Vermont Telecommunications Authority

TO: House Committee on Commerce and Economic Development
House Committee on Corrections and Institutions
Senate Committee on Economic Development, Housing and General Affairs
Senate Committee on Finance
Senate Committee on Institutions
Joint Fiscal Committee
Secretary of the Administration
Secretary of the Agency of Commerce and Community Development (Challenge Lead)
Chief, Connect Vermont

FROM: Vermont Telecommunications Authority

DATE: July 2, 2012

RE: Quarterly Report per Section 49(i) of the FY2012 Capital Bill

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Per Section 49(i) of the FY2012 Capital Bill starting on October 1, 2011 the Vermont Telecommunication Authority (VTA) is to submit a report on investments made or grants awarded that are in furtherance of the goals stated in 30 V.S.A. § 8060(b) using the telecommunications measures established pursuant to No. 146 of the Acts of the 2009 Adj. Sess. (2010) (an act relating to implementation of challenges for change) to track the progress made in attaining those goals through such investments and grants. The progress report provided below reflects the outcomes and measures applied under Outcome 2, Measures 2, of the Economic Development Challenge (see Challenges for Change, Quarterly Progress Report, p. 97-98, July 2011) to projects funded under Section 49 ("The VTA Capital Appropriations Provision"):

(i) Percentage of residences and businesses with broadband access, using the current Vermont definition of broadband

(ii) Percentage of cellular coverage on major roads

(iii) Percentage of cellular coverage on minor roads

(iv) Percent of State where public safety radios work

This progress report also includes location-specific information on the progress of deployment of telecommunications technology that does not require the utilization of towers, as expressly required by The VTA Capital Appropriations Provision.

Measure 2(i): Progress made in attaining broadband telecommunications goals.

Summary: Statutorily-required Public Comment Period completed.
Statutorily-required Competitive Solicitation in process.
First set of broadband grants awarded.
Investments in fiber optic infrastructure in process.

The standard used to measure broadband coverage is currently identified as availability of service at e911 locations with a minimum threshold speed of least 768kbps download and 200kbps upload. This includes broadband service delivered by cable, DSL, fiber optic and wireless broadband (fixed and mobile). Satellite-based coverage is not included.

In making grants available, the VTA is required to coordinate with the need analysis of Connect Vermont. Connect Vermont's strategic plan identifies four service-level goals with respect to broadband availability for each e911 location:

1.0= one connection available (other than satellite) at the minimum threshold of 768/200 kbps or better

Goal date: 100% complete by December 31, 2013

2.0 = two connections available (other than satellite) at a minimum threshold 768/200 kbps or better, where at least one option is fixed and one is mobile or fixed

Goal date: substantially complete by December 31, 2013

3.0 = one available connection (other than satellite) at a minimum threshold of 4/1 mbps

Goal date: Future

4.0 = two connections available (other than satellite) at a minimum threshold 4/1 mbps, where at least one option is fixed and one is mobile

Goal date: Future

In order to make baseline and progress measurements of these goals, Connect VT analyzes Vermont Broadband Mapping Initiative (BMI) data with two lenses: a survey of coverage with mobile broadband availability and without mobile as an option for broadband delivery. Coverage across the state is expressed as the % of e911 locations with broadband, and several maps are generated. Based on data as reported by providers in the June 30, 2011 BMI report:

- 97.2% of e 911 locations meet the 1.0 goal of at least one, non-satellite, source of broadband at a minimum threshold speed of 768/200 kbps.

This represents an improvement in coverage from the December 31, 2010 report where 94.6% of e 911 locations had availability at the 1.0 standard.

- 92.8% of e 911 locations meet the 2.0 goal of both a fixed and mobile option for broadband at a minimum threshold speed of 768/200 kbps.

Connect Vermont is analyzing a comparable basis for the 2.0 goal based on the December 31, 2010 data to report in Q3 of 2012.

The competitive process for distribution of grants from the FY2012 capital appropriations began in Q1 2012 under the VTA's RFP VTA2012-128 (Broadband Notice of Grant Funding Availability) for last mile broadband service, with responses from 13 providers. On May 17, 2012 FairPoint Communications filed a list of Target Communities to commit to serve under Dockets 7725 and 7726 with the Vermont Public Service Board and the Department of Public Service. A portion of the FairPoint Target Community commitment overlapped with Target Communities identified in the VTA's Broadband Notice of Grant Funding Availability, released on March 13, 2012. (See http://www.telecomvt.org/rfp/128.). In response to those providers who submitted proposals in areas affected by the FairPoint commitment, the VTA re-opened the grant round until July 6, 2012. However, for Target Communities that were not affected by the FairPoint commitment, the first grant awards totaling $625,000 were awarded in the second quarter. The VTA anticipates awarding additional grants in the third quarter.

In addition, the VTA moved forward on a fiber optic project to be funded with FY2012 capital appropriations. On June 26, 2012, the VTA Board of Directors authorized the VTA to proceed with an investment in a fiber optic cable facility through the towns of Sharon, Thetford, West Fairlee, Vershire, and Chelsea. The VTA had previously designated Routes 113 and 132 as "Target Corridors" for mobile voice service, the route of the fiber deployment. Areas along the proposed route have been identified as "Target Communities" for broadband service expansion by the Agency of Administration and as Target Grant Areas by the VTA. The VTA determined that a fiber cable can efficiently support multiple uses for multiple communications providers: as backhaul service for mobile voice providers, as a last- mile broadband service to premises along the route, and as a middle-mile transport facility for broadband companies. The VTA will make dark fiber available at competitive rates to broadband and mobile voice communication companies, consistent with the VTA Capital Appropriation Provision at subsection (d), which requires that VTA investments "be available for use by as many retail service providers as technology will permit to prevent the state from establishing a monopoly service territory for one provider…."

Measure 2(ii) and 2(iii): Progress made in attaining mobile telecommunications goals.

Summary: **Statutorily-required Public Comment Period Completed.**
Statutorily-required Competitive Solicitation completed.
First cellular investment contract awarded
First cellular tower lease signed

Based on 2010 drive-test data collected through BMI, VTA estimated that 87% of major roads and 76% of minor roads have mobile telecommunications coverage ("roads" are defined as roads that are part of the federal aid highway system, not city streets or residential neighborhoods). Coverage of both major air interface platforms for cellular phones, GSM (used by AT&T and T-Mobile) and CDMA (used by Verizon Wireless, Sprint, and US Cellular) was examined. The reported numbers reflect the coverage for GSM phones, which was more extensive (the CDMA estimate is 55% of major roads and 44% of minor roads). It should be noted that these relatively high coverage percentages do not reflect low coverage or gaps in coverage that can result in dropped calls or inadequate signal transmission.

As part of its duties under 3 V.S.A. § 2222b (b) (1), the Agency of Administration is charged with developing an inventory of locations at which mobile telecommunications and broadband services are not available within the state. The VTA understands that, as part of that initiative, Connect Vermont plans to commission a new independent and comprehensive evaluation of mobile voice and data coverage in 2013. The VTA will report on cellular coverage utilizing the data that becomes available at that time.

Section 49 of the Fiscal Year 2012 Capital Bill requires a competitive solicitation, as well as a Request for Public Comment to enlist the cell-phone user experience of Vermont residents. The Request for Public Comment had been completed previously and results posted on the VTA's web site (see http://www.telecomvt.org/resources/public-comments/2011-A01.php). The competitive solicitation process was also completed. As a result of that process, VTA announced its intention to negotiate two contracts for expansion of cellular service. One with VTel Wireless, an affiliate of Vermont Telephone of Springfield, VT, and another with Vanu CoverageCo, an affiliate of Cambridge, MA – based Vanu, Inc., a developer of software-defined radio equipment which supports the deployment of multiple standards used by cellular operators on a single platform. Vanu CoverageCo seeks to provide wholesale service to multiple cellular carriers that allow those carriers to expand cellular service to their customers through micro-cell equipment mounted on utility pole tops or other available existing structures within Target Corridors. VTel Wireless seeks to add support for 2G/3G cellular voice and data services to its planned Wireless Open World (WOW) network, a 4G LTE mobile data network that is deployed on traditional communications towers and other types of existing

structures. VTel's service is intended to provide wholesale coverage to existing providers, and to provide a new retail cellular offer to residents and businesses in the state.

In the second quarter of 2012, VTA and CoverageCo signed an agreement to expand cellular service. VTA will purchase the equipment to serve nearly 90 miles of unserved roadway in three sections of the state at a cost of $500,000. CoverageCo will lease the equipment from the VTA and operate it as part of their overall network. In addition to the 90 miles sponsored by the VTA through this contract, CoverageCo has proposed to cover an additional 125 road miles throughout the State as part of its initial build, funded through private capital investment. The VTA-funded project will touch 17 towns, covering the following routes:

- Route 110 in Washington, through Chelsea, into part of Tunbridge
- From Route 110 in Chelsea along the East Randolph Road into a part of Randolph
- Route 25 from Orange, through Topsham, through Corinth, into a part of Bradford
- From Route 25 in East Corinth along the Topsham-Corinth Road and Powder Spring Road through Topsham to Route 302 in Groton
- Route 302 east of Orange through Topsham through Groton to South Ryegate
- Six miles along Route 15 in Wolcott
- Route 108 in Bakersfield through East Fletcher into Jeffersonville and Cambridge
- Route 15 from Jeffersonville to Johnson

Deployment for the project is scheduled for fall of 2012. Additional routes may be considered for VTA funding with a successful deployment of these initial routes.

Negotiations with VTel continue to be in process. These negotiations are complicated and lengthened by the impact of parallel negotiations with third parties. Both parties seek to reach final agreement within the third Quarter of FY2012.

VTA has also successfully completed negotiations of a lease with AT&T on a tower to be constructed in Bethel. The tower is slated to be constructed on land owned by the Town of Bethel in early 2013.

In addition, VTA has completed a rigorous competitive process to select a tower construction and management vendor. When negotiations are complete the VTA will have an alliance with a national company to help fund cellular tower site acquisition, development, and leasing to cellular operators. A contract is expected to be finalized early in the third quarter of 2012.

Additional information under Section 49(i): Deployment of telecommunications technology that does not require utilization of towers, including location-specific information.

Summary: Contract with non-tower-based cellular service provider in negotiation.

The May 2012 contract between VTA and CoverageCo calls for the VTA to fund CoverageCo's deployment of a network using "small cell" equipment. The small cell equipment will be small enough to be mounted on utility poles or other available existing structures, with each small cell covering about 1 mile on average along the Target Corridor. The radio equipment for the project will be provided by CoverageCo's affiliated company, Vanu, Inc. The Vanu "CompactRAN" equipment used in the project is being newly introduced in 2012 and builds on previous generations of Vanu software-defined radio technology deployed commercially in locations as diverse as Texas, Alaska, Nepal, and India, as well as for the U.S. Dept. of Defense.

Measure 2(iv): Percentage of State where public safety radios work.

Summary: Co-development and co-location opportunities being pursued as available.

While the VTA is not charged with expanding service territories for public service radios, there has been significant collaboration with the Department of Public Safety in the utilization of State lands at proposed communication facility sites. At lands controlled by the Agency of Natural Resources on Okemo Mountain, in Mount Holly, utilized by Okemo Mountain Resort, the VTA has negotiated a license agreement that will provide for consolidation of equipment on a tower that may be constructed in the future by the Department of Public Safety for public safety radio transmission. In addition, the licensee, in its construction of a facility, is required to accommodate municipal public safety users such as first responders. The collocation of users and consolidation of equipment not only provides for efficient use of State lands but expands local public safety radio coverage and reserves the opportunity of the Department of Public Safety for future safety radio deployment.