Planning & Environmental is assisting CPCS prepare a Campus Master Plan and Environmental Assessment (EA), which is needed to secure their lease from DLNR. As part of the EA process, we are trying to obtain information to assess cultural impacts. As an organization that may have knowledge of traditional cultural properties or cultural practices that may occur at or within the immediate vicinity of the property, we kindly ask your assistance to identify potential impacts. To facilitate information gathering, we have enclosed a questionnaire form.

Providing Services Since 1976
Land Use Planners and Environmental Consultants

1018 Palm Drive • Honolulu, Hawaii • 96814 • Phone 808-598-4688 • Fax 808-597-1851 • E-Mail: wjcp@lava.net

Edith Kanaka'ole Foundation
April 23, 2010
Page 2

We would appreciate any comments regarding cultural concerns you may have relative to the property within 30 days of receipt of this letter. If we receive no communication from you within 30 days, we will assume that your organization has no comments to offer.

Your cooperation and assistance in this matter would be greatly appreciated. Should have any questions, or if you would prefer to submit comments via telephone or email, please feel free to contact me at 808-596-4688 or cshen@wcpohawaii.com.

Sincerely,

Celia Shen
Planner

Enclosures: 1) Location Maps
2) Questionnaire Form



WIL CHEE - PLANNING & ENVIRONMENTAL

April 23, 2010

Hawaiian Civic Club of Hilo
P. O. Box 543
Hilo, HI 96721

Dear Sirs/Madams,

Subject: Environmental Assessment for Connections Public Charter School
Abupua'a of Pōhāhāwai, District of South Hilo, TMK (3) 2-5-006:141

Connections Public Charter School (CPCS) is proposing to develop a new campus in Kaunama, Hilo, Hawai'i, on lands to be leased from the State Department of Land and Natural Resources (DLNR). The new campus would allow CPCS to expand their educational offerings, consolidate their elementary, intermediary, and high school programs at one location, and develop a campus that would be a model of sustainable development.

The property on which CPCS would like to develop their new campus is approximately 72 acres in size and is identified by TMK (3) 2-5-006:141 (refer to Enclosure Figure 1). It is situated on the lower slopes of Mauna Loa, inland from the town of Hilo, at an elevation that ranges between 600-900 feet. The parcel is located off of Kaunama Drive and is separated into two sections, at its narrowest point, by Edita Street. The property is bounded along much of its perimeter by residences on Kaunama Drive, Edita Street and Melanani Street (refer to Enclosure Figure 2). West of the property, on the other side of Kaunama Drive, is the main entrance to the Kaunama lava tube complex, which has been designated as Kaunama Caves County Park. A branch of this lava tube complex runs under the western half of the project area, ending at an opening along the western edge of Edita Street.

The property is currently undeveloped. The upper or western portion of the property (above Edita Street) is mostly covered by native vegetation consisting of an open canopy forest of 'ohia trees with an understory of uhalae fern. The lower or eastern portion of the property (below Edita Street) is covered by a mix of native and non-native species, such as strawberry guava.

Wil Chee - Planning & Environmental is assisting CPCS prepare a Campus Master Plan and Environmental Assessment (EA), which is needed to secure their lease from DLNR. As part of the EA process, we are trying to obtain information to assess cultural impacts. As an organization that may have knowledge of traditional cultural properties or cultural practices that may occur at or within the immediate vicinity of the property, we kindly ask your assistance to

Providing Services Since 1976
Land Use Planners and Environmental Consultants

1018 Pāhā Drive • Honolulu, Hawai'i 96814 • Phone 808-596-4688 • Fax 808-597-1851 • E-Mail wcp@lana.net

Hawaiian Civic Club of Hilo
April 23, 2010
Page 2

identify potential impacts. To facilitate information gathering, we have enclosed a questionnaire form.

We would appreciate any comments regarding cultural concerns you may have relative to the property within 30 days of receipt of this letter. If we receive no communication from you within 30 days, we will assume that your organization has no comments to offer.

Your cooperation and assistance in this matter would be greatly appreciated. Should have any questions, or if you would prefer to submit comments via telephone or email, please feel free to contact me at 808-596-4688 or caben@wcpshawaii.com.

Sincerely,

Celia Shen
Planner

Enclosures: 1) Location Maps
2) Questionnaire Form



WPP
WIL CHCE - PLANNING & ENVIRONMENTAL

April 23, 2010

Kepa Maly
554 Keonana Street
Hilo, HI 96720

Dear Mr. Maly,

Subject: Environmental Assessment for Connections Public Charter School
Ahupua'a of Pounahawai, District of South Hilo, TMK (3) 2-5-006:141

Connections Public Charter School (CPCS) is proposing to develop a new campus in Kaunama, Hilo, Hawaii, on lands to be leased from the State Department of Land and Natural Resources (DLNR). The new campus would allow CPCS to expand their educational offerings, consolidate their elementary, intermediary and high school programs at one location, and develop a campus that would be a model of sustainable development.

The property on which CPCS would like to develop their new campus is approximately 72 acres in size and is identified by TMK (3) 2-5-006:141 (refer to Enclosure Figure 1). It is situated on the lower slopes of Mauna Loa, inland from the town of Hilo, at an elevation that ranges between 600-900 feet. The parcel is located off of Kaunama Drive and is separated into two sections, at its narrowest point, by Edita Street. The property is bounded along much of its perimeter by residences on Kaunama Drive, Edita Street and Melema Street (refer to Enclosure Figure 2). West of the property, on the other side of Kaunama Drive, is the main entrance to the Kaunama lava tube complex, which has been designated as Kaunama Carves County Park. A branch of this lava tube complex runs under the western half of the project area, ending at an opening along the western edge of Edita Street.

The property is currently undeveloped. The upper or western portion of the property (above Edita Street) is mostly covered by native vegetation consisting of an open canopy forest of 'ohia trees with an understory of ubuhe fern. The lower or eastern portion of the property (below Edita Street) is covered by a mix of native and non-native species, such as strawberry guava.

Will Chee - Planning & Environmental is assisting CPCS prepare a Campus Master Plan and Environmental Assessment (EA), which is needed to secure their lease from DLNR. As part of the EA process, we are trying to obtain information to assess cultural impacts. As an organization that may have knowledge of traditional cultural properties or cultural practices that may occur at or within the immediate vicinity of the property, we kindly ask your assistance to

Providing Services Since 1976
Land Use Planning and Environmental Consultants

1018 Palm Drive • Honolulu, Hawaii 96814 • Phone 808-598-4688 • Fax 808-597-1851 • E-Mail wcp@lava.net

Ms. Kepa Maly
April 23, 2010
Page 2

identify potential impacts. To facilitate information gathering, we have enclosed a questionnaire form.

We would appreciate any comments regarding cultural concerns you may have relative to the property within 30 days of receipt of this letter. If we receive no communication from you within 30 days, we will assume that your organization has no comments to offer.

Your cooperation and assistance in this matter would be greatly appreciated. Should have any questions, or if you would prefer to submit comments via telephone or email, please feel free to contact me at 808-598-4688 or cshear@wcp.hawaii.com.

Sincerely,

Celia Shen
Partner

Enclosures: 1) Location Maps
2) Questionnaire Form

Cultural Assessment Information Form

Project: Connections Public Charter School Master Plan and Environmental Assessment
 Ahupua'a of Pānōhāwai, District of South Hilo, Hawai'i, TMK (3) 2-5-006:141.

Name: _____

Contact Information:

Address: _____

Phone: _____

Email: _____

Background Information:

1. Where were you born?
2. How long have you lived on Hawai'i island?
3. How long have you lived in the area of the subject property?
4. Could you provide information as to your area of interest or expertise, as well as any memberships or affiliations with Hawaiian cultural groups/organizations?
5. What is your relationship to the area? Do you have any personal associations/ties with the subject property?

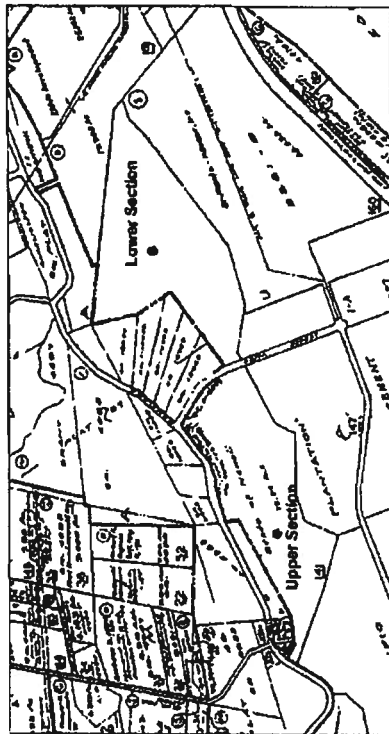


Figure 1. TMK (3) 2-5-006:141



Figure 2. Project Location & Topography

6. Do you use the subject property or surrounding area? If so, for what purposes and how often?

7. Do you have any knowledge of traditional or cultural practices conducted specific to the subject property or in the vicinity of the project area? If so, what kind of activities are conducted (e.g. hunting, gathering, ceremonies, etc.)?

8. Do you have any concerns about the project affecting cultural sites or practices?

**SP21-413, CONNECTIONS NEW CENTURY PUBLIC CHARTER SCHOOL/Community
Based Education Support Services (CBESS) (SPP 12-000138) (Hawaii)**

Response #5: Construction Schedule

<u>ICA, Record on Appeal, volume #:</u>	<u>Description:</u>	<u>Date:</u>	<u>Pdf page #:</u>
Part 2 of 4	Petition for Special Permit, Sec. 4.2, "Project Timetable and Phasing."	July, 2012	86-87
	Final EA: Sec. 2.1.3, "Project Phasing and Construction."	July, 2012	125-126

consist of a settling tank(s) and series of tanks/systems (underground or aboveground, depending on the specific design of the system) that progressively clean the wastewater. Bacteria, algae, plants, and other organisms, such as snails and fish, are used to break down and digest the organic pollutants. It is virtually an odor-free process. The end product is R-2 quality water that can be reused for some non-potable uses such as some agricultural irrigation. Use of recycled water would comply with the State Department of Health's *Guidelines for the Treatment and Use of Recycled Water*, including the preparation and approval, as needed, of an irrigation plan, a management plan, a public education plan, an employee training plan, a vector control plan, and a monitoring plan. On the campus site plan, an approximately 12,000-square-foot area has been set aside for the biological treatment system. This area is based on early rough estimates of wastewater volumes. During design development, estimated volumes would be refined as they can be based on fixtures counts and also take into account water reduction features included in the project. Thus, this set aside area may be smaller in size than what is shown on the site plan or could be developed as multiple smaller units to coincide with incremental development of the campus.

4.2 Project Timetable and Phasing

The timetable for full build out of the school campus is roughly projected to take from 16 to 25 years. This timetable is highly dependent on the Applicant's ability to obtain the necessary financial resources. Given the amount of money required to develop the infrastructure and construct all of the school's facilities, development of the proposed project would likely be implemented in phases, with each phase being initiated as funds become available. A preliminary gross estimate of the project cost is approximately \$30 million.

Applicant intends to fund the project through various sources. The Applicant has applied for a long-term, low-interest loan from the United States Department of Agriculture (USDA). Recent communication with the USDA has indicated that approval of the loan looks very promising. If approved, this loan would provide approximately \$8 million dollars to start implementing the project's initial phases (Phase 1, 2 and 3). Future funding is expected from operational money the Applicant receives through rental income from the Kress Building, grants, and private donations. The Applicant currently has an active capital campaign to raise funds for the project, which includes annual in-house donations from the school's staff. It is also possible that capital improvement funds and/or facility funds may become available from the State.

The sequence of the implementation phases is based on a set of priorities developed by the school to meet its curriculum and operational needs, which are as follows.

- Priority 1 – Agriculture and forestry/conservation programs and caretaker's residence
- Priority 2 – High school facilities
- Priority 3 – Intermediate school facilities
- Priority 4 – Elementary school facilities
- Priority 5 – Gymnasium/multi-purpose facility, dormitory, residence, and intergenerational facility

As noted above, project implementation is highly dependent upon the availability of funds. Thus, the projected implementation phases (Exhibit D.11) and timetable shown below accounts for the need to acquire funding to initiate successive project phases.

<u>Implementation Phase</u>	<u>Estimated Time to Complete</u>
Phase 1: Refinement of planning and project costs, and completion of attendant studies which may include a topographic survey, geotechnical/soils study, drainage study, and water study	1 to 2 years
Phase 2: Design and permitting of the caretaker's residence, administration building and high school facilities	1 to 2 years
Phase 3: Site grading; installation of utilities, wastewater system, and access road; construction of caretaker's residence, administration building, and high school facilities (classrooms and high school green/shade houses)	2.5 to 3.5 years
Phase 4: Design and permitting of the intermediate school facilities, library/resource center, barn and maintenance building	1.5 to 2.5 years
Phase 5: Construction of the intermediate school facilities, library/resource center, barn and maintenance building	1.5 to 2.5 years
Phase 6: Design and permitting of the elementary school facilities, shared elementary/intermediate facilities (green/shade houses and art/music buildings) and dining facility	2 to 3 years
Phase 7: Construction of elementary school facilities, shared elementary/intermediate facilities (green/shade houses and art/music buildings) and dining facility	2.5 to 3.5 years
Phase 8: Design and permitting of gymnasium/multi-purpose facility, dormitory, and intergenerational facilities	2 to 3 years
Phase 9: Construction of gymnasium/multi-purpose facility, dormitory, and intergenerational facilities	2 to 3 years

4.3 Hours of Operation

The school's hours of operation would be typical of an academic institution. Weekday hours span from 7:00 am to 5:30 pm. The elementary and intermediate instructional hours are 7:30 am to 2:00 pm Monday through Thursday, and 7:30 am to 1:00 pm on Friday. The high school's

Agricultural Program

With the new campus, Connections would like to incorporate an agricultural program into their academic offerings. The agricultural program would provide students with hands-on experience in sustainable agricultural practices and would emphasize small sustainable agricultural techniques. An area of approximately 17 acres is allocated for the agricultural/cultivation area. The agricultural area comprises the eastern portion of the lower parcel. Agricultural program facilities would include greenhouses, a 6-horse barn, and cultivated gardens. Cultivated gardens would be limited to the lower section of the property, which is currently populated largely by non-native trees and weeds. Cultivated crops may include vegetables, taro, fruit trees, native plants, and ornamental plants. The agricultural program may also include some livestock (e.g., chickens, goats, pigs, and horses).

Infrastructure

Electrical, telecommunication and potable water infrastructure is available to the project site. As stated earlier, the project will achieve, at a minimum, LEED Silver certification. A higher certification will be striven for, if financially feasible. Project features to achieve LEED certification would reduce demand for electricity and potable water. These include the use of photovoltaics and an extensive rainwater catchment system. To support the rainwater catchment system, a minimum of two cisterns or tanks—a catchment tank and a reservoir tank—would be needed. These tanks are shown conceptually on Figures 2-3 and 2-5. During design development the actual number and size of these tanks would be determined based on amount of captured rainfall to be collected and the amount of reserves needed to support the campus' non-potable water uses.

The Kaūmana area is not served by a municipal wastewater system. Therefore, like all the surrounding properties, Connections would have to provide its own wastewater system as part of the project. A biological wastewater treatment system is being considered and likely will be implemented for the school. One well-known and established system is called the "Living Machine." This type of system is Connections' preferred option over a conventional septic system. Biological treatment systems are on-site, environmentally friendly systems that mimic the cleansing functions of wetlands and consist of a settling tank and series of tanks/systems (underground or aboveground, depending on the specific design of the system) that progressively clean the wastewater. Bacteria, plants, and other organisms, such as snails and fish, are used to break down and digest the organic pollutants. It is an odor free process. The end product is R-2 quality water that can be reused for non-potable uses such as some agricultural irrigation or can be released safely back into the environment. On the campus site plan, an approximately 12,000-square-foot area has been set aside for the biological treatment system. This area is shown by the dashed rectangle on Figure 2-5. This area is based on early rough estimates of wastewater volumes. However, during design development, estimated volumes would be refined as they can be based on fixtures counts and also take into account water reduction features included in the project. Thus it is expected that this set aside area would be substantially smaller in size than what is shown on the conceptual master plan.

2.1.3 Project Phasing and Construction

Full build out of the new school is projected to be completed by the year 2022. However, the timetable for development is difficult to determine, as it is highly dependent on the ability of the

school to obtain the necessary financial resources. Given the amount of money required to develop the entire property and construct all of the school's facilities, Connections proposes to develop the proposed project in phases, with each phase being initiated as funds become available. The sequence of each phase is based on a set of priorities developed by the school to meet its curriculum and operational needs. The proposed project phases and development schedule are presented below.

- Phase 1 – Construction of agricultural facilities (2011)
- Phase 2 – Construction of dormitory and caretakers residence (2012)
- Phase 3 – Construction of high school facilities (2013).
- Phase 4 – Construction of elementary/intermediate school facilities (2017-18).
- Phase 5 – Construction of gymnasium (2019)
- Phase 6 – Construction of pre-Kindergarten facilities (2022)

2.2 Alternatives Considered

In addition to the Proposed Action, No Action and three alternative design options were evaluated in the context of meeting the project's purpose and need. The alternative design options incorporate different site utilization/layout configurations. The alternative designs are described in further detail below.

2.2.1 Alternative 1 (Linear Split Campus)

The Upper Campus would house the elementary and intermediate schools, the pre-K program, the main administration building, the main cafeteria and kitchen, and a gymnasium/multi-purpose building. The pre-K program will accommodate approximately 25 students, the elementary program 167 students, and the intermediate program 107 students. Of the 37 acres which comprise the Upper Campus, approximately seven acres would be built-up including roadways, parking and buildings.

As shown in Figure 2-10, facilities on the Upper Campus would be laid out linearly, stretching across the length of the property. Buildings will be situated along a pedestrian spine with the main administrative center, the gymnasium and the cafeteria/kitchen closest to the main parking lot and Edita Street. Further up the property will be the pre-Kindergarten facilities, followed by the elementary school facilities and the intermediate school facilities at the top of the Upper Campus.

The Upper Campus will have two driveways on Edita Street, which would provide the primary vehicular access to the Upper campus and would service the main parking lot. A secondary access is proposed off of Kaūmana Drive at the upper tip of the property. This access would be limited (i.e., gated) and used primarily during the before and after school rush to accommodate traffic to/from the Puainako Extension and upper Kaumana Drive. It would also be used as secondary access/egress for emergency purposes. In addition to the main parking lot, four small parking lots would be provided to facilitate deliveries and service to the buildings located at the higher end of the Upper Campus.

**SP21-413, CONNECTIONS NEW CENTURY PUBLIC CHARTER SCHOOL/Community
Based Education Support Services (CBESS) (SPP 12-000138) (Hawaii)**

Response #6: Alternative Locations

<u>ICA, Record on Appeal, volume #:</u>	<u>Description:</u>	<u>Date:</u>	<u>Pdf page #:</u>
Part 2 of 4	Final EA: Sec. 2.3 “Alternatives Considered and Eliminated from Further Analysis”	July, 2012	129-130

2.2.4 Alternative 4 (No Action Alternative)

Under the no action alternative, Connections would continue to operate and house its elementary and intermediate schools in the Kress Building. The high school is currently located in facilities which must be vacated soon due to leasing issues. Thus, the school needs to find a new facilities to accommodate its high school operations. Once a new lease location is found, Connections would be faced with continued high rental costs in order to house its high school program. Additionally, the temporary nature and uncertainties associated with the leasing of a property could result in the interruption of services to its students and their families. Therefore, the No Action Alternative is not considered acceptable, as it would not meet the long term operational and curriculum needs for Connections.

2.3 Alternatives Considered and Eliminated from Further Analysis

2.3.1 Selection Criteria

In selecting a site for their new campus, Connections applied several selection criteria. Because the school's long-term goals included adding an agricultural program, the property had to be large enough to accommodate an approximately 20-acre cultivation area. The University of Hawai'i at Hilo has a 20-acre demonstration farm, thus twenty acres was identified as a target size for Connection's demonstration farm. Therefore, the property needed to have enough acreage to accommodate school facilities plus provide another roughly 20 acres for cultivation. Other criteria included surrounding land uses that are compatible with a school and the agricultural program; sufficient vehicle access, while staying away from major roadways; availability of public transportation, and availability of utilities.

2.3.2 Alternative Site Locations

The applicant does not own another suitable site and the land costs involved in acquiring a suitable site could be very high considering the current market. Connections conducted an extensive search of possible properties on which to develop a new school campus and found that the Kaūmana project site was the only acceptable site within the school's service area that satisfied its selection criteria. In addition, the Kaūmana project site was uniquely suited to support both an agricultural program and a conservation/forestry program.

Connections engaged DLNR to discuss the possibility of leasing state land on which to develop their new campus. DLNR forwarded a list of properties in the Hilo area for consideration by the school. Table 2-1 below lists the properties that were considered, but rejected because they did not meet the school's needs.

Table 2-1. TMKs Considered for New Campus Location

TMK	Land Area	Reason for elimination
2-4-012:009	14.37	Too small; limited access
2-4-012:010	3.99	Too small; limited access
2-5-003:020	16.29	Too small; shape of parcel not conducive for school
2-5-003:021	23.96	Too small; shape of parcel not conducive for school
2-5-006:003	28.24	Limited access; powerline easement running through property
2-5-006:142	5.76	Too small, shape of parcel not conducive for school, powerline easement running through property
2-4-001:010	13.58	Too small; fronts onto a major, high-speed road
2-4-001:011	6.19	Too small; fronts onto a major, high-speed road
2-4-003:012	159.12	Too large
2-4-003:026	102.00	Too large
2-4-003:027	6.8	Too small; no access
2-4-003:050	8.88	Too small
2-4-006:034	319.60	Too large
2-4-006:035	45.77	No access
2-4-076:036	41.2	Too far from bus route (\approx 1.3 miles)

2.3.3 Deferred Action

This alternative would delay the process of identifying, securing, and developing a site for the construction of a new campus. This would delay the lease agreement process and in turn, delay the transfer of the proposed project site to the Applicant. In addition, there would likely be an increase in planning, design, and construction costs in the future that would be financially burdensome for the applicant and could potentially preclude development of a new campus altogether.