



**STATE OF VERMONT**  
JOINT FISCAL OFFICE

**MEMORANDUM**

To: James Reardon, Commissioner of Finance & Management  
From: Nathan Lavery, Fiscal Analyst  
Date: November 5, 2009  
Subject: JFO #2399, #2401, #2403

The Joint Fiscal Committee has reviewed the following items and agreed to waive the remainder of the statutory review period and consider the Governor's approval of the items as final:

**JFO #2399** — \$130,000 grant from the U.S. Department of Justice to the Department of Public Safety. These grant funds will be used to hire one intelligence analyst who will be assigned to the Vermont Fusion Center (VTFC) to support rural law enforcement investigations in Vermont. This grant is a competitive award under the American Recovery and Reinvestment Act (ARRA).  
[JFO received 10/13/09]

**JFO #2401** — Award from the U.S. Internal Revenue Service to Office of the State Treasurer. Acceptance of this request will allow for federal reimbursement to the issuer of 45% of the interest cost of these bonds; the preliminary estimated value of this subsidy is approximately \$9 million. This award is part of the American Recovery and Reinvestment Act (ARRA) and expedited approval of this item has been requested.  
[JFO received 10/21/09]

**JFO #2403** — \$355,435 grant from the Vermont Center for Geographic Information (VCGI) to the Department of Public Service. These grant funds will be used to fully fund 1.0 FTE position for a three year period to support the activities of the Vermont Broadband Mapping Initiative. Expedited approval of this item was requested subsequent to JFO receipt. Approval of this item was granted only after VCGI had been notified of the grant award.  
[JFO received 10/21/09]

We ask that you inform the Secretary of Administration and your staff of this action.

cc: Thomas Tremblay, Commissioner  
Jeb Spaulding, Treasurer  
David O'Brien, Commissioner  
Mel Adams, Chief Recovery Officer



**STATE OF VERMONT**  
JOINT FISCAL OFFICE

**MEMORANDUM**

To: Joint Fiscal Committee Members  
From: Nathan Lavery, Fiscal Analyst  
Date: October 21, 2009  
Subject: Grant Requests

Enclosed please find six (6) requests that the Joint Fiscal Office has received from the administration:

**JFO #2401** — Award from the U.S. Internal Revenue Service to Office of the State Treasurer. The American Recovery and Reinvestment Act allocated \$90 million of bonding authority to Vermont for use as Recovery Zone Economic Development Bonds. Acceptance of this request will allow for federal reimbursement to the issuer of 45% of the interest cost of these bonds; the preliminary estimated value of this subsidy is approximately \$9 million. **This award is part of the American Recovery and Reinvestment Act (ARRA) and expedited approval of this item has been requested.** The Joint Fiscal Committee members will be contacted within two weeks with a request to waive the statutory review period and accept this item.

*[JFO received 10/21/09]*

**JFO #2402** — \$500,000 grant from the U.S. Department of Energy to Education Department. These grant funds will be distributed to local school districts for the installation of solar panels.

*[JFO received 10/21/09]*

**JFO #2403** — \$355,435 grant from the Vermont Center for Geographic Information (VCGI) to the Department of Public Service. **These grant funds will be used to fully fund 1.0 FTE position for a three year period** to support the activities of the Vermont Broadband Mapping Initiative. VCGI received funding from the American Recovery and Reinvestment Act to support this project.

*[JFO received 10/21/09]*

**JFO #2404** — \$105,876 grant from the Federal Emergency Management Agency (FEMA) to Department of Public Safety. These grant funds will be used to provide financial assistance to implement measures that will permanently reduce or eliminate future damage from natural hazards through safer building practices and improving existing structures.

*[JFO received 10/21/09]*

**JFO #2405** — \$1,000,000 grant from the Federal Emergency Management Agency (FEMA) to Department of Public Safety. These grant funds will be used renovate and equip the Emergency Operations Center (EOC) at Public Safety headquarters in Waterbury.

*[JFO received 10/21/09]*

**JFO #2406** — \$1,770,018 grant from the Center for Disease Control and Prevention to Department of Health. These grant funds will be to establish and maintain a tracking network for obtaining health and environmental data to improve health in communities. **Three (3) limited service position requests are associated with this request.**

*[JFO received 10/21/09]*

The Joint Fiscal Office has reviewed these submissions and determined that all appropriate forms bearing the necessary approvals are in order. In accordance with the procedures for processing such requests, we ask you to review the enclosed and notify the Joint Fiscal Office (Nathan Lavery at (802) 828-1488; [nlavery@leg.state.vt.us](mailto:nlavery@leg.state.vt.us)) if you have questions or would like an item held for Joint Fiscal Committee review. Unless we hear from you to the contrary by November 4 we will assume that you agree to consider as final the Governor's acceptance of these requests.

cc: James Reardon, Commissioner  
Jeb Spaulding, Treasurer  
Armando Vilaseca, Commissioner  
David O'Brien, Commissioner  
Thomas Tremblay, Commissioner  
Wendy Davis, Commissioner



**State of Vermont**  
 Department of Finance & Management  
 109 State Street, Pavilion Building  
 Montpelier, VT 05620-0401

Agency of Administration

[phone] 802-828-2376  
 [fax] 802-828-2428

**STATE OF VERMONT  
 FINANCE & MANAGEMENT GRANT REVIEW FORM**

**Grant Summary:** American Recovery and Reinvestment Act (ARRA) award from the federal Department of Energy to the Vermont Center for Geographic Information (VCGI) will be sub-granted (using a contract) to the Department of Public Service to provide support for the grant's State Broadband Data and Development program. Use of a grant application was deemed appropriate for the Joint Fiscal Committee's consideration and approval of receipt of this funding from VCGI.

**Date:** 9/29/2009

**Department:** Department of Public Service

**Legal Title of Grant:** Vermont Center for Geographic Information contract #DPS-BBM 09-01

**Federal Catalog #:** NA

**Grant/Donor Name and Address:** Vermont Center for Geographic Information

**Grant Period:** **From:** 9/15/2009 **To:** 12/31/2013

**Grant/Donation:** \$518,547

	SFY 1	SFY 2	SFY 3	Total	Comments
<b>Grant Amount:</b>	\$121,755	\$116,840	\$116,840	\$355,435	

Position Information:	# Positions	Explanation/Comments
	1	Telecommunications Infrastructure Specialist

**Additional Comments:**

<b>Department of Finance &amp; Management</b>	<i>JA 10/15/09</i>	(Initial) <i>DB 9-29-09</i>
<b>Secretary of Administration</b>	<i>TP 10/15/09</i>	(Initial)
<b>Sent To Joint Fiscal Office</b>		Date <i>10/9/09</i>

**RECEIVED**  
 OCT 21 2009  
 JOINT FISCAL OFFICE

**STATE OF VERMONT  
Joint Fiscal Committee Review  
Limited Service - Grant Funded  
Position Request Form**

This form is to be used by agencies and departments when additional grant funded positions are being requested. Review and approval by the Department of Human Resources must be obtained prior to review by the Department of Finance and Management. The Department of Finance will forward requests to the Joint Fiscal Office for JFC review. A Request for Classification Review Form (RFR) and an updated organizational chart showing to whom the new position(s) would report must be attached to this form. Please attach additional pages as necessary to provide enough detail.

Agency/Department: Public Service Department Date: 09/29/2009

Name and Phone (of the person completing this request): Sheri Rockcastle 802-828-4084

Request is for:

- Positions funded and attached to a new grant.  
 Positions funded and attached to an existing grant approved by JFO # \_\_\_\_\_

1. Name of Granting Agency, Title of Grant, Grant Funding Detail (attach grant documents):

Vermont Center for Geographic Information Contract # DPS-BBM 09-01 for the Vermont Broadband Mapping Initiative

The PSD is a partner organization with VCGI in Vermont's only application for funding from the National Telecommunications and Information Administration's (NTIA) State Broadband Data and Development Grant Program, a program funded under the American Recovery and Reinvestment Act. VCGI is named in the proposal as the lead applicant and the prime recipient of the grant from NTIA. VCGI and PSD have entered into a contract that will allow VCGI to pay PSD in support of activities undertaken for the Vermont Broadband Mapping Initiative. Please find attached to this memo a copy of the contract between VCGI and the PSD, which is being submitted in lieu of a Notice of Award and Grant Agreement. Also please find the copy of the VCGI grant proposal to NTIA, which includes the overall grant budget.

2. List below titles, number of positions in each title, program area, and limited service end date (information should be based on grant award and should match information provided on the RFR) position(s) will be established only after JFC final approval:

<u>Title* of Position(s) Requested</u>	<u># of Positions</u>	<u>Division/Program</u>	<u>Grant Funding Period/Anticipated End Date</u>
Telecommunications Infrastructure Specialist	1	Telecommunications	October 15, 2009-October 7, 2012

\*Final determination of title and pay grade to be made by the Department of Human Resources Classification Division upon submission and review of Request for Classification Review.

3. Justification for this request as an essential grant program need:

The NTIA and the Rural Utilities Service of the U.S. Dept. of Agriculture are encouraging applicants to their broadband stimulus programs to use state broadband mapping data. PSD has experience in broadband data collection and unique familiarity with telecommunications infrastructure, making it the best-suited organization in Vermont to be responsible for this role. However, the level of data quality, granularity, and frequency expected cannot be achieved without additional resources than the state has devoted to this activity to date. Funding is available through the federal grant to be awarded to VCGI. Without accepting this funding, broadband availability in Vermont will be less accurately represented, harming applications for broadband stimulus funding in Vermont, as well as hampering state and federal broadband planning efforts.

I certify that this information is correct and that necessary funding, space and equipment for the above position(s) are available (required by 32 VSA Sec. 5(b)).

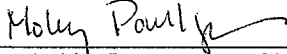
STATE OF VERMONT  
Joint Fiscal Committee Review  
Limited Service - Grant Funded  
Position Request Form



9-30-09

Signature of Agency or Department Head

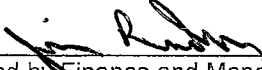
Date



10/2/09

Approved/ Denied by Department of Human Resources

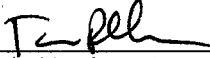
Date



10/5/09

Approved/ Denied by Finance and Management

Date



10/5/09

Approved/Denied by Secretary of Administration

Date

Comments:

**STATE OF VERMONT REQUEST FOR GRANT ACCEPTANCE (Form AA-1)**

BASIC GRANT INFORMATION				
<b>1. Agency:</b>				
<b>2. Department:</b>		Public Service Department (PSD)		
<b>3. Program:</b>		Vermont Broadband Mapping Initiative		
<b>4. Legal Title of Grant:</b>		Vermont Center for Geographic Information Contract # DPS-BBM 09-01		
<b>5. Federal Catalog #:</b>				
<b>6. Grant/Donor Name and Address:</b>				
Vermont Center for Geographic Information (VCGI)				
58 South Main Street				
Suite 2				
Waterbury, VT 05676				
<b>7. Grant Period:</b>		<b>From:</b>	9/15/2009	<b>To:</b> 12/31/2013
<b>8. Purpose of Grant:</b>				
<p>The PSD is a partner organization with VCGI in Vermont's only application for funding from the National Telecommunications and Information Administration's (NTIA) State Broadband Data and Development Grant Program, a program funded under the American Recovery and Reinvestment Act. VCGI is named in the proposal as the lead applicant and the prime recipient of the grant from NTIA. VCGI and PSD have entered into a contract that will allow VCGI to pay PSD in support of activities undertaken for the Vermont Broadband Mapping Initiative, principally the collection of data from broadband service providers and some telephone survey work. The contract is principally intended to fully fund 1 FTE position for a three year period, as well as other expenses.</p>				
<b>9. Impact on existing program if grant is not Accepted:</b>				
<p>The NTIA and the Rural Utilities Service of the U.S. Dept. of Agriculture are encouraging applicants to their broadband stimulus programs to use state broadband mapping data. PSD has experience in broadband data collection and unique familiarity with telecommunications infrastructure, making it the best-suited organization in Vermont to be responsible for this role. However, the level of data quality, granularity, and frequency expected cannot be achieved without additional resources than the state has devoted to this activity to date. Funding is available through the federal grant to be awarded to VCGI. Without accepting this funding, broadband availability in Vermont will be less accurately represented, harming applications for broadband stimulus funding in Vermont, as well as hampering state and federal broadband planning efforts.</p>				
10. BUDGET INFORMATION				
	SFY 1	SFY 2	SFY 3	Comments
Expenditures:	FY 2010	FY 2011	FY 2012	
Personal Services	\$87,630	\$116,840	\$116,840	1 FTE, starting around 10/1/2009
Operating Expenses	\$64,125	\$	\$	Includes survey expenses
Grants	\$	\$	\$	
<b>Total</b>	\$	\$	\$	
Revenues:				
State Funds:	\$30,000	\$	\$	From funds already budgeted for Telplan

**STATE OF VERMONT REQUEST FOR GRANT ACCEPTANCE (Form AA-1)**

				survey
Cash	\$	\$	\$	
In-Kind	\$	\$	\$	
Federal Funds:	\$	\$	\$	
(Direct Costs)	\$	\$	\$	
(Statewide Indirect)	\$	\$	\$	
(Departmental Indirect)	\$	\$	\$	
Other Funds:	\$	\$	\$	
Grant (source VCGI)	\$121,755	\$116,840	\$116,840	
<b>Total</b>	\$	\$	\$	

<b>Appropriation No:</b>	2240000000	<b>Amount:</b>	\$121,755
			\$
			\$
			\$
			\$
			\$
			\$
		<b>Total</b>	\$121,755

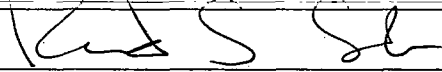
**PERSONAL SERVICE INFORMATION**

**11. Will monies from this grant be used to fund one or more Personal Service Contracts?**  Yes  No  
 If "Yes", appointing authority must initial here to indicate intent to follow current competitive bidding process/policy.  
 Appointing Authority Name: \_\_\_\_\_ Agreed by: \_\_\_\_\_ (initial)

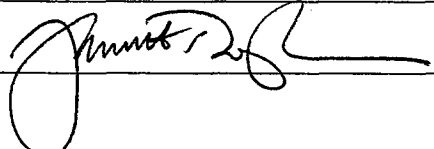
<b>12. Limited Service Position Information:</b>	<b># Positions</b>	<b>Title</b>
	1	Telecommunications Infrastructure Specialist
<b>Total Positions</b>	1	

**12a. Equipment and space for these positions:**  Is presently available.  Can be obtained with available funds.

**13. AUTHORIZATION AGENCY/DEPARTMENT**

I/we certify that no funds beyond basic application preparation and filing costs have been expended or committed in anticipation of Joint Fiscal Committee approval of this grant, unless previous notification was made on Form AA-1PN (if applicable):	Signature: 	Date: 9-25-09
	Title: DEPUTY COMMISSIONER	
	Signature:	Date:
	Title:	

**14. ACTION BY GOVERNOR**

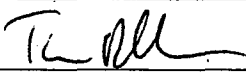
Check One Box:  
 Accepted  10/8/09



**STATE OF VERMONT REQUEST FOR GRANT ACCEPTANCE (Form AA-1)**

<input type="checkbox"/>	Rejected	(Governor's signature)	Date:
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**15. SECRETARY OF ADMINISTRATION**

<input type="checkbox"/>	Check One Box: Request to JFO.		10/5/09
<input type="checkbox"/>	Information to JFO	(Secretary's signature or designee)	Date:

**16. DOCUMENTATION REQUIRED**

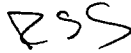
Required GRANT Documentation	
<input checked="" type="checkbox"/> Request Memo <input checked="" type="checkbox"/> Dept. project approval (if applicable) <input checked="" type="checkbox"/> Notice of Award <input checked="" type="checkbox"/> Grant Agreement <input checked="" type="checkbox"/> Grant Budget	<input type="checkbox"/> Notice of Donation (if any) <input type="checkbox"/> Grant (Project) Timeline (if applicable) <input type="checkbox"/> Request for Extension (if applicable) <input type="checkbox"/> Form AA-1PN attached (if applicable)

End Form AA-1

# Memorandum

## Vermont Department of Public Service

**To:** Neale Lunderville, Secretary of Administration

**From:** Richard Smith, Deputy Commissioner 

**CC:** Tom Evslin, Chief Recovery Officer

**Subject:** Form AA-1 for Vermont Broadband Mapping Initiative

**Date:** Sept. 25, 2009

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One of the programs funded under the American Recovery and Reinvestment Act (ARRA) is the State Broadband Data and Development Grant Program, administered through the National Telecommunications and Information Administration's (NTIA). This program has the stated intention to fund a program of broadband data collection in each state, to produce a national map of information about broadband availability and characteristics which can be used in policy development, including the development of a national broadband plan. This data will also be used to evaluate stimulus applications to NTIA and to the Rural Utilities Service (RUS) for funding of proposed broadband infrastructure projects. Lack of an update to existing broadband map information in Vermont could disadvantage proposals from Vermont.

State Broadband Data and Development Grant Program is nominally a competitive program. However, the Notice of Funds Availability (NoFA) for the program allowed for one entity in each state to be designated as the single eligible entity to receive funding in that state. The Vermont Center for Geographic Information (VCGI) was named by Governor Douglas in August to be that entity. The NoFA also announced the NTIA's expectation that it would make awards of between \$1.9 and \$3.8 million per state. VCGI has submitted a grant application prior to the August 14, 2009, deadline in the amount of \$1.96 million. VCGI has been contacted by NTIA, received favorable comments on its application, and has responded to follow-up data requests prior to an award announcement. However, given the announced parameters of the program, and VCGI being the sole applicant from Vermont, the likelihood of VCGI not being awarded the grant is exceedingly low.

The Public Service Department (PSD) is a partner organization with VCGI in the application. VCGI is the lead applicant and the prime recipient of the grant from NTIA. VCGI and PSD have entered into a contract that will allow VCGI to pay PSD in support of activities undertaken for the Vermont Broadband Mapping Initiative, principally the collection of data from broadband service providers and some telephone survey work. The contract is principally intended to fully fund 1 FTE for a three year period, as well as survey expenses. This request seeks permission to create a limited service position that will be necessary to perform the work required and will be supported by the payments from VCGI to PSD.

The PSD is seeking expedited approval of this request, due to timeframes included in the ARRA broadband programs. The State Broadband Data and Development Grant Program calls for the first round of data from states by November 1, 2009. This data will help determine eligibility of

REC'D SEP 25 2009

projects in the next round of broadband infrastructure grants and loans, applications for which may be due as early as December 2009. These deadlines are unlikely to move significantly because of the underlying requirements to finish obligation of broadband stimulus funds by September 2010. Recruitment of the position funded by this contract at the soonest possible date is important to the success of the program in Vermont. While the contract is contingent on an award to VCGI, and the PSD does not intend to make a hire before an award is assured, the near-certainty of the award and the urgency of the project create a need to be as ready to move without further delay when funds become available.

Please find attached to this memo a copy of the contract between VCGI and the PSD, which is being submitted in lieu of a Notice of Award and Grant Agreement. Also please find the copy of the VCGI grant proposal to NTIA, which includes the overall grant budget. Thank you for your consideration of this request.

**Vermont Center for Geographic Information Contract # DPS-BBM 09-01  
STANDARD CONTRACT**

**1. Parties:** This is a contract provided by the Vermont Center for Geographic Information, Inc., (hereafter called "VCGI"), to the Vermont Department of Public Service, with principal place of business at 112 State St., Montpelier, VT, (hereafter called "Contractor"). Contractor is required by law to have a Business Account Number from the Vermont Department of Taxes. Account Number is 44498. Federal Identification Number 03-6000-274.

**2. Subject Matter:** The subject matter of this contract is for the provision of services generally on the subject of activities related to the mapping and verification of broadband telecommunications infrastructure in Vermont. Detailed services to be provided by the Contractor are described in Attachment A, Statement of Work.

**3. Maximum Amount:** In consideration of the services to be performed by Contractor, VCGI agrees to pay Contractor, in accordance with the payment provisions specified in Attachment B, a sum not to exceed \$518,547.00.

**4. Contract Term:** The period of Contractor's performance shall begin on September 15, 2009 and end on September 30, 2014.

**5. Contingencies:** This contract is only valid upon an award by the National Telecommunications and Information Administration (NTIA) to VCGI for the State Broadband Data and Development Grant. The Maximum Amount, Contract Term, Statement of Work and/or Contract Provisions may be modified based upon any changes in the final grant awarded to VCGI. Contractor will be required to abide by any provisions required by Tier 1 Contractors as provided by NTIA in their award or contract documentation. If future modifications are not acceptable the contract may be cancelled (Item 9).

**6. Amendment:** No changes, modifications, or amendments in the terms and conditions of this contract shall be effective unless reduced to writing, numbered and signed by the duly authorized representative of VCGI and Contractor.

**7. Additional Provisions:** The contractor agrees to abide by all of the requirements and provisions as identified in Attachments A, B, C and D of this document.

**8. Applicable Law:** This agreement shall be interpreted and enforced according to the laws of the State of Vermont.

**9. Cancellation:** This contract may be canceled by either party by giving written notice at least 30 days in advance.

**10. Contact Persons:** The contractor's contact person for this award is;

Name: Corey Chase

Telephone Number: 802 828 1257

Email Address: corey.chase@state.vt.us

**11. Source Of Funds:** 100% Federal ARRA Funds

**12. Attachments** This contract consists of 12 pages including the following attachments, which are incorporated herein:

Attachment A - Scope of Work

Attachment B - Payment Provisions

Attachment C - Customary Provisions

Attachment D - Reporting Forms and Additional Information Required

Attachment E – Technical Appendix to State Broadband Data and Development Grant Program and NTIA Clarification

WE THE UNDERSIGNED PARTIES AGREE TO BE BOUND BY THIS CONTRACT.

By VCGI:

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

By the Contractor:

Date: September 15, 2009

Signature:  \_\_\_\_\_

Name: Richard Smith

Title: Deputy Commissioner, Department of Public Service

The following information is required for Contracts funded in whole or in part with monies from the federal American Recovery & Reinvestment Act of 2009.

Legal Name and D-U-N-S® Number on File with the federal Central Contractor Registration (1):

PUBLIC SERVICE, VERMONT DEPARTMENT OF  
Print Legal CCR Name

809376791  
D-U-N-S® Number (2)

1) The Central Contractor Registration (CCR) is the primary registrant database for the U.S. Federal Government. CCR collects, validates, stores and disseminates data in support of agency acquisition missions. FREE registration is available at: <http://www.ccr.gov/Default.aspx>.

2) The D-U-N-S Number is a unique nine-digit identification number assigned and maintained solely by Dun & Bradstreet (D&B). D-U-N-S Number assignment is FREE for all businesses required to register with the US Federal government (see # 1 above) for contracts or grants. Created in 1962, the Data Universal Numbering System or D-U-N-S® Number is D&B's copyrighted, proprietary means of identifying business entities. Register at: [https://eupdate.dnb.com/requestoptions.asp?cm\\_re=HomepageB\\*TopNav\\*DUNSNumberTab](https://eupdate.dnb.com/requestoptions.asp?cm_re=HomepageB*TopNav*DUNSNumberTab)  
ARRA Addendum

## **ATTACHMENT A**

### **SCOPE OF WORK**

#### **OVERVIEW**

The Vermont Center for Geographic Information, Inc. (VCGI) will coordinate the state-wide Vermont Broadband Mapping effort as follows:

All aspects of this contract award will be centrally managed by VCGI. VCGI will work with the National Telecommunications and Information Administration (NTIA) and all Tier 1 Contractors. The VT Department of Public Service is defined by NTIA, for the purposes of this contract, as a Tier 1 Contractor.

#### **BUSINESS REQUIREMENTS**

All work products and deliverables produced under this contract will be the property of NTIA, VCGI, the VT Department of Public Service and the State of Vermont. This includes, but is not limited to, documentation, and development materials. A contractor shall not sell a work product or deliverable produced under this contract without explicit permission from the VCGI or the State of Vermont.

The funds used to support this agreement, in full or in part, are provided through the federal American Recovery & Reinvestment Act (ARRA or the Act); this agreement therefore is subject to payment criteria and specific reporting requirements mandated by the Act. A periodic report, certified by an authorized agent of the Party, utilizing the form provided by the State of Vermont and attached hereto, shall be submitted as required. Failure to submit timely, accurate and fully executed reports will result in a mandate to return to the State funds already disbursed under this agreement, or the withholding of current and future payments under this agreement until such time as the reporting irregularities are resolved to the State's satisfaction.

For subrecipients who report awards of federal funds to the State, said subrecipient agrees to include information of ARRA funding separately from other federal awards reported on their Statement of Expenditures of Federal Awards (SEFA).

The parties to this agreement are further bound by the Act that they shall promptly refer to an appropriate federal inspector general any credible evidence that a principal, employee, agent, contractor, subrecipient, contractor, or other person has submitted a false claim under the False Claims Act or has committed a criminal or civil violation of laws pertaining to fraud, conflict of interest, bribery, gratuity, or similar misconduct involving the ARRA funds used to support this agreement.

The Contractor shall be required to provide complete and accurate project reporting on a monthly and quarterly basis for the duration of this project. See Attachment D - Reporting Forms and Additional Information Required for examples of the forms that will be used and the information that is required.

The Contractor shall be required to notify VCGI of any changes in project personnel as well as the reason for the change for the duration of the project. Notification of personnel change should occur prior to the change implementation. The Contractor is responsible for replacing project personnel with personnel of equal or better skills and experience for the project if a change is implemented.

The Contractor shall work with VCGI to alleviate issues relating to proprietary data access, creating Non-disclosure Agreements if necessary.

The Contractor shall report employee salaries and project expenses that can be used as contract match as identified in the project proposal.

## PROJECT PERFORMANCE REQUIREMENTS

The following criteria have been identified as performance requirements for the contract.

### Activity 1: Provision of a Telecommunications and GIS Specialist

The VT Department of Public Service shall make available to the project one Full Time Equivalent telecommunications specialist who will work in coordination with partners at VCGI to estimate and map the capabilities of mobile and fixed wireless and landline based broadband infrastructure. The DPS is responsible for understanding telecommunications technology and networks and is responsible for implementing methodologies for gathering and presenting information about the state of telecommunications networks in Vermont. The VT Department of Public Service will provide this level of service for three years.

### Activity 1: Requirements

1. The VT Department of Public Service shall provide a member of its telecommunications staff as a primary point of contact as soon as possible after notification of grant award to VCGI.
2. The VT Department of Public Service shall work directly with all of the Broadband Telecommunications service providers and/or Community Anchor Institutions in Vermont to collect the broadband service area coverage, telecommunications infrastructure location and characterization data, existing digital mapping data, DSL service addresses, and subscriber weighted nominal speed information being requested by the Broadband Mapping Team.
3. The VT Department of Public Service shall work to ensure as complete a response as possible from the Broadband Telecommunications service providers and Community Anchor Institutions concerning all of the information being requested by the Broadband Mapping Team.
4. The VT Department of Public Service shall provide all of the data collected from the Vermont service providers and Community Anchor Institutions to VCGI as it is collected from the service providers and without aggregation or modification.
5. The VT Department of Public Service shall perform Telecommunications analysis for the VT Department of Public Service related to the present and future capabilities and availability of Vermont's telecommunications infrastructure.

### Activity 1: Deliverables

1. The Department of Public Service shall forward information submitted via Service Providers Data Requests to VCGI in accordance with the Data Delivery Timeline. The DPS shall request information from broadband service providers consistent with the data elements listed in the "Technical Appendix" to the NTIA's July 2, 2009, Notice of Funds Availability

(NoFA) for the State Broadband Data and Development Grant Program, as clarified by the NTIA on August 7, 2009, (See Attachment E) under the following headings:

- Broadband Service Availability in Provider's Service Area
  - Broadband Service Infrastructure – Last Mile Connection Points
  - Broadband Service Infrastructure – Middle-Mile and Backbone Interconnection Points
2. The VT Department of Public Service shall provide information characterizing the type of broadband service available at Community Anchor Institutions.
  3. The VT Department of Public Service shall provide to VCGI the methods used and attribution collected relating to Community Anchor Institutions.

#### Activity 2: Creation and Performance of Broadband Service Verification Surveys

The VT Department of Public Service will support the VT Broadband Mapping Team in the performance of a Basic Verification Survey and perform an Expanded Verification Survey. For the Expanded Verification Survey the VT Department of Public Service will consult with the Vermont Council on Rural Development, state and local agencies including the Department of Education and state libraries to understand the information needs of their constituents and incorporate appropriate questions into the surveys.

#### Activity 2: Requirements

1. The VT Department of Public Service shall provide support to the UVM Center for Rural Studies for the creation of a Basic Verification Survey and work with the VT Broadband Mapping Team in analyzing the results.
2. The VT Department of Public Service shall create, in consultation with the UVM Center for Rural Studies and other community partners, an Expanded Verification Survey and perform this survey twice (2009 and 2013) during the contract period.
3. The Expanded Verification Survey shall be approximately 60 questions and focus on communication technology adoption, applications, decision making priorities, and usage for both businesses and residents.
4. The Expanded Verification Survey shall cover a random sampling of the following:
  - 400 Businesses statewide
  - 400 Vermont Residents
  - 40-50 Cell Phones.
5. The VT Department of Public Service shall provide support to the UVM Center for Rural Studies to perform accuracy verification for the Expanded Verification Survey.

#### Activity 2: Deliverables

1. The VT Department of Public Service shall provide the results of the Expanded Verification Survey to VCGI and the project partners.



2. The VT Department of Public Service shall provide the documented sample method and ensure that it is statistically and geographically valid.

## **PROJECT MANAGEMENT REQUIREMENTS**

The Contractor shall be responsible to VCGI, who has overall responsibility for the project schedule and adherence to contract provisions. The Contractor must meet with personnel from VT Broadband Mapping Team as needed to develop and manage project review and delivery schedules and discuss data quality issues.

The Contractor shall develop a project schedule consistent with the Project Delivery Timeline specified below.

The Contractor shall report project status on a quarterly basis to VCGI's Project Manager.

### **Project Deliverables Timeline:**

Project Deliveries shall be made in accordance with the VT Broadband Mapping Initiative Workplan (currently in work).

## **ATTACHMENT B**

### **PAYMENT PROVISIONS**

VCGI agrees to compensate the Contractor for services performed for an amount not to exceed \$518,547.00.

Payment must be requested using a standard business invoice. Payment should be requested on a monthly basis for time spent at an identified hourly rate and all materials reimbursement. All completed invoices should be submitted to:

Name: Linda Ladd  
Address: VCGI  
58 South Main St., Suite 2  
Waterbury, VT 05676

#### **CONTRACTOR REIMBURSEMENTS:**

##### **Invoice Request:**

The Contractor shall submit a monthly invoice for work performed on the contract and any reimbursable expenses on their letterhead.

##### **Information Requirements:**

**Wages:** The contractor shall be responsible for retaining records on-site that include a copy of the contract related personnel activity reports; which reflect an after-the-fact distribution of time on activities chargeable to the contract, are prepared at least monthly and are signed by the employee and the person authorized to approve payment.

**Benefits:** Only the employer's share of benefit cost shall be reimbursable and only the prorated share of those benefits allocable to the individual chargeable to the contract is allowable.

**Operating Expense:** Employee expenses shall include documentation of expense vouchers clearly identifying the expenses chargeable to the contract. Such documentation would include a copy of the approved expense claim.

**Contracts:** Payments to sub contractors by the contractor that are chargeable to the Contract shall clearly indicate the purpose of the contract and the portion of the contractor's cost which is allocable to the Contract program.

Records relating to the above requirements for Wages, Benefits, Operating Expenses, and Contracts shall be made available for audit upon request by VCGI.

#### **ORGANIZATIONAL AND FINANCIAL REQUIREMENTS:**

1. Contractors shall be required to establish and maintain accounting systems and financial records to accurately account for funds awarded to them. The determination of allowability of costs claimed shall be consistent with the requirements of the contract award and its applicable regulations.

a. Contractors shall have the responsibility for employing the organizational and management techniques necessary to assure proper administration and cost allocation, including accounting, budgeting, reporting, auditing and other review controls.

b. Contractors shall accept responsibility for expending and accounting for funds in a manner consistent with the project goals as evidenced by their acceptance of a contract award by VCGI.

2. Sub-Contractors shall have adequate internal controls which:

a. Presents, classifies and retains all detailed financial records related to the contract award. Financial records must be retained by the Contractor and be available for review for a period of three (3) years after the expiration of the Contract period except that records must be retained until completion or resolution of all issues arising from audit, litigation or claims started before the expiration of the three year period, whichever is later.

b. Provides information for planning, control and evaluation of direct and indirect costs;

c. Provides cost and property control to ensure optimal use of the Contract funds;

d. Controls funds and other resources to ensure that the expenditure of Contract funds and use of any property acquired under the Contract are in conformance with established guidelines and policies.

## ATTACHMENT C

### CUSTOMARY PROVISIONS

**1. Entire Agreement:** This Contract Agreement represents the entire agreement between the parties on the subject matter. All prior agreements, representations, statements, negotiations, and understandings shall have no effect.

**2. Applicable Law:** This Contract Agreement will be governed by the laws of Vermont. The Contractor must comply with all the federal requirements pertaining to the expenditure of federal funds.

**3. Appropriations: Availability of Federal ARRA Funds:** This Grant is funded in whole or in part by federal ARRA funds. In the event the federal funds supporting this grant become unavailable or are reduced, the VCGI may suspend or cancel this Contract immediately, and VCGI shall have no obligation to pay Contractor from other revenues. Contractor shall receive payment for services performed prior to the suspension or cancellation of the Grant.

**4. No Employee Benefits For Contractor:** The Contractor understands that VCGI will not provide any individual retirement benefits, group life insurance, group health and dental insurance, vacation and sick leave, workers' compensation or other benefits or services available to VCGI employees, nor will VCGI withhold any state or federal taxes except as required under applicable tax laws, which shall be determined in advance of execution of the Contract Agreement. The Contractor understands that all tax returns required by the Internal Revenue Code and the State, including, but not limited to income, withholding, sales and use, and rooms and meals, must be filed by the Contractor, and information as to Contract income will be provided by VCGI to the Internal Revenue Service and the Vermont Department of Taxes, if required.

**5. Independence, Liability:** The Contractor will act in an independent capacity and not as officers or employees of VCGI. The Contractor shall indemnify, defend and hold harmless VCGI and its officers and employees from liability and any claims, suits, judgments, and damages to the extent caused by the Contractor's negligent acts and/or omissions in the performance of this Contract.

**6. Reliance By VCGI on Representations:** All payments by VCGI under this Contract Agreement will be made in reliance upon the accuracy of all prior representations by the Contractor, including but not limited to bills, invoices, progress reports and other proofs of work.

**7. Records Available for Audit:** The Contractor will maintain all books, documents, payroll papers, accounting records, and other evidence pertaining to costs incurred under this Contract Agreement and make them available at reasonable times during the period of the Contract and for three years thereafter for inspection by any authorized representatives of the State or Federal Government. If any litigation, claim, or audit is started before the expiration of the three-year period, the records shall be retained until all litigation, claims or audit findings involving the records have been resolved. VCGI, by any authorized representative, shall have the right at all reasonable times to inspect or otherwise evaluate the work performed or being performed under this Contract Agreement.

**8. Fair Employment Practices and Americans with Disabilities Act:** Contractor agrees to comply with the requirement of Title 21 V.S.A. Chapter 5, Subchapter 6, relating to fair employment practices, to the full extent applicable. Contractor shall also ensure, to the full extent required by the Americans with Disabilities Act of 1990 that qualified individuals with disabilities receive equitable access to the services, programs, and activities provided by the Contractor under this Contract Agreement. Contractor further agrees to include this provision in all subcontracts.


**9. Subcontracting:** Contractor shall not assign or subcontract the performance of this Contract or any portion thereof to any other Subcontractor without the prior written approval of VCGI. They must advise their Subcontractors of requirements imposed on them by federal laws, regulations, and the provisions of contracts or grant agreements as well as any supplemental requirements imposed by the pass-through entity. They must also set up a plan for monitoring those Contractors' use of the funds.

**10. No Gifts or Gratuities:** Contractor shall not give title or possession of any thing of substantial value (including property, currency, travel and/or education programs) to any officer or employee of VCGI during the term of this Contract Agreement.

**11. Copies:** All written reports prepared under this Contract Agreement will be printed using both sides of the paper.

**12. Suspension and Debarment:** Non-federal entities are prohibited by Federal Executive Orders 12549 and 12689 from contracting with or making sub-awards under covered transactions to parties that are suspended or debarred or whose principals are suspended or debarred. Covered transactions include procurement contracts for goods or services equal to or in excess of \$100,000 and non-procurement transaction (grants to Contractors). By signing this Contract Agreement, current Contractor certifies as applicable, that the contracting organization and its principals are not suspended or debarred by GSA from federal procurement and non-procurement programs.

**ATTACHMENT D Reporting Forms and Additional Information Required**  
 (These forms may be modified based upon information at award)

 Vermont Center for Geographic Information, Inc. Financial Report Form	
1. Federal Funding Agency Name U.S. Department of Commerce	2. Treasury Accounting Symbol (if provided)
3. Vermont Awarding Organization Vermont Center for Geographic Information, Inc.	4. CFDA Number
5. Award Name	6. Award Type <input type="checkbox"/> Matching <input type="checkbox"/> Non-Matching
8. Award Number	7. Check Type of Report <input type="checkbox"/> Month Ending <input type="checkbox"/> Quarter Ending <input type="checkbox"/> Final
9. Award Date	10. Funding Period From: _____ To: _____
12. Federal ID number	11. Report Period From: _____ To: _____
14. Recipient Name and Address	13. DUNS number
16. Name of Contact Person	15. Payee (When a check is to be sent it different from 14)
18. Project Name	17. Telephone Number
<b>19. Expenditures</b>	
<b>Personal Services:</b>	
Salaries and Benefits	\$0.00
Other Personal Services (Explain)	\$0.00
Contractual	\$0.00
<b>Total Personal Services</b>	<b>\$0.00</b>
<b>Operating Expense:</b>	
Supplies	\$0.00
Travel	\$0.00
Equipment	\$0.00
Indirect Cost	\$0.00
Other Operating Expense (Explain)	\$0.00
<b>Total Operating Expense</b>	<b>\$0.00</b>
<b>Total Program</b>	<b>\$0.00</b>
<b>20. Financial Report Summary</b>	
a. Total Program as of date:	\$0.00
b. Less: Cumulative Program Income	\$0.00
c. Net program outlays (line a. minus line b.)	\$0.00
d. Cash Advance	\$0.00
e. Total for Program	\$0.00
f. Non-Federal share of amount on line e.	\$0.00
g. Federal share of amount on line e.	\$0.00
h. Grant payment now requested or cash balance	\$0.00
<b>21. Certification</b>	
I certify to the best of my knowledge and belief the data included on this report are correct, all supporting documentation is on file and available for inspection and that all outlays have been or will be made in accordance with the sub-grant conditions or other agreement and that payment is due and has not been previously requested.	Signature of authorizing official
	Typed or printed name and title
	Date Submitted
	Tel. Number
Over Expenditures must be shown as non-federal share Note: If you are completing this form in electronic format, make all entries in the highlighted areas only.	



1. Federal Funding Agency Name U.S. Dept. of Commerce		2. Treasury Accounting Symbol (if provided)	
3. Vermont Awarding Organization Vermont Center for Geographic Information, Inc.			
5. Award Name		7. Check Type of Report	
<input type="checkbox"/> Matching <input type="checkbox"/> Non-Matching		<input type="checkbox"/> Month Ending <input type="checkbox"/> Quarter Ending <input type="checkbox"/> Final	
8. Award Number		11. Report Period	
9. Award Date		10. Funding Period	
12. Federal ID number		13. DUNS number	
14. Recipient Name and Address			
15. Payee (If there check is to be sent it different from 14)			
16. Name of Contact Person		17. Telephone Number	
18. Congressional District VT-1			
19. Primary Place of Performance		Amount	
22. Project Description			
23. Job Creation Narrative			
24. Project % Complete		25. Number of Jobs Created	
26. Project Name		27. Number of Jobs Retained	
28. Tier 1 and 2 Vendor Headquarters Zip Code		29. Product/Service Description (NAICS Code)	
31. Certification			
I certify to the best of my knowledge and belief the data included on this report are correct, all supporting documentation is on file and available for inspection and that all outlays have been or will be made in accordance with the sub grant conditions or other agreement.			
Signature of authoring official		Typed or printed name and title	
Date Submitted		Tel Number	
Note: If you are completing this form in electronic format, make all entries in the highlighted areas only. Over Expenditures must be shown as non-federal share			

**ATTACHMENT E Technical Appendix to State Broadband Data and Development Grant Program and NTIA Clarification**





State of Vermont  
 Department of Finance & Management  
 109 State Street, Pavilion Building  
 Montpelier, VT 05620-0401

Agency of Administration

[phone] 802-828-2376  
 [fax] 802-828-2428

**STATE OF VERMONT  
 FINANCE & MANAGEMENT GRANT REVIEW FORM**

<b>Grant Summary:</b>		American Recovery and Reinvestment Act (ARRA) award from the federal Department of Energy to the Vermont Center for Geographic Information (VCGI) will be sub-granted (using a contract) to the Department of Public Service to provide support for the grant's State Broadband Data and Development program. Use of a grant application was deemed appropriate for the Joint Fiscal Committee's consideration and approval of receipt of this funding from VCGI.			
<b>Date:</b>		9/29/2009			
<b>Department:</b>		Department of Public Service			
<b>Legal Title of Grant:</b>		Vermont Center for Geographic Information contract #DPS-BBM 09-01			
<b>Federal Catalog #:</b>		NA			
<b>Grant/Donor Name and Address:</b>		Vermont Center for Geographic Information			
<b>Grant Period:</b>		<b>From:</b>	<b>To:</b>		
		9/15/2009	12/31/2013		
<b>Grant/Donation</b>		\$518,547			
	<b>SFY 1</b>	<b>SFY 2</b>	<b>SFY 3</b>	<b>Total</b>	<b>Comments</b>
<b>Grant Amount:</b>	\$121,755	\$116,840	\$116,840	\$355,435	
<b>Position Information:</b>		<b># Positions</b>	<b>Explanation/Comments</b>		
		1	Telecommunications Infrastructure Specialist		
<b>Additional Comments:</b>					
<b>Department of Finance &amp; Management</b>		[Signature]		(Initial) DS 9-29-09	
<b>Secretary of Administration</b>		[Signature]		(Initial)	
<b>Sent To Joint Fiscal Office</b>				Date 10/9/09	

**RECEIVED**

OCT 21 2009

**JOINT FISCAL OFFICE**

**STATE OF VERMONT**  
**Joint Fiscal Committee Review**  
**Limited Service - Grant Funded**  
**Position Request Form**

This form is to be used by agencies and departments when additional grant funded positions are being requested. Review and approval by the Department of Human Resources must be obtained prior to review by the Department of Finance and Management. The Department of Finance will forward requests to the Joint Fiscal Office for JFC review. A Request for Classification Review Form (RFR) and an updated organizational chart showing to whom the new position(s) would report must be attached to this form. Please attach additional pages as necessary to provide enough detail.

Agency/Department: Public Service Department Date: 09/29/2009

Name and Phone (of the person completing this request): Sheri Rockcastle 802-828-4084

Request is for:

- Positions funded and attached to a new grant.  
 Positions funded and attached to an existing grant approved by JFO # \_\_\_\_\_

1. Name of Granting Agency, Title of Grant, Grant Funding Detail (attach grant documents):

Vermont Center for Geographic Information Contract # DPS-BBM 09-01 for the Vermont Broadband Mapping Initiative

The PSD is a partner organization with VCGI in Vermont's only application for funding from the National Telecommunications and Information Administration's (NTIA) State Broadband Data and Development Grant Program, a program funded under the American Recovery and Reinvestment Act. VCGI is named in the proposal as the lead applicant and the prime recipient of the grant from NTIA. VCGI and PSD have entered into a contract that will allow VCGI to pay PSD in support of activities undertaken for the Vermont Broadband Mapping Initiative. Please find attached to this memo a copy of the contract between VCGI and the PSD, which is being submitted in lieu of a Notice of Award and Grant Agreement. Also please find the copy of the VCGI grant proposal to NTIA, which includes the overall grant budget.

2. List below titles, number of positions in each title, program area, and limited service end date (information should be based on grant award and should match information provided on the RFR) position(s) will be established only after JFC final approval:

<u>Title* of Position(s) Requested</u>	<u># of Positions</u>	<u>Division/Program</u>	<u>Grant Funding Period/Anticipated End Date</u>
Telecommunications Infrastructure Specialist	1	Telecommunications	October 15, 2009-October 7, 2012

\*Final determination of title and pay grade to be made by the Department of Human Resources Classification Division upon submission and review of Request for Classification Review.

3. Justification for this request as an essential grant program need:

The NTIA and the Rural Utilities Service of the U.S. Dept. of Agriculture are encouraging applicants to their broadband stimulus programs to use state broadband mapping data. PSD has experience in broadband data collection and unique familiarity with telecommunications infrastructure, making it the best-suited organization in Vermont to be responsible for this role. However, the level of data quality, granularity, and frequency expected cannot be achieved without additional resources than the state has devoted to this activity to date. Funding is available through the federal grant to be awarded to VCGI. Without accepting this funding, broadband availability in Vermont will be less accurately represented, harming applications for broadband stimulus funding in Vermont, as well as hampering state and federal broadband planning efforts.

I certify that this information is correct and that necessary funding, space and equipment for the above position(s) are available (required by 32 VSA Sec. 5(b).

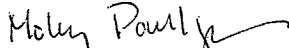
STATE OF VERMONT  
Joint Fiscal Committee Review  
Limited Service - Grant Funded  
Position Request Form



9-30-09

Signature of Agency or Department Head

Date



10/2/09

Approved/Denied by Department of Human Resources

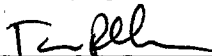
Date



10/5/09

Approved/Denied by Finance and Management

Date



10/5/09

Approved/Denied by Secretary of Administration

Date

Comments:

**STATE OF VERMONT REQUEST FOR GRANT ACCEPTANCE (Form AA-1)**

BASIC GRANT INFORMATION				
<b>1. Agency:</b>				
<b>2. Department:</b>	Public Service Department (PSD)			
<b>3. Program:</b>	Vermont Broadband Mapping Initiative			
<b>4. Legal Title of Grant:</b>	Vermont Center for Geographic Information Contract # DPS-BBM 09-01			
<b>5. Federal Catalog #:</b>				
<b>6. Grant/Donor Name and Address:</b>				
Vermont Center for Geographic Information (VCGI) 58 South Main Street Suite 2 Waterbury, VT 05676				
<b>7. Grant Period:</b>	<b>From:</b>	9/15/2009	<b>To:</b>	12/31/2013
<b>8. Purpose of Grant:</b>				
The PSD is a partner organization with VCGI in Vermont's only application for funding from the National Telecommunications and Information Administration's (NTIA) State Broadband Data and Development Grant Program, a program funded under the American Recovery and Reinvestment Act. VCGI is named in the proposal as the lead applicant and the prime recipient of the grant from NTIA. VCGI and PSD have entered into a contract that will allow VCGI to pay PSD in support of activities undertaken for the Vermont Broadband Mapping Initiative, principally the collection of data from broadband service providers and some telephone survey work. The contract is principally intended to fully fund 1 FTE position for a three year period, as well as other expenses.				
<b>9. Impact on existing program if grant is not Accepted:</b>				
The NTIA and the Rural Utilities Service of the U.S. Dept. of Agriculture are encouraging applicants to their broadband stimulus programs to use state broadband mapping data. PSD has experience in broadband data collection and unique familiarity with telecommunications infrastructure, making it the best-suited organization in Vermont to be responsible for this role. However, the level of data quality, granularity, and frequency expected cannot be achieved without additional resources than the state has devoted to this activity to date. Funding is available through the federal grant to be awarded to VCGI. Without accepting this funding, broadband availability in Vermont will be less accurately represented, harming applications for broadband stimulus funding in Vermont, as well as hampering state and federal broadband planning efforts.				

10. BUDGET INFORMATION				
	SFY 1 FY 2010	SFY 2 FY 2011	SFY 3 FY 2012	Comments
<b>Expenditures:</b>				
Personal Services	\$87,630	\$116,840	\$116,840	1 FTE, starting around 10/1/2009
Operating Expenses	\$64,125	\$	\$	Includes survey expenses
Grants	\$	\$	\$	
<b>Total</b>	\$	\$	\$	
<b>Revenues:</b>				
State Funds:	\$30,000	\$	\$	From funds already budgeted for Telplan

**STATE OF VERMONT REQUEST FOR GRANT ACCEPTANCE (Form AA-1)**

				survey
Cash	\$	\$	\$	
In-Kind	\$	\$	\$	
Federal Funds:	\$	\$	\$	
(Direct Costs)	\$	\$	\$	
(Statewide Indirect)	\$	\$	\$	
(Departmental Indirect)	\$	\$	\$	
Other Funds:	\$	\$	\$	
Grant (source VCGI)	\$121,755	\$116,840	\$116,840	
<b>Total</b>	\$	\$	\$	

<b>Appropriation No:</b>	2240000000	<b>Amount:</b>	\$121,755
			\$
			\$
			\$
			\$
			\$
			\$
		<b>Total</b>	\$121,755

**PERSONAL SERVICE INFORMATION**

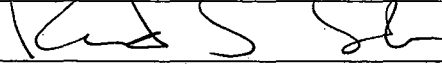
**11. Will monies from this grant be used to fund one or more Personal Service Contracts?**  Yes  No  
 If "Yes", appointing authority must initial here to indicate intent to follow current competitive bidding process/policy.

Appointing Authority Name: \_\_\_\_\_ Agreed by: \_\_\_\_\_ (initial)

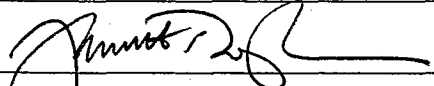
<b>12. Limited Service Position Information:</b>	<b># Positions</b>	<b>Title</b>
	1	Telecommunications Infrastructure Specialist
<b>Total Positions</b>	1	

**12a. Equipment and space for these positions:**  Is presently available.  Can be obtained with available funds.

**13. AUTHORIZATION AGENCY/DEPARTMENT**

I/we certify that no funds beyond basic application preparation and filing costs have been expended or committed in anticipation of Joint Fiscal Committee approval of this grant, unless previous notification was made on Form AA-1PN (if applicable):	Signature: 	Date: 9-25-09
	Title: DEPUTY COMMISSIONER	
	Signature: _____	Date: _____
	Title: _____	

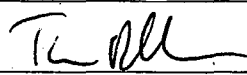
**14. ACTION BY GOVERNOR**

Check One Box:  
 Accepted  10/8/09

**STATE OF VERMONT REQUEST FOR GRANT ACCEPTANCE (Form AA-1)**

<input type="checkbox"/>	Rejected	(Governor's signature)	Date:
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**15. SECRETARY OF ADMINISTRATION**

<input type="checkbox"/>	Check One Box: Request to JFO		10/5/09
<input type="checkbox"/>	Information to JFO	(Secretary's signature or designee)	Date:

**16. DOCUMENTATION REQUIRED**

**Required GRANT Documentation**

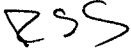
<input checked="" type="checkbox"/> Request Memo <input checked="" type="checkbox"/> Dept. project approval (if applicable) <input checked="" type="checkbox"/> Notice of Award <input checked="" type="checkbox"/> Grant Agreement <input checked="" type="checkbox"/> Grant Budget	<input type="checkbox"/> Notice of Donation (if any) <input type="checkbox"/> Grant (Project) Timeline (if applicable) <input type="checkbox"/> Request for Extension (if applicable) <input type="checkbox"/> Form AA-1PN attached (if applicable)
--	--

End Form AA-1

# Memorandum

## Vermont Department of Public Service

**To:** Neale Lunderville, Secretary of Administration

**From:** Richard Smith, Deputy Commissioner 

**CC:** Tom Evslin, Chief Recovery Officer

**Subject:** Form AA-1 for Vermont Broadband Mapping Initiative

**Date:** Sept. 25, 2009

---

One of the programs funded under the American Recovery and Reinvestment Act (ARRA) is the State Broadband Data and Development Grant Program, administered through the National Telecommunications and Information Administration's (NTIA). This program has the stated intention to fund a program of broadband data collection in each state, to produce a national map of information about broadband availability and characteristics which can be used in policy development, including the development of a national broadband plan. This data will also be used to evaluate stimulus applications to NTIA and to the Rural Utilities Service (RUS) for funding of proposed broadband infrastructure projects. Lack of an update to existing broadband map information in Vermont could disadvantage proposals from Vermont.

State Broadband Data and Development Grant Program is nominally a competitive program. However, the Notice of Funds Availability (NoFA) for the program allowed for one entity in each state to be designated as the single eligible entity to receive funding in that state. The Vermont Center for Geographic Information (VCGI) was named by Governor Douglas in August to be that entity. The NoFA also announced the NTIA's expectation that it would make awards of between \$1.9 and \$3.8 million per state. VCGI has submitted a grant application prior to the August 14, 2009, deadline in the amount of \$1.96 million. VCGI has been contacted by NTIA, received favorable comments on its application, and has responded to follow-up data requests prior to an award announcement. However, given the announced parameters of the program, and VCGI being the sole applicant from Vermont, the likelihood of VCGI not being awarded the grant is exceedingly low.

The Public Service Department (PSD) is a partner organization with VCGI in the application. VCGI is the lead applicant and the prime recipient of the grant from NTIA. VCGI and PSD have entered into a contract that will allow VCGI to pay PSD in support of activities undertaken for the Vermont Broadband Mapping Initiative, principally the collection of data from broadband service providers and some telephone survey work. The contract is principally intended to fully fund 1 FTE for a three year period, as well as survey expenses. This request seeks permission to create a limited service position that will be necessary to perform the work required and will be supported by the payments from VCGI to PSD.

The PSD is seeking expedited approval of this request, due to timeframes included in the ARRA broadband programs. The State Broadband Data and Development Grant Program calls for the first round of data from states by November 1, 2009. This data will help determine eligibility of

REC'D SEP 25 2009

projects in the next round of broadband infrastructure grants and loans, applications for which may be due as early as December 2009. These deadlines are unlikely to move significantly because of the underlying requirements to finish obligation of broadband stimulus funds by September 2010. Recruitment of the position funded by this contract at the soonest possible date is important to the success of the program in Vermont. While the contract is contingent on an award to VCGI, and the PSD does not intend to make a hire before an award is assured, the near-certainty of the award and the urgency of the project create a need to be as ready to move without further delay when funds become available.

Please find attached to this memo a copy of the contract between VCGI and the PSD, which is being submitted in lieu of a Notice of Award and Grant Agreement. Also please find the copy of the VCGI grant proposal to NTIA, which includes the overall grant budget. Thank you for your consideration of this request.



**Vermont Center for Geographic Information Contract # DPS-BBM 09-01  
STANDARD CONTRACT**

**1. Parties:** This is a contract provided by the Vermont Center for Geographic Information, Inc., (hereafter called "VCGI"), to the Vermont Department of Public Service, with principal place of business at 112 State St., Montpelier, VT, (hereafter called "Contractor"). Contractor is required by law to have a Business Account Number from the Vermont Department of Taxes. Account Number is 44498. Federal Identification Number 03-6000-274.

**2. Subject Matter:** The subject matter of this contract is for the provision of services generally on the subject of activities related to the mapping and verification of broadband telecommunications infrastructure in Vermont. Detailed services to be provided by the Contractor are described in Attachment A, Statement of Work.

**3. Maximum Amount:** In consideration of the services to be performed by Contractor, VCGI agrees to pay Contractor, in accordance with the payment provisions specified in Attachment B, a sum not to exceed \$518,547.00.

**4. Contract Term:** The period of Contractor's performance shall begin on September 15, 2009 and end on September 30, 2014.

**5. Contingencies:** This contract is only valid upon an award by the National Telecommunications and Information Administration (NTIA) to VCGI for the State Broadband Data and Development Grant. The Maximum Amount, Contract Term, Statement of Work and/or Contract Provisions may be modified based upon any changes in the final grant awarded to VCGI. Contractor will be required to abide by any provisions required by Tier 1 Contractors as provided by NTIA in their award or contract documentation. If future modifications are not acceptable the contract may be cancelled (Item 9).

**6. Amendment:** No changes, modifications, or amendments in the terms and conditions of this contract shall be effective unless reduced to writing, numbered and signed by the duly authorized representative of VCGI and Contractor.

**7. Additional Provisions:** The contractor agrees to abide by all of the requirements and provisions as identified in Attachments A, B, C and D of this document.

**8. Applicable Law:** This agreement shall be interpreted and enforced according to the laws of the State of Vermont.

**9. Cancellation:** This contract may be canceled by either party by giving written notice at least 30 days in advance.

**10. Contact Persons:** The contractor's contact person for this award is;

Name: Corey Chase

Telephone Number: 802 828 1257

Email Address: corey.chase@state.vt.us

**11. Source Of Funds:** 100% Federal ARRA Funds

**12. Attachments** This contract consists of 12 pages including the following attachments, which are incorporated herein:

Attachment A - Scope of Work

Attachment B - Payment Provisions

Attachment C - Customary Provisions

Attachment D - Reporting Forms and Additional Information Required

Attachment E – Technical Appendix to State Broadband Data and Development Grant Program and NTIA Clarification

WE THE UNDERSIGNED PARTIES AGREE TO BE BOUND BY THIS CONTRACT.

By VCGI:

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

By the Contractor:

Date: September 15, 2009

Signature:  \_\_\_\_\_

Name: Richard Smith

Title: Deputy Commissioner, Department of Public Service

The following information is required for Contracts funded in whole or in part with monies from the federal American Recovery & reinvestment Act or 2009.

Legal Name and D-U-N-S® Number on File with the federal Central Contractor Registration (1):

PUBLIC SERVICE, VERMONT DEPARTMENT OF  
Print Legal CCR Name

809376791  
D-U-N-S® Number (2)

1) The Central Contractor Registration (CCR) is the primary registrant database for the U.S. Federal Government. CCR collects, validates, stores and disseminates data in support of agency acquisition missions. FREE registration is available at: <http://www.ccr.gov/Default.aspx>.

2) The D-U-N-S Number is a unique nine-digit identification number assigned and maintained solely by Dun & Bradstreet (D&B). D-U-N-S Number assignment is FREE for all businesses required to register with the US Federal government (see # 1 above) for contracts or grants. Created in 1962, the Data Universal Numbering System or D-U-N-S® Number is D&B's copyrighted, proprietary means of identifying business entities. Register at: [https://eupdate.dnb.com/requestoptions.asp?cm\\_re=HomepageB\\*TopNav\\*DUNSNumberTab](https://eupdate.dnb.com/requestoptions.asp?cm_re=HomepageB*TopNav*DUNSNumberTab)  
ARRA Addendum

## **ATTACHMENT A**

### **SCOPE OF WORK**

#### **OVERVIEW**

The Vermont Center for Geographic Information, Inc. (VCGI) will coordinate the state-wide Vermont Broadband Mapping effort as follows:

All aspects of this contract award will be centrally managed by VCGI. VCGI will work with the National Telecommunications and Information Administration (NTIA) and all Tier 1 Contractors. The VT Department of Public Service is defined by NTIA, for the purposes of this contract, as a Tier 1 Contractor.

#### **BUSINESS REQUIREMENTS**

All work products and deliverables produced under this contract will be the property of NTIA, VCGI, the VT Department of Public Service and the State of Vermont. This includes, but is not limited to, documentation, and development materials. A contractor shall not sell a work product or deliverable produced under this contract without explicit permission from the VCGI or the State of Vermont.

The funds used to support this agreement, in full or in part, are provided through the federal American Recovery & Reinvestment Act (ARRA or the Act); this agreement therefore is subject to payment criteria and specific reporting requirements mandated by the Act. A periodic report, certified by an authorized agent of the Party, utilizing the form provided by the State of Vermont and attached hereto, shall be submitted as required. Failure to submit timely, accurate and fully executed reports will result in a mandate to return to the State funds already disbursed under this agreement, or the withholding of current and future payments under this agreement until such time as the reporting irregularities are resolved to the State's satisfaction.

For subrecipients who report awards of federal funds to the State, said subrecipient agrees to include information of ARRA funding separately from other federal awards reported on their Statement of Expenditures of Federal Awards (SEFA).

The parties to this agreement are further bound by the Act that they shall promptly refer to an appropriate federal inspector general any credible evidence that a principal, employee, agent, contractor, subrecipient, contractor, or other person has submitted a false claim under the False Claims Act or has committed a criminal or civil violation of laws pertaining to fraud, conflict of interest, bribery, gratuity, or similar misconduct involving the ARRA funds used to support this agreement.

The Contractor shall be required to provide complete and accurate project reporting on a monthly and quarterly basis for the duration of this project. See Attachment D - Reporting Forms and Additional Information Required for examples of the forms that will be used and the information that is required.

The Contractor shall be required to notify VCGI of any changes in project personnel as well as the reason for the change for the duration of the project. Notification of personnel change should occur prior to the change implementation. The Contractor is responsible for replacing project personnel with personnel of equal or better skills and experience for the project if a change is implemented.

The Contractor shall work with VCGI to alleviate issues relating to proprietary data access, creating Non-disclosure Agreements if necessary.

The Contractor shall report employee salaries and project expenses that can be used as contract match as identified in the project proposal.

## **PROJECT PERFORMANCE REQUIREMENTS**

The following criteria have been identified as performance requirements for the contract.

### **Activity 1: Provision of a Telecommunications and GIS Specialist**

The VT Department of Public Service shall make available to the project one Full Time Equivalent telecommunications specialist who will work in coordination with partners at VCGI to estimate and map the capabilities of mobile and fixed wireless and landline based broadband infrastructure. The DPS is responsible for understanding telecommunications technology and networks and is responsible for implementing methodologies for gathering and presenting information about the state of telecommunications networks in Vermont. The VT Department of Public Service will provide this level of service for three years.

### **Activity 1: Requirements**

1. The VT Department of Public Service shall provide a member of its telecommunications staff as a primary point of contact as soon as possible after notification of grant award to VCGI.
2. The VT Department of Public Service shall work directly with all of the Broadband Telecommunications service providers and/or Community Anchor Institutions in Vermont to collect the broadband service area coverage, telecommunications infrastructure location and characterization data, existing digital mapping data, DSL service addresses, and subscriber weighted nominal speed information being requested by the Broadband Mapping Team.
3. The VT Department of Public Service shall work to ensure as complete a response as possible from the Broadband Telecommunications service providers and Community Anchor Institutions concerning all of the information being requested by the Broadband Mapping Team.
4. The VT Department of Public Service shall provide all of the data collected from the Vermont service providers and Community Anchor Institutions to VCGI as it is collected from the service providers and without aggregation or modification.
5. The VT Department of Public Service shall perform Telecommunications analysis for the VT Department of Public Service related to the present and future capabilities and availability of Vermont's telecommunications infrastructure.

### **Activity 1: Deliverables**

1. The Department of Public Service shall forward information submitted via Service Providers Data Requests to VCGI in accordance with the Data Delivery Timeline. The DPS shall request information from broadband service providers consistent with the data elements listed in the "Technical Appendix" to the NTIA's July 2, 2009, Notice of Funds Availability

(NoFA) for the State Broadband Data and Development Grant Program, as clarified by the NTIA on August 7, 2009, (See Attachment E) under the following headings:

- Broadband Service Availability in Provider's Service Area
  - Broadband Service Infrastructure – Last Mile Connection Points
  - Broadband Service Infrastructure – Middle-Mile and Backbone Interconnection Points
2. The VT Department of Public Service shall provide information characterizing the type of broadband service available at Community Anchor Institutions.
  3. The VT Department of Public Service shall provide to VCGI the methods used and attribution collected relating to Community Anchor Institutions.

#### Activity 2: Creation and Performance of Broadband Service Verification Surveys

The VT Department of Public Service will support the VT Broadband Mapping Team in the performance of a Basic Verification Survey and perform an Expanded Verification Survey. For the Expanded Verification Survey the VT Department of Public Service will consult with the Vermont Council on Rural Development, state and local agencies including the Department of Education and state libraries to understand the information needs of their constituents and incorporate appropriate questions into the surveys.

#### Activity 2: Requirements

1. The VT Department of Public Service shall provide support to the UVM Center for Rural Studies for the creation of a Basic Verification Survey and work with the VT Broadband Mapping Team in analyzing the results.
2. The VT Department of Public Service shall create, in consultation with the UVM Center for Rural Studies and other community partners, an Expanded Verification Survey and perform this survey twice (2009 and 2013) during the contract period.
3. The Expanded Verification Survey shall be approximately 60 questions and focus on communication technology adoption, applications, decision making priorities, and usage for both businesses and residents.
4. The Expanded Verification Survey shall cover a random sampling of the following;
  - 400 Businesses statewide
  - 400 Vermont Residents
  - 40-50 Cell Phones.
5. The VT Department of Public Service shall provide support to the UVM Center for Rural Studies to perform accuracy verification for the Expanded Verification Survey.

#### Activity 2: Deliverables

1. The VT Department of Public Service shall provide the results of the Expanded Verification Survey to VCGI and the project partners.

2. The VT Department of Public Service shall provide the documented sample method and ensure that it is statistically and geographically valid.

## PROJECT MANAGEMENT REQUIREMENTS

The Contractor shall be responsible to VCGI, who has overall responsibility for the project schedule and adherence to contract provisions. The Contractor must meet with personnel from VT Broadband Mapping Team as needed to develop and manage project review and delivery schedules and discuss data quality issues.

The Contractor shall develop a project schedule consistent with the Project Delivery Timeline specified below.

The Contractor shall report project status on a quarterly basis to VCGI's Project Manager.

### Project Deliverables Timeline:

Project Deliveries shall be made in accordance with the VT Broadband Mapping Initiative Workplan (currently in work).

## **ATTACHMENT B**

### **PAYMENT PROVISIONS**

VCGI agrees to compensate the Contractor for services performed for an amount not to exceed \$518,547.00.

Payment must be requested using a standard business invoice. Payment should be requested on a monthly basis for time spent at an identified hourly rate and all materials reimbursement. All completed invoices should be submitted to:

Name: Linda Ladd  
Address: VCGI  
58 South Main St., Suite 2  
Waterbury, VT 05676

#### **CONTRACTOR REIMBURSEMENTS:**

##### **Invoice Request:**

The Contractor shall submit a monthly invoice for work performed on the contract and any reimbursable expenses on their letterhead.

##### **Information Requirements:**

**Wages:** The contractor shall be responsible for retaining records on-site that include a copy of the contract related personnel activity reports; which reflect an after-the-fact distribution of time on activities chargeable to the contract, are prepared at least monthly and are signed by the employee and the person authorized to approve payment.

**Benefits:** Only the employer's share of benefit cost shall be reimbursable and only the prorated share of those benefits allocable to the individual chargeable to the contract is allowable.

**Operating Expense:** Employee expenses shall include documentation of expense vouchers clearly identifying the expenses chargeable to the contract. Such documentation would include a copy of the approved expense claim.

**Contracts:** Payments to sub contractors by the contractor that are chargeable to the Contract shall clearly indicate the purpose of the contract and the portion of the contractor's cost which is allocable to the Contract program.

Records relating to the above requirements for Wages, Benefits, Operating Expenses, and Contracts shall be made available for audit upon request by VCGI.

#### **ORGANIZATIONAL AND FINANCIAL REQUIREMENTS:**

1. Contractors shall be required to establish and maintain accounting systems and financial records to accurately account for funds awarded to them. The determination of allowability of costs claimed shall be consistent with the requirements of the contract award and its applicable regulations.

a. Contractors shall have the responsibility for employing the organizational and management techniques necessary to assure proper administration and cost allocation, including accounting, budgeting, reporting, auditing and other review controls.

b. Contractors shall accept responsibility for expending and accounting for funds in a manner consistent with the project goals as evidenced by their acceptance of a contract award by VCGI.

2. Sub-Contractors shall have adequate internal controls which:

a. Presents, classifies and retains all detailed financial records related to the contract award. Financial records must be retained by the Contractor and be available for review for a period of three (3) years after the expiration of the Contract period except that records must be retained until completion or resolution of all issues arising from audit, litigation or claims started before the expiration of the three year period, whichever is later.

b. Provides information for planning, control and evaluation of direct and indirect costs;

c. Provides cost and property control to ensure optimal use of the Contract funds;

d. Controls funds and other resources to ensure that the expenditure of Contract funds and use of any property acquired under the Contract are in conformance with established guidelines and policies.



## ATTACHMENT C

### CUSTOMARY PROVISIONS

**1. Entire Agreement:** This Contract Agreement represents the entire agreement between the parties on the subject matter. All prior agreements, representations, statements, negotiations, and understandings shall have no effect.

**2. Applicable Law:** This Contract Agreement will be governed by the laws of Vermont. The Contractor must comply with all the federal requirements pertaining to the expenditure of federal funds.

**3. Appropriations: Availability of Federal ARRA Funds:** This Grant is funded in whole or in part by federal ARRA funds. In the event the federal funds supporting this grant become unavailable or are reduced, the VCGI may suspend or cancel this Contract immediately, and VCGI shall have no obligation to pay Contractor from other revenues. Contractor shall receive payment for services performed prior to the suspension or cancellation of the Grant.

**4. No Employee Benefits For Contractor:** The Contractor understands that VCGI will not provide any individual retirement benefits, group life insurance, group health and dental insurance, vacation and sick leave, workers' compensation or other benefits or services available to VCGI employees, nor will VCGI withhold any state or federal taxes except as required under applicable tax laws, which shall be determined in advance of execution of the Contract Agreement. The Contractor understands that all tax returns required by the Internal Revenue Code and the State, including, but not limited to income, withholding, sales and use, and rooms and meals, must be filed by the Contractor, and information as to Contract income will be provided by VCGI to the Internal Revenue Service and the Vermont Department of Taxes, if required.

**5. Independence, Liability:** The Contractor will act in an independent capacity and not as officers or employees of VCGI. The Contractor shall indemnify, defend and hold harmless VCGI and its officers and employees from liability and any claims, suits, judgments, and damages to the extent caused by the Contractor's negligent acts and/or omissions in the performance of this Contract.

**6. Reliance By VCGI on Representations:** All payments by VCGI under this Contract Agreement will be made in reliance upon the accuracy of all prior representations by the Contractor, including but not limited to bills, invoices, progress reports and other proofs of work.

**7. Records Available for Audit:** The Contractor will maintain all books, documents, payroll papers, accounting records, and other evidence pertaining to costs incurred under this Contract Agreement and make them available at reasonable times during the period of the Contract and for three years thereafter for inspection by any authorized representatives of the State or Federal Government. If any litigation, claim, or audit is started before the expiration of the three-year period, the records shall be retained until all litigation, claims or audit findings involving the records have been resolved. VCGI, by any authorized representative, shall have the right at all reasonable times to inspect or otherwise evaluate the work performed or being performed under this Contract Agreement.

**8. Fair Employment Practices and Americans with Disabilities Act:** Contractor agrees to comply with the requirement of Title 21 V.S.A. Chapter 5, Subchapter 6, relating to fair employment practices, to the full extent applicable. Contractor shall also ensure, to the full extent required by the Americans with Disabilities Act of 1990 that qualified individuals with disabilities receive equitable access to the services, programs, and activities provided by the Contractor under this Contract Agreement. Contractor further agrees to include this provision in all subcontracts.


**9. Subcontracting:** Contractor shall not assign or subcontract the performance of this Contract or any portion thereof to any other Subcontractor without the prior written approval of VCGI. They must advise their Subcontractors of requirements imposed on them by federal laws, regulations, and the provisions of contracts or grant agreements as well as any supplemental requirements imposed by the pass-through entity. They must also set up a plan for monitoring those Contractors' use of the funds.

**10. No Gifts or Gratuities:** Contractor shall not give title or possession of any thing of substantial value (including property, currency, travel and/or education programs) to any officer or employee of VCGI during the term of this Contract Agreement.

**11. Copies:** All written reports prepared under this Contract Agreement will be printed using both sides of the paper.

**12. Suspension and Debarment:** Non-federal entities are prohibited by Federal Executive Orders 12549 and 12689 from contracting with or making sub-awards under covered transactions to parties that are suspended or debarred or whose principals are suspended or debarred. Covered transactions include procurement contracts for goods or services equal to or in excess of \$100,000 and non-procurement transaction (grants to Contractors). By signing this Contract Agreement, current Contractor certifies as applicable, that the contracting organization and its principals are not suspended or debarred by GSA from federal procurement and non-procurement programs.

**ATTACHMENT D Reporting Forms and Additional Information Required**  
 (These forms may be modified based upon information at award)

 Vermont Center for Geographic Information, Inc. Financial Report Form	
1. Federal Funding Agency Name U.S. Department of Commerce	2. Treasury Accounting Symbol (if provided)
3. Vermont Awarding Organization Vermont Center for Geographic Information, Inc.	4. CFDA Number
5. Award Name	6. Award Type <input type="checkbox"/> Matching <input type="checkbox"/> Non-Matching
8. Award Number	7. Check Type of Report <input type="checkbox"/> Month Ending <input type="checkbox"/> Quarter Ending <input type="checkbox"/> Final
9. Award Date	10. Funding Period From: _____ To: _____
12. Federal ID number	11. Report Period From: _____ To: _____
14. Recipient Name and Address	13. DUNS number
16. Name of Contact Person	15. Payee (What's check is to be sent if different from 14)
18. Project Name	17. Telephone Number
<b>Financial Report Section</b>	
<b>Personal Services</b>	
Salaries and Benefits	\$0.00
Other Personal Services (Explain)	\$0.00
Contractual	\$0.00
<b>Total Personal Services</b>	<b>\$0.00</b>
<b>Operating Expenses</b>	
Supplies	\$0.00
Travel	\$0.00
Equipment	\$0.00
Indirect Cost	\$0.00
Other Operating Expense (Explain)	\$0.00
<b>Total Operating Expense</b>	<b>\$0.00</b>
<b>Total Program</b>	<b>\$0.00</b>
<b>Financial Report Section</b>	
a. Total Program as of date:	\$0.00
b. Less: Cumulative Program Income	\$0.00
c. Net program outlays (line a. minus line b.)	\$0.00
d. Cash Advances	\$0.00
e. Total for Program	\$0.00
f. Non-Federal share of amount on line e.	\$0.00
g. Federal share of amount on line e.	\$0.00
h. Grant payment now requested or cash balance	\$0.00
<b>21. Certification</b>	
I certify to the best of my knowledge and belief the data included on this report are correct, all supporting documentation is on file and available for inspection and that all outlays have been or will be made in accordance with the sub-grant conditions or other agreement and that payment is due and has not been previously requested.	Signature of authorizing official
	Typed or printed name and title
	Date Submitted
	Tel. Number
Over Expenditures must be shown as non-federal share Note: If you are completing this form in electronic format, make all entries in the highlighted areas only.	



1. Federal Funding Agency Name		2. Treasury Accounting Symbol (if provided)	
U.S. Dept. of Commerce			
3. Vermont Awarding Organization		4. CFDA Number	
Vermont Center for Geographic Information, Inc.			
5. Award Name		7. Check Type of Report	
<input type="checkbox"/> Matching <input type="checkbox"/> Non-Matching		<input type="checkbox"/> Month Ending <input type="checkbox"/> Quarter Ending <input type="checkbox"/> Final	
8. Award Number		10. Funding Period	
		11. Report Period	
9. Award Date		From:	
		To:	
12. Federal ID number		13. DUNS number	
14. Recipient Name and Address		15. Payee (Where check is to be sent if different from 14)	
16. Name of Contact Person		17. Telephone Number	
18. Congressional District		19. Primary Place of Performance	
VT-1		Vermont	
22. Project Description		23. Job Creation Narrative	
24. Project % Complete		25. Number of Jobs Created	
26. Project Name		27. Number of Jobs Retained	
		28. Total Project	
28. Tier 1 and 2 Vendor Headquarters ZIP Code		29. Product/Service Description (NAICS Code)	
21. Certification		Signature of authorizing official	
I certify to the best of my knowledge and belief the data included on this report are correct, all supporting documentation is in file and available for inspection and that all outlays have been or will be made in accordance with the sub grant conditions or other agreement.		Typed or printed name and title	
Date Submitted		Tel. Number	
Notes: If you are completing this form in electronic format, make all entries in the highlighted areas only. Over Expenditures must be shown as non-federal share			

**ATTACHMENT E Technical Appendix to State Broadband Data and Development Grant Program and NTIA Clarification**



**STATE OF VERMONT**  
JOINT FISCAL OFFICE

**MEMORANDUM**

To: Representative Warren Kitzmiller

From: Nathan Lavery, Fiscal Analyst

Date: October 21, 2009

Subject: JFO #2403

Representative Michael Obuchowski asked that I forward to you a copy of the enclosed grant materials and cover memo. He requests your observations regarding the enclosed item.

cc: Rep. Michael Obuchowski  
Stephen Klein





State of Vermont  
Department of Finance & Management  
109 State Street, Pavilion Building  
Montpelier, VT 05620-0401

Agency of Administration

[phone] 802-828-2376  
[fax] 802-828-2428

**STATE OF VERMONT  
FINANCE & MANAGEMENT GRANT REVIEW FORM**

**Grant Summary:** American Recovery and Reinvestment Act (ARRA) award from the federal Department of Energy to the Vermont Center for Geographic Information (VCGI) will be sub-granted (using a contract) to the Department of Public Service to provide support for the grant's State Broadband Data and Development program. Use of a grant application was deemed appropriate for the Joint Fiscal Committee's consideration and approval of receipt of this funding from VCGI.

**Date:** 9/29/2009

**Department:** Department of Public Service

**Legal Title of Grant:** Vermont Center for Geographic Information contract #DPS-BBM 09-01

**Federal Catalog #:** NA

**Grant/Donor Name and Address:** Vermont Center for Geographic Information

**Grant Period:** **From:** 9/15/2009 **To:** 12/31/2013

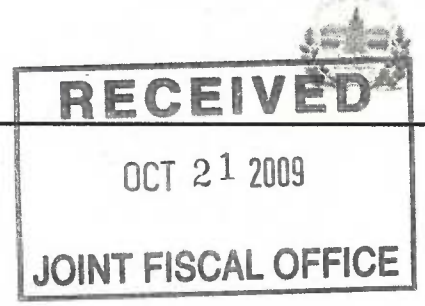
**Grant/Donation** \$518,547

	SFY 1	SFY 2	SFY 3	Total	Comments
<b>Grant Amount:</b>	\$121,755	\$116,840	\$116,840	\$355,435	

Position Information:	# Positions	Explanation/Comments
	1	Telecommunications Infrastructure Specialist

**Additional Comments:**

Department of Finance & Management	<i>W 10/5/09</i>	(Initial) <i>DB 9-29-09</i>
Secretary of Administration	<i>TP 10/5/09</i>	(Initial)
Sent To Joint Fiscal Office		Date <i>10/9/09</i>





**STATE OF VERMONT  
Joint Fiscal Committee Review  
Limited Service - Grant Funded  
Position Request Form**

This form is to be used by agencies and departments when additional grant funded positions are being requested. Review and approval by the Department of Human Resources must be obtained prior to review by the Department of Finance and Management. The Department of Finance will forward requests to the Joint Fiscal Office for JFC review. A Request for Classification Review Form (RFR) and an updated organizational chart showing to whom the new position(s) would report must be attached to this form. Please attach additional pages as necessary to provide enough detail.

Agency/Department: Public Service Department Date: 09/29/2009

Name and Phone (of the person completing this request): Sheri Rockcastle 802-828-4084

Request is for:

- Positions funded and attached to a new grant.  
 Positions funded and attached to an existing grant approved by JFO # \_\_\_\_\_

1. Name of Granting Agency, Title of Grant, Grant Funding Detail (attach grant documents):

Vermont Center for Geographic Information Contract # DPS-BBM 09-01 for the Vermont Broadband Mapping Initiative

The PSD is a partner organization with VCGI in Vermont's only application for funding from the National Telecommunications and Information Administration's (NTIA) State Broadband Data and Development Grant Program, a program funded under the American Recovery and Reinvestment Act. VCGI is named in the proposal as the lead applicant and the prime recipient of the grant from NTIA. VCGI and PSD have entered into a contract that will allow VCGI to pay PSD in support of activities undertaken for the Vermont Broadband Mapping Initiative. Please find attached to this memo a copy of the contract between VCGI and the PSD, which is being submitted in lieu of a Notice of Award and Grant Agreement. Also please find the copy of the VCGI grant proposal to NTIA, which includes the overall grant budget.

2. List below titles, number of positions in each title, program area, and limited service end date (information should be based on grant award and should match information provided on the RFR) position(s) will be established only after JFC final approval:

<u>Title* of Position(s) Requested</u>	<u># of Positions</u>	<u>Division/Program</u>	<u>Grant Funding Period/Anticipated End Date</u>
Telecommunications Infrastructure Specialist	1	Telecommunications	October 15, 2009-October 7, 2012

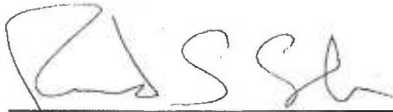
\*Final determination of title and pay grade to be made by the Department of Human Resources Classification Division upon submission and review of Request for Classification Review.

3. Justification for this request as an essential grant program need:

The NTIA and the Rural Utilities Service of the U.S. Dept. of Agriculture are encouraging applicants to their broadband stimulus programs to use state broadband mapping data. PSD has experience in broadband data collection and unique familiarity with telecommunications infrastructure, making it the best-suited organization in Vermont to be responsible for this role. However, the level of data quality, granularity, and frequency expected cannot be achieved without additional resources than the state has devoted to this activity to date. Funding is available through the federal grant to be awarded to VCGI. Without accepting this funding, broadband availability in Vermont will be less accurately represented, harming applications for broadband stimulus funding in Vermont, as well as hampering state and federal broadband planning efforts.

I certify that this information is correct and that necessary funding, space and equipment for the above position(s) are available (required by 32 VSA Sec. 5(b)).

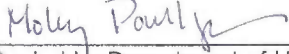
STATE OF VERMONT  
Joint Fiscal Committee Review  
Limited Service - Grant Funded  
Position Request Form



9-30-09

Signature of Agency or Department Head

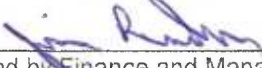
Date



10/2/09

Approved/ Denied by Department of Human Resources

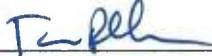
Date



10/5/09

Approved/ Denied by Finance and Management

Date



10/5/09

Approved/Denied by Secretary of Administration

Date

Comments:

**STATE OF VERMONT REQUEST FOR GRANT ACCEPTANCE (Form AA-1)**

BASIC GRANT INFORMATION					
<b>1. Agency:</b>					
<b>2. Department:</b>		Public Service Department (PSD)			
<b>3. Program:</b>		Vermont Broadband Mapping Initiative			
<b>4. Legal Title of Grant:</b>		Vermont Center for Geographic Information Contract # DPS-BBM 09-01			
<b>5. Federal Catalog #:</b>					
<b>6. Grant/Donor Name and Address:</b> Vermont Center for Geographic Information (VCGI) 58 South Main Street Suite 2 Waterbury, VT 05676					
<b>7. Grant Period:</b>		<b>From:</b> 9/15/2009	<b>To:</b> 12/31/2013		
<b>8. Purpose of Grant:</b> The PSD is a partner organization with VCGI in Vermont's only application for funding from the National Telecommunications and Information Administration's (NTIA) State Broadband Data and Development Grant Program, a program funded under the American Recovery and Reinvestment Act. VCGI is named in the proposal as the lead applicant and the prime recipient of the grant from NTIA. VCGI and PSD have entered into a contract that will allow VCGI to pay PSD in support of activities undertaken for the Vermont Broadband Mapping Initiative, principally the collection of data from broadband service providers and some telephone survey work. The contract is principally intended to fully fund 1 FTE position for a three year period, as well as other expenses.					
<b>9. Impact on existing program if grant is not Accepted:</b> The NTIA and the Rural Utilities Service of the U.S. Dept. of Agriculture are encouraging applicants to their broadband stimulus programs to use state broadband mapping data. PSD has experience in broadband data collection and unique familiarity with telecommunications infrastructure, making it the best-suited organization in Vermont to be responsible for this role. However, the level of data quality, granularity, and frequency expected cannot be achieved without additional resources than the state has devoted to this activity to date. Funding is available through the federal grant to be awarded to VCGI. Without accepting this funding, broadband availability in Vermont will be less accurately represented, harming applications for broadband stimulus funding in Vermont, as well as hampering state and federal broadband planning efforts.					
10. BUDGET INFORMATION					
	SFY 1 FY 2010	SFY 2 FY 2011	SFY 3 FY 2012	Comments	
<b>Expenditures:</b>					
Personal Services	\$87,630	\$116,840	\$116,840	1 FTE, starting around 10/1/2009	
Operating Expenses	\$64,125	\$	\$	Includes survey expenses	
Grants	\$	\$	\$		
<b>Total</b>	\$	\$	\$		
<b>Revenues:</b>					
State Funds:	\$30,000	\$	\$	From funds already budgeted for Telplan	

**STATE OF VERMONT REQUEST FOR GRANT ACCEPTANCE (Form AA-1)**

				survey
Cash	\$	\$	\$	
In-Kind	\$	\$	\$	
Federal Funds:	\$	\$	\$	
(Direct Costs)	\$	\$	\$	
(Statewide Indirect)	\$	\$	\$	
(Departmental Indirect)	\$	\$	\$	
Other Funds:	\$	\$	\$	
Grant (source VCGI)	\$121,755	\$116,840	\$116,840	
<b>Total</b>	\$	\$	\$	

<b>Appropriation No:</b>	2240000000	<b>Amount:</b>	\$121,755
			\$
			\$
			\$
			\$
			\$
			\$
		<b>Total</b>	\$121,755

**PERSONAL SERVICE INFORMATION**

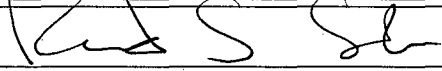
**11. Will monies from this grant be used to fund one or more Personal Service Contracts?**  Yes  No  
 If "Yes", appointing authority must initial here to indicate intent to follow current competitive bidding process/policy.

Appointing Authority Name: \_\_\_\_\_ Agreed by: \_\_\_\_\_ (initial)

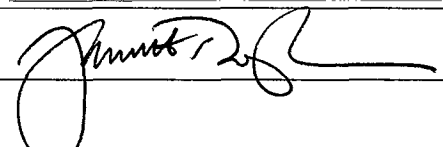
<b>12. Limited Service Position Information:</b>	<b># Positions</b>	<b>Title</b>
	1	Telecommunications Infrastructure Specialist
<b>Total Positions</b>	1	

**12a. Equipment and space for these positions:**  Is presently available.  Can be obtained with available funds.

**13. AUTHORIZATION AGENCY/DEPARTMENT**

I/we certify that no funds beyond basic application preparation and filing costs have been expended or committed in anticipation of Joint Fiscal Committee approval of this grant, unless previous notification was made on Form AA-1PN (if applicable):	Signature: 	Date: 9-25-09
	Title: DEPUTY COMMISSIONER	
	Signature:	Date:
	Title:	

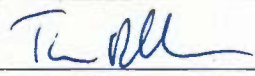
**14. ACTION BY GOVERNOR**

<input checked="" type="checkbox"/> Check One Box: Accepted		10/8/09
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**STATE OF VERMONT REQUEST FOR GRANT ACCEPTANCE (Form AA-1)**

<input type="checkbox"/> Rejected	(Governor's signature)	Date:
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**15. SECRETARY OF ADMINISTRATION**

<input type="checkbox"/> Check One Box: Request to JFO		10/5/09
<input type="checkbox"/> Information to JFO	(Secretary's signature or designee)	Date:

**16. DOCUMENTATION REQUIRED**

Required GRANT Documentation	
<input checked="" type="checkbox"/> Request Memo <input checked="" type="checkbox"/> Dept. project approval (if applicable) <input checked="" type="checkbox"/> Notice of Award <input checked="" type="checkbox"/> Grant Agreement <input checked="" type="checkbox"/> Grant Budget	<input type="checkbox"/> Notice of Donation (if any) <input type="checkbox"/> Grant (Project) Timeline (if applicable) <input type="checkbox"/> Request for Extension (if applicable) <input type="checkbox"/> Form AA-1PN attached (if applicable)

**End Form AA-1**

# Memorandum

## Vermont Department of Public Service

**To:** Neale Lunderville, Secretary of Administration

**From:** Richard Smith, Deputy Commissioner *RSS*

**CC:** Tom Evslyn, Chief Recovery Officer

**Subject:** Form AA-1 for Vermont Broadband Mapping Initiative

**Date:** Sept. 25, 2009

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One of the programs funded under the American Recovery and Reinvestment Act (ARRA) is the State Broadband Data and Development Grant Program, administered through the National Telecommunications and Information Administration's (NTIA). This program has the stated intention to fund a program of broadband data collection in each state, to produce a national map of information about broadband availability and characteristics which can be used in policy development, including the development of a national broadband plan. This data will also be used to evaluate stimulus applications to NTIA and to the Rural Utilities Service (RUS) for funding of proposed broadband infrastructure projects. Lack of an update to existing broadband map information in Vermont could disadvantage proposals from Vermont.

State Broadband Data and Development Grant Program is nominally a competitive program. However, the Notice of Funds Availability (NoFA) for the program allowed for one entity in each state to be designated as the single eligible entity to receive funding in that state. The Vermont Center for Geographic Information (VCGI) was named by Governor Douglas in August to be that entity. The NoFA also announced the NTIA's expectation that it would make awards of between \$1.9 and \$3.8 million per state. VCGI has submitted a grant application prior to the August 14, 2009, deadline in the amount of \$1.96 million. VCGI has been contacted by NTIA, received favorable comments on its application, and has responded to follow-up data requests prior to an award announcement. However, given the announced parameters of the program, and VCGI being the sole applicant from Vermont, the likelihood of VCGI not being awarded the grant is exceedingly low.

The Public Service Department (PSD) is a partner organization with VCGI in the application. VCGI is the lead applicant and the prime recipient of the grant from NTIA. VCGI and PSD have entered into a contract that will allow VCGI to pay PSD in support of activities undertaken for the Vermont Broadband Mapping Initiative, principally the collection of data from broadband service providers and some telephone survey work. The contract is principally intended to fully fund 1 FTE for a three year period, as well as survey expenses. This request seeks permission to create a limited service position that will be necessary to perform the work required and will be supported by the payments from VCGI to PSD.

The PSD is seeking expedited approval of this request, due to timeframes included in the ARRA broadband programs. The State Broadband Data and Development Grant Program calls for the first round of data from states by November 1, 2009. This data will help determine eligibility of

REC'D SEP 25 2009

projects in the next round of broadband infrastructure grants and loans, applications for which may be due as early as December 2009. These deadlines are unlikely to move significantly because of the underlying requirements to finish obligation of broadband stimulus funds by September 2010. Recruitment of the position funded by this contract at the soonest possible date is important to the success of the program in Vermont. While the contract is contingent on an award to VCGI, and the PSD does not intend to make a hire before an award is assured, the near-certainty of the award and the urgency of the project create a need to be as ready to move without further delay when funds become available.

Please find attached to this memo a copy of the contract between VCGI and the PSD, which is being submitted in lieu of a Notice of Award and Grant Agreement. Also please find the copy of the VCGI grant proposal to NTIA, which includes the overall grant budget. Thank you for your consideration of this request.

**Vermont Center for Geographic Information Contract # DPS-BBM 09-01  
STANDARD CONTRACT**

**1. Parties:** This is a contract provided by the Vermont Center for Geographic Information, Inc., (hereafter called "VCGI"), to the Vermont Department of Public Service, with principal place of business at 112 State St., Montpelier, VT, (hereafter called "Contractor"). Contractor is required by law to have a Business Account Number from the Vermont Department of Taxes. Account Number is 44498. Federal Identification Number 03-6000-274.

**2. Subject Matter:** The subject matter of this contract is for the provision of services generally on the subject of activities related to the mapping and verification of broadband telecommunications infrastructure in Vermont. Detailed services to be provided by the Contractor are described in Attachment A, Statement of Work.

**3. Maximum Amount:** In consideration of the services to be performed by Contractor, VCGI agrees to pay Contractor, in accordance with the payment provisions specified in Attachment B, a sum not to exceed \$518,547.00.

**4. Contract Term:** The period of Contractor's performance shall begin on September 15, 2009 and end on September 30, 2014.

**5. Contingencies:** This contract is only valid upon an award by the National Telecommunications and Information Administration (NTIA) to VCGI for the State Broadband Data and Development Grant. The Maximum Amount, Contract Term, Statement of Work and/or Contract Provisions may be modified based upon any changes in the final grant awarded to VCGI. Contractor will be required to abide by any provisions required by Tier 1 Contractors as provided by NTIA in their award or contract documentation. If future modifications are not acceptable the contract may be cancelled (Item 9).

**6. Amendment:** No changes, modifications, or amendments in the terms and conditions of this contract shall be effective unless reduced to writing, numbered and signed by the duly authorized representative of VCGI and Contractor.

**7. Additional Provisions:** The contractor agrees to abide by all of the requirements and provisions as identified in Attachments A, B, C and D of this document.

**8. Applicable Law:** This agreement shall be interpreted and enforced according to the laws of the State of Vermont.

**9. Cancellation:** This contract may be canceled by either party by giving written notice at least 30 days in advance.

**10. Contact Persons:** The contractor's contact person for this award is;

Name: Corey Chase

Telephone Number: 802 828 1257

Email Address: corey.chase@state.vt.us

**11. Source Of Funds:** 100% Federal ARRA Funds



**12. Attachments** This contract consists of 12 pages including the following attachments, which are incorporated herein:

Attachment A - Scope of Work

Attachment B - Payment Provisions

Attachment C - Customary Provisions

Attachment D - Reporting Forms and Additional Information Required

Attachment E - Technical Appendix to State Broadband Data and Development Grant Program and NTIA Clarification

WE THE UNDERSIGNED PARTIES AGREE TO BE BOUND BY THIS CONTRACT.

By VCGI:

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

By the Contractor:

Date: September 15, 2009

Signature:  \_\_\_\_\_

Name: Richard Smith

Title: Deputy Commissioner, Department of Public Service

The following information is required for Contracts funded in whole or in part with monies from the federal American Recovery & reinvestment Act or 2009.

Legal Name and D-U-N-S® Number on File with the federal Central Contractor Registration (1):

PUBLIC SERVICE, VERMONT DEPARTMENT OF  
Print Legal CCR Name

809376791

D-U-N-S® Number (2)

1) The Central Contractor Registration (CCR) is the primary registrant database for the U.S. Federal Government. CCR collects, validates, stores and disseminates data in support of agency acquisition missions. FREE registration is available at: <http://www.ccr.gov/Default.aspx>.

2) The D-U-N-S Number is a unique nine-digit identification number assigned and maintained solely by Dun & Bradstreet (D&B). D-U-N-S Number assignment is FREE for all businesses required to register with the US Federal government (see # 1 above) for contracts or grants. Created in 1962, the Data Universal Numbering System or D-U-N-S® Number is D&B's copyrighted, proprietary means of identifying business entities. Register at: [https://eupdate.dnb.com/requestoptions.asp?cm\\_re=HomepageB\\*TopNav\\*DUNSNumberTab](https://eupdate.dnb.com/requestoptions.asp?cm_re=HomepageB*TopNav*DUNSNumberTab)  
ARRA Addendum

## **ATTACHMENT A**

### **SCOPE OF WORK**

#### **OVERVIEW**

The Vermont Center for Geographic Information, Inc. (VCGI) will coordinate the state-wide Vermont Broadband Mapping effort as follows:

All aspects of this contract award will be centrally managed by VCGI. VCGI will work with the National Telecommunications and Information Administration (NTIA) and all Tier 1 Contractors. The VT Department of Public Service is defined by NTIA, for the purposes of this contract, as a Tier 1 Contractor.

#### **BUSINESS REQUIREMENTS**

All work products and deliverables produced under this contract will be the property of NTIA, VCGI, the VT Department of Public Service and the State of Vermont. This includes, but is not limited to, documentation, and development materials. A contractor shall not sell a work product or deliverable produced under this contract without explicit permission from the VCGI or the State of Vermont.

The funds used to support this agreement, in full or in part, are provided through the federal American Recovery & Reinvestment Act (ARRA or the Act); this agreement therefore is subject to payment criteria and specific reporting requirements mandated by the Act. A periodic report, certified by an authorized agent of the Party, utilizing the form provided by the State of Vermont and attached hereto, shall be submitted as required. Failure to submit timely, accurate and fully executed reports will result in a mandate to return to the State funds already disbursed under this agreement, or the withholding of current and future payments under this agreement until such time as the reporting irregularities are resolved to the State's satisfaction.

For subrecipients who report awards of federal funds to the State, said subrecipient agrees to include information of ARRA funding separately from other federal awards reported on their Statement of Expenditures of Federal Awards (SEFA).

The parties to this agreement are further bound by the Act that they shall promptly refer to an appropriate federal inspector general any credible evidence that a principal, employee, agent, contractor, subrecipient, contractor, or other person has submitted a false claim under the False Claims Act or has committed a criminal or civil violation of laws pertaining to fraud, conflict of interest, bribery, gratuity, or similar misconduct involving the ARRA funds used to support this agreement.

The Contractor shall be required to provide complete and accurate project reporting on a monthly and quarterly basis for the duration of this project. See Attachment D - Reporting Forms and Additional Information Required for examples of the forms that will be used and the information that is required.

The Contractor shall be required to notify VCGI of any changes in project personnel as well as the reason for the change for the duration of the project. Notification of personnel change should occur prior to the change implementation. The Contractor is responsible for replacing project personnel with personnel of equal or better skills and experience for the project if a change is implemented.

The Contractor shall work with VCGI to alleviate issues relating to proprietary data access, creating Non-disclosure Agreements if necessary.  
The Contractor shall report employee salaries and project expenses that can be used as contract match as identified in the project proposal.

## **PROJECT PERFORMANCE REQUIREMENTS**

The following criteria have been identified as performance requirements for the contract.

### **Activity 1: Provision of a Telecommunications and GIS Specialist**

The VT Department of Public Service shall make available to the project one Full Time Equivalent telecommunications specialist who will work in coordination with partners at VCGI to estimate and map the capabilities of mobile and fixed wireless and landline based broadband infrastructure. The DPS is responsible for understanding telecommunications technology and networks and is responsible for implementing methodologies for gathering and presenting information about the state of telecommunications networks in Vermont. The VT Department of Public Service will provide this level of service for three years.

### **Activity 1: Requirements**

1. The VT Department of Public Service shall provide a member of its telecommunications staff as a primary point of contact as soon as possible after notification of grant award to VCGI.
2. The VT Department of Public Service shall work directly with all of the Broadband Telecommunications service providers and/or Community Anchor Institutions in Vermont to collect the broadband service area coverage, telecommunications infrastructure location and characterization data, existing digital mapping data, DSL service addresses, and subscriber weighted nominal speed information being requested by the Broadband Mapping Team.
3. The VT Department of Public Service shall work to ensure as complete a response as possible from the Broadband Telecommunications service providers and Community Anchor Institutions concerning all of the information being requested by the Broadband Mapping Team.
4. The VT Department of Public Service shall provide all of the data collected from the Vermont service providers and Community Anchor Institutions to VCGI as it is collected from the service providers and without aggregation or modification.
5. The VT Department of Public Service shall perform Telecommunications analysis for the VT Department of Public Service related to the present and future capabilities and availability of Vermont's telecommunications infrastructure.

### **Activity 1: Deliverables**

1. The Department of Public Service shall forward information submitted via Service Providers Data Requests to VCGI in accordance with the Data Delivery Timeline. The DPS shall request information from broadband service providers consistent with the data elements listed in the "Technical Appendix" to the NTIA's July 2, 2009, Notice of Funds Availability

(NoFA) for the State Broadband Data and Development Grant Program, as clarified by the NTIA on August 7, 2009, (See Attachment E) under the following headings:

- Broadband Service Availability in Provider's Service Area
  - Broadband Service Infrastructure – Last Mile Connection Points
  - Broadband Service Infrastructure – Middle-Mile and Backbone Interconnection Points
2. The VT Department of Public Service shall provide information characterizing the type of broadband service available at Community Anchor Institutions.
  3. The VT Department of Public Service shall provide to VCGI the methods used and attribution collected relating to Community Anchor Institutions.

#### Activity 2: Creation and Performance of Broadband Service Verification Surveys

The VT Department of Public Service will support the VT Broadband Mapping Team in the performance of a Basic Verification Survey and perform an Expanded Verification Survey. For the Expanded Verification Survey the VT Department of Public Service will consult with the Vermont Council on Rural Development, state and local agencies including the Department of Education and state libraries to understand the information needs of their constituents and incorporate appropriate questions into the surveys.

#### Activity 2: Requirements

1. The VT Department of Public Service shall provide support to the UVM Center for Rural Studies for the creation of a Basic Verification Survey and work with the VT Broadband Mapping Team in analyzing the results.
2. The VT Department of Public Service shall create, in consultation with the UVM Center for Rural Studies and other community partners, an Expanded Verification Survey and perform this survey twice (2009 and 2013) during the contract period.
3. The Expanded Verification Survey shall be approximately 60 questions and focus on communication technology adoption, applications, decision making priorities, and usage for both businesses and residents.
4. The Expanded Verification Survey shall cover a random sampling of the following;
  - 400 Businesses statewide
  - 400 Vermont Residents
  - 40-50 Cell Phones.
5. The VT Department of Public Service shall provide support to the UVM Center for Rural Studies to perform accuracy verification for the Expanded Verification Survey.

#### Activity 2: Deliverables

1. The VT Department of Public Service shall provide the results of the Expanded Verification Survey to VCGI and the project partners.

2. The VT Department of Public Service shall provide the documented sample method and ensure that it is statistically and geographically valid.

## **PROJECT MANAGEMENT REQUIREMENTS**

The Contractor shall be responsible to VCGI, who has overall responsibility for the project schedule and adherence to contract provisions. The Contractor must meet with personnel from VT Broadband Mapping Team as needed to develop and manage project review and delivery schedules and discuss data quality issues.

The Contractor shall develop a project schedule consistent with the Project Delivery Timeline specified below.

The Contractor shall report project status on a quarterly basis to VCGI's Project Manager.

### **Project Deliverables Timeline:**

Project Deliveries shall be made in accordance with the VT Broadband Mapping Initiative Workplan (currently in work).

## **ATTACHMENT B**

### **PAYMENT PROVISIONS**

VCGI agrees to compensate the Contractor for services performed for an amount not to exceed \$518,547.00.

Payment must be requested using a standard business invoice. Payment should be requested on a monthly basis for time spent at an identified hourly rate and all materials reimbursement. All completed invoices should be submitted to:

Name: Linda Ladd  
Address: VCGI  
58 South Main St., Suite 2  
Waterbury, VT 05676

#### **CONTRACTOR REIMBURSEMENTS:**

##### **Invoice Request:**

The Contractor shall submit a monthly invoice for work performed on the contract and any reimbursable expenses on their letterhead.

##### **Information Requirements:**

**Wages:** The contractor shall be responsible for retaining records on-site that include a copy of the contract related personnel activity reports; which reflect an after-the-fact distribution of time on activities chargeable to the contract, are prepared at least monthly and are signed by the employee and the person authorized to approve payment.

**Benefits:** Only the employer's share of benefit cost shall be reimbursable and only the prorated share of those benefits allocable to the individual chargeable to the contract is allowable.

**Operating Expense:** Employee expenses shall include documentation of expense vouchers clearly identifying the expenses chargeable to the contract. Such documentation would include a copy of the approved expense claim.

**Contracts:** Payments to sub contractors by the contractor that are chargeable to the Contract shall clearly indicate the purpose of the contract and the portion of the contractor's cost which is allocable to the Contract program.

Records relating to the above requirements for Wages, Benefits, Operating Expenses, and Contracts shall be made available for audit upon request by VCGI.

#### **ORGANIZATIONAL AND FINANCIAL REQUIREMENTS:**

1. Contractors shall be required to establish and maintain accounting systems and financial records to accurately account for funds awarded to them. The determination of allowability of costs claimed shall be consistent with the requirements of the contract award and its applicable regulations.

a. Contractors shall have the responsibility for employing the organizational and management techniques necessary to assure proper administration and cost allocation, including accounting, budgeting, reporting, auditing and other review controls.

b. Contractors shall accept responsibility for expending and accounting for funds in a manner consistent with the project goals as evidenced by their acceptance of a contract award by VCGI.

2. Sub-Contractors shall have adequate internal controls which:

a. Presents, classifies and retains all detailed financial records related to the contract award. Financial records must be retained by the Contractor and be available for review for a period of three (3) years after the expiration of the Contract period except that records must be retained until completion or resolution of all issues arising from audit, litigation or claims started before the expiration of the three year period, whichever is later.

b. Provides information for planning, control and evaluation of direct and indirect costs;

c. Provides cost and property control to ensure optimal use of the Contract funds;

d. Controls funds and other resources to ensure that the expenditure of Contract funds and use of any property acquired under the Contract are in conformance with established guidelines and policies.

## ATTACHMENT C

### CUSTOMARY PROVISIONS

**1. Entire Agreement:** This Contract Agreement represents the entire agreement between the parties on the subject matter. All prior agreements, representations, statements, negotiations, and understandings shall have no effect.

**2. Applicable Law:** This Contract Agreement will be governed by the laws of Vermont. The Contractor must comply with all the federal requirements pertaining to the expenditure of federal funds.

**3. Appropriations: Availability of Federal ARRA Funds:** This Grant is funded in whole or in part by federal ARRA funds. In the event the federal funds supporting this grant become unavailable or are reduced, the VCGI may suspend or cancel this Contract immediately, and VCGI shall have no obligation to pay Contractor from other revenues. Contractor shall receive payment for services performed prior to the suspension or cancellation of the Grant.

**4. No Employee Benefits For Contractor:** The Contractor understands that VCGI will not provide any individual retirement benefits, group life insurance, group health and dental insurance, vacation and sick leave, workers' compensation or other benefits or services available to VCGI employees, nor will VCGI withhold any state or federal taxes except as required under applicable tax laws, which shall be determined in advance of execution of the Contract Agreement. The Contractor understands that all tax returns required by the Internal Revenue Code and the State, including, but not limited to income, withholding, sales and use, and rooms and meals, must be filed by the Contractor, and information as to Contract income will be provided by VCGI to the Internal Revenue Service and the Vermont Department of Taxes, if required.

**5. Independence, Liability:** The Contractor will act in an independent capacity and not as officers or employees of VCGI. The Contractor shall indemnify, defend and hold harmless VCGI and its officers and employees from liability and any claims, suits, judgments, and damages to the extent caused by the Contractor's negligent acts and/or omissions in the performance of this Contract.

**6. Reliance By VCGI on Representations:** All payments by VCGI under this Contract Agreement will be made in reliance upon the accuracy of all prior representations by the Contractor, including but not limited to bills, invoices, progress reports and other proofs of work.

**7. Records Available for Audit:** The Contractor will maintain all books, documents, payroll papers, accounting records, and other evidence pertaining to costs incurred under this Contract Agreement and make them available at reasonable times during the period of the Contract and for three years thereafter for inspection by any authorized representatives of the State or Federal Government. If any litigation, claim, or audit is started before the expiration of the three-year period, the records shall be retained until all litigation, claims or audit findings involving the records have been resolved. VCGI, by any authorized representative, shall have the right at all reasonable times to inspect or otherwise evaluate the work performed or being performed under this Contract Agreement.

**8. Fair Employment Practices and Americans with Disabilities Act:** Contractor agrees to comply with the requirement of Title 21 V.S.A. Chapter 5, Subchapter 6, relating to fair employment practices, to the full extent applicable. Contractor shall also ensure, to the full extent required by the Americans with Disabilities Act of 1990 that qualified individuals with disabilities receive equitable access to the services, programs, and activities provided by the Contractor under this Contract Agreement. Contractor further agrees to include this provision in all subcontracts.



**9. Subcontracting:** Contractor shall not assign or subcontract the performance of this Contract or any portion thereof to any other Subcontractor without the prior written approval of VCGI. They must advise their Subcontractors of requirements imposed on them by federal laws, regulations, and the provisions of contracts or grant agreements as well as any supplemental requirements imposed by the pass-through entity. They must also set up a plan for monitoring those Contractors' use of the funds.

**10. No Gifts or Gratuities:** Contractor shall not give title or possession of any thing of substantial value (including property, currency, travel and/or education programs) to any officer or employee of VCGI during the term of this Contract Agreement.

**11. Copies:** All written reports prepared under this Contract Agreement will be printed using both sides of the paper.

**12. Suspension and Debarment:** Non-federal entities are prohibited by Federal Executive Orders 12549 and 12689 from contracting with or making sub-awards under covered transactions to parties that are suspended or debarred or whose principals are suspended or debarred. Covered transactions include procurement contracts for goods or services equal to or in excess of \$100,000 and non-procurement transaction (grants to Contractors). By signing this Contract Agreement, current Contractor certifies as applicable, that the contracting organization and its principals are not suspended or debarred by GSA from federal procurement and non-procurement programs.

**ATTACHMENT D Reporting Forms and Additional Information Required**  
 (These forms may be modified based upon information at award)

1. Federal Funding Agency Name U.S. Department of Commerce		2. Treasury Accounting Symbol (if provided)	
3. Vermont Awarding Organization Vermont Center for Geographic Information, Inc.		4. CFDA Number	
5. Award Name		5. Award Type <input type="checkbox"/> Matching <input type="checkbox"/> Non-Matching	7. Check Type of Report <input type="checkbox"/> Month Ending <input type="checkbox"/> Quarter Ending <input type="checkbox"/> Final
8. Award Number		10. Funding Period	
9. Award Date		From:	From:
12. Federal ID number		To:	To:
14. Recipient Name and Address		13. DUNS number	
16. Name of Contact Person		15. Payee (What's check is to be sent if different from 14)	
18. Project Name		17. Telephone Number	
18. Budget and Expense		19. a. Expenditures	
		19. a. Award Budget	19. b. Prior Expenditures
		Current Period	Award Balance
<b>Personal Services:</b>			
Salaries and Benefits			\$0.00
Other Personal Services (Explain)			\$0.00
Contractual			\$0.00
<b>Total Personal Services</b>	\$0.00	\$0.00	\$0.00
<b>Operating Expense:</b>			
Supplies			\$0.00
Travel			\$0.00
Equipment			\$0.00
Indirect Cost			\$0.00
Other Operating Expense (Explain)			\$0.00
<b>Total Operating Expense</b>	\$0.00	\$0.00	\$0.00
<b>Total Program</b>	\$0.00	\$0.00	\$0.00
<b>20. Financial Report Section</b>		<b>Award Budget</b>	<b>Prior Expend.</b>
<b>a. Total Program as of date:</b>	\$0.00	\$0.00	\$0.00
<b>b. Less: Cumulative Program Income</b>			\$0.00
<b>c. Net program outlays (line a. minus line b.)</b>	\$0.00	\$0.00	\$0.00
<b>d. Cash Advance</b>			\$0.00
<b>e. Total for Program</b>	\$0.00	\$0.00	\$0.00
<b>f. Non-Federal share of amount on line a.</b>			\$0.00
<b>g. Federal share of amount on line a.</b>	\$0.00	\$0.00	\$0.00
<b>h. Grant payment now requested or cash balance</b>			\$0.00
<b>21. Certification</b>			
I certify to the best of my knowledge and belief the data included on this report are correct, all supporting documentation is on file and available for inspection and that all outlays have been or will be made in accordance with the sub-grant conditions or other agreement and that payment is due and has not been previously requested.		Signature of authorizing official	Date Submitted
		Typed or printed name and title	Tel. Number
Over Expenditures must be shown as non-federal share Note: If you are completing this form in electronic format, make all entries in the highlighted areas only.			



1. Federal Funding Agency Name	U.S. Dept. of Commerce
2. Treasury Accounting Symbol (if provided)	
3. Vermont Awarding Organization	Vermont Center for Geographic Information, Inc.
4. CFDA Number	
5. Award Name	
6. Award Type	<input type="checkbox"/> Matching <input type="checkbox"/> Non-Matching
7. Check Type of Report	<input type="checkbox"/> Month Ending <input type="checkbox"/> Quarter Ending <input type="checkbox"/> Final
8. Award Number	
9. Award Date	From: To:
10. Funding Period	From: To:
11. Report Period	From: To:
12. Federal ID number	
13. DUNS number	
14. Recipient Name and Address	
15. Payee (Where check is to be sent if different from 14)	
16. Name of Contact Person	
17. Telephone Number	
18. Congressional District	VT-1
19. Primary Place of Performance	Vermont
20. Recipient Center's Name	(is highest paid)
21. Amount of AFRA funds disbursed	Budget: Per Diem: Total Disbursed: Total Disbursed:
22. Project Description	23. Job Creation Narrative
24. Project % Complete	25. Number of Jobs Created This Quarter Total Project
26. Project Name	27. Number of Jobs Retained This Quarter Total Project
28. Tier 1 and 2 Vendor Headers ZIP Code	
29. Product/Service Description (NAICS Code)	
30. Continuation	
31. Continuation	

1. Federal Funding Agency Name  
U.S. Dept. of Commerce

2. Treasury Accounting Symbol (if provided)

3. Vermont Awarding Organization  
Vermont Center for Geographic Information, Inc.

4. CFDA Number

5. Award Name

6. Award Type  
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 Non-Matching

7. Check Type of Report  
 Month Ending  
 Quarter Ending  
 Final

8. Award Number

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16. Name of Contact Person

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VT-1

19. Primary Place of Performance  
Vermont

20. Recipient Center's Name  
(is highest paid)

Budget	Per Diem	Total Disbursed	Total Disbursed

21. Amount of AFRA funds disbursed

22. Project Description

23. Job Creation Narrative

24. Project % Complete

25. Number of Jobs Created  
This Quarter  
Total Project

26. Project Name

27. Number of Jobs Retained  
This Quarter  
Total Project

28. Tier 1 and 2 Vendor Headers ZIP Code

29. Product/Service Description (NAICS Code)

30. Continuation

31. Continuation

I certify to the best of my knowledge and belief the data included on this report are correct, all supporting documentation is on file and available for inspection and that all audits have been or will be made in accordance with the sub grant conditions or other agreement.

Signature of authoring official

Date Submitted

Typed or printed name and title

Tel Number

Over Expenditure must be shown as non-federal share

Note: If you are completing this form in electronic format, make all entries in the highlighted areas only.

**ATTACHMENT E Technical Appendix to State Broadband Data and Development Grant Program and NTIA Clarification**

**STATE OF VERMONT**  
**Joint Fiscal Committee Review**  
**Limited Service - Grant Funded**  
**Position Request Form**

This form is to be used by agencies and departments when additional grant funded positions are being requested. Review and approval by the Department of Human Resources must be obtained prior to review by the Department of Finance and Management. The Department of Finance will forward requests to the Joint Fiscal Office for JFC review. A Request for Classification Review Form (RFR) and an updated organizational chart showing to whom the new position(s) would report must be attached to this form. Please attach additional pages as necessary to provide enough detail.

Agency/Department: Public Service Department Date: 09/29/2009

Name and Phone (of the person completing this request): Sheri Rockcastle 802-828-4084

Request is for:

- Positions funded and attached to a new grant.  
 Positions funded and attached to an existing grant approved by JFO # \_\_\_\_\_

1. Name of Granting Agency, Title of Grant, Grant Funding Detail (attach grant documents):

Vermont Center for Geographic Information Contract # DPS-BBM 09-01 for the Vermont Broadband Mapping Initiative

The PSD is a partner organization with VCGI in Vermont's only application for funding from the National Telecommunications and Information Administration's (NTIA) State Broadband Data and Development Grant Program, a program funded under the American Recovery and Reinvestment Act. VCGI is named in the proposal as the lead applicant and the prime recipient of the grant from NTIA. VCGI and PSD have entered into a contract that will allow VCGI to pay PSD in support of activities undertaken for the Vermont Broadband Mapping Initiative. Please find attached to this memo a copy of the contract between VCGI and the PSD, which is being submitted in lieu of a Notice of Award and Grant Agreement. Also please find the copy of the VCGI grant proposal to NTIA, which includes the overall grant budget.

2. List below titles, number of positions in each title, program area, and limited service end date (information should be based on grant award and should match information provided on the RFR) position(s) will be established only after JFC final approval:

<u>Title* of Position(s) Requested</u>	<u># of Positions</u>	<u>Division/Program</u>	<u>Grant Funding Period/Anticipated End Date</u>
Telecommunications Infrastructure Specialist	1	Telecommunications	October 15, 2009-October 7, 2012

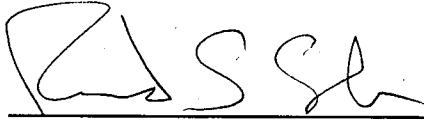
\*Final determination of title and pay grade to be made by the Department of Human Resources Classification Division upon submission and review of Request for Classification Review.

3. Justification for this request as an essential grant program need:

The NTIA and the Rural Utilities Service of the U.S. Dept. of Agriculture are encouraging applicants to their broadband stimulus programs to use state broadband mapping data. PSD has experience in broadband data collection and unique familiarity with telecommunications infrastructure, making it the best-suited organization in Vermont to be responsible for this role. However, the level of data quality, granularity, and frequency expected cannot be achieved without additional resources than the state has devoted to this activity to date. Funding is available through the federal grant to be awarded to VCGI. Without accepting this funding, broadband availability in Vermont will be less accurately represented, harming applications for broadband stimulus funding in Vermont, as well as hampering state and federal broadband planning efforts.

I certify that this information is correct and that necessary funding, space and equipment for the above position(s) are available (required by 32 VSA Sec. 5(b)).

STATE OF VERMONT  
Joint Fiscal Committee Review  
Limited Service - Grant Funded  
Position Request Form



9-30-09

---

Signature of Agency or Department Head

Date

---

Approved/Denied by Department of Human Resources

Date

---

Approved/Denied by Finance and Management

Date

---

Approved/Denied by Secretary of Administration

Date

Comments:

## **Vermont's Broadband Mapping Initiative**

### **A Project Proposal for the National Telecommunications and Information Administration State Broadband Data and Development Grant Program**

**CFDA # 11.558  
Opportunity #0660-ZA29**

**Prepared By: The Vermont Broadband Mapping Team**

Vermont Center for Geographic Information (Prime Contractor)  
Vermont Department of Public Service  
Vermont Telecommunications Authority  
Center for Rural Studies – University of Vermont  
Vermont Enhanced 9-1-1 Board

**Date of Publication:** 8/13/2009

**Version:** Final

August 12, 2009

Mr. Larry Strickling, Administrator  
National Telecommunications and Information Administration  
1401 Constitution Ave., N.W.  
Washington, DC 20230

RE: NTIA State Broadband Data and Development Grant Program

Mr. Strickling,

Beginning in January 2007, Vermont's Governor Jim Douglas identified broadband and wireless telecommunications access as a priority for the state. In his 2007 Budget Address the Governor proposed that Vermont should become the nation's first "e-state" – "the first state to offer universal access to broadband and wireless technology everywhere within its borders". Vermont's Broadband Mapping Initiative will build upon the broadband mapping efforts attempted to date in Vermont in support of the Governor's call to action.

Vermont has created a Mapping Team of professional organizations that is fully able to provide the requested broadband mapping data and meet the aggressive delivery milestones required in the State Broadband Data and Development Grant Program. We are confident our proposed Broadband Mapping Initiative will provide broadband coverage data that is verified and meets the long term planning needs of our state in establishing broadband telecommunications infrastructure to unserved and underserved areas of our state.

If our grant application is successful Vermont will be able to create comprehensive and verified broadband mapping coverage data that will enable the state to deploy telecommunications infrastructure wisely and efficiently in order to provide statewide access to collaborating medical, educational and government applications in facilitation of better public services.

Thank you for this opportunity to apply for grant funding under the State Broadband Data and Development Grant Program. If there is any additional information or supporting data you require please feel free to contact me at any time.

Sincerely,



David F. Brotzman  
Executive Director  
Vermont Center for Geographic Information



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## Executive Summary

In response to NTIA's State Broadband Data and Development Grant Program Notice of Funds availability Vermont is proposing the following Broadband Mapping Initiative. The Vermont Broadband Mapping Team will initiate the development of a **comprehensive and verified** geographic inventory of broadband service availability in the State of Vermont. Landline and wireless services (fixed and mobile) will be mapped, including wireless voice and data with information from the providers and other sources. The broadband mapping information collected and verified through this proposed effort will then support the broadband development objectives identified in the RUS Broadband Initiatives Program (BIP) and NTIA's Broadband Technology Opportunities Program (BTOP) in Vermont. Most importantly, the geographic inventory will further refine our understanding of the location of "unserved" and "underserved" areas, supporting targeted investments in these areas.

The State's broadband inventory will comply with all identified NTIA and Federal standards in support of a consistent National geographic picture of broadband coverage. The inventory will be accessible to the public, while retaining the proprietary rights of the private sector providers.

To accomplish these critically important goals we are proposing that the Vermont Department of Public Service, the Vermont Telecommunications Authority, the Center for Rural Studies at the University of Vermont, Vermont's Enhanced 9-1-1 Board and the Vermont Center for Geographic Information come together as partners to create a Vermont Broadband Mapping Team. The Mapping Team members will combine their subject area expertise to create a thorough and defensible geospatial representation of the state's broadband resources. The primary members of the Vermont Broadband Mapping Team were selected to provide the following expertise;

- Vermont Center for Geographic Information (VCGI) will provide geospatial data collection, aggregation, web mapping expertise and act as Prime Contractor for the grant,
- Vermont Department of Public Service (DPS) will provide telecommunications, regulatory and data verification expertise,
- Vermont Telecommunications Authority (VTA) will provide knowledge of current and future telecommunications infrastructure in the state,
- Center for Rural Studies at the University of Vermont (CRS) will provide verification of provider coverage data by survey and an understanding of telecommunications needs in a rural context.
- Vermont's Enhanced 9-1-1 Board (E911) is the provider of the statewide E911 address information that will be the foundation for the Mapping Team's address level mapping.

VCGI will be the prime contractor for the initiative with other Mapping Team partners acting as Tier 1 contractors to VCGI. The data collection, verification and mapping will be a true partnership, as each organization plays a singular and critical role in consistently providing a quality product, on time, and for the full duration of the project.

The Vermont Broadband Mapping Team is composed of geospatial and telecommunications professionals with organizational missions intended to serve the public good. The Mapping Team is

also composed of organizations that have worked together on various mapping related projects for many years. This previous experience will help the Team respond quickly to the demanding delivery timeline of the project.

Unserved and Underserved

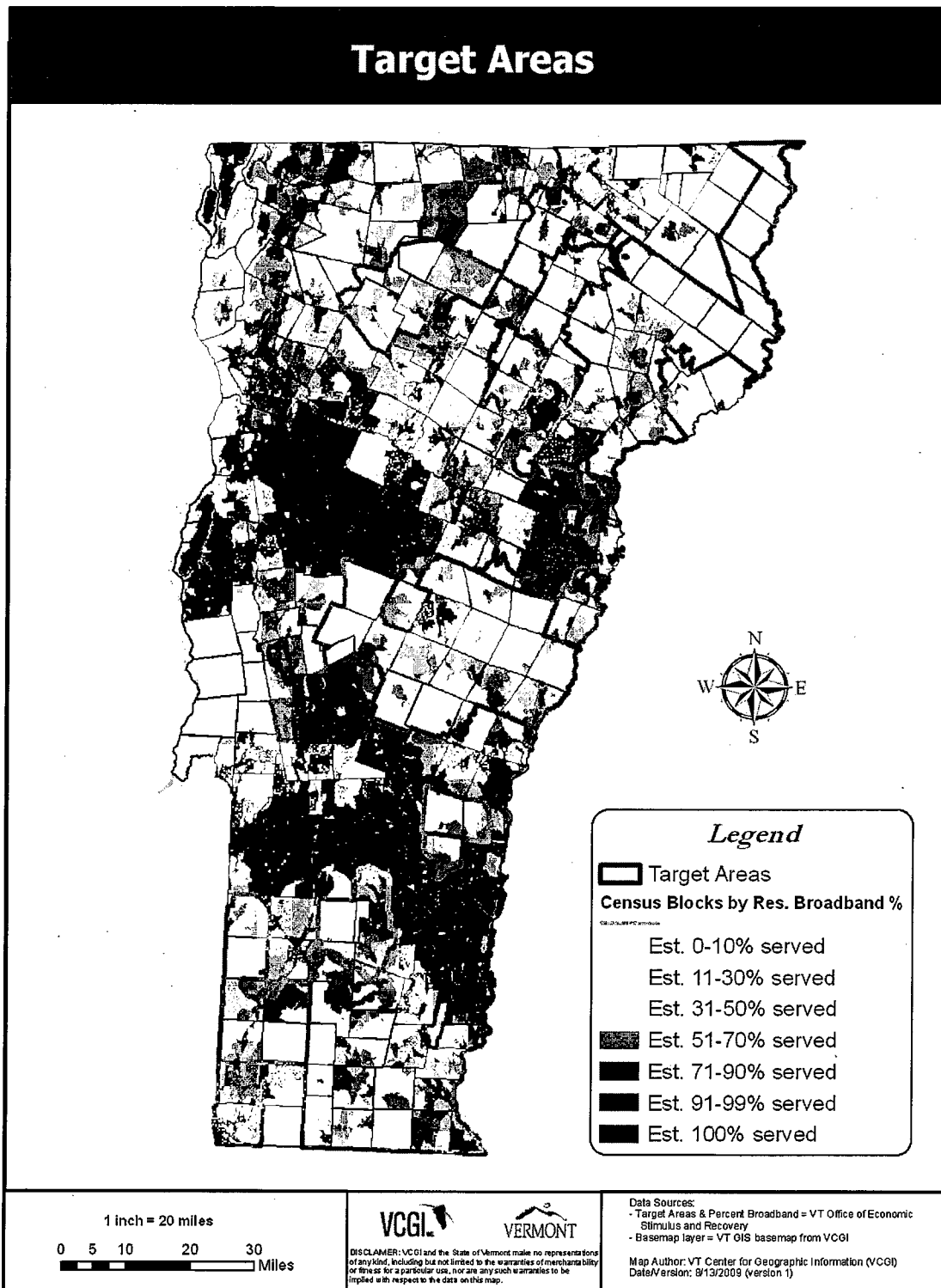
Broadband availability information was collected by the Vermont Department of Public Service (DPS) and Vermont Telecommunications Authority (VTA) from broadband service providers as part of ongoing cooperative efforts to map the availability of broadband services as of the beginning of 2008. The data has subsequently been reviewed and updated by the Vermont Office of Economic Stimulus and Recovery (VoESR) with updates provided to the State through January 2009. The data was re-analyzed to make it conform to the definitions of “broadband” and requirements of the NoFAs released by NTIA and RUS for BIP and BTOP as well as the NoFA for the State Broadband Data and Development Grant Program (SDDGP).

Known expansions of broadband service have been added to the map, whenever such information was provided in a way that could be mapped at a granular level, such as addressable locations or road segments. Coverage by service providers that did not appear to advertise (such as on a company website) data transfer rates consistent with the NoFAs’ definition of “broadband” were eliminated.

The Technical Appendix for SDDGP includes requirements for state broadband data programs regarding the accuracy of collected data that will apply to programs receiving support. Available data that did not appear to closely approximate this standard was eliminated. Where such data was not available, but it was possible to systematically produce a conservative estimate of service availability (such as areas in the immediate vicinity of telephone central offices in which DSL service is provisioned), such an estimate was substituted. Residential availability of broadband services by census block has been calculated based on the location of non-seasonal residential E911 addresses, using a statewide dataset of E911 addresses maintained by the Vermont Enhanced 9-1-1 Board. Please see the included map of broadband availability by census blocks.

The following statement has been provided by VoESR regarding state priorities for the allocation of grant funds within the state for projects within the state or affecting the state:

“The highest priorities of the State of Vermont, through VoESR, for Broadband Infrastructure grant funds are projects which deploy broadband service within areas of the state with low availability (approximated by the census blocks with less than 50% broadband availability, as represented on the included maps), and have geographically coordinated proposed service areas through VoESR. Within these areas, the State gives priority to projects that provide coverage within the targeted regions of the state (and may include improving service in other neighboring areas). Please see the map below for these areas. To the extent possible, while achieving the objective of coverage in all parts of the targeted areas without broadband service, VoESR supports funding of at least one project in the state which can offer at least 50 Mbps to end users. “Regarding middle mile projects, the priorities of the State are projects which are intended to serve the needs of multiple classes of users (education, health care, government, cellular and broadband service providers) and which support connections among community anchor institutions around the state, either directly or through interconnection with networks serving other regions or community anchor institutions.”



## I. Data

### a) **Data Gathering**

Vermont's Broadband Mapping Initiative is focused on the development and maintenance of an accurate broadband inventory map of Vermont. The goal is to gather, maintain, and disseminate a robust broadband dataset in support of the NTIA's State Broadband Data Program. This initiative will establish innovative partnerships with state-level agencies, local authorities, broadband providers, and others who can assist with the development, verification, and maintenance of a statewide broadband inventory.

**Roles and Responsibilities:** The Vermont Center for Geographic Information (VCGI) will be lead and prime contractor for the broadband mapping effort. The master broadband inventory database will be housed on VCGI's geospatial data server<sup>1</sup>. VCGI will leverage the skills and expertise of the Broadband Mapping Team (Team), including VCGI's own geospatial data management expertise. The Mapping Team will also reach out to representatives from the public, private, and non-profit sectors. The Mapping Team will leverage the ideas, capabilities, and resources of each Team member in order to ensure Vermont's Broadband Mapping Initiative is successful and sustainable.

The Department of Public Service (DPS), will request and collect network infrastructure data directly from providers. The Department is well positioned as an essential partner in the collection of broadband mapping data in Vermont through its longstanding relationships with providers and its history of collecting broadband service availability data from traditional telephone companies, Commercial Mobile Radio Service (CMRS) providers, and cable operators. These providers also submit to DPS annual reports, which include the number of lines, subscribers, service capabilities and service area.

A DPS Telecommunications and GIS Specialist will act as liaison with VCGI on the technical aspects of broadband, telephony, and wireless infrastructure deployments and mapping. The Telecommunications and GIS Specialist's primary responsibility is to obtain broadband availability datasets from providers. The Specialist will develop and maintain a close working relationship with all providers and be in regular contact with all providers. As an experienced telecom professional, the Telecommunications and GIS Specialist will use accumulated technical expertise to assess the quality of the data received from providers. The Telecommunications and GIS Specialist will forward information submitted by providers to VCGI for integration into the master broadband database housed at VCGI. DPS will also be given "direct-connect" access to the broadband database, allowing their Telecommunications and GIS Specialist to evaluate and verify the data.

The Department also obtains (under confidentiality) FCC form 477 data. While the Department is currently unable to release this information to other entities, it will continue to work with providers to obtain all information required by this application. The FCC information, published twice yearly, includes data specific to broadband service capabilities such as total broadband connections to end users, broken out to specify residential end users; advertised transfer rates described by upload vs.

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<sup>1</sup> The master broadband data will be stored on VCGI's ArcSDE server.

download speeds, and services that are provided over the local loop vs. the wireless last-mile equivalent. Cable companies submit plant maps to the state, and DSL providers have cooperated in delivering information regarding plant locations, specifications and capabilities. Finally, fixed and mobile wireless providers also submit mapping information to the State.

The Mapping Team anticipates good cooperation from broadband providers in Vermont. The NTIA's BTOP and USDA's BIP programs require that infrastructure grant recipients "must agree to participate in the State Broadband Data and Development Program"\*2. As a result, any broadband providers receiving infrastructure funds from BTOP or BIP will be required to cooperation with the Mapping Team. When necessary this requirement will be leverage to ensure adequate cooperation.

**Objectives:**

1. Support the objectives outlined in the Broadband Data Improvement Act (BDIA), Pub. L. No. 110-385 2008.
2. Support the objectives and priorities identified in the NTIA's State Broadband Data and Development Grant Program, including but not limited to;
  - a. Assist the NTIA with the development and maintenance of a comprehensive and searchable nationwide inventory map of existing broadband service availability.
  - b. Gather high-quality data on broadband availability, technology, speed, infrastructure, ARPU, and spectrum (wireless).
  - c. Provide online access to clearly present broadband maps to the public, government, and others without unduly compromising confidential information\*3.
  - d. Establish innovative partnerships with state-level agencies, local authorities, broadband providers, and others who can assist with the development, verification, and maintenance of a statewide broadband inventory over a 5-year time frame.

**Methodology and Deliverables:** VCGI and Vermont's Broadband Mapping Team will utilize the strategies and methods outlined below to produce the deliverables necessary to meet the NTIA's State Broadband Data and Development Program requirements\*4.

**1) *Broadband Service Availability - Service Associated with a Specific Address***

a) Description:

A list of all addresses in Vermont that have broadband service available to end-users for each facilities-based provider of broadband service.

- b) Data Gathering Methodology: To support the requirements of this deliverable, VCGI will develop a robust set of GIS-compatible layers depicting the extent of DSL, fiber, cable modem, and terrestrial fixed wireless broadband service availability. The DSL, fiber, and

---

<sup>2</sup> BTOP NOFA fact sheet [http://broadbandusa.sc.egov.usda.gov/files/BTOP\\_NOFA\\_FactSheet7-1-09.pdf](http://broadbandusa.sc.egov.usda.gov/files/BTOP_NOFA_FactSheet7-1-09.pdf)

<sup>3</sup> "Confidential Information" is defined in section "III. DEFINITIONS" of the NTIA's State Broadband Data and Development Grant Program NOFA and further defined in the subsequent Clarification released on 8/7/09.

<sup>4</sup> All deliverable will comply with NTIA technical specifications as defined in section "Appendix A: Technical Appendix" of the NTIA's State Broadband Data and Development Grant Program NOFA.

cable modem layers will be mapped to Vermont's high-accuracy Enhanced 911 road centerline layer<sup>5</sup>. This will allow the state to accurately<sup>6</sup> map the geographic extent of these services. All roads or sections of roads will be flagged with an attribute indicating the type (DSL, fiber, cable modem) and speed (advertised and typical) of broadband service available along each road or section of road. The terrestrial fixed wireless layer will be mapped as service area polygons depicting the geographic coverage of each wireless service provider. It will identify the technology, spectrum, and speed available from each provider.

Vermont's Mapping Team will work collaboratively with broadband service providers to compile the DSL, fiber, cable modem, and fixed wireless broadband GIS layers outlined above. The Department of Public Service (DPS) will ask broadband service providers to share any existing digital data they may have, especially data mapped to the road or address-level.

The DPS Telecommunications and GIS Specialist will obtain a list of addresses from providers (when available) where DSL service is currently offered. This information will be delivered in electronic database format and will be forwarded to VCGI. VCGI will then geocode the addresses and plot them in GIS format. Subsequently, the DPS Telecommunications and GIS Specialist and/or VCGI will analyze the GIS data, and using knowledge of telecom deployment practices, will manually update the DSL layer to accurately map the geographic extent of DSL service availability.

DPS's Telecommunications and GIS Specialist will work with cable and CMRS operators to ensure they are in compliance with the DPS requirement to submit facilities and coverage data in GIS format. After spot-checking for accuracy, the Telecommunications and GIS Specialist will deliver the GIS data to VCGI.

The Telecommunications and GIS Specialist will develop and foster relationships with WISP's and obtain coverage data for further analysis by the Team. VCGI and DPS will determine if the data meets the quality and accuracy requirements necessary to support NTIA's broadband mapping specifications. If so, the data will be integrated into the statewide broadband database.

VCGI and DPS will also work with providers who do not have existing digital data. The Team will utilize a combination of hard copy maps and online web mapping tools to collect information from DSL, fiber, and cable modem providers. In the case of fixed wireless broadband providers, the Mapping Team will work with providers to generate high-quality

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<sup>5</sup> The E911 road centerline layer includes all public and private roads in the State of Vermont. It is actively maintained by VT E911 at a horizontal accuracy of +/-5 meters.

<sup>6</sup> For example, current DSL maps in Vermont are generally limited to 3-mile radius ("as the crow flies") around central offices (and/or whole exchanges). However, DSL does not follow a straight line from the central office to someone's home. Instead it zig-zags its way along streets. Therefore, modeling the DSL (and cable/fiber) along Vermont's road network will more accurately represent the true extent of these services, and allows for finer-grained refinement of the DSL map over time.

wireless propagation maps depicting the strength and geographic extent of each fixed wireless facility.

The Telecommunications and GIS Specialist and/or VCGI will evaluate every road in the state to verify the availability or absence of broadband services (DSL, fiber, and cable modem). VCGI will crosscheck this information against the best available information from broadband providers. Online web mapping tools will also allow broadband providers to review their coverage information online, and give them the option of reporting corrections or submitting extensions to their existing physical plant.

Finally, VCGI will create a list of all addresses in Vermont that have broadband service available to end-users for each of the facilities-based providers (DSL, fiber, cable modem, and terrestrial fixed wireless). Vermont's high-accuracy E911 address GIS layer (ESITE) will be leveraged toward this effort. This data layer includes a GPS coordinate for every E911 address in Vermont, including the type of structure (e.g.: residential, commercial, public, etc). The DSL, fiber, cable modem, and fixed wireless GIS layers will be used to identify all E911 address points within a specified distance of these service areas. The resulting data will be used to generate a list of all addresses in the state, including the type and speed of each broadband service at every address. The list will also include a unique identifier for each address point (SITEID), which will provide a direct-link back to the E911 ESITE database. This relational database link will allow VCGI and E911 to establish a tightly coordinated data maintenance cycle. It will also allow broadband information to be updated and maintained at the address level. For example, the public will be able to use online feedback tools (developed by VCGI) to enter their address and verify what is available at their address (it will also allow them to test the speed of their connection). This information will be automatically transferred to VCGI's geospatial data warehouse and linked to the corresponding E911 ESITE address point. VCGI's mapping specialist will be automatically notified of the feedback, and will have the option of updating the master database using the submitted information.

- c) Verification Methodology: The Team will utilize the following methods to verify the accuracy and completeness of these deliverables. A complete description of each verification method is outlined in section *I.b (Accuracy and Verification)*.
  - i) Verification by Survey
  - ii) Verification Online by the Public
  - iii) Verification Online by Broadband Providers
  
- d) Deliverables:
  - i) A robust set of GIS-compatible layers (shapefiles) depicting the extent of DSL, fiber, cable modem, and terrestrial fixed wireless broadband service availability.
  - ii) A single tab-delimited plain text file (address\_availability\_VT.txt) listing all addresses in Vermont that have broadband service available to end-users for each of the facilities-based providers (DSL, fiber, cable modem, and terrestrial fixed wireless).
  - iii) Detailed documentation outlining the sources and methods used to create the deliverables noted above. This will include FGDC complaint metadata for every GIS-compatible layer.



2) **Broadband Service Availability – Wireless Services (not provided to a specific address)**

- a) Description: A set of GIS-compatible map layers depicting areas in which wireless broadband service is available to end-users (for those facilities-based providers of wireless broadband service that are not address specific such as nomadic, terrestrial mobile wireless, or satellite).
- b) Data Gathering Methodology: To support the requirements of this deliverable, VCGI (and the Broadband Mapping Team) will develop a robust set of GIS-compatible layers depicting the extent of terrestrial mobile wireless and satellite-based broadband service availability. The terrestrial mobile wireless layer will be mapped as service area polygons depicting the geographic coverage of each wireless service provider. It will identify the technology, spectrum, and speed available from each provider.

VCGI, the Mapping Team and project partners (e.g.: broadband providers, state government) will work collaboratively to compile the mobile wireless and satellite-based broadband GIS layers outlined above. VCGI and DPS will ask broadband service providers to share any existing digital data they may have, especially detailed wireless propagation maps based on well documented sources and methods. VCGI and DPS will determine if the data meets the quality and accuracy requirements necessary to support NTIA's broadband mapping specifications. If so, the data will be integrated into the statewide broadband database. Otherwise, VCGI's subcontractors (wireless mapping contractors) will work with wireless and satellite providers to generate high-quality wireless propagation maps depicting the strength and geographic extent of wireless broadband services. DPS's Telecommunications and GIS Specialist and/or VCGI's Mapping Specialist will crosscheck the results against the best available information from broadband providers. Online web mapping tools will also allow wireless broadband providers to review their coverage information online, and give them the option of reporting corrections or submitting extensions to their existing physical plant (e.g.: new wireless towers/antennae).

- c) Verification Methodology: The Team will utilize the following methods to verify the accuracy and completeness of these deliverables. A complete description of each verification method is outlined in section *I.b (Accuracy and Verification)*.
  - i) Verification by Survey
  - ii) Verification Online by the Public
  - iii) Verification Online by Broadband Providers
  - iv) Verification by Drive Testing
- d) Deliverables:
  - i) A robust set of GIS-compatible layers (shapefiles) depicting the extent of terrestrial mobile wireless and satellite-based broadband service availability, including the technology, spectrum, and speed available from each provider.
  - ii) Detailed documentation outlining the sources and methods used to create the deliverables noted above. This will include FGDC complaint metadata for every GIS-compatible layer.

### 3) *Residential Broadband Service Pricing*

- a) Description: For each broadband service provider in the state, the Vermont Broadband Mapping Initiative will provide the NTIA with;
  - i) Average Revenue Per End-User (ARPU) associated with residential subscribers by county.
  - ii) Subscriber-Weighted Nominal Speed (blended average rate) by county.
  
- b) Data Gathering Methodology: DPS will work collaboratively with broadband service providers to compile information necessary to calculate the 1) average revenue per end-user (ARPU) and 2) subscriber-weighted nominal speed. DPS will ask broadband service providers to share the baseline information (e.g.: revenue by county) necessary to making these calculations.
  
- c) Verification Methodology: The Team will utilize the following methods to verify the accuracy and completeness of these deliverables. A complete description of each verification method is outlined in section *I.b (Accuracy and Verification)*.
  - i) Verification by Survey
  - ii) The Team will also crosscheck information on broadband provider websites to compare advertised rates against those reported in the Residential Broadband Service Pricing dataset.
  
- d) Deliverables:
  - i) A single tab-delimited plain text file (pricing\_VT.txt) listing the Average Revenue Per End-User (ARPU) and Subscriber-Weighted Nominal Speed (blended average rate) by county for each broadband service provider in the state.
  - ii) Detailed documentation outlining the sources and methods used to create the deliverables noted above.

### 4) *Broadband Service Infrastructure - Last-Mile Connection Points*

- a) Description: A list of “first points of aggregation” (last mile connection points<sup>\*7</sup>) in the networks (serving facilities) used by facilities-based broadband providers in Vermont.
  
- b) Data Gathering Methodology: To support the requirements of this deliverable, VCGI (and its subcontractors) will develop a robust GIS-compatible layer identifying the location of all last mile connection points (“first point of aggregation”) used by facilities-based broadband providers in Vermont. Examples of “first points of aggregation” include central offices and remote terminals locations, cable headend locations, and wireless tower (antennae) or base station locations. The layer will identify the location (latitude/longitude), transmission technology, backhaul capacity, backhaul type, number of end-users served, and elevation above grade.

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<sup>7</sup> “Last-mile” infrastructure consists of facilities used to provide broadband service between end-user (including residences, businesses, community anchor institutions, etc.) equipment and the appropriate access point, router or first significant aggregation point in the broadband network. Refer to section “Appendix A: Technical Appendix” of the NTIA’s State Broadband Data and Development Grant Program NOFA for additional details.

Vermont's Mapping Team will work collaboratively with project partners (e.g.: broadband providers, state government) to map "first points of aggregation" locations. DPS will ask broadband service providers and others (e.g.: state government) who manage such locations to share any existing digital data they may have, especially latitude/longitude information. VCGI and DPS will determine if the data meets the quality and accuracy requirements necessary to support NTIA's broadband mapping specifications. If so, the data will be integrated into the statewide "first points of aggregation" database. Otherwise, the DPS Telecommunications and GIS Specialist and/or VCGI will work with providers to locate and map "first points of aggregation". All locations will be mapped using GPS or high-resolution aerial photography (1:1250 or 1:5000 scale orthophotography). Online web mapping tools will also allow broadband providers to review their information online, and give them the option of reporting corrections or submitting extensions to their existing physical plant (e.g.: new points of aggregation).

- c) Verification Methodology: The Team will utilize the following methods to verify the accuracy and completeness of these deliverables. A complete description of each verification method is outlined in section *I.b (Accuracy and Verification)*.
  - i) Verification Online by Broadband Providers
  - ii) Verification by Groundtruthing
- d) Deliverables:
  - i) A single tab-delimited plain text file (lastmile\_VT.txt) listing all "first points of aggregation" for each broadband service provider in the state. The file will identify the location (latitude/longitude), transmission technology, backhaul capacity, backhaul type, number of end-users served, and elevation above grade.
  - ii) Detailed documentation outlining the sources and methods used to identify and map all "first point of aggregation" locations.

**5) *Broadband Service Infrastructure - Middle-mile and Backbone Interconnection Points***

- a) Description: A list of interconnection points of facilities in Vermont that provide connectivity between (a) a service provider's network elements (or segments) or (b) between a service provider's network and another provider's network, including the Internet backbone (collectively (a) and (b) are "middle-mile and backbone interconnection points").
- b) Data Gathering Methodology: To support the requirements of this deliverable, VCGI will develop a robust GIS-compatible layer identifying the location of all middle-mile and backbone interconnection points used by broadband providers in Vermont. The middle-mile and backbone interconnection points layer will identify the location (latitude/longitude), ownership status (owned vs leased), bandwidth capacity, type of transport facility (e.g.: fiber, copper, wireless, etc.), and elevation above grade.

Vermont's Mapping Team will work collaboratively with project partners (e.g.: broadband providers, state government) to map all middle-mile and backbone interconnection points locations. VCGI and DPS will ask broadband service providers and others (e.g.: state

government) who manage such locations to share any existing digital data they may have, especially latitude/longitude information. VCGI and DPS will determine if the data meets the quality and accuracy requirements necessary to support NTIA's broadband mapping specifications. If so, the data will be integrated into the statewide "middle-mile and backbone interconnection points" database. Otherwise, the DPS Telecommunications and GIS Specialist and/or VCGI will work with providers and partners to locate and map these locations. All locations will be mapped using GPS or high-resolution aerial photography (1:1250 or 1:5000 scale orthophotography). Online web mapping tools will also allow broadband providers to review their information online, and give them the option of reporting corrections or submitting extensions to their existing physical plant (e.g.: new "middle-mile and backbone interconnection points").

- c) Verification Methodology: The Team will utilize the following methods to verify the accuracy and completeness of these deliverables. A complete description of each verification method is outlined in section *I.b (Accuracy and Verification)*.
  - i) Verification Online by Broadband Providers
  - ii) Verification by Groundtruthing
  
- d) Deliverables:
  - i) A single tab-delimited plain text file (middlemile\_VT.txt) listing all "middle-mile and backbone interconnection points" in the state. The file will identify the location (latitude/longitude), ownership status (owned vs. leased), bandwidth capacity, type of transport facility (e.g.: fiber, copper, wireless, etc.), and elevation above grade.
  - ii) Detailed documentation outlining the sources and methods used to identify and map all "middle-mile and backbone interconnection points" locations.

#### 6) *Community Anchor Institutions*

- a) Description: A list of "community anchor institutions" in Vermont, including schools, libraries, medical and healthcare providers, public safety entities, community colleges and other institutions of higher education, and other community support organizations and entities.
  
- b) Data Gathering Methodology: To support the requirements of this deliverable, the Broadband Mapping Team will develop a robust GIS-compatible layer identifying the location of all "community anchor institutions" in Vermont. These include schools, libraries, medical and healthcare providers, public safety entities, community colleges and other institutions of higher education, and other community support organizations. The layer will identify the location (latitude/longitude), address, type of institution, broadband subscription status, broadband transmission technology, and advertised download and upload speeds.

The Team and project partners will work collaboratively to map community anchor institutions locations, and to characterize the availability and nature of broadband services. VCGI will map the location of all anchor institutions. They will leverage existing<sup>8</sup> locational

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<sup>8</sup> The State of Vermont has developed a comprehensive Critical Facilities database, which includes many of the community anchor institutions.

information for these institutions. All locations will be geocoded, GPS'd, or mapped using high-resolution aerial photography (1:1250 or 1:5000 scale orthophotography). DPS will ask community anchor institutions (e.g.: school, library, government) who manage such locations to share any information characterizing the type of broadband service available at the institution. CRS will conduct an outreach and collection campaign to obtain information from the remaining institutions. CRS interviewers will use both electronic mail and a telephone survey to contact the institutions to collect the information or direct them to an online survey to submit the information themselves. VCGI will join the attributes collected by DPS and CRS to the mapped locations. Online tools will also allow community anchor institutions to review their information online, and give them the option of reporting corrections or additions (e.g.: new public facility with broadband access).

- c) **Verification Methodology:** The Team will utilize the following methods to verify the accuracy and completeness of these deliverables. A complete description of each verification method is outlined in section *I.b (Accuracy and Verification)*.
  - i) Verification Online by Public (targeted toward community anchor institutions)
  - ii) Verification by Survey (targeted toward community anchor institutions)
- d) **Deliverables:**
  - i) A single tab-delimited plain text file (comm\_anchor\_VT.txt) listing all “community anchor institutions” in the state. The file will identify the location (latitude/longitude), address, type of institution, broadband subscription status, broadband transmission technology, and advertised download and upload speeds at each location.
  - ii) Detailed documentation outlining the sources and methods used to identify, map, and characterize all “community anchor institution” locations.

**b) Accuracy and Verification**

The Vermont Broadband Mapping Team is proposing several verification methodologies to independently validate the accuracy for data supplied by broadband providers. The initial cumulative results of the broadband mapping effort proposed in section *I.a) Data Gathering* will be independently verified using one or more of the methods outlined in this section.

Table 1 provides a comprehensive view of the verification method proposed for each broadband deliverable.

	1. Address Specific Service	2. Mobile Wireless Service	3. Residential Service Pricing	4. Last Mile Connection Points	5. Middle Mile and Backbone Interconnections	6. Community Anchor Institutions
Surveying	X	X	X			X
Drive Testing		X				
Online by Public	X	X				X
Online by Broadband Providers	X	X		X	X	
Groundtruthing				X	X	

Table 1. - Broadband Deliverable and Verification Matrix

**1) Verification Online by Broadband Providers**

VCGI (and its subcontractors) will develop an online tool that will allow broadband providers to verify their broadband maps (physical plant) online. Broadband providers will be allowed to identify errors for correction. VCGI will evaluate online submissions for quality and consistency. Valid submission will be used to update the statewide broadband inventory.

**2) Verification Online by the Public**

VCGI (and its subcontractors) will develop an online tool (hosted on the BroadbandVT website) that will allow the public to identify and flag errors on the broadband map. Users will be given the option of verifying data or flagging errors down to the address-level (e.g. home or business). They will also be able to test their broadband speed and report back at the address-level, helping to verify "typical" broadband speed information. Users will also have the option of specifying how much they pay for broadband service. VCGI will evaluate online submissions by the public to determine if they can be used to update or correct the master broadband inventory. If so, the feedback will be used to update the statewide broadband inventory. Address-level submission will be used to update the statewide address list outlined in deliverable #1 (Broadband Service Availability - Service Associated with a Specific Address) under section *I.(a) Data Gathering*.

A robust outreach effort (led by the Department of Public Service) will be used to create public awareness about the online broadband feedback tool outlined above. DPS will use existing contacts in town and local government to notify the public of the online tool. News media and public information outlets will be used to make the public aware of the online tool and its value to the state and communities. Special attention will be paid to information outlets that will reach rural areas of the state.

**3) Verification by Drive Testing**

Wireless drive-testing will be used to collect real-time mobile wireless information. Data will be collected for all Federal Aid roads in Vermont (3,872 miles) on an annual basis for the five years of the program. The drive-test data will be used to determine the accuracy of the mobile wireless broadband polygons.

**4) Verification by Groundtruthing (Field Check)**

The Mapping Team will utilize "on the ground" data verification techniques for certain broadband datasets, including last-mile and middle-mile connection points. In some cases this may involve going to the offices of the broadband providers to validate information against internal documents. In other cases it may involve going out "into the field" with line workers to verify information.

**5) Verification by Surveying (CRS and DPS)**

The Department of Public Service (DPS) and the Center for Rural Studies (CRS) will implement telephone polls of random samples of Vermont households and businesses to ascertain respondent broadband connectivity, coverage, and pricing. The polls will also gauge cell phone coverage and pricing. The results of these polls will be linked to a broadband service map by address. For each address point covered by the poll, the respondents' answers for broadband connectivity and

availability will be compared to the corresponding variables of the addresses from the service map. From this comparison the project will conclude a percentage of accuracy for the service map.<sup>9</sup>

Ten verification surveys will be conducted during the course of this online project. CRS will conduct a basic verification survey eight times, and DPS will contract out the implementation of two expanded surveys. The “Basic Verification” and “Expanded Information” aspects of these two surveying efforts are explained in the Surveying Plan below.

#### a) Surveying Plan

##### i) Phase One – Developing the Telephone Poll Sample

**Basic Verification:** This project will begin with an analysis of the broadband service map. The number of addresses on the map will be summed for rural areas and by county. If it is deemed that low numbers of addresses in certain areas of the state may represent obstacles to regional representation in the results of the telephone survey, these areas will be “flagged” for stratification or oversampling. Stratification is a means by which goals are set to ensure that adequate numbers of addresses from certain areas are sampled. Oversampling goes even farther to ensure that a higher percentage of addresses from one area are polled versus other areas that may have higher original totals. The goal is for the telephone poll to represent all of the State of Vermont to the highest degree possible regionally and rurally<sup>10</sup> and for the confidence interval to be as rigorous as possible.

After this preliminary analysis, CRS (for the eight basic verification surveys) will purchase a random sample of thousands of household and business landline phone numbers from a professional service that maintains and verifies such registries regularly. These records will also include address information for the respondents. The number of records purchased will depend upon estimates of what is necessary to result in a response that will result in a confidence interval of 95 percent with a confidence interval (margin of error) of plus or minus 5 percent. Additional numbers may also be necessary if stratification or oversampling is required for certain areas of the state.

**Expanded Information:** For the two expanded surveys, the DPS contractor will draw a sample with a method sufficient to match the statistical validity and geographic coverage of the CRS method. In addition, the DPS expanded survey will include cell phone numbers.

##### ii) Phase Two – Developing the Survey Instrument

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<sup>9</sup> An example of the true depiction of accuracy could be that “96 percent of the time, this service map would verify to be 95 percent accurate within a range of +/- 5 percent.”

<sup>10</sup> By the definitions of the State Broadband Data and Development Grant Program, the city of Burlington is the only non-rural area in Vermont. With nearly 93.5 percent of the Vermont population living outside Burlington, representing Vermont’s rural areas is not seen as a major obstacle in this project.

**Basic Verification:** CRS will work with project partners to develop a list of questions to be asked of poll respondents. CRS has demonstrated expertise in designing survey questions for efficiency of time, avoidance of respondent frustration, adherence to accepted research practices, and strong linkage to the topics being covered. Information desired in this case includes:

- whether the respondent has a broadband connection and through what delivery method,
- what broadband services and delivery methods are available to the respondent overall,
- whether the respondent has cell phone coverage at that location, the monthly price that the respondent pays for broadband/cell services, and the respondent's physical address.

A survey instrument of only 5-10 questions will be necessary to garner this information, and the shortness of the poll is anticipated be optimal for overall response rate and quality of information.

**Expanded Information:** The expanded DPS survey will include the basic verification questions as well as questions relating to communications technology adoption, applications, decision-making priorities, and usage for businesses and residents. Each survey will include approximately sixty questions. DPS will consult with Vermont Council on Rural Development, state and local agencies including the Department of Education and state libraries to understand the information needs of their constituents and incorporate appropriate questions into the surveys.

### iii) Phase Three – Conducting the Telephone Poll

**Basic Verification:** From the CRS offices on the University of Vermont campus, specially trained interviewers will begin calling the purchased list of telephone numbers and either conducting the survey with respondents or coding reasons for refusal or ineligibility<sup>11</sup>. The interviewers will be using computer-assisted telephone interviewing (CATI) software. All respondents will be informed of the source and purpose of the survey and that it is entirely voluntary and confidential.

**Expanded Information:** The DPS contractor will conduct the two expanded surveys using similar methods to the CRS survey. These two surveys will also have to implement methods to reimburse cell phone respondents for minutes answering the survey.

In addition, targeted focus groups will be held to represent the qualitative aspects of telecommunications usage, adoption and non-adoption among seniors, the most rural and low-income, unemployed, and vulnerable populations at ten locations around the state. Analysis of the data will ultimately inform decisions about the development and efficacy of new and existing demand stimulation programs and aid in the creation of market intelligence to improve the case for businesses to deploy more broadband services.

### iv) Phase Four – Poll Data Analysis

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<sup>11</sup> One aspect of eligibility will be that a survey respondent must be 18 years of age or older.



**Basic Verification:** CRS staff will verify the integrity of data in the poll results. For respondent records that are missing a physical address that can be matched with the service map, reverse telephone look-up will be used to the fullest extent possible.

CRS, in collaboration with project partners, will compare the telephone survey connectivity, availability and service type results with the service map analysis, address-by-address. The result of this comparison will be measures of the service map's accuracy statewide, for rural (non-Burlington) areas only, and for any regions of the state that require stratification or oversampling.

**Expanded Information:** The accuracy verification procedures for the expanded DPS survey will follow the same procedures as the CRS method.

In addition, the surveys and focus groups will augment statewide broadband mapping efforts that are also described in this response by VCGI and the VTA. Results of the surveys will be shared with all Vermont entities that are focusing efforts on broadband-based economic development, professional development training and infrastructure deployment. Survey results and focus group analysis will be used to formulate policy recommendations and they will be published in the Telecommunications Plan and online. The public and private sectors will be encouraged to use the information to establish programs that stimulate broadband demand, through affordable access and availability of appropriate equipment and relevant content. In particular, results of focus group analysis will be used to understand and address the needs and barriers to entry of vulnerable populations.

The survey results will describe current and relevant broadband adoption, preferences, priorities and applications of Vermont residents and businesses. In keeping with the changing dynamic of how Vermonters communicate, the sample must include cell phone users. Among other things, cell phone user data will inform the State on the degree to which cell phone users use data plans for broadband access, their intention to maintain landlines at home and their level of satisfaction with the provider and service in Vermont. Additionally, the focus groups will provide a qualitative aspect of the research that relates to barriers to broadband adoption and necessary technology training for low-income, unemployed, aged, and otherwise vulnerable populations. Technology leadership teams throughout the state will use the data to develop programs that provide broadband education, awareness, training, access, and equipment to community support organizations and entities that facilitate greater use of broadband service. Furthermore, the information will be used for the Legislature to develop policy based on an understanding of broadband use and demand as it relates to the need for further State support of training, economic development and healthcare opportunities.

#### v) Surveying Deliverables

##### **Basic Verification**

- A 5-10 question statewide telephone survey.

- Draft univariate frequency report in electronic format no later than two weeks after survey is completed
- Full univariate frequency report with graphical and tabular data representation
- The complete raw dataset in Excel or SPSS format
- Comparison of the survey data to the broadband service map and a determination and explanation of accuracy.

### c) Accessibility

Vermont's Broadband Mapping Team will establish an online presence (BroadbandVT) to house all broadband related information, maps, and resources. The BroadbandVT website will provide online access to clearly presented broadband maps to the public, government, and others without unduly compromising confidential information\*<sup>12</sup>. VCGI (and its subcontractors) will develop a set of web-based solutions enabling the public and other stakeholders to easily visualize and understanding the geographic extent and nature of broadband services in Vermont.

The BroadbandVT website will include a user-friendly, interactive, and searchable web mapping tool allowing users to easily navigate to any location in the state. The map will be fast and simple to use\*<sup>13</sup>, and will allow the public and others to determine the availability of broadband services in their area. The online tool will also allow users to provide feedback and corrections at the address-level\*<sup>14</sup>.

VCGI will also develop a set of static broadband maps (Adobe Portable Document Format), both statewide and county-based. Web links (URLs) will be provided to the NTIA as stipulated in the State Broadband Data and Development Program grant specifications.

### d) Security and Confidentiality

#### 1) Transparency

The Vermont Broadband Mapping Team sees transparency of process as a priority. Process transparency allows the opportunity for others to assess and provide comment to our approach and the methods we employ in creating the Broadband data. The ability to improve our methodologies through feedback is an important self-improvement goal of the effort. While the Team is interested in improving our methods through feedback we are also aware we need to retain the focus on the primary goals of the effort as established at outset. Redefining critical information such as data definitions or defined data aggregation approaches over time, even if well intended, will weaken the analysis of the mapping effort over time. Geographically defined temporal change analysis of the unserved and underserved populations in the state is critical to understanding the success of future broadband infrastructure deployment. Only consistent methodologies will

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<sup>12</sup> "Confidential Information" is defined in section "III. DEFINITIONS" of the NTIA's State Broadband Data and Development Grant Program NOFA.

<sup>13</sup> Examples of fast and simple to use interactive maps include <http://www.bing.com/maps/>, <http://www.google.com/maps/>, <http://gis.cityofboston.gov/solarboston/>

<sup>14</sup> The online BroadbandVT user feedback tool will leverage related design ideas and software solutions developed by others, including the Vermont Telecommunications Authority's "VT Connectivity Map" and the eCorridors's "Community Broadband Access Map".

support that analysis. As experienced and responsible process engineers we are able to recognize the line between process improvement and destructive redesign.

The Vermont Team's approach will ensure transparency through;

- Fully documenting our approach;
- Providing documentation online on a dedicated, publicly accessible web page.

Our Team places a high value on communication and each team member has already been working with other team members on developing methodologies to accomplish all of the elements of the broadband mapping effort in accordance with the defined requirements. Each team member will contribute to project documentation that defines a clear set of project goals, approach and methodology (including changes over time), any standards used, metrics and outcomes. Project documentation will be available on a publicly available website established for the VT Broadband Mapping effort.

## 2) *Confidentiality*

The VT Broadband Mapping Team will establish Non-Disclosure Agreements (NDAs) with those broadband service providers that wish to keep their data restricted from public access and distribution. VCGI already has NDA's with two of the broadband providers in the state for the provision of broadband mapping data. Other NDA's will be established by VCGI with/in consultation with the VT Department of Public Service as the providers request.

Confidentiality may also be achieved through the aggregation of provider data into the publicly available mapping data products. By aggregating the data supplied by multiple broadband providers into a single graphic representation the specific details of a single provider's services are not shown. For instance, by showing the aggregated statewide availability of wireless services in Vermont from all providers as a single map layer the individual service areas of each provider are discernable and yet the understanding of wireless coverage availability is not diminished. The use of aggregation for all publicly available products will be used in mapping and reporting the broadband availability data. The team will work with the data providers to be sure they are comfortable with the methods being used to represent publicly available data.

Another important aspect of maintaining confidentiality is proprietary data control. Our plan for the collection of provider service coverage information is for that information to be sent to a single point of collection, VCGI. In addition proprietary data may come from the Federal Communications Commission (FCC) or DPS. VCGI will be the single point of data control for proprietary data used in the project. As the data aggregator, VCGI will then be able to take the provided data, aggregate it according to the defined processes and provide it to the public.

As the state's designated geographic data depository, VCGI has previous experience with data control methods and the disciplined process necessary to ensure the limiting of data access. VCGI was the prime contractor on Vermont's Critical Facilities geographic data collection contract lasting from 2005 to 2008. Information relating to location and attribution for some of the feature types designated for collection in this effort were defined to have limited access. VCGI worked with the state and federal Homeland Security teams to define the controlled data types and ensure

the data was kept secure from collection through database loading at the state's emergency management facility.

It is our intention, through the implementation of the processes mentioned above, to ensure that the Team provides open access and transparency of the methods we employ in our work while also ensuring that proprietary data from providers, federal and state entities is controlled and distributed without disclosing proprietary information.

## II. Project Feasibility

### a) Applicant Capabilities

#### 1) *Project Budget Spreadsheets*

(See Appendix B for a year by year breakdown of project budget)

Budget Item Number	Total Project Budget (5 Years)	Time Estimate Total Hours	Cost Estimate
<b>Personnel Budget Elements</b>			
1	Project Management	400	\$39,036
2	Central Administration (0.5%)		\$9,738
3	Data - Gathering	4900	\$330,036
4	Data - Verification	1120	\$76,716
5	Data - Accessibility	700	\$66,361
6	Data - Updating	2520	\$203,457
	<b>TOTAL ESTIMATE</b>	9640	\$725,344
<b>Partner Contractual</b>			
7	<b>VT Dept. of Public Service</b>		\$518,547
8	<b>Center for Rural Studies - Univ. of VT</b>		\$200,513
9	<b>Enhanced 9-1-1- Board</b>		\$44,750
10	<b>VT Telecommunications Authority</b>		\$0
11	Contract Services		\$424,600
12	Supplies & Software		\$36,000
13	Travel		\$4,000
14	Equipment		\$4,000
15	Other Direct Costs		\$0
	<b>TOTAL OTHER DIRECT COSTS</b>		\$1,232,410
	<b>TOTAL BUDGETED FULL PROJECT COSTS</b>		<b>\$1,957,754</b>

Estimated Available Matching Funds Worksheet

Funding Match Item #	Potential Match (All Years)	Estimated Amount
1	VCGI - In-Kind (from previous Broadband data collection and )	\$40,000
2	VCGI – In-Kind (ED’s salary for creation, evaluation and award of RFPs)	\$15,000
3	DPS - In-Kind (Contribution for Landline Telephone Survey)	\$60,000
4	VTA - In-Kind (Previous mapping and partial salaries July 08 to June 09)	\$90,150
5	E-9-1-1- In-Kind (Cost of Addressing data collection statewide)	\$2,100,000
6	VCGI – In-Kind (Cost of statewide Orthophotography collection)	\$400,000
	<b>Total Project Value</b>	\$1,957,754
	<b>Total Estimated Match Required (20%)</b>	\$391,551
	<b>Total Estimated Match Available</b>	\$2,705,150

2) *Budget Narrative*

*Vermont Center for Geographic Information Activities*

Budget Item #1

Project Management – VCGI’s budget for Project Management is intended to cover the estimated cost for the Project Manager to organize, manage, review, and document project activities. Other activities covered in this cost estimate include scheduling and planning for meetings, coordination of Contractors, issue resolution, and risk management.

Budget Item #2

Central Administration- VCGI is allocating .5% of the total contract value for Central Administration of the project as directed by the Vermont Secretary of Administration for all ARRA projects in the State. As defined by the Secretary of Administration, Central Administration is intended to cover the costs of accounting and Federal reporting requirements for any ARRA project.

Budget Item #3

Data Gathering- VCGI’s budget for Data Gathering contains the cost of leading the initial broadband data collection and data mapping effort including the creation and population of the master broadband inventory database. This budget activity will support the cost of contacting the Broadband providers, aggregating, and integrating their data as well as resolving data issues for all six requested data types.

Budget Item #4

Data Verification- VCGI's budget for Data Verification contains the cost of verifying the six requested data types using the methods outlined in this proposal. It also includes the cost of developing online verification and feedback tools.

**Budget Item #5**

Data Accessibility- VCGI's budget for Data Accessibility includes the cost of establishing the BroadbandVT website to house all broadband related information, maps, and resources. The online website will allow users to provide feedback and corrections at the address-level. This budget activity also covers the cost for VCGI to develop a set of statewide and county-based static broadband maps.

**Budget Item #6**

Data Updating- VCGI's budget for Data Updating includes the cost of integrating the yearly updated broadband information from the Service Providers and the verification data from the project partners. It includes the time necessary to resolve data issues, and populate the master broadband inventory database for all six requested data types.

**Budget Item #11**

Contract Services- VCGI's cost estimate for Contract Services includes the estimated cost of hiring a contractor from the Private Sector to perform propagation analysis for fixed and mobile wireless assets and then map the resulting analysis statewide. The initial data collection will be performed in year 1 with updates to be performed in years 2-5, an estimated total of \$216,000 for all five years.

It includes the estimated cost of hiring a contractor from the private sector to perform Drive Testing once each year for the full five year period in order to verify actual Wireless coverage in the state, an estimated total of \$193,600 for all five years.

It also includes the cost of hiring a contractor to develop the BroadbandVT website, an estimated total of \$15,000.

**Budget Item #12**

Supplies and Software- VCGI's cost estimate for Software includes the acquisition of the following items;

- Latitude Geographics' Geocortex Essentials (Internet Mapping Development Software) - \$15,000,
- Google Basemap or MS Virtual Earth License (5 years) - \$10,000,
- ESRI ArcGIS Desktop license (5 years) - \$6,000,
- Speed Test Software - \$5,000.

**Budget Item #13**

Travel- The costs for Travel during the 5 year term of the contract were intended to be in support of Groundtruthing. It was determined that a total estimate of \$4000 or \$800/year would be used. All travel will be in-state and charged at the prevailing Federal mileage rate (currently .50/mile).

Budget Item #14

Equipment- VCGI's cost estimate for Equipment includes the acquisition of the following items;

- One Computer Workstation - \$2500
- One professional quality GPS Unit - \$1500

All cost estimates for VCGI activities cover the full 5 year term of the contract unless otherwise designated. All VCGI cost estimates include .75% for fringe benefits on all staff salary/wages and 1.40% for indirect costs. All rates are approved by an independent audit and applied universally to all contracts.

*Vermont Department of Public Service Activities*

Budget Item #7

Telecommunications and GIS Specialist: The Department of Public Service will hire one FTE Telecommunications and GIS Specialist who will work in coordination with partners at VCGI and the DPS Telecommunications Director to estimate and map the capabilities of mobile and fixed wireless and landline based broadband infrastructure. The position is responsible for understanding telecommunications technology and networks and is responsible for implementing methodologies for gathering and presenting information about the state of telecommunications networks in Vermont. The Specialist will perform specialized analysis related to the present and future capabilities and availability of Vermont's telecommunications infrastructure. Estimated annual compensation for the position including benefits is \$94,500 annually. This estimate is based on similar job specifications and compensation described by the State of Vermont on its website for Telecommunications Infrastructure Specialist and a GIS Specialist. The position must be filled for four years.

Total estimated four year cost: \$378,000

Telephone Survey Cost: The estimated total cost to conduct the surveys in 2009 and again in 2013 is \$41,400. Estimates include compensation to cell phone users who must pay for the time they take to answer survey questions. Compensation may be a \$5 gift card or an equivalent donation to a national non-profit of the participant's choice. The estimate is based on the average pricing provided by competitive vendors. This includes the estimated cost for random sampling of;

- 400 businesses statewide.
- 400 Vermont residents.
- 40-50 cell phones.

All DPS budget items are subject to a multiplier for Indirect Costs of 23.64%

*Vermont Telecommunications Authority Activities*

Budget Item #10

VTA is not requesting funding under the NTIA State Broadband Data and Development Grant Program. They will be providing information and support to the Mapping Team as part of their existing program responsibilities.

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*Center for Rural Studies – University of Vermont Activities*

Budget Item #8

CRS Verification Surveys Budget Narrative

The estimated total cost incurred by the Center for Rural Studies for completing the 8 Verification Surveys is estimated at \$17,459.45 for the 2010 fiscal year with a total of \$122,797.14 for the combined 5 years of effort. The project budget accounts for disbursements for; salaried CRS staff who will develop, conduct, analyze and report findings; specially-trained phone survey hourly staff; fringe benefit costs at the appropriate levels; operating costs including phone charges and supplies; and the University of Vermont's Facilities and Administration overhead fee.

Staff Salary/Wages includes expenses associated with the following specific activities: Develop the survey with project partners, create and test the survey instrument, provide database management, provide training and management to survey staff, provide financial accounting, data tabulation, analysis and reporting including document development and meetings. Hourly rates and fringe rates at the University of Vermont are included for all salaried staff and hourly staff, and subsequent annual adjustments have been applied to the budget worksheet. The annual adjustment for hourly rates has been estimated at 3 percent. The increases to fringe rates have been estimated by the University Of Vermont Office Of Sponsored Programs. No fringe rate is applied to temporary phone survey staff.

Operating Costs take into account the costs for travel to project meetings, the procurement of the sample call list for the survey, phone charges incurred during surveying, and miscellaneous office supplies. The University of Vermont's Facilities and Administration overhead fee set at 29.5% for fiscal year 2010 and assumed to remain constant.

CRS Anchor Institutions Budget Narrative

The estimated total cost incurred by the Center for Rural Studies for completing the 5 annual "Anchor Institutions" data collection efforts outlined above is estimated at \$8,335.14 for the 2010 fiscal year with a total of \$44,555.79 for the combined 5 years of effort. The project budget accounts for disbursements for; salaried CRS staff who will develop, conduct, analyze and report findings; specially-trained hourly staff; fringe benefit costs at the appropriate levels; operating costs including phone charges and supplies; and the University of Vermont's Facilities and Administration overhead fee.

Staff Salary/Wages includes expenses associated with the following specific activities: Develop the database with project partners, provide database management, provide training and management to hourly staff conducting the data collection, provide financial accounting, data tabulation, analysis and reporting including document development and meetings. Hourly rates and fringe rates at the University of Vermont are included for all salaried staff and hourly staff, and subsequent annual adjustments have been applied to the budget worksheet. The annual adjustment for hourly rates has been estimated at 3 percent. The increases to fringe rates have been estimated by the University of Vermont's Office of Sponsored Programs.



Operating Costs take into account the costs for travel to project meetings, phone charges incurred during data collection, and miscellaneous office supplies. The University of Vermont's Facilities and Administration overhead fee is set at 29.5% for fiscal year 2010 and is assumed to remain constant.

Vulnerable Communities Focus Groups: The estimated cost for two studies (2009 and 2013) of ten focus groups located around the state is \$33,160 (\$16,580/study). Cost includes 4-5 meeting facilitation for each group of up to 10 members, content analysis, location and travel costs for group leader and incidentals for the group.

### *Vermont Enhanced 9-1-1 Board Activities*

#### Budget Item #9

The estimated total cost incurred by the Vermont Enhanced 9-1-1 Board for completing the creation of a dynamic data service that will provide VCGI with the E9-1-1 locatable address data through SDE/SQL server replication from database to database for the 2010 fiscal year is a total of \$24,750. The cost of providing continuing data support to the initiative for the remaining 4 years of effort is \$20,000 or \$5,000 per year. The project budget accounts for salaried staff who will develop the dynamic data service application and maintain the data feed for the duration of the project, fringe benefit costs at the appropriate levels; and standard overhead costs for Enhanced 9-1-1 personnel.

### *Potential Project Matching Funds*

The Vermont Mapping Team is able to include potential matching funds well in excess of 100% of the final value of our full proposal cost. The support narrative for the numerous potential funding match items is as follows;

1. Funding Match Item #1. references In-Kind match from the aggregated cost of previous Telecommunication mapping data collection activities by VCGI in support of the Dept. of Public Service and the CIO's office. State building broadband access analysis was also performed. All costs for this item occurred from 2006 to the present.
2. Funding Match Item #2. references future In-Kind match from the estimated cost of the VCGI Executive Director salary to create, evaluate, award and manage the RFP process proposed for having the public sector provide Drive Testing to verify the availability of Mobile Wireless service in Vermont.
3. Funding Match Item #3. references In-Kind match from the actual and estimated costs of the, already in-progress, Dept. of Public Service Landline Telephone Survey to determine public access to Broadband services in Vermont.
4. Funding Match Item #4. references In-Kind match from the aggregated costs of previous Broadband service area data collection from providers and subsequent data conflation activities by VCGI and the Vermont Telecommunications Authority. It also includes partial salaries from VTA personnel in collecting the service coverage area information. All costs for this item occurred from 2006 to the present.

5. Funding Match Item #5. references In-Kind match from the actual costs for the State of Vermont to collect statewide addressing data. Vermont has identified, by GPS, the location coordinates for every E911 address in Vermont, with attribution including the type of structure (e.g.: residential, commercial, public, etc). Having this highly accurate data available increases the value of the final Broadband Mapping data products to the public. The assigned value of this effort represents only the costs paid to a subcontractor to collect the address data and not the cost of ancillary efforts such as program development, training, hardware, software, or maintenance.
6. Funding Match Item #6. references In-Kind match from the actual costs for the State of Vermont to collect the latest version of its statewide 1:5,000 scale orthophotography. The statewide orthophotography will be used for a.) Background reference data to support Online Verification by the public and b.) Verification by field checking personnel.

## **b) Applicant Capacity, Knowledge and Experience**

The Vermont Broadband Mapping Team is composed of several partners all identified as providing a critical expertise to the Team. In addition, each of the Team members has already worked with the prime contractor, VCGI, in recent years on other state mapping initiatives or in the creation of preliminary broadband mapping. The VT team is composed of well established state entities with existing working relationships that are able to provide a singular expertise to the effort. Each of the participating partners has been fully engaged in the discussion and decision making process from the beginning and communication with the partners is a priority for the Team.

### **1) Vermont Center for Geographic Information**

The prime contractor for the Vermont Broadband Mapping Team is the Vermont Center for Geographic Information (VCGI). VCGI is a non-profit, 501(c)4, corporation established as an instrumentality of the State of Vermont that is statutorily charged with the coordination and implementation responsibilities relating to the state's geospatial resources. VCGI is responsible for the management of Vermont's Geographic Information System (VGIS).

VCGI has maintained a continually operating statewide GIS data repository and data coordination office for the State of Vermont since 1989. VCGI employs proven and fully documented business processes to ensure business continuity in accordance with industry standards for an organization similar to ours. VCGI's financial records are audited through an independent auditor every year and in the most recent year, as in previous years, the results were found to be free of financial misstatement and there were no instances of non-compliance that are required to be reported under Government Auditing Standards. A copy of the most recent Financial Statements and Supplementary Information from VCGI's auditor is available upon request. VCGI has a Board of Directors composed of 12 individuals selected by the Governor of Vermont representing a wide range of state interests from VT Senate and House members to academic representatives from the universities and colleges in VT to a representative from the private sector. Mr. Tom Murray, state CIO, is Chair of the VCGI Board of Directors.

As mentioned previously, VCGI has acted as prime contractor on other state data collection initiatives over the years. The most significant project recently completed was the state's Critical

Facilities data collection efforts. This was a multi-year effort funded and directed by the federal Department of Homeland Security. The project was sub-granted through each state's respective Homeland Security Office. The total value of the grant to VCGI was over \$870,000 and VCGI was responsible for creating and maintaining 10+ sub-contracts with the local and regional data collection managers. VCGI provided all required state and federal project and financial reporting on time and completed the project ahead of schedule. Every year VCGI maintains several contracts with state government agencies and departments and also with federal partners. In the past, VCGI has successfully contracted with or worked on grants from the US Geological Survey, Federal Emergency Management Agency (FEMA), Environmental Protection Agency (EPA), and U.S. Department of Transportation (USDOT). VCGI also has experience creating, evaluating and awarding competitive Requests for Proposals to the private sector for the provision of data collection and mapping information.

VCGI has maintained an active, registered, fully compliant National Spatial Data Infrastructure clearinghouse node for the State's GIS data since 1993. The node currently offers literally dozens of different data layers for download access all with FGDC compliant metadata. In 2002, VCGI extended their data distribution services by developing a web map interface 'clip and zip' data download capability for public access to the State's data. Project managers at VCGI have developed several web mapping applications for different customers. Currently, they provide a secure web mapping application to Vermont Emergency Management for their use in emergency mitigation, planning and training activities. VCGI has also created demonstration web mapping applications using the State's foundation data for the Vermont Dept. of Information and Innovation, the Dept. of Health and the University of Vermont, Center for Rural Studies.

The primary project technical lead for VCGI will be Mr. Stephen Sharp. Mr. Sharp is a Senior Project Manager at VCGI as well as Database Administrator and Web Site Manager. Mr. Sharp already has a solid professional working relationship with geospatial and telecommunications technical personnel at all of the partnership organizations, having been the lead on all previous telecommunications mapping. Specifically, over the past two years Mr. Sharp has worked with the VT Department of Public Service, the VT CIO and the VT Telecommunications Authority in support of broadband access data development and the provision of telecommunications mapping needs. Mr. Sharp also supervises technical staff at VCGI on projects involving state data development, integration, conversion, maintenance and analysis.

The Executive Director (ED) at VCGI, Mr. David Brotzman will provide program guidance, financial and resource management, and the creation and management of Requests for Proposals (RFPs) for private sector contractors on the project. Mr. Brotzman has been ED for 9+ years at VCGI and prior to his tenure he was Lead Engineer and Project Manager in large Federal mapping system projects in the National Imagery and Mapping Agency (NIMA, now NGA) while working with Intergraph Corporation and British Aerospace Engineering Systems. He has 30 years of experience in systems design as well as technical and financial project management. In addition, VCGI, as a non-profit corporation, has a fully functioning business office with a full time Business Manager that has been with the organization for over 10 years. VCGI has both the capacity and the experience to manage the technical and business aspects of this project.

Additionally, to ensure that all project activities meet the larger goals of the national American Recovery and Reinvestment Act, VCGI will maintain regular communication with the **Vermont Office of Economic Stimulus and Recovery (ESR)**. Established by the Governor of Vermont in early 2009, the Office of Economic Stimulus and Recovery (ESR) assists and coordinates efforts of State, community, and private organizations to obtain stimulus funds for projects, which not only alleviate the pain of the current recession but build the infrastructure necessary for Vermonters to succeed in the second decade of the 21st century.

Accountability and transparency in the expenditure of stimulus (American Recovery and Reinvestment Act or ARRA) funds are key responsibilities of ESR. ESR has a Director of Audit and works closely with the State Auditor of Accounts to assure that ARRA-funded projects are designed from the beginning to meet stringent reporting requirements.

## 2) *Vermont Department of Public Service*

The Vermont Department of Public Service (DPS) represents the public interest in matters regarding energy, telecommunications, water, and wastewater. The Telecommunications Division is responsible for implementing telecommunication policy objectives, including support for universal availability of broadband and mobile phone services.

The Department of Public Service is well positioned as an essential partner in the collection of broadband mapping and survey data. Through its longstanding relationships with providers and its history of collecting broadband service availability data from traditional telephone companies and cable operators, the Department has a proven track record in identifying key information and its technical ability to create and publish useful broadband mapping information. Since 1992, the Department has conducted extensive telephone surveys concerning consumer expectations, product demand, availability and use of services in both the residential and business communities. The Department's history with the surveys has enabled it to keep up to date on trends in consumer demand and expectations and to deliver quality analysis to the state legislature for action. Staff members at the Department have extensive GIS experience and in-depth knowledge of global technology trends, national communications policy and local efforts to attract broadband providers to rural communities through demand aggregation programs.

Deborah Shannon, Telecommunications Policy Analyst, is the designated survey and planning Coordinator for this effort and will be supported by the GIS Telecommunications Specialist. In June 2009, Deb released the Vermont Telecommunications Almanac. Her 12 years experience in sales and community technology education and planning qualify her to lead the planning efforts for this application. Prior to her position with the state, Deb worked in education and development for Vermont's first ISP. She has developed training materials for new Internet users and lead forums for businesses interested in developing a web presence. In 2004, MontpelierNet, a wireless broadband provider in the state capital, hired Deb to respond to sales and customer development requests.

As a telecommunications Policy Analyst with the Department since 2008, Deb published the Vermont Telecommunications Almanac, which provides key data about the status of telecommunications in Vermont. These statistics, described in relationship to national and global

data provide important indicators of where Vermont has progressed in meeting its telecommunication needs, and where there is room for further improvement. The Almanac includes maps of where and what types of broadband services are available in Vermont. Deb's experience with colleagues at DPS Consumer Affairs Division and the Vermont Council on Rural Development qualifies her as a knowledgeable and capable aggregator of statewide information on broadband. She demonstrates a unique knowledge of current broadband needs and the ability to synthesize and analyze data for use in public policy forums. As a policy maker, Deb communicates regularly with ISP decision makers around the state. Her well-rounded network of broadband providers, wireless technology developers and consumers positions her to develop research tools that identify core issues around adoption and non-adoption of broadband services. Furthermore, her position at the Department provides access to statewide communications tools including multiple websites, mailing lists and consumer contacts, which she will utilize to distribute the survey results.

Corey Chase, Acting Telecommunications Director, formerly the Telecommunications Infrastructure Specialist at DPS and past President of V-Sat Telecom, Inc., Corey has worked closely with VCGI on the development and maintenance of state broadband service availability maps. He is responsible for fine-tuning the Vermont Broadband maps to offer the most accurate representation possible of broadband availability throughout the state. He provides testimony to the Public Service Board and is responsible for telecommunication policy development concerning service quality standards, benchmarks, consumer affairs and new service deployments. Their combined level of expertise and ability to build successful relationships with providers has established Vermont DPS as a national forerunner in broadband surveying and mapping.

### 3) *Vermont Telecommunications Authority*

Signed in June 2007 by Governor Jim Douglas, VT Act 79 created the Vermont Telecommunications Authority to facilitate the establishment and delivery of mobile phone and internet access infrastructure and services for residents and businesses throughout Vermont. The authority is focused on unserved and underserved areas and an overall long-term goal of establishing broadband and mobile phone infrastructure throughout the state.

The VTA is statutorily directed as follows:

- (1) to develop and maintain an inventory of locations at which mobile telecommunications and broadband services are not available within the state, develop and maintain an inventory of infrastructure that is available or reasonably likely to be available to support provision of services to areas unserved, and develop and maintain an inventory of infrastructure necessary for provision of these services to the areas unserved;
- (2) to identify the types and locations of infrastructure and services needed;
- (3) to coordinate the agencies of the state to make public resources available to support the extension of mobile telecommunications and broadband infrastructure and services to all unserved areas;

- (4) to coordinate and establish public-private partnerships to extend availability of mobile telecommunications and broadband services, and to promote development of the infrastructure that enables the provision of these services;
- (5) to support and facilitate local initiatives to extend the availability of mobile telecommunications and broadband services, and to promote development of the infrastructure that enables the provision of these services;
- (6) to provide resources to local, regional, public and private entities in the form of loans, grants, and other incentives funded through bonded capital and other resources;
- (7) to solicit and consider input from local municipal authorities, districts designated by the federal economic development administration, regional planning commissions, and metropolitan planning organizations;
- (8) to inventory and assess the potential to use federal radio frequency licenses held by instrumentalities of the state to enable broadband service in unserved areas of the state; take whatever steps are consistent with the powers granted the authority under this chapter to promote the use of those licensed radio frequencies for that purpose; and recommend to the general assembly any further legislative measures with respect to ownership, management, and utilization of these licenses as would promote the general good of the state; and
- (9) to utilize existing buildings and structures, historic or otherwise, as sites for visually-neutral placement of mobile telecommunications and wireless broadband antenna facilities.

Since its inception in 2007 the VTA has been actively pursuing the same infrastructure development goals that have been recently identified by the BTOP and BIP federal broadband development programs, specifically, providing broadband service to unserved and underserved communities. As an active enabler of the development of broadband infrastructure in Vermont, with existing programs in place, VTA is an important partner for the Team. They provide a connection to existing future Broadband development plans and relationships with service providers. They also provide to the Team an experience based knowledge of telecommunications technologies and the specific issues related to their implementation throughout Vermont.

#### **4) *University of Vermont - Center for Rural Studies***

The Center for Rural Studies (CRS) is a nonprofit, fee-for-service research organization that addresses social, economic, and resource-based problems of rural people and communities. Based in the College of Agriculture and Life Sciences at the University of Vermont (UVM), CRS provides consulting and research services in Vermont, the United States, and abroad. Over its three decades of existence, CRS has developed its expertise and reputation in the areas of survey research, program evaluation, community data, community planning, focus groups, and outreach and capacity building. Today CRS's 7-10 member staff continues to demonstrate CRS's breadth and depth, managing various different projects every year, from single-client consultations to large federal research grants worth hundreds of thousands of dollars.

CRS will bring its knowledge and expertise in survey research and rural context to this project to design, implement and analyze a statewide telephone poll that will verify the accuracy of broadband service in Vermont to within a statistically rigorous range.

Using a stratified random sampling methodology, CRS will verify the accuracy of existing broadband availability and connectivity data sets at a confidence level of 95 percent with a confidence interval (margin of error) of plus or minus 5 percent. This means that 95 percent of the time the verification will be accurate to within a 10 percent total range of the survey response.

This verification will consist of making contact with a statistically significant number of Vermont residences and businesses to determine their broadband connectivity and perceived availability (both by service type). Physical addresses will be utilized, which will allow for comparisons to the physical address points used in the existing broadband availability and connectivity datasets. If this study finds that, for example, 90 percent of physical addresses in the connectivity dataset self-report actual broadband connectivity, the conclusion will be the dataset is 90 percent accurate within the range of the above confidence interval. It should be noted that factors of the study, once conducted, may enable an even more precise confidence interval.

No other organization is better suited for this particular task dealing with this particular topic area in the State of Vermont than the Center for Rural Studies. Using its annual *Vermont Poll*, CRS has been tracking various aspects of the digital divide for more than a decade, including such variables as household computer ownership, Internet connectivity, broadband connectivity and service type, desire for Internet, perceived barriers to high-speed Internet, and the use of online resources. CRS has observed, for instance, that the proportion of Vermont households with high-speed or broadband Internet has increased from 9% in 2001 to slightly more than 66% in 2009. Nevertheless a geographic divide remains: 76% of rural households with Internet connections have broadband versus urban (88%) or suburban (93%) households.

CRS has also gauged public interest in the involvement of state and local government in broadband service provision. The 2007 *Vermont Poll* found a majority (58%) of respondents in support of the allocation of State funds toward universal broadband. In 2008, a vast majority of respondents (77%) were in favor of having their city or town involved in such an effort.

Other technology-related projects that CRS has been involved in recently include the 1999-2002 *Town Officer's Connectivity Project*, the 2006 *CyberSkills for Vermont Municipalities* project, and the ongoing *Municipal E-Government Outreach Project*, including the 2004 *Vermont Municipal E-Government Conference*. CRS has also provided monetary and technical support for the Vermont Council on Rural Development's community broadband facilitation work since 2003.

##### 5) ***Vermont Enhanced 9-1-1 Board***

Title 30 VSA Chapter 87, authorized the establishment of a statewide emergency 9-1-1 calling system. The Enhanced 9-1-1 Board is the agency responsible for the design and maintenance of the 9-1-1 network, call-handling equipment, call-handling and mapping software support,

telecommunication training, and maintenance of all necessary databases for 9-1-1 call routing and handling, including its statewide enhanced 9-1-1 GIS database.

In 1995, roughly 75 % of the state did not have a conventional street addressing system. The Enhanced 9-1-1 Board worked to develop a GIS database with coordinate information, providing a cost efficient and time saving method to address Vermont municipalities, with the goal of creating a digital map able to accommodate both wire line and wireless enhanced 9-1-1.

Currently, Vermont's statewide enhanced 9-1-1 GIS database contains:

- 322,125 sites
- 63,359 street segments
- 35,019 roads/road names (including all private roads)
- 80,701 driveways
- 465 Emergency Service Zones (ESZs), including the primary Emergency Service Agencies (ESAs) for each ESZ.

The State of Vermont Enhanced 9-1-1 Board also maintains wireless tower and sector information for Verizon Wireless, Sprint/Nextel, T-Mobile, AT&T Mobility, US Cellular, and Unicom. Together there are 782 wireless towers distinct to wireless carrier with 2494 associated wireless sectors. Attached is an example of the wireless information maintained (*Information Needed From All Wireless Carriers for the Implementation of FCC Order 94-102*).

The GIS database is maintained primarily by three members of the Board staff (a GIS Database Administrator, a GIS Technician, and an Office Assistant) with indirect department support (see attached budgetary document). Also, 30 VSA § 7056 (a) requires that all municipalities participating in enhanced 9-1-1 are required to appoint a Municipal 9-1-1 Coordinator who is responsible for updating the E9-1-1 Board with address information as outlined in the attached "*Municipal Government Enhanced 9-1-1 Maintenance Responsibilities*." This municipal-based relationship is integral to having accurate, up-to-date addressing data.

Updates from the municipalities are added to Vermont's GIS dataset and flagged for GPS field verification. The Board has its own vehicle equipped with an OmniStar, WASS, and Beacon enabled differentially corrected GPS unit and software specifically designed for capturing E9-1-1 road and site information. This data is meticulously and constantly maintained, as it is used primarily for purposes of public safety. We have processes in place to ensure the timely update of any new roads, sites, or emergency service zones:

- Municipalities are required to submit updates to the Board for any changes to sites, roads, or ESZs, as they occur.
- Each year municipalities are provided with a 9-1-1 atlas showing all the changes submitted in the previous 12 months. They must review their atlas, ensuring that all the changes submitted have been processed.
- ALI/GIS Discrepancies – the 9-1-1 call-taker is required to complete a discrepancy form if the address on the map display is incorrect based on information provided by the 9-1-1 caller or emergency service responder.



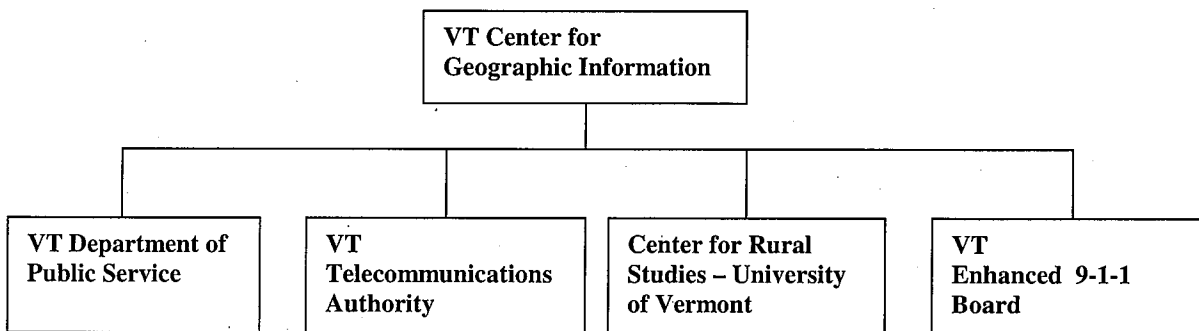
- ALI/GIS Site Audit – an annual comparison of the addresses in the ALI database to the addresses in the GIS database. Any inconsistencies are sent back to the Municipal 9-1-1 Coordinator for resolution.

***Future GIS Database Development for Broadband Mapping Proposal***

The Enhanced 9-1-1 Board will provide VCGI with the E9-1-1 locatable address through SDE/SQL server replication from database to database.

**6) Organization**

An effective project organizational structure is essential to achieving success. The following diagram graphically depicts the proposed organizational structure of the Broadband Mapping Team:



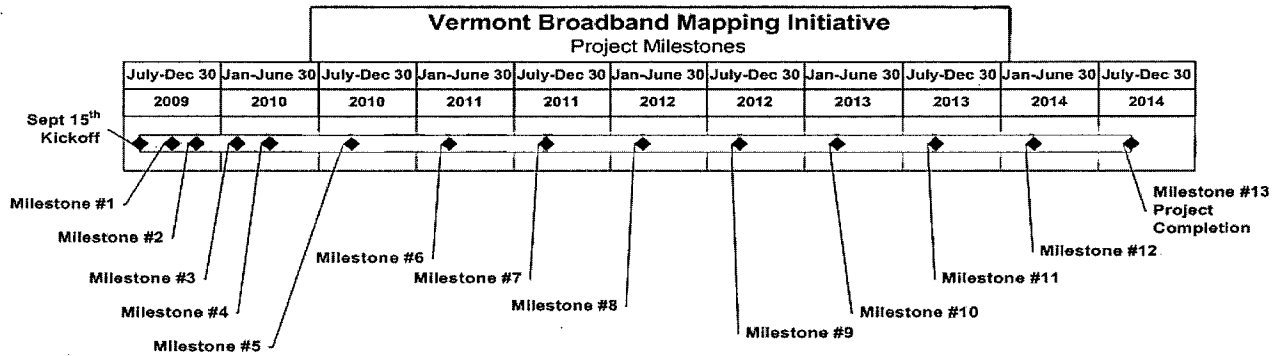
**7) Additional Project Partners:**

Project partners from other areas of the telecommunications community are also included as part of the project plan. The specific role(s) of each of these partners is identified in the narrative. The additional partners are;

- **VT Council on Rural Development (VCRD)** The Vermont Council on Rural Development (VCRD) is a non-profit organization dedicated to the support of the locally defined progress of Vermont's rural communities. VCRD is a dynamic partnership of federal, state, local, non-profit and private partners. Actively non-partisan with an established reputation for community-based facilitation, VCRD is uniquely positioned to sponsor and coordinate collaborative efforts across governmental and organizational categories concerned with policy questions of rural import.
- **Telecommunications Companies** (cable, phone, wireless, etc.) Vermont has 20+ telecommunications companies that offer services in the state and the Team sees each of those providers as a full partner to the development of quality Broadband data in this initiative. We hope to establish long term relationships with the providers based upon trust and a willingness to respect the business and civic needs of the respective partners.
- **Private Sector Companies:** The private sector will play an important role by helping to collect field data, build propagation models, and perform other specialized tasks.
- **Data collection sub-contractors:** VCGI, DPS and CRS will be hiring consultants or temporary employees to support their organizations for this initiative.

### III. Expedient Data Delivery

Vermont Broadband Mapping Initiative will leverage the capabilities of the Mapping Team, subcontractors, and project partners to ensure the timely delivery of all data specified by the NTIA<sup>\*15</sup>. The chart below identifies all critical milestones during the 5-year timeframe of this effort. Each milestone is described in more detail below.



**Description of Milestones:** The milestone numbers below correspond with the numbers on the milestone chart.

- **Milestone #1 – (November 1<sup>st</sup>, 2009):** A “substantially complete set of availability data”<sup>\*16</sup> will be delivered to the NTIA on November 1<sup>st</sup>, 2009. The deliverables will not be verified as of November 1<sup>st</sup>, 2009, and therefore will be preliminary. The package will include the following deliverables (refer to section *I.(a) Data Gathering* for details).
  - Broadband Service Availability - Service Associated with a Specific Address (Deliverable #1 in section *I.(a) Data Gathering*)
  - Broadband Service Availability – Wireless Services (Deliverable #2 in section *I.(a) Data Gathering*)
  - Community Anchor Institutions (Deliverable #6 in section *I.(a) Data Gathering*)
- **Milestone #2 (November 15<sup>th</sup>, 2009):** The data delivered at Milestone#1 will be partially verified through the following survey verification activities.
  - CRS will complete its first 5-10 question survey to support verification of the deliverables listed under *Milestone #1*. The address-level survey will be compared to the address-level data to develop a statistically valid accuracy assessment of the data.
  - The Department of Public Service (DPS) will deliver results of the 60 question broadband survey of residents and businesses. The survey will also include the 5-10

<sup>15</sup> Including all deliverables listed in Appendix A (Technical Appendix) of the NTIA State Broadband Data and Development Grant program NOFA. These deliverables are also described in more detail in section *I.(a) Data Gathering* of this proposal.

<sup>16</sup> As defined in section III-DEFINITIONS of the NTIA State Broadband Data and Development Grant program NOFA.

questions asked by CRS in its survey (Milestone #2 above) in support of data verification requirements.

- **Milestone #3 (February 1<sup>st</sup>, 2010):** A second “substantially complete set of availability data” will be delivered to the NTIA on February 1<sup>st</sup>, 2010. The package will include the following deliverables (refer to section *I.(a) Data Gathering* for details).
  - Broadband Service Availability - Service Associated with a Specific Address (Deliverable #1 in section *I.(a) Data Gathering*)
  - Broadband Service Availability – Wireless Services (Deliverable #2 in section *I.(a) Data Gathering*)
  - Residential Broadband Service Pricing (Deliverable #3 in section *I.(a) Data Gathering*)
  - Broadband Service Infrastructure - Last-Mile Connection Points (Deliverable #4 in section *I.(a) Data Gathering*)
  - Broadband Service Infrastructure - Middle-mile and Backbone Interconnection Points (Deliverable #5 in section *I.(a) Data Gathering*)
  - Community Anchor Institutions (Deliverable #6 in section *I.(a) Data Gathering*)
- **Milestone #4 (March 1<sup>st</sup>, 2010):** A complete and verified set of availability data will be delivered to the NTIA on March 1<sup>st</sup>, 2010. The package will include the following deliverables (refer to section *I.(a) Data Gathering* for details).
  - Broadband Service Availability - Service Associated with a Specific Address (Deliverable #1 in section *I.(a) Data Gathering*)
  - Broadband Service Availability – Wireless Services (Deliverable #2 in section *I.(a) Data Gathering*)
  - Residential Broadband Service Pricing (Deliverable #3 in section *I.(a) Data Gathering*)
  - Broadband Service Infrastructure - Last-Mile Connection Points (Deliverable #4 in section *I.(a) Data Gathering*)
  - Broadband Service Infrastructure - Middle-mile and Backbone Interconnection Points (Deliverable #5 in section *I.(a) Data Gathering*)
  - Community Anchor Institutions (Deliverable #6 in section *I.(a) Data Gathering*)
  - User-friendly online maps as defined in section *I.(c) Accessibility* of this proposal.
- **Milestone #5 (September 1<sup>st</sup>, 2010):** Updated versions of the deliverables listed above, excluding DPS’s survey. CRS’s 5-10 question survey will be delivered instead, and used to verify the data. The data will be accurate as of both December 31<sup>st</sup>, 2009 and June 30<sup>th</sup>, 2010. Online maps (static and interactive) will be updated as well.
- **Milestone #6→13 (March 1<sup>st</sup> and September 1<sup>st</sup>, 2011-2014):** Updated versions of the deliverables listed in *Milestone #4* above (excluding DPS survey). March 1<sup>st</sup> updates will include data accurate as of both December 31<sup>st</sup> of the previous years. September 1<sup>st</sup> updates

will include data accurate June 30<sup>th</sup> of the current year. Online maps (static and interactive) will be updated semi-annually as well. DPS will complete and deliver the 60 question broadband survey in 2013.

- **Reporting:** Quarterly status reports will be submitted to the NTIA. The reports will document
  - expenditure of grant funds and how much of the award remains;
  - amount of non-federal cash or in-kind investment that is being added to complete the project; and
  - whether the project is on schedule to provide broadband-related data in accordance with the mapping project timeline.

#### **IV. Process for Repeating Data Updating**

Vermont's Broadband Mapping Initiative incorporates a robust maintenance strategy that will ensure the long-term accuracy of Vermont's broadband inventory. The Mapping Team (Team) understands the importance of long-term data maintenance. VCGI (a member of the Mapping Team) has extensive experience maintaining large complex datasets over a multi-year period. As the state designated maintainer and distributor of Vermont's geospatial data assets, VCGI's technical personnel have extensive experience with the requirements of data maintenance, update, and dissemination.

The Mapping Team (Team) will utilize the following tools and strategies to maintain the accuracy of the State's broadband inventory over a 5-year period<sup>17</sup>. Updates will be submitted to the NTIA on a semi-annual basis (March 1<sup>st</sup> and September 1<sup>st</sup> of each year) as stipulated in the NTIA State Broadband and Data Development Program (SBDD).

1. **Online Broadband Data Update and Verification by Providers:** This online tool will allow authorized users (eg: broadband providers) to identify changes impacting the geographic extent, type, and speed of their broadband services. The Mapping Team will evaluate online submissions and ensure that the data meets high-quality standards. If so, the data will be used to update the statewide broadband inventory. For wireless providers, new or modified wireless facilities (towers/antennae) will be used to generate updated wireless propagation maps.
2. **Offline Data Submitted by Providers:** Broadband providers will be given the option of submitting digital updates offline. The Mapping Team will ensure that the data meets established standards and specifications. If so, the data will be used to update the statewide broadband inventory. For wireless providers, new or modified wireless facilities (towers/antennae) will be used to generate updated wireless propagation maps.

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<sup>17</sup> The NTIA State Broadband Data Program requires that the recipient of NTIA grant funds agree to update the broadband data semi-annually over a 5-year timeframe.

3. **Online Feedback by the Public:** This user-friendly online tool (hosted on the BroadbandVT website) will allow the public to identify and flag errors on the broadband map. Users will be given the option of verifying data or flagging errors down to the address-level (eg: home or business). They will also be able to test their broadband speed and report that back at the address-level, helping to verify “typical” broadband speed information. Users will also have the option of specifying how much they pay for broadband service. The Mapping Team will evaluate online submissions by the public to determine if they can be used to update or correct the master broadband inventory. If so, the feedback will be used to update the statewide broadband inventory. Address-level submission will be used to update the statewide address list outlined in deliverable #1 (Broadband Service Availability - Service Associated with a Specific Address) under section *I.(a) Data Gathering*.
4. **Ongoing Survey of Anchor Institutions:** CRS will conduct an annual phone and/or online survey of community anchor institutions to verify and update broadband information for each institution.
5. **“On the Ground” Data Collection:** When necessary, the Mapping Team will utilize “on the ground” data collection and mapping techniques (GPS) to update or verify certain broadband datasets. In some cases this may involve going to the offices of the broadband providers to validate information against internal documents. In other cases, it may involve going out “into the field” with line workers to verify or update information.
6. **Close Collaboration:** In all cases, the Mapping Team will work in close collaboration with broadband providers, partners, and anchor institutions to ensure the ongoing accuracy of the State’s broadband inventory.

The Broadband Mapping Team will utilize one or more of the verifications methodologies outlined in section I.(b) to verify data updates on a semi-annual basis.

The Department of Public Service (DPS) and the Center for Rural Studies (CRS) will conduct periodic surveys. CRS will conduct it’s a 5-10 question survey semi-annually (every 6 months) to support verification of semi-annual data updates. The Department of Public Service will conduct a broader survey of telecommunications needs and uses twice during the 5 year period.

## **V. Collaboration and Planning**

The Vermont Broadband Mapping Team includes most of the primary state entities responsible for the oversight and promotion of telecommunications and broadband services in Vermont. Specifically, the VT Department of Public Service and the VT Telecommunications Authority have existing relationships with the provider community and local authorities. Also, as previously mentioned, the Mapping Team partners have a previous history of working together on telecommunications mapping work and other mapping initiatives for several years. These existing relationships are a key strength of our Team approach.

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Our proposed Vermont Broadband Mapping Initiative includes no request for funding for Planning activities. This is not because planning will not be done, but because the Vermont State Legislature already requires the Department of Public Service to create a yearly Telecommunications Plan. The mapping data and survey information that is created from this Initiative will be used by DPS to create a plan that is considerably more robust, defensible and in line with national plans. The yearly planning activities that Vermont DPS will do are already part of their mission and will not be funded through this grant.

Appendix A - Letter of State Designation from the Governor

JAMES H. DOUGLAS  
Governor



State of Vermont  
OFFICE OF THE GOVERNOR

August 12, 2009

The Honorable Lawrence E. Strickling, Assistant Secretary  
National Telecommunications and Information Administration  
U.S. Department of Commerce  
1401 Constitution Avenue, NW  
Washington, DC 20230

**RE:** Broadband Data Improvement Act  
Designation of Single Eligible Entity

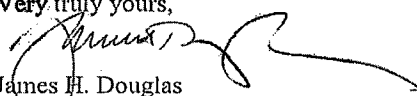
Dear Assistant Secretary Strickling:

For purposes of Section 106 of the Broadband Data Improvement Act, I hereby designate the Vermont Center for Geographic Information ("VCGI") to be the single eligible entity in the State of Vermont to receive a grant under the State Broadband Data Development Grant Program pursuant to the Notice of Funds Availability published in the Federal Register by the National Telecommunications and Information Administration (NTIA) on July 8, 2009.

VCGI is established in state law as a nonprofit public corporation "as a body corporate and politic and a public instrumentality of the state." 10 V.S.A. § 122(a). Among its statutory purposes is to "promote the efficient development and use of geographic information by agencies of the state, its political subdivisions, Vermont businesses and citizens." 10 V.S.A. § 123(b)(3). One of its statutory duties is to provide information and services to the federal government within the limits of available resources. 10 V.S.A. § 123(c) (1).

VCGI is governed by a twelve-member Board of Directors – ten are appointed by the Governor and two by legislative leadership. VCGI is the appropriate organization to carry out the purposes of the Broadband Data Improvement Act in the State of Vermont.

Very truly yours,

  
James H. Douglas  
Governor

JHD/sry

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Appendix B - 5 Year Budget Breakdown

Year One	TIME ESTIMATE	COST ESTIMATE
<b>Personnel Budget Elements</b>		
Project Management	132	\$12,882
Central Administration		\$4,502
Data - Gathering	4900	\$330,036
Data - Verification	370	\$25,572
Data - Accessibility	700	\$66,361
Data - Updating		\$0
<b>TOTAL ESTIMATE</b>	6102	\$439,353
Partner Contractual		
VT Dept. of Public Service		\$150,965
Center for Rural Studies - Univ. of VT		\$44,404
Enhanced 9-1-1- Board		\$24,750
VT Telecommunications Authority		\$0
Contract Services		\$233,720
Supplies & Software		\$15,700
Travel		\$1,000
Equipment		\$4,000
Other Direct Costs		\$0
<b>TOTAL OTHER DIRECT COSTS</b>		\$474,539
<b>TOTAL BUDGETED COSTS (Year 1)</b>		\$913,892

Year Two	TIME ESTIMATE	COST ESTIMATE
<b>Personnel Budget Elements</b>		
Project Management	67	\$6,539
Central Administration		\$1,442
Data - Gathering		
Data - Verification	188	\$12,786
Data - Accessibility		\$0
Data - Updating	630	\$50,864
<b>TOTAL ESTIMATE</b>	885	\$71,631
Partner Contractual		
VT Dept. of Public Service		\$116,840
Center for Rural Studies - Univ. of VT		\$36,338
Enhanced 9-1-1- Board		\$5,000
VT Telecommunications Authority		\$0
Contract Services		\$47,720
Supplies & Software		\$5,075
Travel		\$1,000
Equipment		\$0
Other Direct Costs		\$0
<b>TOTAL OTHER DIRECT COSTS</b>		\$211,973
<b>TOTAL BUDGETED COSTS (Year 2)</b>		\$283,604

Year Three	TIME ESTIMATE	COST ESTIMATE
<b>Personnel Budget Elements</b>		
Project Management	67	\$6,539
Central Administration		\$1,434
Data - Gathering		
Data - Verification	187	\$12,786
Data - Accessibility		\$0
Data - Updating	630	\$50,864
<b>TOTAL ESTIMATE</b>	884	\$71,622
Partner Contractual		
VT Dept. of Public Service		\$116,840
Center for Rural Studies - Univ. of VT		\$35,599
Enhanced 9-1-1- Board		\$5,000

Year Four	TIME ESTIMATE	COST ESTIMATE
<b>Personnel Budget Elements</b>		
Project Management	67	\$6,539
Central Administration		\$1,457
Data - Gathering		
Data - Verification	188	\$12,786
Data - Accessibility		\$0
Data - Updating	630	\$50,864
<b>TOTAL ESTIMATE</b>	885	\$71,646
Partner Contractual		
VT Dept. of Public Service		\$116,840
Center for Rural Studies - Univ. of VT		\$38,956
Enhanced 9-1-1- Board		\$5,000



**Vermont's Broadband Mapping Initiative  
Project Proposal**



VT Telecommunications Authority		\$0
Contract Services		\$47,720
Supplies & Software		\$5,075
Travel		\$0
Equipment		\$0
Other Direct Costs		\$0
<b>TOTAL OTHER DIRECT COSTS</b>		<b>\$210,234</b>
<b>TOTAL BUDGETED COSTS (Year 3)</b>		<b>\$281,857</b>

VT Telecommunications Authority		\$0
Contract Services		\$47,720
Supplies & Software		\$5,075
Travel		\$1,000
Equipment		\$0
Other Direct Costs		\$0
<b>TOTAL OTHER DIRECT COSTS</b>		<b>\$214,591</b>
<b>TOTAL BUDGETED COSTS (Year 4)</b>		<b>\$286,236</b>

Year Five	TIME ESTIMATE	COST ESTIMATE
<b>Personnel Budget Elements</b>		
Project Management	67	\$6,539
Central Administration		\$903
Data - Gathering		
Data - Verification	187	\$12,786
Data - Accessibility		\$0
Data - Updating	630	\$50,864
<b>TOTAL ESTIMATE</b>	<b>884</b>	<b>\$71,092</b>
<b>Partner Contractual</b>		
VT Dept. of Public Service		\$17,062
Center for Rural Studies - Univ. of VT		\$45,217
Enhanced 9-1-1- Board		\$5,000
VT Telecommunications Authority		\$0
Contract Services		\$47,720
Supplies & Software		\$5,075
Travel		\$1,000
Equipment		\$0
Other Direct Costs		\$0
<b>TOTAL OTHER DIRECT COSTS</b>		<b>\$121,074</b>
<b>TOTAL BUDGETED COSTS (Year 5)</b>		<b>\$192,165</b>