Invitation No.: 601-20
Location: Statewide
Commodity: Digital Infrastructure Assets and Strategy

Presented To:
State of Ohio, Department of Transportation
Office of Contract Sales, Purchasing Services
Jack Marchbanks, Ph.D., Director

Presented By:
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Wednesday, July 31, 2019

Director Jack Marchbanks
Ohio Department of Transportation
Office of Contract Sales, Purchasing Services

Dear Director Marchbanks:

Charter Communications™ (Spectrum) is pleased to submit the enclosed material in response to your Request for Information (RFI) regarding Ohio’s digital infrastructure assets and strategy.

A leading broadband communications company and the second largest cable operator in the United States, Spectrum serves more than 28 million customers across 41 states, including 2.4 million customers across 85 out of 88 Ohio counties. Additionally, Spectrum is a Top 50 employer in Ohio, with a workforce of nearly 8,000 people based in communities throughout the state.

Spectrum is continuously investing in our networks to better serve customers across our footprint. Since 2014, we have invested more than $32 billion in technology and infrastructure, enabling us to expand the reach of our fiber-rich network and allowing us to deliver fast and reliable broadband to customers across Ohio – whether they live in big cities or rural America. In 2018, we expanded our network to provide broadband to tens of thousands of additional homes and businesses nationwide, with more than 34 percent of those located in rural areas across the country including in Ohio.

Thank you for the opportunity to submit this response to your RFI. We appreciate the DeWine-Husted Administration’s interest in partnering with private-sector providers like Spectrum to connect more Ohioans to quality, high-speed broadband in unserved areas, and we look forward to the opportunity to further participate in this process.

Sincerely,

Gary K. Underwood
Regional Vice President, State Government Affairs

Connie M. Luck
Regional Senior Director, State Government Affairs

* Spectrum is a commercial brand of Charter Communications, Inc. The legal entity proposing hereunder is Charter Communications Operating, LLC, a subsidiary of Charter Communications, Inc.
NO OBLIGATION TO PROCEED

This proposal is not intended to obligate Spectrum or Ohio Department of Transportation to proceed with any potential relationship or transaction unless the parties enter into a subsequent definitive agreement with respect to the subject matter herein.
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ABOUT CHARTER

Charter Communications is a connectivity company providing broadband, video, mobile, and voice services to over 28 million customers in 41 states under the brand name Spectrum. Our 98,000 employees work every day to deliver on our core business objective of providing superior products with great customer service.

We're driving innovation and expanding access to broadband to ensure our customers receive the information and entertainment they want and need to succeed in today's hyper-connected world.

Charter is continually investing in our network, our employees, and the communities we serve.

Our key priorities include:

- Providing superior products and services at a better value to our customers
- Building a highly skilled, locally based and diverse workforce to deliver service to our customers
- Investing in America's infrastructure to enhance our network and drive innovation
- Strengthening the communities we serve
REQUEST FOR INFORMATION (RFI) –
DIGITAL INFRASTRUCTURE ASSETS AND STRATEGY

State of Ohio, Department of Transportation
Office of Contract Sales, Purchasing Services
Jack Marchbanks, Ph.D., Director

Submission Deadline (Opening Date):
Tuesday, July 9, 2019 at 2:00 p.m. eastern time

Submitted by:
Company Name: Charter Communications, Inc.
Federal Tax ID No.: 841496755

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<td>Zip: 43215</td>
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<tr>
<td>Contact Person and Phone Number: Connie Luck</td>
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<tr>
<td>(authorized to answer questions about your company’s bid)</td>
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<td>E-Mail Address (required): <a href="mailto:Connie.Luck@charter.com">Connie.Luck@charter.com</a></td>
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<td>E-Mail Address (required): <a href="mailto:Connie.Luck@charter.com">Connie.Luck@charter.com</a></td>
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VENDORS MUST SUBMIT ANY QUESTIONS, CLARIFICATIONS, OR INQUIRIES REGARDING THIS RFI VIA
THE FOLLOWING WEBSITE:
http://www.dot.state.oh.us/Divisions/ContractAdmin/Contracts/Pages/PurchasePBQ.aspx
RFI QUESTIONNAIRE

A. Respondent Information: Please fill out the information on page 1 of this RFI.

   Spectrum Response:

   Spectrum acknowledges. Page 1 of this RFI is included with our response back to the state.

B. This RFI does include information considered a ‘trade secret’: Yes ☐ No ☑

   Spectrum Response:

   Given the competitive nature of our business, we have chosen to provide only publicly available information in our response to the RFI at this time. Should the state seek additional confidential information about our capabilities, network or services, we are happy to discuss them in a manner that comports with your legal procurement processes and that addresses competitive business sensitivities.

C. QUESTIONS PRESENTED

1) What solutions would you recommend and where would you wish to place your solution?
   a. E.g., underground, in ODOT right of way, along I-70 but not U.S. 40, etc.

   Spectrum Response:

   Spectrum is interested in targeting unserved areas of the state with a broadband solution through use of new wireless technology and network expansion where Spectrum has nearby coaxial and/or fiber network assets.

2) Given the assets provided above, what asset(s) would you leverage and how would you use those assets?

   Spectrum Response:

   After an analysis of the assets provided, Spectrum's view on the assets to meet the objective of targeting unserved areas is as follows:

   • US33 Smart Corridor – Some of the fiber assets may be useful, but Spectrum would need more detailed information.
   • MARCS (Emergency Radio Towers) – These assets could be useful to Spectrum, but we would need additional details on business terms for the availability of the assets as they could be directly accessed via the landlord, if required. Any state-owned towers not mentioned in the RFI (state departments other than ODOT) could be of interest to Spectrum, as well.
• OARnet – Some parts of the network would be of interest to Spectrum but it would require more information and a better understanding of business terms to consider.

a. Are there additional assets that you would recommend be leveraged including items such as the State of Ohio Fleet?

Spectrum Response:

Spectrum would be interested in street furniture: i.e. light poles, street lighting strands, government-owned signs/billboards, etc. for commercial uses associated with wireless deployment objectives.

b. How would your system(s) interact with the assets?

Spectrum Response:

Spectrum expects to use the assets for location of equipment or as a network for backhauling of traffic to the internet.

3) What are your goals and how will achievement of your goals benefit both the public and Ohio government (ODOT, Municipalities, Counties, etc.), goals? How will your concept help you reach your goals and our purpose(s)?

Spectrum Response:

Spectrum’s goal is to offer broadband products and services at a better value than our competitors. While we feel strongly that government assets should not be used to compete with the private sector in areas that are served by Spectrum or other broadband competitors, there are unique instances where government resources may be leveraged to facilitate access to unserved areas. Any use of government assets for broadband deployment should be focused exclusively on these unserved areas.

4) What will you provide directly in return and/or what direct public purpose will be served?

a. I.e., will you propose free access, a # of strands, a lease of space, conduit to be dedicated for any use by the State or its partners, etc.

Spectrum Response:

Access to Ohio state assets, where applicable, will help provide broadband services to unserved areas and meet the objectives of the RFI. Directly in return for the assets, Spectrum could consider direct lease fees or in-kind compensation for attachment rights to physical assets. Spectrum would consider utilizing these Ohio assets only if the proposed cost structure was competitively priced (versus other available alternatives) and on business terms that make sense for the company.
5) In what ways should we be looking at our assets as a revenue generating commodity?

**Spectrum Response:**

We urge the state to approach revenue generation policies with caution. Generally speaking, additional costs associated with access to state assets could discourage broadband expansion. If the state’s goal is to eliminate barriers to broadband expansion, the focus should be on making the cost of expanding broadband into cost-prohibitive, currently unserved areas less expensive, not more expensive. The state should consider incentives – such as a broadband subsidy program like other states have developed – with the money allocated from the state’s general revenue to fund broadband expansion in areas that are unserved. Cable and broadband companies like Spectrum have incentive to extend their network to reach unserved areas, but not when the cost of capital exceeds the return on such investment. We have found that in some instances, subsidies for capital investment can change the economic equation and make it more likely for Spectrum or others to competitively bid for grants to serve these unserved areas.

a. Are you aware of schemes being used by other governments in the U.S. or elsewhere that have provided successful monetization of government property like right of way?

**Spectrum Response:**

No. As stated above, we have seen instances where broadband grant programs have been used effectively. Most efforts to monetize or leverage government fiber assets - except in very targeted ways such as potentially leasing capacity to serve last mile unserved areas – have failed. We have seen many instances where states have tried to build their own middle mile infrastructure networks (presumably to spur last mile access) in states like Massachusetts and Kentucky which have either failed or resulted in such huge cost overruns that they have saddled the states with unwanted liability and debt. ([https://www.propublica.org/article/matt-bevin-kentucky-information-highway-high-speed-internet](https://www.propublica.org/article/matt-bevin-kentucky-information-highway-high-speed-internet) / [https://www.berkshireeagle.com/stories/bridge-to-nowhere-so-far-a-middle-mile-with-revenue-problem.498073](https://www.berkshireeagle.com/stories/bridge-to-nowhere-so-far-a-middle-mile-with-revenue-problem.498073))

b. Do you have an in-kind contribution solution?

**Spectrum Response:**

It is too early in the process to evaluate the use of in-kind contributions without understanding the assets we could use or the business plans that may be generated from the use of those assets.
c. What timeframes for recoupment of cost would you foresee?

**Spectrum Response:**

We anticipate a range from 3-10 years, depending on the asset.

6) Describe existing partnerships with entities utilizing your products/services within the context of the solutions you are recommending. Are there existing governments using your solution?

**Spectrum Response:**

1. Fixed Wireless Access: Intended to provide a viable means to extend our broadband service areas, Spectrum has conducted technology trials in six states, and we’re about to initiate coverage for 5,700 un- and underserved addresses near Lexington, North Carolina for live customer trials of a service providing a minimum 25/3 Mbps service.

2. Spectrum has received grants through the State of Wisconsin in the past three years to deliver broadband to the communities of Weston, Dunn and King.

3. US Ignite, a non-profit organization seeking to accelerate the smart city movement, and Spectrum have selected St. Petersburg as a Smart Gigabit Community, with the St. Petersburg Innovation District serving as the convening partner. The Innovation District’s participation in this project is made possible by a generous three-year grant from Spectrum. The St. Petersburg Innovation District is using its newfound resources to develop advanced applications and services that address local needs such as infrastructure, workforce development, public safety, education, and community health. The resulting efforts are adding to a catalog of more than 150 applications and services developed throughout the Smart Gigabit Communities network over the last three years. These technology advancements are shaping the way that residents of St. Petersburg and visitors, live, work and play.

7) If you have a recommended solution, describe the availability and implementation time. Are there barriers that you recommend be addressed by ODOT to implement your solution? Law changes? Installation of access points to power?

**Spectrum Response:**

Spectrum is exploring and testing various wireless technologies to target unserved areas. Please see the response to question #6 above and the policy considerations outlined below that aim to advance broadband expansion in Ohio.
8) What security issues do you foresee with your solution?

**Spectrum Response:**

Spectrum does not foresee any unique or new security issues with our solution.

9) Describe your willingness to form teams composed of multiple manufacturers or vendors to achieve the goals of your proposed solution.

**Spectrum Response:**

Spectrum currently engages with a number of technology and infrastructure vendors in the creation and deployment of solutions. We are open to considering private-public partnerships that are beneficial to all involved parties to achieve the goals of the proposed solution.
POLICY CONSIDERATIONS

Through the investment of private capital, Spectrum has built a fiber-rich network across Ohio that touches 85 out of 88 counties. Expanding broadband to unserved areas, however, involves significant challenges related to population, lower adoption rates in rural areas, distance between potential customers and topography. As the state explores ways in which it can encourage private-sector leaders like Spectrum to expand our footprint in Ohio, we encourage the DeWine-Husted Administration to consider opportunities to improve state policy not contemplated in the RFI, which we believe will have the additional benefit of removing barriers to broadband deployment.

State Broadband Grant Program

Many states across the country have adopted broadband grant programs to support expansion of service into unserved areas. Spectrum has applied for grants in several states, and with these broadband grant awards, we are extending our service to thousands of new customers who currently lack quality broadband service.

As the state continues to examine opportunities to incentivize private-sector investment where significant cost challenges exist, we strongly encourage the adoption of the following key policy principles:

*Unserved Areas Only (Defined as 25Mbps/3Mbps)*

- A properly structured state-funded broadband deployment program must ensure that limited government resources are allocated to unserved areas only and not to overbuild areas where residents already have access to broadband service.
- 25Mbps/3Mbps is current FCC speed benchmark and any area without 25Mbps/3Mbps broadband service available should be defined as “unserved” and thus eligible for a grant-funded project.
- Only areas without access to wireline or fixed wireless broadband service should be considered for grant funding. Government funds should not be used to fund projects in areas that broadband providers already serve.
- If “underserved” is also included in a grant program, then unserved comes first or is a priority. (Underserved should be defined as any area without internet access service capable of providing a minimum of 50Mbps/5Mbps.)

*RFP / RFP Criteria*

- A broadband grant program should utilize a bid process that annually awards grants through a competitive process.
- A project supported by a taxpayer-funded grant must be sustainable. An applicant must demonstrate the ability to build, operate and manage a broadband network and the applicant must have experience with broadband deployment.
- A project may not receive any other government funding – federal or state – if receiving a grant through the broadband grant program.
- An applicant must certify that the area is unserved prior to receiving grant dollars.
Projects should be awarded on technology neutral basis (i.e. cost alone should not be a deciding factor, as it discriminates against wireline providers).

**Robust Challenge Process**

- A robust challenge process – which allows current providers to challenge an unserved designation – is critical to ensure that money is provided to support projects in unserved areas only.

**Matching Funds Requirement**

- Applicants for funds must commit to paying a portion of the project cost (minimum 20%).
- Matching funds for a broadband grant-supported project should not include other government grants, loans or subsidies.

**Dedicated State Fund**

- Broadband grant programs should be funded through general revenues or bonds, not a telecommunications or broadband specific fee assessed on existing broadband customers. This better reflects the state’s position that the issue of broadband is of such social importance that everyone needs to chip in. A broadband grant program must not become a new Universal Service Fund (USF). (Note: Cable operators contribute to the federal USF program but are not able to use those funds to expand our broadband service footprint as our competitors can.)

**Priority Projects**

- The state agency that administers the program must give priority to (or score/rank highly) projects/applicants based on the following criteria:
  - Provide service to unserved areas;
  - Financial wherewithal of the applicant;
  - Infrastructure must be scalable to higher speeds;
  - Applicant has committed to higher levels of matching funds;
  - Public-private partnerships;
  - Private providers of broadband in the area, with the ability to leverage scale, etc.;
  - Extent to which the project does not duplicate existing broadband infrastructure.

**Implementing Rules**

- The state agency that administers the program should not impose requirements that make participation in the program unpalatable or prohibitively expensive. The goal is to ensure that private companies are not disincented from participation. Examples of program elements that must be excluded: Open access network; Rates, terms and conditions that differ from what a provider offers in other areas of its footprint; Rate regulation (in any form); Net neutrality requirements; Unreasonable time constraints on build
Broadband Grant Programs Should Not Include Any of the Following

- State or municipal legislation or programs that give preferential treatment for a particular technology or company;
- Government-Owned Networks;
- Non-transparent award process;
- Financial awards for areas that are already served.

Reducing Regulatory Challenges to Support Broadband Expansion

Permitting

By seeking solutions that ensure uniformity in permitting (both cost and make-ready) the State of Ohio can remove another impediment to broadband deployment. Costs can range up to $3000.00 per permit (depending on the work) and may take up to six months or more for approval, according to our field operations team. ODOT’s permitting process is one we consider a best practice. However, railroad companies consistently are the most challenging for our field operations team. There is an opportunity for the State to lead here by applying common sense solutions to any permits that would require access to railroad right of way.

Pole Attachments

Spectrum relies on access to utility poles to provide broadband service throughout our 85-county footprint. In exchange for access to utility poles Spectrum pays pole attachment fees to pole owners and performs “make-ready” work to ensure poles can safely hold the weight of Spectrum’s equipment.

Thought should also be given to ensuring that arbitrary pole attachment rates, make-ready costs and/or lack of responsiveness on the part of the pole owner are not used as a way to block pole access to providers seeking to extend their networks.

Improving Ohio’s Tax Environment to Support Broadband Expansion

The state of Ohio can help promote broadband expansion by clarifying that equipment used in all of the activities performed as part of the provision of internet access service should not be taxable under the existing equipment exemption statute.