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February 14, 2019

VIA EMAIL

Honorable Ann Cummings, Chair
Senate Committee on Finance
Vermont General Assembly
115 State Street
Montpelier, Vermont 05633

Re: State of Vermont Microcell Network Update

Dear Senator Cummings:

By this letter, the Department of Public Service provides an update on the state's microcell network and its effort to find a successor operator. The microcell network was a project developed by the Vermont Telecommunications Authority ("VTA") to bring wireless voice coverage to roadways unserved by the major wireless carriers.

As you know, the State's original contractor, Vanu CoverageCo, failed to deliver on its contractual obligations to build and operate a wireless network in accordance with the applicable requirements and specifications of its contracts. Last summer, the Department afforded CoverageCo ample opportunity to cure its contractual breaches and to demonstrate that the company had a viable business plan. Unfortunately, CoverageCo proved unable to do so. Therefore, the Department terminated the master lease agreements with the company.

The Department thereafter issued a request for proposals ("RFP") seeking a successor vendor to provide cell coverage in place of CoverageCo. The Department received two proposals, both from companies with proven track records of deploying wireless networks. The Department is currently assessing these proposals to determine whether there is good cause to conclude that either proposal has a better prospect of succeeding where CoverageCo failed. The Department has held meetings with each vendor and is thoroughly reviewing each company's business model. One vendor has proposed operating small-cell and macro sites using a "real estate" model in which carriers pay a flat fee for use of a site. The second vendor has proposed a novel solution that would involve civilian application of aerostat technology along the lines of equipment already in use by the military. It is important to note that the Department received no response to the RFP that proposed to simply revive the CoverageCo microcell model and operate the network as originally designed. This is a strong indication that the private market alone does not see microcells as a viable means of serving rural and sparsely populated areas.



The Department shares the committee’s sense of urgency about the continuing lack of cell coverage in many parts of Vermont. That said, questions concerning the viability of each of the two vendor’s business model remain and the Department is working diligently with both companies to obtain the information needed to move forward with a solution that makes responsible use of the \$900,000 that was appropriated by the Legislature. The Department is intent on ensuring that this funding is used responsibly and is not misspent on another failed wireless broadband project.

In addition to the RFP process, the Department is also working to identify and examine other options using the microcell equipment. For instance, the Department is considering a proposal developed by PSD staff last summer that proposes to lease the equipment to towns or private entities to cover the per-site costs, while the state contracts with a vendor for the core-network functions. For a modest fee, towns would have direction over the placement of the microcells, and carriers would roam at very low, fixed costs or for free.

Vermont’s prospects for expanding rural cell coverage are in large part tied to gaining access to federal funds. In March of 2018, the Federal Communications Commission announced the availability of \$4.5 Billion for the Mobility Fund Phase II program.¹ This past fall, the Department engaged in a state-wide drive test of wireless LTE coverage under this program. The purpose of the drive test was to challenge propagation maps submitted to the FCC. It is our hope that the FCC will rely on our data and open larger areas of land to program.

During the drive test, Department staff took special note of existing and planned micro-cell sites. In its testing the Department found that over two-thirds of the existing and planned microcell sites had wireless coverage from at least one of the six major carriers. The data show that of the 193 installed CoverageCo sites, 135 have cell coverage of some kind from another carrier.² The following chart breaks down each site by carrier.

Download speeds recorded in cells containing the installed micro cell sites

Service (Mbps)	Any Carrier	Verizon	AT&T	VTel	US Cellular	Sprint	T-Mobile
0	58	157	138	115	156	108	147
> 0 < 0.254	17	11	7	4	28	10	27
> 0.255 < 4.9	49	13	20	41	8	55	8
> 5.0	69	12	28	33	1	20	11

¹ The MF-II program is administered by the FCC and makes available \$4.53 billion in federal support to wireless carriers who elect to extend wireless LTE coverage to unserved areas. To determine whether an area is served with LTE service, the FCC directed each wireless carrier to submit propagation maps detailing LTE coverage. The FCC designed a process by which states could challenge the authenticity of those maps. The carrier’s propagation maps showed that Vermont was about 95% covered with LTE service.

²The Department measured service at the 193 installed sites. Many of these sites have coverage from multiple carriers. The 193 sites includes sites both commissioned by CoverageCo and installed but not commissioned.

The Department also found areas in need of coverage that were not contemplated in the CoverageCo deployment.³ without reliance on expensive and inaccurate propagation studies, the Department has identified existing coverage gaps. This data indicates a clear need for us to redefine our coverage goals and design a wireless solution that best meets those goals.

Sincerely,



Clay Purvis

Director for Telecommunications and Connectivity

C: Representative Tim Briglin, Chair, House Energy and Technology

³ You can access the interactive map of the Department's drive test results by visiting this link:
<https://publicservice.vermont.gov/content/mobile-wireless-2018-drive-test>.