

COLLEGES AND UNIVERSITIES RATE AGREEMENT

EIN #:

DATE: May 5, 2009

INSTITUTION:
University of Hawaii
2530 Dole Street
Sakamaki D-200
Honolulu

HI 96822

FILING REF.: The preceding Agreement was dated February 28, 2006

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

SECTION I: FACILITIES AND ADMINISTRATIVE COST RATES*

RATE TYPES: FIXED FINAL PROV. (PROVISIONAL) PRED. (PREDETERMINED)

TYPE	EFFECTIVE PERIOD		RATE (%)	LOCATIONS	APPLICABLE TO
	FROM	TO			
PRED.	07/01/08	06/30/09	38.4	On-Campus	Organized Research
PRED.	07/01/09	06/30/12	36.7	On-Campus	Organized Research
PRED.	07/01/08	06/30/12	20.6	Off-Campus	Organized Research
PRED.	07/01/08	06/30/09	27.4	On-Campus	Instruction
PRED.	07/01/09	06/30/12	27.5	On-Campus	Instruction
PRED.	07/01/09	06/30/12	20.0	Off-Campus	Instruction
PRED.	07/01/08	06/30/09	26.9	On-Campus	Other Spon Act
PRED.	07/01/09	06/30/12	25.0	On-Campus	Other Spon Act
PRED.	07/01/08	06/30/12	19.0	Off-Campus	Other Spon Act
PRED.	07/01/08	06/30/09	25.4	On-Campus	Inst. for Astronomy
PRED.	07/01/09	06/30/12	34.2	On-Campus	Inst. for Astronomy
PRED.	07/01/08	06/30/12	19.5	Off-Campus	Inst. for Astronomy
PRED.	07/01/08	06/30/09	3.1	(A)	Direct Projects
PRED.	07/01/09	06/30/12	2.7	(A)	Direct Projects
PRED.	07/01/08	06/30/09	8.9	(B)	(C)
PRED.	07/01/09	06/30/12	8.6	(B)	(C)
PRED.	07/01/08	06/30/09	53.5	(D)	Organized Research
PRED.	07/01/09	06/30/12	50.0	(D)	Organized Research
PROV.	07/01/12	UNTIL AMENDED	Use same rates and conditions as those cited for fiscal year ending June 30, 2012.		

- (A) Research Corp. of U.H.
- (B) Applied Research Laboratory
- (C) University Affiliated Research Center
- (D) Kaka'ako campus including Gold Bond Building

***BASE:**

Modified total direct costs, consisting of all salaries and wages, fringe benefits, materials, supplies, services, travel and subgrants and subcontracts up to the first \$25,000 of each subgrant or subcontract (regardless of the period covered by the subgrant or subcontract). Modified total direct costs shall exclude equipment, capital expenditures, charges for patient care, tuition remission, rental costs of off-site facilities, scholarships, and fellowships as well as the portion of each subgrant and subcontract in excess of \$25,000.

INSTITUTION:
University of Hawaii

AGREEMENT DATE: May 5, 2009

SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:

This organization charges the actual cost of each fringe benefit direct to Federal projects. However, it uses a fringe benefit rate which is applied to salaries and wages in budgeting fringe benefit costs under project proposals. The fringe benefits listed below are treated as direct costs.

TREATMENT OF PAID ABSENCES:

Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims for the costs of these paid absences are not made.

DEFINITION OF OFF-CAMPUS: A project is considered off-campus if the activity is conducted at locations other than in University owned or operated facilities and indirect costs associated with physical plant and library are not considered applicable to the project.

DEFINITION OF EQUIPMENT

Equipment is defined as tangible nonexpendable personal property having a useful life of more than one year and an acquisition cost of \$5,000 or more per unit.

The following fringe benefits are treated as direct costs:

FICA, WORKERS COMPENSATION, HEALTH/DENTAL/LIFE INSURANCE, MEDICARE, UNEMPLOYMENT INSURANCE, RETIREMENT, POST RETIREMENT BENEFITS, AND FACULTY VACATION RESERVE.

INSTITUTION:
University of Hawaii

AGREEMENT DATE: May 5, 2009

SECTION III: GENERAL

A. LIMITATIONS:

The rates in this Agreement are subject to any statutory or administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the organization were included in its facilities and administrative cost pools as finally accepted; such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as facilities and administrative costs are not claimed as direct costs; (3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the organization which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. ACCOUNTING CHANGES:

This Agreement is based on the accounting system purported by the organization to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement require prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from facilities and administrative to direct. Failure to obtain approval may result in cost disallowances.

C. FIXED RATES:

If a fixed rate is in this Agreement, it is based on an estimate of the costs for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to a rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs.

D. USE BY OTHER FEDERAL AGENCIES:

The rates in this Agreement were approved in accordance with the authority in Office of Management and Budget Circular A-21 Circular, and should be applied to grants, contracts and other agreements covered by this Circular, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

BY THE INSTITUTION:
University of Hawaii

(INSTITUTION)

J. R. Gaines

(SIGNATURE)

James R. Gaines

(NAME)

Vice President for Research

(TITLE)

MAY 12 2009

(DATE)

ON BEHALF OF THE FEDERAL GOVERNMENT:

DEPARTMENT OF HEALTH AND HUMAN SERVICES

(AGENCY)

Wallace Chan

(SIGNATURE)

Wallace Chan

(NAME)

DIRECTOR, DIVISION OF COST ALLOCATION

(TITLE)

MAY 5, 2009

(DATE) 2801

HHS REPRESENTATIVE: Jeanette Lu

Telephone: (415) 437-7820

**UNIVERSITY OF HAWAII
FACILITIES AND ADMINISTRATIVE COST RATES
FOR THE PERIOD JULY 1, 2008 THROUGH JUNE 30, 2009**

**EXHIBIT A
PAGE 1 OF 3**

	ORGANIZED RESEARCH		INSTRUCTION		OTHER SPONSORED ACTIVITIES	
	ON-CAMPUS	OFF-CAMPUS	ON-CAMPUS	OFF-CAMPUS	ON-CAMPUS	OFF-CAMPUS
BUILDING & IMPROVEMENTS	2.1%		0.4%		0.7%	
INTEREST EXPENSE	2.4%		0.2%		0.3%	
EQUIPMENT USE ALLOWANCE	0.9%		0.1%		0.4%	
OPERATIONS & MAINTENANCE	10.6%		6.1%		5.5%	
LIBRARY	1.2%		0.6%		0.7%	
GENERAL ADMIN	5.2%	5.2%	4.1%	4.1%	5.0%	5.0%
DEPT ADMIN	12.0%	12.5%	13.2%	13.3%	10.6%	10.6%
SPON PROJ ADMIN	2.9%	2.9%	2.6%	2.6%	2.6%	2.6%
STUDENT SERV ADMIN	0.2%		0.1%		0.2%	
ADMIN COMPONENTS	21.2%	<u>21.2%</u>	20.0%	<u>20.0%</u>	19.3%	<u>19.3%</u>
TOTAL	58.4%	20.6%	27.4%	20.0%	26.9%	19.0%

	ORGANIZED RESEARCH IFA		RCUH DIRECT PROJECTS	APPLIED RESEARCH LABORATORY	
	ON-CAMPUS	OFF-CAMPUS			
BUILDING & IMPROVEMENTS	0.3%		0.0%		0.0%
INTEREST EXPENSE	2.2%		0.0%		0.0%
EQUIPMENT USE ALLOWANCE	0.7%		0.0%		0.0%
OPERATIONS & MAINTENANCE	1.7%		0.3%		0.0%
LIBRARY	1.0%		0.0%		0.0%
GENERAL ADMIN	4.5%	4.5%	2.8%		4.8%
DEPT ADMIN	12.0%	12.0%	0.0%		1.5%
SPON PROJ ADMIN	2.9%	2.9%	0.0%		2.3%
STUDENT SERV ADMIN	0.1%	0.1%	0.0%		0.0%
ADMIN COMPONENTS	19.6%	<u>19.6%</u>	2.8%	<u>2.8%</u>	8.9%
TOTAL	25.4%	19.5%	3.1%		8.8%

CONCUR:



(SIGNATURE)

Vice President for Research

TITLE

MAY 12 2009

DATE

**UNIVERSITY OF HAWAII
FACILITIES AND ADMINISTRATIVE COST RATES
FOR THE PERIOD JULY 1, 2009 THROUGH JUNE 30, 2012**

**EXHIBIT A
PAGE 2 OF 3**

	ORGANIZED RESEARCH		INSTRUCTION		OTHER SPONSORED ACTIVITIES	
	ON-CAMPUS	OFF-CAMPUS	ON-CAMPUS	OFF-CAMPUS	ON-CAMPUS	OFF-CAMPUS
BUILDING & IMPROVEMENTS	3.1%		0.4%		0.3%	
INTEREST EXPENSE	0.6%		0.2%		0.1%	
EQUIPMENT USE ALLOWANCE	1.0%		0.1%		0.2%	
OPERATIONS & MAINTENANCE	10.0%		6.2%		4.4%	
LIBRARY	0.8%		0.6%		0.7%	
GENERAL ADMIN	5.2%	5.2%	4.1%	4.1%	5.9%	5.9%
DEPT ADMIN	12.9%	12.6%	13.2%	13.3%	10.6%	10.5%
SPON PROJ ADMIN	2.9%	2.9%	2.8%	2.6%	2.6%	2.6%
STUDENT SERV ADMIN	0.2%		0.1%		0.2%	
ADMIN COMPONENTS	21.2%	<u>21.2%</u> <u>20.6%</u>	20.0%	<u>20.0%</u> <u>20.0%</u>	19.3%	<u>19.3%</u> <u>19.0%</u>
TOTAL	36.7%	20.8%	27.5%	20.0%	25.0%	19.0%

	ORGANIZED RESEARCH IFA		RCUH DIRECT PROJECTS	APPLIED RESEARCH LABORATORY	
	ON-CAMPUS	OFF-CAMPUS		ON-CAMPUS	OFF-CAMPUS
BUILDING & IMPROVEMENTS	2.9%		0.0%		0.0%
INTEREST EXPENSE	1.0%		0.0%		0.0%
EQUIPMENT USE ALLOWANCE	1.1%		0.0%		0.0%
OPERATIONS & MAINTENANCE	8.0%		0.3%		0.0%
LIBRARY	0.8%		0.0%		0.0%
GENERAL ADMIN	4.5%	4.5%	2.4%		4.7%
DEPT ADMIN	12.0%	12.0%	0.0%		1.7%
SPON PROJ ADMIN	2.9%	2.9%	0.0%		2.2%
STUDENT SERV ADMIN	0.1%	0.1%	0.0%		0.0%
ADMIN COMPONENTS	19.5%	<u>19.6%</u> <u>19.5%</u>	2.4%	<u>2.4%</u>	8.6% <u>8.6%</u>
TOTAL	34.2%	19.5%	2.7%		8.6%

CONCUR:

(SIGNATURE)

JRhami

Vice President for Research

TITLE

MAY 12 2009

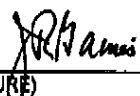
DATE

**UNIVERSITY OF HAWAII
FACILITIES AND ADMINISTRATIVE COST RATES
FOR RESEARCH PERFORMED ON THE KAKA'AKO CAMPUS
FOR THE PERIOD JULY 1, 2008 THROUGH JUNE 30, 2012**

**EXHIBIT A
PAGE 3 OF 3**

	KAKA'AKO RESEARCH		KAKA'AKO RESEARCH	
	JULY 1, 2008 - JUNE 30, 2008		JULY 1, 2009 - JUNE 30, 2012	
BUILDING & IMPROVEMENTS		3.9%		8.6%
INTEREST EXPENSE		14.1%		10.2%
EQUIPMENT USE ALLOWANCE		1.4%		1.3%
OPERATIONS & MAINTENANCE		12.6%		9.7%
LIBRARY		0.3%		0.1%
GENERAL ADMIN	5.2%		4.8%	
DEPT ADMIN	12.6%		12.3%	
SPON PROJ ADMIN	2.8%		2.8%	
STUDENT SERV ADMIN	0.2%		0.2%	
ADMIN COMPONENTS	21.2%	<u>21.2%</u>	20.2%	<u>20.2%</u>
TOTAL		63.5%		60.0%

CONCUR:



(SIGNATURE)

Vice President for Research

TITLE

MAY 12 2009

DATE

DAVID LASSNER

Vice President for Information Technology & Chief Information Officer
University of Hawaii

Education

Ph.D. in Communication and Information Sciences - University of Hawaii
M.S. in Computer Science - University of Illinois at Urbana-Champaign
A.B. in Economics - University of Illinois at Urbana-Champaign

Employment

Vice President for Information Technology & Chief Information Officer;
University of Hawaii: 2007 -
Chief Information Officer; University of Hawaii: 2003 - 2007
Progressively Responsible Technology Support & Management Positions;
University of Hawaii: 1977 - 2003

Major Extramural Project Highlights

Principal Investigator, Air Force Research Lab
Maui High Performance Computing Center (MHPCC), \$251M, 2001-2011

Co-Principal Investigator, Office of the Secretary of Defense
Pacific Disaster Center (PDC), \$18M, 2006-2009

Principal Investigator, – NSF Subaward via USC
Hawaii Connections for TransLight/PacificWave (TLPW), \$997K, 2007-2010

Principal Investigator, National Science Foundation
“HERN: Hawaii Education and Research Network,” \$2.1M, 1994-98

Professional Activity Highlights (1995 -)

EDUCAUSE: Net@Edu Advisory Board
Hawaii Broadband Task Force - Chair
Hawaii Educational Networking Consortium (HENC): co-founder
Hawaii High Technology Development Corporation: Board Member
Internet2: Board Member, Applications Strategy Council Chair
Internet Society: Education Workshop Coordinator, ThinkQuest Head Judge
Pacific Northwest Gigapop – Board Member
Pacific Telecommunications Council: President and Board Chair. Conference Chair
WICHE Western Cooperative for Educational Telecommunications
Founding Steering Committee Member, Steering Committee Chair (twice), Executive Council Member and Chair, Program Committee, Recipient of Richard W. Jonsen award for Service to Educational Telecommunications (2000)

Richard Burns
Hawaii State Librarian

On October 18, 2007, the Hawaii State Board of Education selected Richard P. Burns, Branch Manager of the Kapolei Public Library, to be Hawaii's State Librarian beginning January 1, 2008.

A long-time resident of Hawaii and an employee of the Hawaii State Public Library System since 1983, Mr. Burns holds a Bachelor of Arts degree in Political Science from the University of California at Los Angeles, a Masters of Arts in Political Science from the University of Hawaii, and a Master of Library and Information Science degree, also from the University of Hawai'i.

Mr. Burns has worked in many capacities during his twenty-six years with the state's library system, including Library Assistant, Library Technician, Children's Librarian and Bookmobile Librarian. He garnered many awards in his two most recent positions, as Branch Manager for Waimanalo Public & School Library from January 1999 to June 2003 and as Branch Manager for Kapolei Public Library from July 2003 to December 2007. Most notably, Mr. Burns was chosen by the Hawaii Library Foundation as Hawaii's Public Librarian of the Year for 2003.

While at Waimanalo, Mr. Burns worked hard to secure a sixth day of public service at a time when all public libraries were reduced to a five-days-a-week schedule due to budget cuts. By securing grants from trusts, community and philanthropic organizations, he was able to create and install native plant gardens surrounding the library, for which the library won the Betty Crocker Award for Excellence in Community Gardens.

In 2003, Mr. Burns was selected to head the newest addition and second largest public library in Hawaii, the long-anticipated Kapolei Public Library which opened in August 2004. Among his many duties was the task of filling an empty library and hiring a staff of twenty-three employees for what would become one of the busiest libraries in the state.

PROFESSIONAL PROFILE:

Thirty years of experience working with computer and telecommunications technology. Responsibilities have included executive management, supervision of technical staff, technical support & account management. IT background includes mainframe, storage, and server hardware and software systems, programming, and data base technology. Communications background includes local and long distance circuits for voice, data, video and Internet connectivity, PBXs, LANs, WANs, and data communications systems. Supervised and directed networking staff responsible for the planning, installation, and operational support of servers, local area networks, wide area networks, and voice communications. Managed application analysts and provided support for user departments. Experience includes application of statistical data analysis and design methods, and management, organizational, and administrative procedures. Industry background includes education, public sector, high technology, real estate, manufacturing, and retail.

PROFESSIONAL EXPERIENCE:2009-Present Director, Network Support Services Branch, State of Hawaii, Department of Education

The Network Support Services Branch (NSSB) is responsible for the Department's statewide telecommunications network. NSSB's activities include analysis, design & architecture, planning, installation, and maintenance of local and wide area networks, telephony, and Internet access.

2006-2009 Enterprise Account Manager, Senior Manager, Hawaiian Telcom

Product management responsibility for business access lines, long distance voice and data, and ancillary services such as voicemail and conferencing services. Duties include pricing, packaging, regulatory compliance, and internal coordination of product rollouts.

Account Manager with sales responsibility for the University of Hawaii and selected departments in the State of Hawaii. Sold communications solutions to address instructional, research, & administrative requirements.

2005-2006 V.P. Marketing & Sales, Mid Pacific Communications

Developed sales and marketing plans for wireless broadband services; established a referral partner plan to expedite penetration into commercial markets; worked with engineering to design a wireless broadband network; and engaged in direct sales of fixed and mobile wireless data services.

2002-2003 Vice-President of Nettricity, a Subsidiary of DataHouse Inc.

General management responsibility for Nettricity, a managed hosting and Internet services provider. Managed network staff to provide support for servers, local area networks, wide area networks, and Internet access. Used the Balanced Scorecard method to develop and implement a strategic plan for Nettricity; performed a financial review of the business unit, including product and pricing analysis.

1997-2002, 2003-2005 Account Executive, Time Warner Telecom

Account Executive with sales responsibility for commercial and public sector clients. Customers included AT&T Wireless, Kaiser Permanente Hawaii, and Hawaii Department of Transportation. Sold enterprise-wide solutions to address local and long-haul transpacific voice and data communications requirements. Recognized as a sales leader at TWTC's 2001 Summit of Leaders conference.

1994-1996 Technology Specialist, Technology Planning Manager, Kamehameha Schools Bishop Estate

Technology Specialist: Managed application analysts to support the real estate and financial investment groups at the estate; directed the implementation of a statewide geographic information system (GIS).

Technology Planning Manager: Managed infrastructure planning staff to evaluate new technologies to address end user requirements, and integration of new technologies into the organization's strategic IT plan. Supervised and directed network specialists to support the organization.

1978-1994 Advisory Systems Engineer, IBM Corporation

Technical responsibilities included planning, implementation, and post-implementation support for mainframe systems and applications; communications/networking (local area networks and wide area networks), servers and workstations. Technical sales support involved analysis and preparation of bid responses for complex systems integration, oral and written proposals, position papers, planning documents, benchmarks, presentations and demonstrations. Supported commercial and government accounts, including the University of Hawaii.

EDUCATION:

- Bachelor of Business Administration, Michigan State University, 1973-1977
- Extensive IBM education in mainframe, workstation, and communications systems.
- Time Warner Telecom training in switched applications, SONET transport systems, & IP-based services.

Chris Zane

Manager, Network Engineering
University of Hawaii – Information Technology Services

Work Experience

- 2009 Manager, Network Engineering
University of Hawaii, Information Technology Services

- 2007-2009 Network Engineer
University of Hawaii, Information Technology Services

- 2005-2007 IT Specialist
University of Hawaii, Information Technology Services

- 2003-2005 Director of Internet Services
NetEnterprise, Inc.

- 2000-2003 Network Operations Manager
NetEnterprise, Inc.

- 1995-2000 Network & Systems Engineer
JMCS, Inc.

Education

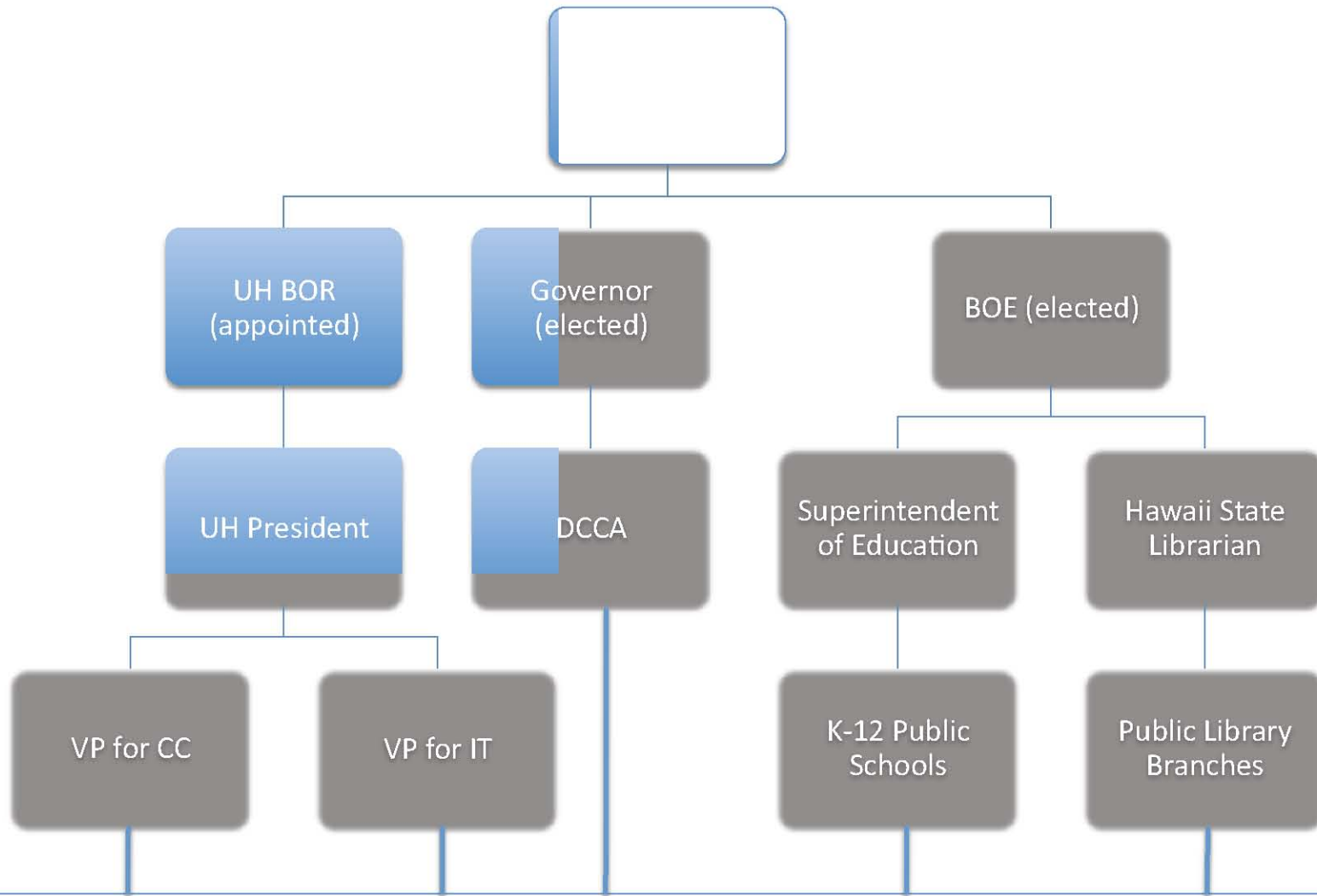
- 1994 Bachelor of Science, Civil Engineering
University of Hawaii at Manoa

Mr. Zane has worked in many capacities in the networking and Internet services fields throughout his career. He has extensive experience in deploying Internet technologies and telecommunication circuits through his responsibilities over the years.

At JMCS and NetEnterprise, Mr. Zane designed and installed various LAN and WAN networks for private customers. In 2000, he designed, built and managed NetEnterprise's data center in Honolulu, HI. The NetEnterprise data center was the first public data center in the State of Hawaii.

At the University of Hawaii, Mr. Zane oversees the engineering and management of the University's statewide network that is comprised of microwave, DWDM, and leased circuits. He was recently the project manager of a statewide 10Gbps network deployment that provided access to the DOE, University and State of Hawaii networks.

Organization Chart



Project Management Team

**BTOP Comprehensive Community Infrastructure
Subscriber Estimates Template**

Please complete the complete the Subscriber Estimates worksheet.

All applicants should indicate their 8-year subscriber forecasts with a breakdown by type of subscriber (residential/individual, businesses, community anchor institutions, third party service providers) and service offerings. The names of the service offerings should match those provided in the Service Offering and Competitor Data upload, enabling reviewers to easily cross-reference between the two documents. The Year 0 column should be used to denote any existing customers within the Proposed Funded Service Area. In addition, applicants that project that they will have third party service provider customers should include a line for parties "Served by Third Party Service Providers," showing an estimate of how many residential/individual, community anchor institution, and business customers will be served by those service providers, as demonstrated in the example below. At the bottom of the table, applicants should provide customer totals across all service offerings, with and without customers indirectly served through a third party service provider (if applicable). Applicants should also include a brief discussion of their methodology for deriving these estimates.

In contrast to several other upload templates in this application, the data provided via this template will NOT be subject to automated processing. Applicants are permitted to modify the template layout in order to provide the most effective presentation of the data for their specific project, but such modifications are generally discouraged. Applicants should, in any case, ensure that they provide at least as much detail as the provided template requires. To the extent that you modify these templates please ensure that the print layouts are adjusted so that rows do not break across pages in a manner that will be difficult to understand. A PDF of this file will be automatically generated upon upload to Easygrants, and the print settings will be used to format the PDF file.

EXAMPLE

Name of Service Offering	Customer Type	Year 0	Cumulative/ Net Add	Year 1				Year 2			
				Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Mega-Metro E - 100 Mbps	Community Anchor Inst.	0	Cumulative	0	0	0	0	5	10	17	26
			Net Add	0	0	0	0	5	5	7	9
	Business	0	Cumulative	0	0	0	0	12	27	52	82
			Net Add	0	0	0	0	12	15	25	30
	Third Party Service Provider	0	Cumulative	0	0	0	0	1	2	4	6
			Net Add	0	0	0	0	1	1	2	2
Served by Third Party Service Providers	Indirect - Res./Ind.	0	Cumulative	0	0	0	0	1000	3000	5000	10000
			Net Add	0	0	0	0	1000	2000	2000	5000
	Indirect - Business	0	Cumulative	0	0	0	0	2	8	18	30
			Net Add	0	0	0	0	2	6	10	12
	Indirect - Com. Anchor Inst.	0	Cumulative	0	0	0	0	0	2	3	5
			Net Add	0	0	0	0	0	2	1	2

Broadband Subscriber Estimates

Name of Service Offering	Customer Type	Year 0	Cumulative/ Net Add	Year 1				Year 2				Year 3				Year 4	
				Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
K-12 Public School Connectivity	Community Anchor Inst.	41	Cumulative	41	41	41	62	90	117	142	175	204	233	268	306	306	306
			Net Add	0	0	21	28	27	25	33	29	29	35	38	0	0	0
Public Library Connectivity	Community Anchor Inst.	3	Cumulative	3	3	3	11	13	15	20	25	35	45	50	50	50	50
			Net Add	0	0	8	2	2	5	5	10	10	5	0	0	0	0
Community College/University/State	Community Anchor Inst.	26	Cumulative	26	26	26	27	27	28	28	30	31	32	32	32	32	32
			Net Add	0	0	1	0	1	0	2	1	1	0	0	0	0	0
			Cumulative														
			Net Add														
			Cumulative														
			Net Add														
Cumulative Totals (excluding Indirect)	Residential/Individual		Total														
	Business		Total														
	Community Anchor Inst.		Total	70	70	70	100	130	160	190	230	270	310	350	388	388	
	Third Party Service Provider		Total														
Cumulative Totals (including Indirect)	Residential/Individual		Total														
	Business		Total														
	Community Anchor Inst.		Total	70	70	70	100	130	160	190	230	270	310	350	388	388	
			Total														

Table of Customer Types

Residential/Individual
Business
Community Anchor Inst.
Third Party Service Provider
Indirect - Res./Ind.
Indirect - Business
Indirect - Com. Anchor Inst.

Explanation of Methodology:

The estimates for determining the number of Community Anchor Institutions being connected is based on the Build Out Timeline. As sites are connected to the network and CPE equipment activated, the site is considered completed and "connected".

Name of Service Offering	Customer Type	Year 4		Year 5				Year 6				Year 7				Year 8		
		Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
K-12 Public School Connectivity	Community Anchor Inst.	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Library Connectivity	Community Anchor Inst.	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Community College/University/State	Community Anchor Inst.	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Totals (excluding Indirect)	Residential/Individual Business																	
	Community Anchor Inst.	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388
	Third Party Service Provider																	
Cumulative Totals (including Indirect)	Residential/Individual Business																	
	Community Anchor Inst.	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388

Table of Customer Types

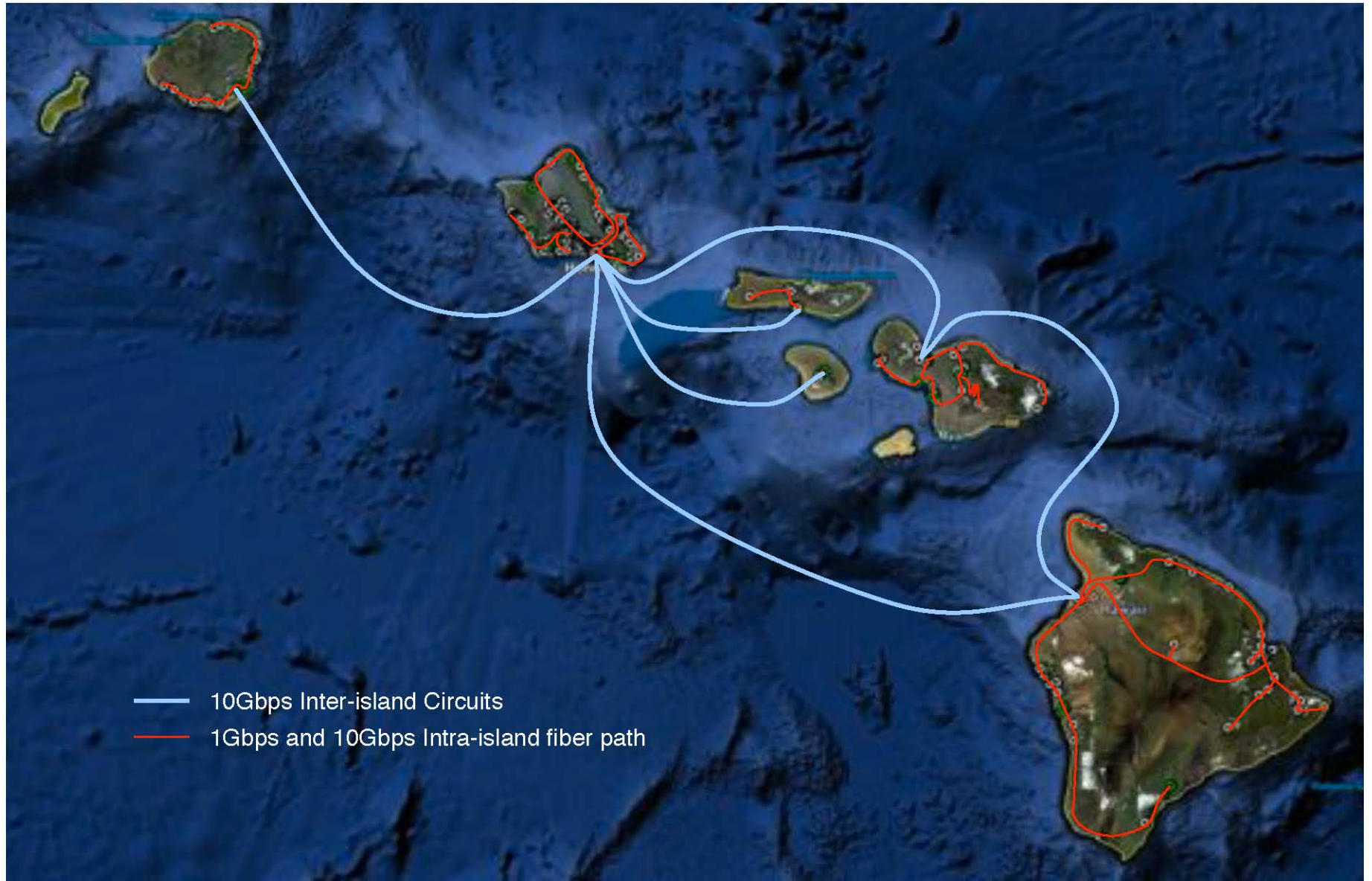
Residential/Individual Business
Community Anchor Inst.
Third Party Service Provider
Indirect - Res./Ind.
Indirect - Business
Indirect - Com. Anchor Inst.

Name of Service Offering	Customer Type	Qtr 4
K-12 Public School Connectivity	Community Anchor Inst.	306 0
Public Library Connectivity	Community Anchor Inst.	50 0
Community College/University/State	Community Anchor Inst.	32 0
Cumulative Totals (excluding Indirect)	Residential/Individual Business	
	Community Anchor Inst.	388
	Third Party Service Provider	
Cumulative Totals (including Indirect)	Residential/Individual Business	
	Community Anchor Inst.	388

Table of Customer Types

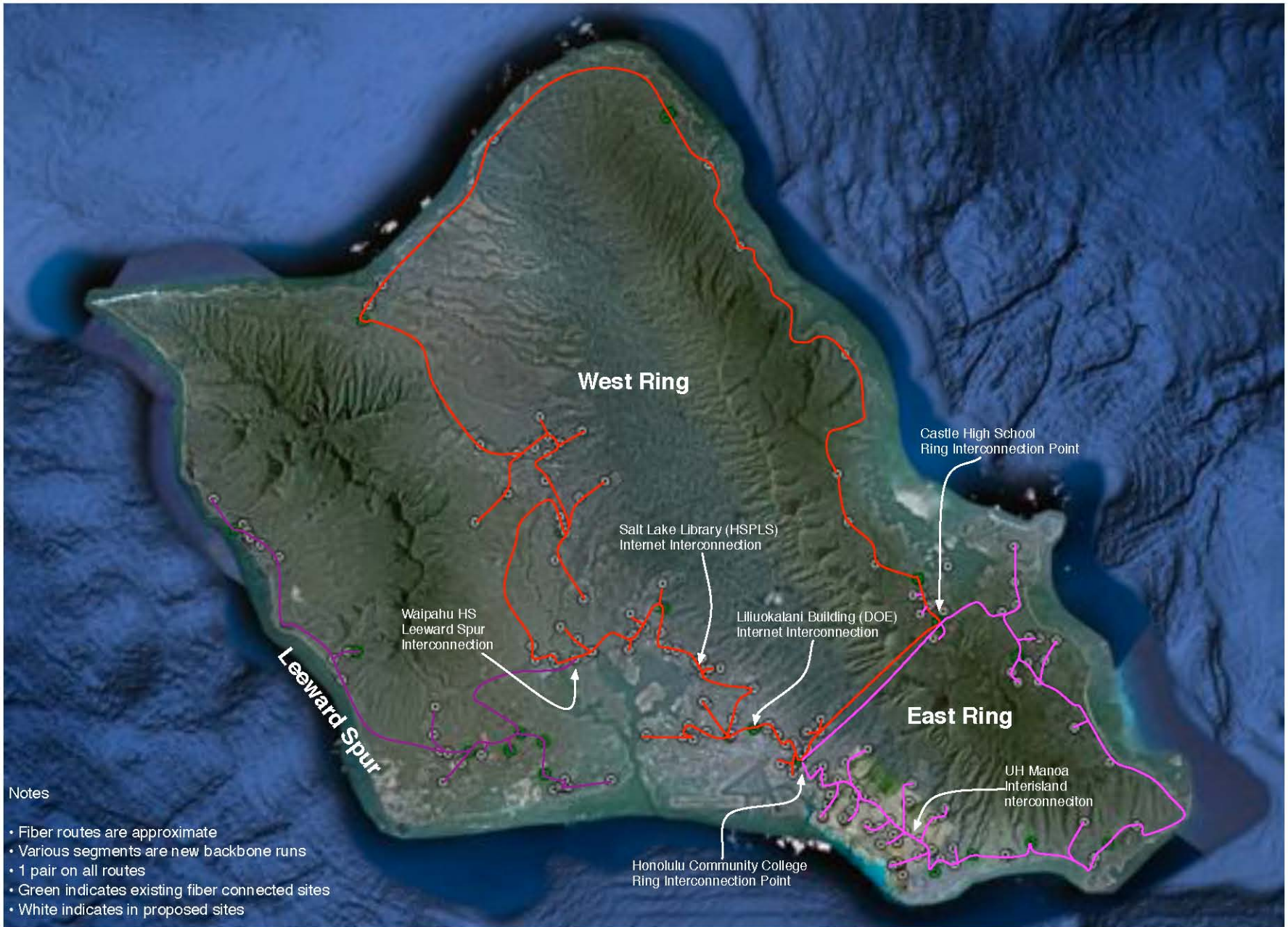
Residential/Individual Business
Community Anchor Inst.
Third Party Service Provider
Indirect - Res./Ind.
Indirect - Business
Indirect - Com. Anchor Inst.

Ke Ala 'Ike: Connecting Hawai'i's Public Schools, Community Colleges & Libraries



Network Map: State of Hawaii Network Site Map

Ke Ala 'Ike: Connecting Hawai'i's Public Schools, Community Colleges & Libraries



Network Map: Oahu : DOE & HSPLS Fiber Routes

Ke Ala 'Ike: Connecting Hawai'i's Public Schools, Community Colleges & Libraries



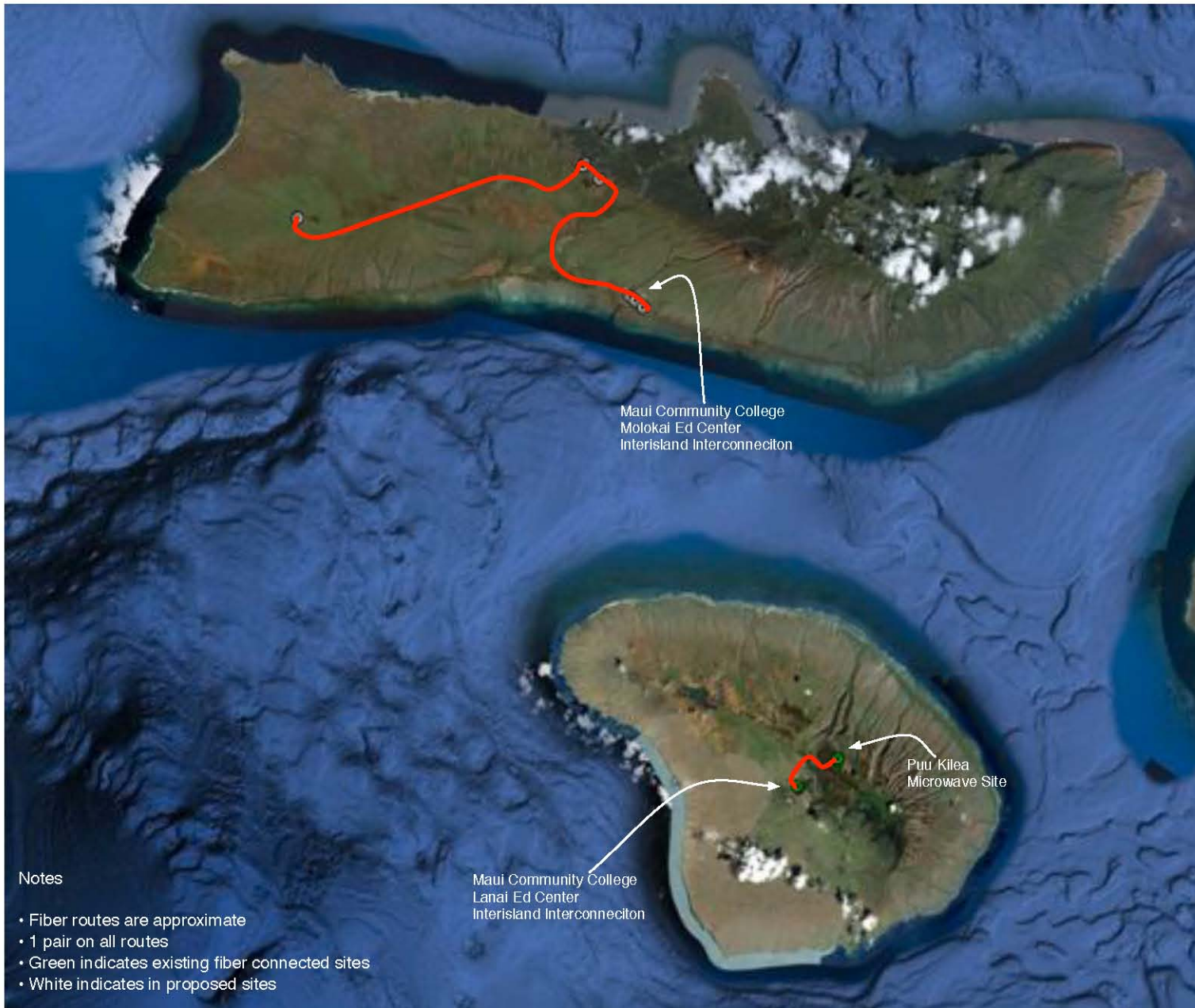
Network Map: Oahu : University of Hawaii Fiber Routes

Ke Ala 'Ike: Connecting Hawai'i's Public Schools, Community Colleges & Libraries



Network Map: Maui : DOE-HSPLS-UH Fiber Route

Ke Ala 'Ike: Connecting Hawai'i's Public Schools, Community Colleges & Libraries



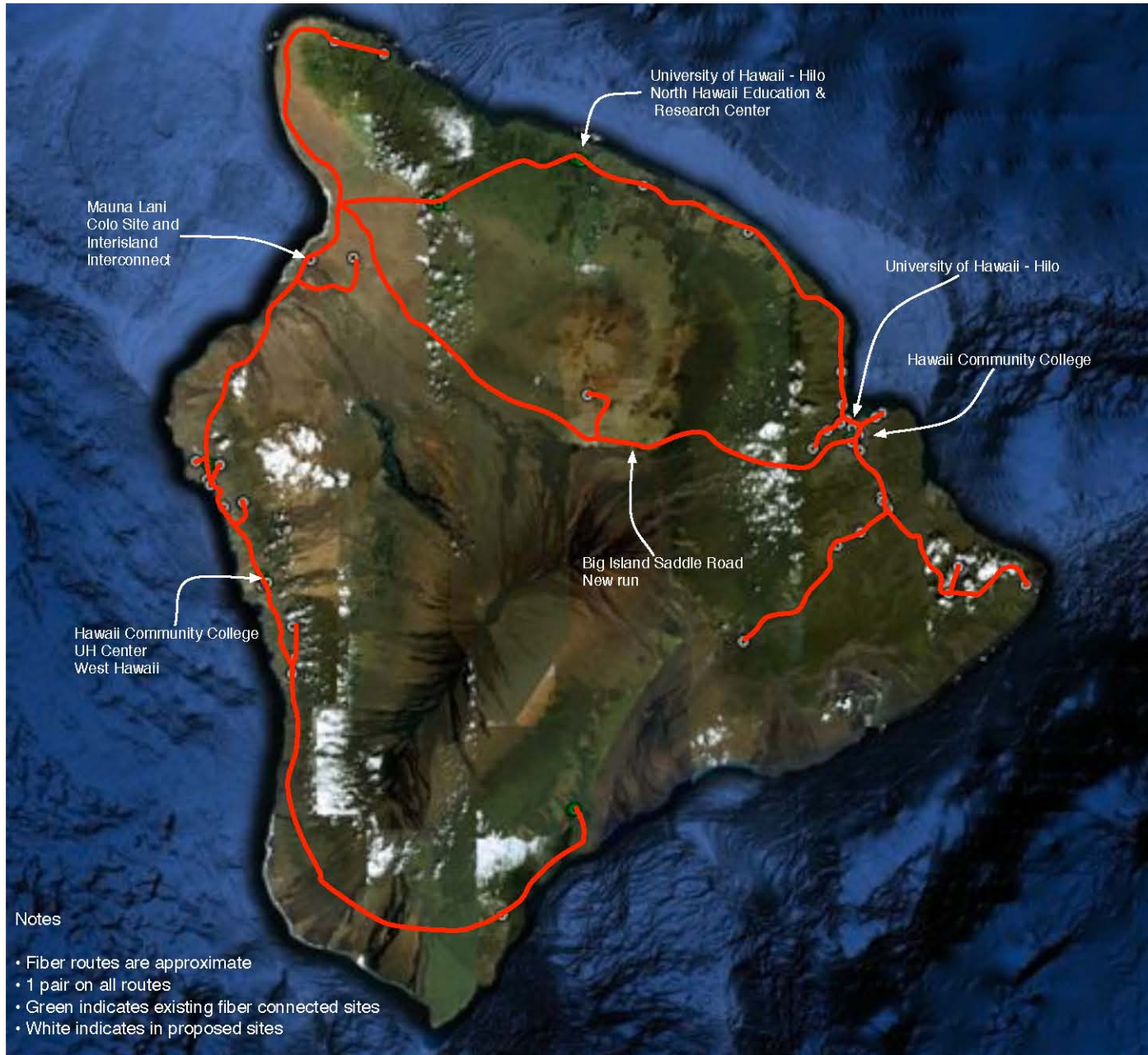
Network Map: Molokai and Lanai : DOE-HSPLS-UH Fiber Route

Ke Ala 'Ike: Connecting Hawai'i's Public Schools, Community Colleges & Libraries



Network Map: Kauai : DOE-HSPLS-UH Fiber Route

Ke Ala 'Ike: Connecting Hawai'i's Public Schools, Community Colleges & Libraries



Network Map: Big Island : DOE-HSPLS-UH Fiber Route

BTOP Comprehensive Community Infrastructure Detailed Budget

Please complete the General Budget Overview and Detailed Project Costs worksheets.

Please refer to the Comprehensive Community Infrastructure Grant Guidance for detailed instructions on the completing this upload.

Applicants are required to provide this upload as an Excel file, and not to convert it to a PDF prior to upload. Applicants should not alter the layout of the provided templates, except to insert additional line-items as needed in the Detailed Project Costs worksheet.

General Budget Overview

Budget	Federal Funding Request	Matching Funds (Cash)	Matching Funds (In-Kind)	Budget TOTAL	Last Mile Allocation	Middle Mile Allocation	Allocated TOTAL
Network & Access Equipment (switching, routing, transport, access)	\$12,374,800	\$723,200		\$13,098,000		\$13,098,000.00	\$13,098,000
Outside Plant (cables, conduits, ducts, poles, towers, repeaters, etc.)	\$20,058,000	\$7,670,000		\$27,728,000		\$27,728,000.00	\$27,728,000
Buildings and Land – (new construction, improvements, renovations, lease)	\$0			\$0			\$0
Customer Premise Equipment (modems, set-top boxes, inside wiring, etc.)	\$1,540,000	\$100,000		\$1,640,000		\$1,640,000.00	\$1,640,000
Billing and Operational Support Systems (IT systems, software, etc.)	\$0			\$0			\$0
Operating Equipment (vehicles, office equipment, other)	\$0			\$0			\$0
Engineering/Professional Services (engineering design, project management, consulting, etc.)	\$0			\$0			\$0
Testing (network elements, IT system elements, user devices, test generators, lab furnishings, servers/computers, etc.)	\$0			\$0			\$0
Site Preparation	\$0			\$0			\$0
Other	\$0			\$0			\$0
TOTAL BROADBAND SYSTEM:	\$33,972,800	\$8,493,200	\$0	\$42,466,000	\$0	\$42,466,000	\$42,466,000
Cost Share Percentage:	80.00%	20.00%	0.00%				

DETAIL OF PROJECT COSTS

PLEASE COMPLETE THE TABLE BELOW FOR THE DIFFERENT CATEGORIES OF EQUIPMENT THAT WILL BE REQUIRED FOR COMPLETING THE PROJECT. EACH CATEGORY SHOULD BE BROKEN DOWN TO THE APPROPRIATE LEVEL FOR IDENTIFYING UNIT COST

SERVICE AREA or COMMON NETWORK FACILITIES:		Match (Cash/In-kind)	Unit Cost	No. of Units	Total Cost	Last Mile Allocation	Middle Mile Allocation	Allocated Total	SF-424C Budget Category	Support of Reasonableness
NETWORK & ACCESS EQUIPMENT					\$13,098,000	\$0	\$13,098,000	\$13,098,000		
Switching	00-State-of-Hawaii	Cash Match	\$16,666.66	6	\$100,000		\$100,000.00	\$100,000	10. Equipment	Interisland 10G aggregation switches
					\$0			\$0		
Routing	00-State-of-Hawaii	Cash Match	\$13,000.00	388	\$5,044,000		\$5,044,000.00	\$5,044,000	10. Equipment	Router at each site location
					\$0			\$0		
Transport	00-State-of-Hawaii	Cash Match	\$18,000.00	388	\$6,984,000		\$6,984,000.00	\$6,984,000	10. Equipment	WDM equipment at each site location
					\$0			\$0		
Access					\$0			\$0		
					\$0			\$0		
Other	00-State-of-Hawaii	Cash Match	\$2,500.00	388	\$970,000		\$970,000.00	\$970,000	10. Equipment	UPS at each site location
					\$0			\$0		
OUTSIDE PLANT					\$27,728,000	\$0	\$27,728,000	\$27,728,000		
Cables	00-State-of-Hawaii	Cash Match		388					11. Misc.	Oceanic Time Warner Cable fiber build out
					\$0			\$0		
Conduits					\$0			\$0		
					\$0			\$0		
Ducts					\$0			\$0		
					\$0			\$0		
Poles					\$0			\$0		
					\$0			\$0		
Towers					\$0			\$0		
					\$0			\$0		
Repeaters					\$0			\$0		
					\$0			\$0		
Other	00-State-of-Hawaii	Cash Match		6					11. Misc.	Oceanic Interisland 10G circuits
	00-State-of-Hawaii	Cash Match		2					11. Misc.	Wavecom Interisland 10G circuits
					\$0			\$0		

COMMON		Match	Unit Cost	No. of	Total Cost	Last Mile	Middle Mile	Allocated Total	SF-424C Budget	Support of Reasonableness
BUILDINGS					\$0	\$0	\$0	\$0		
New Construction					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Pre-Fab Huts					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Improvements &					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Other					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
CUSTOMER PREMISE EQUIPMENT					\$1,640,000	\$0	\$1,640,000	\$1,640,000		
Modems					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Set Top Boxes					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Inside Writing					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Other	00-State-of-Hawaii	Cash Match	65600	25	\$1,640,000		1640000	\$1,640,000	10. Equipment	Distance Education Video Eqpt.
					\$0			\$0		
					\$0			\$0		
BILLING SUPPORT AND OPERATIONS SUPPORT SYSTEMS					\$0	\$0	\$0	\$0		
Billing Support					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Customer Care					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Other Support					\$0			\$0		
					\$0			\$0		
					\$0			\$0		

COMMON		Match	Unit Cost	No. of	Total Cost	Last Mile	Middle Mile	Allocated Total	SF-424C Budget	Support of Reasonableness
OPERATING EQUIPMENT					\$0	\$0	\$0	\$0		
Vehicles					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Office Equipment /					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Other					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
PROFESSIONAL SERVICES					\$0	\$0	\$0	\$0		
Engineering					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Project					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Consulting					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Other					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
TESTING					\$0	\$0	\$0	\$0		
Network					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
IT System					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
User Devices					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Test Generators					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Lab					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Servers/Computer					\$0			\$0		
					\$0			\$0		
					\$0			\$0		

COMMON		Match	Unit Cost	No. of	Total Cost	Last Mile	Middle Mile	Allocated Total	SF-424C Budget	Support of Reasonableness
OTHER UPFRONT COSTS					\$0	\$0	\$0	\$0		
Site					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Other					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
PROJECT TOTAL:					\$42,466,000	\$0	\$42,466,000	\$42,466,000		

BUDGET INFORMATION - Construction Programs

OMB Approval No. 4040-0008
Expiration Date 07/30/2010

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.

COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Columns a-b)
1. Administrative and legal expenses	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>
2. Land, structures, rights-of-way, appraisals, etc.	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>
3. Relocation expenses and payments	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>
4. Architectural and engineering fees	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>
5. Other architectural and engineering fees	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>
6. Project inspection fees	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>
7. Site work	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>
8. Demolition and removal	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>
9. Construction	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>
10. Equipment	\$ <input type="text" value="14,738,000.00"/>	\$ <input type="text" value="0.00"/>	\$ <input type="text" value="14,738,000.00"/>
11. Miscellaneous	\$ <input type="text" value="27,728,000.00"/>	\$ <input type="text" value="0.00"/>	\$ <input type="text" value="27,728,000.00"/>
12. SUBTOTAL (sum of lines 1- 11)	\$ <input type="text" value="42,466,000.00"/>	\$ <input type="text" value="0.00"/>	\$ <input type="text" value="42,466,000.00"/>
13. Contingencies	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>
14. SUBTOTAL	\$ <input type="text" value="42,466,000.00"/>	\$ <input type="text" value="0.00"/>	\$ <input type="text" value="42,466,000.00"/>
15. Project (program) income	\$ <input type="text" value="0.00"/>	\$ <input type="text" value="0.00"/>	\$ <input type="text" value="0.00"/>
16. TOTAL PROJECT COSTS (subtract #15 from #14)	\$ <input type="text" value="42,466,000.00"/>	\$ <input type="text" value="0.00"/>	\$ <input type="text" value="42,466,000.00"/>
FEDERAL FUNDING			
17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share.) Enter eligible costs from line 16c Multiply X <input type="text" value="100"/> % Enter the resulting Federal share.			\$ <input type="text" value="42,466,000.00"/>

ASSURANCES - CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0042), Washington, DC 20503.

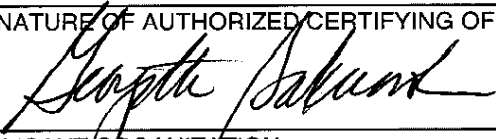
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Awarding Agency. Further, certain Federal assistance awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will not dispose of, modify the use of, or change the terms of the real property title, or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal interest in the title of real property in accordance with awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progress reports and such other information as may be required by the assistance awarding agency or State.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
10. Will comply with all Federal statutes relating to non-discrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
12. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333) regarding labor standards for federally-assisted construction subagreements.
14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
19. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL 		TITLE Administrative Officer	
APPLICANT ORGANIZATION UNIVERSITY OF HAWAII		DATE SUBMITTED MAR 17 2010	

BTOP Comprehensive Community Infrastructure Pro Forma Financial Projections

Please complete the Income Statement, Balance Sheet, Cash Flows, and NPV-IRR Table worksheets. Key assumptions used to formulate these financial projections should be listed in the Key Assumptions worksheet. Please note that these are **project-specific** projections, in contrast to the historical financial information which is provided at the organizational level.

Please refer to the Comprehensive Community Infrastructure Grant Guidance for detailed instructions on the completing this attachment.

Applicants are required to provide this attachment as an Excel file, and not to convert it to a PDF when submitting a copy of their application on an appropriate electronic medium, such as a DVD, CD-ROM, or flash drive. Applicants may make adjustments to the format of the templates as necessary to provide the most effective presentation of the data for their specific project, but should not remove major headings (*e.g.* Revenues and Expenses on the Income Statement) or provide less detailed information than would be required to complete the provided templates.

Balance Sheet

Assets	Forecast Period							
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Current Assets								
Cash	\$ 35,917,000	\$ 8,139,471	\$ 3,180,943	\$ 3,180,943	\$ 3,180,943	\$ 3,180,943	\$ 3,180,943	\$ 3,180,943
Marketable Securities	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accounts Receivable	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Notes Receivable	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Inventory	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Prepayments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Current Assets	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Current Assets	\$ 35,917,000	\$ 8,139,471	\$ 3,180,943	\$ 3,180,943	\$ 3,180,943	\$ 3,180,943	\$ 3,180,943	\$ 3,180,943
Non-Current Assets								
Long-Term Investments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortizable Asset (Net of Amortization)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Plant in Service	\$ 6,549,000	\$ 13,098,000	\$ 13,098,000	\$ 13,098,000	\$ 13,098,000	\$ 13,098,000	\$ 13,098,000	\$ 13,098,000
Less: Accumulated Depreciation	\$ -	\$ (935,571)	\$ (2,806,714)	\$ (4,677,857)	\$ (6,549,000)	\$ (8,420,143)	\$ (10,291,286)	\$ (12,162,429)
Net Plant	\$ 6,549,000	\$ 12,162,429	\$ 10,291,286	\$ 8,420,143	\$ 6,549,000	\$ 4,677,857	\$ 2,806,714	\$ 935,571
Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Non-Current Assets	\$ 6,549,000	\$ 12,162,429	\$ 10,291,286	\$ 8,420,143	\$ 6,549,000	\$ 4,677,857	\$ 2,806,714	\$ 935,571
Total Assets	\$ 42,466,000	\$ 20,301,900	\$ 13,472,229	\$ 11,601,086	\$ 9,729,943	\$ 7,858,800	\$ 5,987,657	\$ 4,116,514
Liabilities and Owners' Equity								
Liabilities								
Current Liabilities								
Accounts Payable	\$ 35,917,000	\$ 7,203,900	\$ 1,309,800	\$ 1,309,800	\$ 1,309,800	\$ 1,309,800	\$ 1,309,800	\$ 1,309,800
Notes Payable	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Current Liabilities	\$ 6,549,000	\$ 13,098,000	\$ 12,162,429	\$ 10,291,286	\$ 8,420,143	\$ 6,549,000	\$ 4,677,857	\$ 2,806,714
Total Current Liabilities	\$ 42,466,000	\$ 20,301,900	\$ 13,472,229	\$ 11,601,086	\$ 9,729,943	\$ 7,858,800	\$ 5,987,657	\$ 4,116,514
Long-Term Liabilities								
Long Term Notes Payable	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Long Term Liabilities	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Long-Term Liabilities	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Liabilities	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Owner's Equity								
Capital Stock	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Additional Paid-In Capital	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retained Earnings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Equity	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Liabilities and Owner's Equity	\$ 42,466,000	\$ 20,301,900	\$ 13,472,229	\$ 11,601,086	\$ 9,729,943	\$ 7,858,800	\$ 5,987,657	\$ 4,116,514

NPV/IRR Table

	Net Present Value	Internal Rate of Return
Without BTOP Funding	-\$43,158,970.66	
With BTOP Funding	\$10,303,850.75	

total npv uh/matching funds	\$20,344,238.80
total npv grant funds	\$33,118,582.61
total	<u>\$53,462,821.41</u>

Revenue Assumptions	
Factor	Specific Metric Used in Analysis
Customers Passed	
Anchor Institutions - Segment A	388
Anchor Institutions - Segment B	
Businesses	99,000
Households	403,000
Last Mile Providers	
Other	
Take Rate (should likely vary across 8-Year Forecast)	
Anchor Institutions - Segment A	
Anchor Institutions - Segment B	
Businesses	
Households	
Last Mile Providers	
Direct Customer Connections	
Customer Segment A	
Customer Segment B	
Other	
Average Revenue per User (may vary across 8-year forecast)	
Anchor Institutions - Segment A	
Anchor Institutions - Segment B	
Businesses	
Households	
Last Mile Providers	
Other	Maintenance and depreciation expenses

Expense Assumptions	
Factor	Specific Metric Used in Analysis
Network Expenses	Based on vendor list prices with our standard discounts app
Backhaul	Based on quote from vendor
Maintenance	Estimate based on 10%/year of initial purchase price

Utilities	
Leasing	
Depreciation	Seven (7) year lifetime for network equipment, a mix of DWDM gear, routers, and switches
Other	This is video conferencing equipment that is less than \$5000 each and thus not depreciable
Sales & Marketing	
Advertising	
Commissions	
Salaries	
Other	
Customer Care & Billing	
Systems	
Personnel	
Other	
General & Administrative	
Professional Services	
Insurance	
Non-Network Utilities	
Travel	
Supplies	
Miscellaneous	
Interest Expenses	
Debt Instrument A	
Debt Instrument B	
Taxes	
Federal Tax Rate	
Other Tax Rates	

Rationale (Cite Basis)

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Anchor Institutions reflect all Public Schools, Libraries, and community colleges

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Service Area reflects entire state of hawaii.

Service Area reflects entire state of hawaii and anchor institutions serve all households in state.

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The applicant is the University of Hawaii System; the partners are the Hawaii State Public Library System, the Hawaii Department of Education, and the Hawaii Department of Commerce and
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Rationale (Cite Basis)

Based on our experience

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Based on our experience

BTOP Comprehensive Community Infrastructure Project Plan and Build-out Timeline

Please complete the Project Plan and Build-out Timeline templates below. Note that these templates may be modified by applicants in order to provide the most effective presentation of the data for their specific project. Applicants should ensure, however, that they provide at least as much detail as the provided templates require.

For system stability reasons, it is recommended that you provide this upload in PDF format. This instruction page need not be included in the upload.

PROJECT PLAN

- Use the following table to list the major network build-out phases and milestones that can demonstrate that your entire project will be substantially complete by the end of Year 2 and fully complete by the end of Year 3. This is to be done at the aggregate level (combining all proposed funded service areas.)
- Indicated how the milestones listed below will demonstrate these completion objectives. The applicant should consider such project areas as: a) network design; b) securing all relevant licenses and agreements; c) site preparation; d) inside plant deployment; e) outside plan deployment; f) deployment of business & operational support systems; g) network testing; f) network operational. The applicant may provide any other milestones that it believes showcase progress.
- Project inception (Year 0) starts at the date when the applicant receives notice that the project has been approved for funding.
- In the table, provide any information (e.g., facts, analysis) to: a) demonstrate the reasonableness of these milestones; b) substantiate the ability to reach the milestones by the quarters indicated.

Time Period	Quarter	Milestones	Support for Reasonableness/Data Points
Year 0	-	<ul style="list-style-type: none"> • Finalize all contacts with contractors. • Finalize timelines and buildout schedules • Finalize equipment deployments and quantities 	<ul style="list-style-type: none"> •
Year 1	Qtr. 1	<ul style="list-style-type: none"> • Begin fiber buildout on all islands, starting with core sites and moving outwards • Begin channel migration on existing INET rings • Order first half of WDM, router and UPS equipment • Payments to Oceanic for fiber and interisland network/circuits • Payments to Wavecom for Interisland circuits 	<ul style="list-style-type: none"> • All major islands have separate engineering and construction crews so all can be running at the same time. Work will be done from the primary island interconnect point and move outward. • Migration of existing channels on the ring does not affect fiber build out. • WDM, router and UPS equipment orders are expected to take 30 days to complete.
	Qtr. 2	<ul style="list-style-type: none"> • Turn up Interisland 10G links • Begin to install UPS, WDM chassis and cards at sites available • Preconfigure routers 	<ul style="list-style-type: none"> • Turn up the Interisland 10G networks and connect to aggregation switches. • WDM Chassis installs begin at most locations, regardless of fiber completion (pre-staging equipment) • Routers that are received will be preconfigured, labeled and packed for shipment

	Qtr. 3	<ul style="list-style-type: none"> • Turn up completed fiber sites with WDM and routers • Continue to install UPS, WDM chassis • Continue to preconfigure routers 	<ul style="list-style-type: none"> • As sites are completed, they will be turned up and activated on the ring. • Continue WDM Chassis installs locations, regardless of fiber completion (pre-staging equipment)
	Qtr. 4	<ul style="list-style-type: none"> • Turn up completed fiber sites with WDM and routers • Continue to install UPS, WDM chassis • Continue to preconfigure routers 	<ul style="list-style-type: none"> • As sites are completed, they will be turned up and activated on the ring. • Continue WDM Chassis installs locations, regardless of fiber completion (pre-staging equipment)
Year 2	Qtr. 1	<ul style="list-style-type: none"> • Turn up completed fiber sites with WDM and routers • Continue to install UPS, WDM chassis • Continue to preconfigure routers • Order second half of WDM, router and UPS equipment 	<ul style="list-style-type: none"> • As sites are completed, they will be turned up and activated on the ring. • Continue WDM Chassis installs locations, regardless of fiber completion (pre-staging equipment)
	Qtr. 2	<ul style="list-style-type: none"> • Turn up completed fiber sites with WDM and routers • Continue to install UPS, WDM chassis • Continue to preconfigure routers 	<ul style="list-style-type: none"> • As sites are completed, they will be turned up and activated on the ring. • Continue WDM Chassis installs locations, regardless of fiber completion (pre-staging equipment)
	Qtr. 3	<ul style="list-style-type: none"> • Turn up completed fiber sites with WDM and routers • Continue to install UPS, WDM chassis • Continue to preconfigure routers 	<ul style="list-style-type: none"> • As sites are completed, they will be turned up and activated on the ring. • Continue WDM Chassis installs locations, regardless of fiber completion (pre-staging equipment)
	Qtr. 4	<ul style="list-style-type: none"> • Turn up completed fiber sites with WDM and routers • Continue to install UPS, WDM chassis • Continue to preconfigure routers 	<ul style="list-style-type: none"> • As sites are completed, they will be turned up and activated on the ring. • Continue WDM Chassis installs locations, regardless of fiber completion (pre-staging equipment)
Year 3	Qtr. 1	<ul style="list-style-type: none"> • Turn up completed fiber sites with WDM and routers • Continue to install UPS, WDM chassis • Continue to preconfigure routers 	<ul style="list-style-type: none"> • As sites are completed, they will be turned up and activated on the ring.
	Qtr. 2	<ul style="list-style-type: none"> • Turn up completed fiber sites with WDM and routers • Continue to install UPS, WDM chassis • Continue to preconfigure routers 	<ul style="list-style-type: none"> • As sites are completed, they will be turned up and activated on the ring.

	Qtr. 3	<ul style="list-style-type: none">• Turn up completed fiber sites with WDM and routers	<ul style="list-style-type: none">• As sites are completed, they will be turned up and activated on the ring.
	Qtr. 4	<ul style="list-style-type: none">• Finish turning up completed fiber sites with WDM and routers	<ul style="list-style-type: none">• As sites are completed, they will be turned up and activated on the ring.

BUILD-OUT TIMELINE

Complete the following schedule for *each* Last Mile or Middle Mile Service Area to note the degree of build-out, based on: a) infrastructure funds awarded; b) entities passed (households, businesses, and community anchor institutions.). In addition, please complete a schedule that aggregates the build-out timeline across all of the Proposed Funded Service Area.

Service Area	[Fill Name]												
	YEAR 0	YEAR 1				YEAR 2				YEAR 3			
		Qtr. 1	Qtr. 2	Qtr. 3	Qtr. 4	Qtr. 1	Qtr. 2	Qtr. 3	Qtr. 4	Qtr. 1	Qtr. 2	Qtr. 3	Qtr. 4
Infrastructure Funds													
Infrastructure Funds Advanced (estimate)	0	34.5M	0	0	0	7.9M	0	0	0	0	0	0	0
Percentage of Total Funds	0	80	80	80	80	100	100	100	100	100	100	100	100
Entities Passed & %													
Households	70k	0	0	35k	35k	35k	35k	38k	38k	38k	38k	38k	0
Percentage of Total Households	17	17	17	26	35	44	52	62	72	81	90	100	100
Businesses	17k	0	0	8k	8k	8k	8k	10k	10k	10k	10k	10k	0
Percentage of Total Businesses	17	17	17	25	33	41	50	60	70	80	90	100	100
Community Anchor Institutions	70	0	0	30	30	30	30	40	40	40	40	42	0
Percentage of Total Institutions	17	17	17	25	33	41	48	58	69	79	89	100	100