Mayor's Office of the
Chief Technology Officer

NYC Connected Request for Information

Issued by the Mayor's Office of the Chief Technology Officer for The City of New York

November 14, 2017

Released: November 14, 2017

Responses due: January 19, 2018

Responses should be submitted online using this form. All questions and requests for additional information concerning this RFI should be submitted via e-mail no later than December 15, 2017, 5:00PM (EST) to connected@cto.nyc.gov.

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PART 2: PURPOSE

The City of New York (City) issues this Request for Information (RFI) to solicit ideas for potential strategies and partnerships to achieve universal gigabit-class broadband throughout New York City.

The Office of the Chief Technology Officer is currently developing a citywide implementation plan that leverages the best of public and private sources to expand broadband availability and affordability, and to maximize the benefits of competition. The City has the ability to mobilize a suite of City assets and resources across agencies, including but not limited to City streets, rooftops, street poles and organizational resources to facilitate the buildout and sustainability of broadband infrastructure to connect all New Yorkers. The City seeks to understand how public and private cooperation can resolve broadband challenges in New York and what kind of efforts and assets will be required to achieve the City's goals. This RFI is an opportunity for the broadband industry and stakeholders to inform the City's planning to enable delivery of ubiquitous gigabit internet service to all New Yorkers at affordable prices in the near future, without significant disparities among neighborhoods or compromises to individual privacy.

The City has set an ambitious goal that "every resident and business will have access to affordable, reliable, high-speed broadband service everywhere by 2025" (see Section II for details). The City seeks ideas and proposals about how the public and private sectors can work together to support the City's goals for next generation, future-proofed networking to provide reliable and affordable high-speed internet service to all residents, businesses, institutions, and the public realm.

The Chief Technology Officer (CTO) of the City of New York is charged with the implementation of the Mayor's broadband commitment. The CTO will ensure that all New Yorkers can use the internet to participate fully in our City through the benefits of new technologies. This mandate includes the development and delivery of a strategy to achieve universal broadband infrastructure and service, as well as resources to support its adoption and use.

New York City has a history of being ambitious and forward-thinking in infrastructure, and the City is open to creative solutions that will maximize public benefit and private investment, and provide reliable, high-quality services to meet community needs. Responses to this RFI should describe the respondent's recommended technological and partnership approaches, and how they would contribute to furthering the City's goals. Responses should describe how recommendations can easily and inexpensively scale to provide higher-speed services as demand for bandwidth increases over time.

Responses to this RFI should suggest technological and partnership approaches, and how they would contribute to furthering the City's goals, including (1) the creation of 100,000 good-paying jobs for New Yorkers over the next ten years, and (2) the awarding of at least 30 percent of the dollar amount of City contracts to minority- and women-owned businesses and enterprises by 2021. The City encourages responses to this RFI on an approach or collaboration that could contribute to increased economic opportunity for all New Yorkers and the protection of workers' rights.

The City anticipates that this RFI will be a primary means of industry input before it determines its specific implementation plan for how it will achieve its universal broadband goals. Respondents may elect to respond to any or all questions included in this RFI. Responses to this RFI may inform potential future solicitations related to the City's universal broadband goals.

We welcome responses from all interested entities, including but not limited to:

1. Internet Service Providers: Those currently operating in New York City and potential new market entrants, including entities that are not traditional internet service providers but are interested in offering service under innovative business models;
2. Investors;
3. Construction contractors, equipment vendors, and operations or maintenance service providers that are interested in working and investing in New York;

4. Workers in the broadband construction and internet service industry.

The City anticipates using information gleaned from the responses to shape the direction and form of the City's universal broadband implementation efforts, including forthcoming Requests for Proposals. Participation in this RFI is in no way required for participation in any forthcoming RFP.

PART 3: THE CITY'S GOALS AND THE CHALLENGE TO BE ADDRESSED

The City's broadband goal is stated in One New York: The Plan for a Strong and Just City: "Every resident and business will have access to affordable, reliable, high-speed broadband service everywhere by 2025." The plan includes five initiatives to achieve the vision:

- Promote competition in the residential and commercial broadband markets.
- Provide high-speed residential internet service for low-income communities currently without
- service.
- Increase investment in broadband corridors to reach high-growth business districts, with a focus on outer-borough neighborhoods.
- Promote seamless user experience across public networks to create high speed access across the boroughs.
- Explore innovative ways to provide high-speed Internet to homes, businesses, and the public.

The CTO has identified the following five principles to guide citywide investments and partnerships in universal broadband: Performance, Affordability, Choice, Equity, and Privacy. The specific parameters of each of these principles will be informed by responses to this RFI and other public process and engagement. The City does not have a preference for a particular broadband technology, architecture, or business model, so long as the solution accords with these principles, meets the City's goals, and is to the greatest extent possible future-proofed.

PART 4: INFORMATION RESOURCES

The following information and open data is available to inform responses to this RFI, including but not limited to:

- OneNYC**,** including City policy and previous initiatives
- NYCx, including an active broadband technology challenge for Governors Island
- Data on Wi-Fi hotspot locations
    - LinkNYC, including map of locations and franchise agreement for the installation, operations, and maintenance of Links
    - Parks WiFi, including geographic information of Wi-Fi hot spots and providers
- Queensbridge Connected
- NYC Connected Communities, including map of locations of public computer centers and classes in libraries, public housing facilities, senior centers, and community centers
    - NYCHA Digital Van
- Information about New York City's Franchise Process**,** including current:
    - Cable television franchise agreements
    - Mobile subway station franchise agreements
    - Information services franchise agreements
    - Mobile telecom franchise agreements
- Microtrenching rules and requirements

- Technical Vendor Resources for current policies, guidelines, and standards applicable to technology projects for the City
- FCC Form 477 Broadband Deployment Data**,** including available service by speed and by choice to New York City census blocks
- NYC Broadband Data Dig
- Locations of City-Owned and Leased Properties
- Map of public facilities across the city. (Users should filter property type by "City Owned" properties when viewing the map.)
- A map of NYCHA developments in the City
- Locations of City assets:
    - Bus stop shelters
    - Parking meters
    - Automatic public toilets
    - Bike parking shelters
    - Cityrack sidewalk bicycle parking racks
    - CityBench public seating
    - Newsstands
- Mobile Telecommunication Franchise Poletop Installation Locations, including street light poles,
- traffic light poles, and utility poles
- Department of Buildings Cellular Antenna Filings
- New York City Street Reconstruction 10 Year Capital Plan, containing information about capital street projects funded from fiscal years 2015 to 2025

The Roosevelt Institute and The New School published a case study on Queensbridge Connected: "Wired: Connecting Equity to a Universal Broadband Strategy." The initiative was also featured in the November 2016 issue of Wired Magazine: "Inside the Battle to Bring Broadband to New York's Public Housing."

PART 5: REQUEST FOR INFORMATION

The City seeks ideas and information on the following topics related to potential public-private partnerships
or collaborations:

A. RESPONDENT PROFILE
B. POTENTIAL NETWORK ARCHITECTURE
C. USE OF CITY ASSETS
D. NETWORK DEPLOYMENT AND CONSTRUCTION
E. BUSINESS PARAMETERS AND PARTNERSHIP OPPORTUNITIES
F. STANDARDS, POLICIES, AND PERFORMANCE INDICATORS
G. SUPPORTING FILES

Respondents may choose to respond to all or only some of the questions in any of these topics. Nonetheless, all respondents should provide a Respondent Profile that identifies the respondent's experience relevant to its responses.

Please note that the text boxes can be expanded to fit your complete answer, and you are not limited to the box as displayed. You can save your progress on this form and return to it by logging back in. You will have the opportunity to upload any supporting files at the end of the form. We will not review your submission until you press "Submit" on the "Review and Submit" page.

CONFIDENTIAL AND PROPRIETARY INFORMATION

1. The Mayor's Office of the Chief Technology Officer (MOCTO) will endeavor to protect from disclosure any confidential and/or proprietary information the Respondent submits to MOCTO pursuant to this RFI in accordance with applicable law, provided that the Respondent shall specifically identify those portions of the response to the RFI that are deemed to be confidential, proprietary information or trade secrets.

2. Such information deemed by the Respondent to be confidential and/or proprietary shall be easily separable from the non-confidential/non-proprietary sections of the response to the RFI. Marking the entire response to the RFI as confidential or proprietary will result in the submission being deemed not confidential and/or proprietary and thus not protected from disclosure.

3. Respondents should be aware that MOCTO may be required, pursuant to the New York State Freedom of Information Law ("FOIL") (New York Public Officers Law Section 87 et seq.), to disclose to the public a written response to the RFI or portion thereof. In the event that such disclosure is requested by a third party, MOCTO shall provide notice to the Respondent as far in advance as practicable of any deadline for response and shall consult with the Respondent to evaluate the extent to which such information may be withheld from disclosure under provisions of FOIL. Consistent with the requirements of FOIL, the final determination of whether such information may be withheld from disclosure shall be made by MOCTO. In the event that MOCTO determines that information may not be withheld, MOCTO will attempt to provide the Respondent with timely notice of intent to disclose in order that the Respondent may invoke any rights or remedies to prevent disclosure to which it believes it may be entitled under the law.

4. Respondent expressly acknowledges and agrees that neither MOCTO nor the City of New York will have any obligation or liability to any Respondent in the event of disclosure of materials designated as confidential or proprietary.

5A. RESPONDENT PROFILE

Please provide a respondent overview that describes your organization and addresses your organization's qualifications related to your response to this RFI.

Name:

Title:

Organization name:

Street Address:

City:

State:

Zip Code:

Country:

Phone Number:

Email Address:

Please provide a short statement describing your organization:

Please describe any relevant experience or expertise that has informed your responses:

5B: POTENTIAL NETWORK ARCHITECTURE

The City is willing to consider all ideas and recommended approaches, and welcomes respondents' unique proposals and ideas with regard to potential improvements to the design and construction of citywide broadband networks. The City welcomes suggestions and proposals regarding alternative technologies, including submissions to the current NYCx challenge for Governors Island.

The following baseline technical attributes are preferred:

- Capability for 1 gigabit per second (Gbps) to all customers in the near to medium-term, with scalability for greater speeds as needs emerge
- Backbone fiber strand capacity and physical architecture (e.g., handhole placement, backbone routes, etc.) anticipating service (wired or wireless or both) to all homes and businesses
- Low latency
- Backbone topology capable of supporting connections over diverse paths from one or more central hub locations to aggregation points located throughout the City to facilitate versatile, high-availability service offerings
- In the backbone and elsewhere as appropriate, fiber plant placed in underground conduit (as opposed to direct burial cable) to more readily facilitate repairs and capacity upgrades
- Active components placed in environmentally hardened City-owned buildings, other facilities, shelters, and/or cabinets equipped with backup power generation and/or batteries, as appropriate, capable of sustaining services in the event of extended power outages
- Path diversity to critical facilities to maintain continuous service even if one path is broken
- Construction plans and route selection that are aligned with existing conduit and coincide with planned local public utility, roadway, and related capital improvement projects to reduce cost and minimize disruption where possible

The City seeks responses to the following questions related to potential citywide network systems and architectures in connection with a public-private collaboration:

1. What design principles or network architecture would you suggest be prioritized in new broadband infrastructure?

2. How would you suggest balancing between fiber and wireless infrastructure, and between fixed and mobile wireless? Would the balance change over time? What, if any, wireless technologies and bands would you suggest would be most effective in achieving the City's goals?

3. To what extent and in what manner would you suggest integrating or interconnecting with existing fiber and wireless networks in the City and/or coordinating with other network installations?

4. To what extent and in what manner would your potential participation in the City's pursuit of its described goals ensure resiliency in the face of future environmental and human threats throughout New York? What service(s) would your suggested approach provide in a disaster, and in what kinds of locations? What resiliency standards might you be willing and able to consider?

5. What other information or perspectives should the City keep in mind as it evaluates potential investments or standards for a public-private collaboration in network architecture elements?

5C. USE OF CITY ASSETS

The City encourages respondents to convey their ideas for, and interest in, utilizing City-owned assets or other City resources to accomplish the goals of this RFI.

The City anticipates that the use of publicly-owned assets, such as building rooftops and street light poles, could help achieve the City's broadband goals. The City may consider constructing or augmenting its real assets or staff capacity in furtherance of these goals. The City welcomes responses which include creative uses and business models for City assets.

The City dedicates resources to support plan review, coordination, and inspection services to assure an expeditious and safe approach to construction and installation, and works with the private sector to facilitate competitive access to the public rights of way. These or additional City staff and processes can further facilitate network deployment and operations

The City is also willing to consider additional or alternative contributions it can make to proposed solutions, including potential access to data as authorized by law or policy, access to City expertise, and other tangible or intangible benefits within the City's ability to produce or share. However, user privacy is an important priority for the City, and respondents should indicate how they would protect the rights of New Yorkers to control their sensitive personal data as they access the internet.

See "Joint Statement from Department of Information Technology and Telecommunications Commissioner Anne Roest and Chief Technology Officer Miguel Gamiño on the Repeal of Federal Internet Privacy Protections" (April 5, 2017).

The City seeks responses to the following questions related to the use of City assets:

1. What kinds of City assets would be useful for your proposed solution? Please share your ideas about any of the following, as well as other components for which broadband infrastructure use would advance the City's goals: fiber optics, conduit, points of aggregation, buildings and rooftops, city-owned light poles, other.
2. How could the City best determine the number and location of poles, rooftops, and facilities to prioritize for new broadband infrastructure? Are there particular City buildings, poles, or facilities that would be of greatest use for new broadband infrastructure?
3. For assets like buildings, what conditions, such as an amount of space or existing wiring pathways, would be needed to be available to make the asset useable or most attractive?
4. Would types of rooms in City-owned buildings be valuable to support colocation, interconnection, edge cloud computing or other network functions? If so, please explain in further detail, including what the City might do to facilitate the use of these rooms for these purposes, and what conditions would be necessary.

5D. NETWORK DEPLOYMENT AND CONSTRUCTION

The City seeks responses to the following questions related to potential opportunities to facilitate public-private collaboration network deployment and construction:

1. How should construction be phased or sectioned to achieve the greatest benefit for New Yorkers while progressing towards the overall goal? What areas of the city or major milestones should be prioritized?
2. Are there any particular challenges associated with wireline versus wireless deployment that you see as concerns with regard to your potential participation?

3. What method or methods of building entry would be contemplated in connection with your potential participation in facilitating service to residents of single-family or multi-family buildings and businesses?
4. What other planned infrastructure investments, if any, should the City seek to leverage for this initiative and your potential participation in it? How might the City leverage or maximize coordination with other capital projects?

5E. BUSINESS PARAMETERS AND COLLABORATION OPPORTUNITIES

1. What kind of collaboration might you contemplate with the City of New York? Please share your ideas about how your organization and the City might work together to achieve your organization's goals and the City's goals? What might the respective roles be for you and the City (and other entities, as appropriate) in each of the following areas (please feel free to address other areas in addition)?
   - Design of the network architecture
   - Finance
   - Deployment and construction
   - Maintenance and operations
   - Service delivery and customer support
   - Performance monitoring, data collection and public reporting
   - Policy-setting, such as those concerning privacy and net neutrality
   - Other

2. How might the City consider procuring goods and services to help achieve its policy goals?
3. Please share your ideas to increase workforce preparedness, minority and women contractor participation in the broadband industry, and job creation through collaboration with the City of New York. What are your goals with regard to creation of new jobs in New York City as part of your suggested collaboration? In what manner could worker or workforce development organizations, such as unions, community colleges, and technical certification providers, be meaningfully involved to ensure these are good paying jobs, with strong safety protections and benefits for workers? Please describe any challenges related to access to skilled labor in New York City and any efforts you would propose to address those challenges, including any actions the City might take.
4. Is it important to have the City as an anchor tenant for establishing a viable business model to support industry investments in new infrastructure? Please share your thinking about the role the City could play as an anchor tenant or otherwise.
5. What City collaboration commitments would be important for your potential participation?

5F. STANDARDS, POLICIES, AND PERFORMANCE INDICATORS

The City seeks information on the following items as they may apply to a public-private collaboration for broadband in New York City.

1. Broadband Speeds: Please share your potential approach through collaboration with the City of New York to addressing the City's goals with regard to broadband speeds and describe how your potential participation might contribute to meeting the City's current definition of broadband (25 megabits per second download / 3 megabits per second upload) and will scale to 1 Gbps and higher over time. Please also discuss upload speeds and whether your vision of how the City could meet its goals entails symmetrical speeds.
2. Broadband Competition: Please describe how your potential participation in a collaboration with the City could help address the City's goal of expanded broadband competition here in the City

What level of competition (i.e., number of choices for broadband service) do you recommend be considered sufficient to meet the needs of all New Yorkers?

3. Affordability: Please describe how your potential participation in a collaboration with the City would address affordability, particularly in light of the variation in ability to pay among households, and, more generally, how you would suggest that the City support and enhance its affordability goals.
4. Privacy: The City places a high priority on protecting the rights of New Yorkers to control their sensitive personal data as they access the internet. Please share your suggestions regarding privacy practices that could be included in your potential participation in the City's pursuit of its policy goals.
5. Open Internet: The City is strongly committed to net neutrality and an open internet. Broadband service that meets performance and affordability goals, but fails to provide open, uninhibited access to lawful online content would be inconsistent with the City's goals. Please describe how your potential participation in the City's pursuit of its goals would be consistent with the City's strong commitment to open internet principles.
   Note: Among the practices viewed as inconsistent with such open, uninhibited access are (1) blocking of access to lawful content, applications, services or non-harmful devices; (2) deliberately targeting some lawful internet traffic to be delivered to users more slowly than other traffic; (3) "paid prioritization", i.e., favoring some internet traffic in exchange for consideration of any kind; and (4) prioritizing by internet access providers of the content, applications and services of their own affiliates.
6. Equity: How would your potential participation address the City of New York's equity goals? How would it alleviate inequities in distribution of broadband, affordability of broadband, and ease of access to broadband? Please be specific in suggesting means by which your potential participation in a collaboration with the City, and the City's financial and/or other commitments, might achieve equity goals. Please also address how your potential activities might help close the "homework gap," i.e. inequitable distribution and uptake of broadband service with secondary impact on student success.
7. Public Wi-Fi: Please share your thoughts related to public Wi-Fi if they are part of your proposed solution
    a. Would your potential participation in the City's pursuit of its goals include an element of public Wi-Fi? If so, what speed or other technical elements would be involved?
    b. In OneNYC (see Section IV, Information Resources, below), the City established a metric for free public Wi-Fi: the percentage of New Yorkers with access to free public Wi-Fi within 1/8th mile from home. How might your potential participation address this metric?
    c. It what ways can public Wi-Fi provide assurances for security or privacy?
8. Digital Literacy and Public Computer Centers: Please share your thoughts related to digital literacy and public computer centers if they are part of your potential participation.
    a. The City prioritizes making available to New Yorkers access to computers, the internet, and digital literacy training. To this end, the City facilitates access to computers with internet access at public locations throughout the City and also supports digital literacy training. Please share your ideas for how your potential activities in a collaboration with the City could support and address these City priorities.
9. Other
    a. Are there other considerations or ideas that are not addressed here that you believe the City should take into account? Please share your guidance and suggestions.

5G. SUPPORTING FILES

Please upload any supporting files here. This can include diagrams, maps or other content to help demonstrate solutions.

6. RESPONDENT QUESTIONS AND ANSWERS

Fiber deployment in the city appears extensive and FCC 477 data appears to show extensive deployment, what broadband infrastructure does the city view that they lack?

While there is fiber in the city, much of it originates and terminates at central offices, data centers, or other major points of presence, but does not connect residents and small businesses. This leaves almost three-quarters of the city with fewer than three choices for service. FCC 477 data show that approximately 15.6% of New York City households have one option for broadband, 56% have two options. Only about 28.5% have three or more options for broadband (defined as a download speed of 25 Mbps or greater).
Looking to the future, growing volumes of data transmission, requirements for lower latency, and exponential increases in the number of connected devices will require more wireless radios served by denser fiber networks than what currently exists in New York City. It is our understanding that many private entities recognize these trends and are seeking to install more wireless radios and fiber optic lines, though it is not clear that this private investment will reach the entire city equitably or result in more affordable service.

As the City considers prioritization, is there an official set of neighborhood boundaries to be used?

Respondents can download Neighborhood Tabulation Areas from the Department of City Planning here: <https://www1.nyc.gov/site/planning/data-maps/open-data/dwn-nynta.page**>. These geographies align to aggregations of Census Tracts that facilitate valuable neighborhood-level analysis of American Community Survey data.**

Are there specific areas of prioritization, currently?

The priority is to connect the entire city in accordance with the five principles. The RFI asks for comment on the translation of those principles into key performance indicators, which could be used to establish a scoring of areas. The City could establish a sequence based on that score or on something other than geography, for example focusing on connecting all school students and their families first if that is determined to have the greatest impact. Respondents to the RFI should explain how focusing on particular features of the physical environment or on certain socio-economic parameters would have the greatest impact or otherwise lead to the ultimate goal of connecting all New Yorkers.

What are the biggest broadband deployment issues the City sees?

We are seeking to gain that insight in part through this RFI, particularly as different entities may consider different issues to be of the highest priority. The City has ready access to real estate to host equipment, and can coordinate the installation of conduit during planned street openings. While these capabilities can benefit time to market and installation costs, we will rely on responses to this RFI among other guidance to determine whether the City should focus on those areas to support broadband deployment in the service of universal broadband. The City's ability to support broadband deployment through creative public-private partnerships may be curtailed to the extent local authority is pre-empted by federal laws and regulations.

Will the City intervene with Empire City Subway and Verizon regarding costs and access to manholes and facilities?

The purpose of this RFI is to determine the steps the City can take to be the most effective partner to everyone who will deliver on the goal of universal broadband. Respondents should identify what actions the City may take to ensure that conduit is available in accordance with applicable laws and rules. Respondents should also explain why these measures are

essential or should be prioritized to achieve the goal of universal broadband in New York City.

Can the network be a combination of fiber and fixed wireless?

Yes.

Does the city own spectrum and will it be made available to providers?

All spectrum is owned by the public, though some portions are made available for exclusive use through federal licenses. The City does have licenses for certain uses, including for public safety, or in certain locations, but it does not currently have any plans to make these available as part of a public-private partnership for citywide broadband service to residents and businesses. Respondents are welcome to identify spectrum – exclusively licensed, lightly licensed or shared – that would be of particular value for use in New York City to serve residents and businesses and any role the City could play in making that spectrum available for providers.

Is the City willing to issue roof rights for City owned or controlled and NYCHA buildings identified as part of the network for construction?

The purpose of this RFI is to determine the steps the City can take to be the most effective partner to everyone who will deliver on the goal of universal broadband. The City recognizes that issuing roof rights for City-owned or -controlled and NYCHA buildings may be an important part of this initiative, and has begun working with all relevant agencies to define potential parameters for such rights and access, including potential obstacles and review procedures that may need to be addressed or evaluated. Respondents should explain why these rights – generally or for particular buildings – are essential or should be prioritized to achieve the goal of universal broadband in New York City.

Is there a current rule set on what approach is contemplated for allocating limited access to city owned assets – e.g., what happens if multiple providers request access, who gets access? What rates/terms would be set for city assets? How would the rates and terms be set?

Based in part on responses to this RFI, MOCTO may develop recommendations, permissible under applicable laws, for the allocation of City-owned assets to achieve the goal of universal broadband.

There are current rules. The New York City Department of Information Technology and Telecommunications manages the allocation of the City's street light poles and traffic poles for commercial wireless services through its Mobile Telecom Franchises in accordance with the New York City Department of Transportation, which manages the poles.

Respondents to the RFI should recommend an approach the City could take on the allocation of limited resources, consistent with applicable laws, that would most contribute to the goal of universal broadband in New York City.

Will the City allow any equipment to be mounted on structures other than buildings, such as light poles? If on light poles, will the City require the participant to file for a Pole Top Franchise? And if so, would the costs for each pole and the lottery be the same as it might delay the construction?

Respondents can identify structures other than buildings that it thinks should be made part of a network or networks for construction, and should also recommend an approach the City could take on the allocation of limited resources, consistent with applicable laws, that would most contribute to the goal of universal broadband in New York City. As owner of the street light poles and street traffic poles, the City will continue to balance the demands on the poles

by various parties, including the primary use of the poles for lighting and traffic management, public safety uses, private sector commercial use and any recommendations MOCTO may develop based in part on responses to this RFI.

Will the city help facilitate access to existing third-party infrastructure?

The City could potentially help facilitate access to existing third-party infrastructure where it is in the City's authority to do so and where that proved to be a better approach than using City-owned infrastructure.

The RFI requests this 'baseline technical attribute': "Path diversity to critical facilities …". Is there a list or clear definition of what NYC deems to be a critical facility?

No, this would be a broadband-specific definition. A facility would be critical and require path diversity if it serves as a key point of aggregation or interconnection for the broadband infrastructure.

With regards to construction plans and route selection, how does the City define alignment with project scheduling? Is the City willing to adjust project scheduling to facilitate broadband infrastructure buildout?

Respondents to the RFI should explain how project alignment and project scheduling can be defined or adjusted to serve the goal of connecting all New Yorkers with broadband. Given the priority to connect the entire city, no area can be disregarded because it will be difficult from a construction standpoint.

Generally, the City will seek to coordinate network deployment with other capital construction so conduit and fiber installation or building-related installations are performed in coordination with other capital projects, minimizing cost and neighborhood disruption.

Capital projects are driven by their own time-sensitive requirements, but the City will consider increasing notice and planning efforts to maximize opportunities for competitive broadband infrastructure buildout in advance of future capital projects, including and especially for opportunities for carrier neutral conduit. Such efforts will require information from industry as to their program needs and plans, as well.

What approvals and permits will be required to proceed? Will the city simplify the permitting process and access to rights of way? Will the City provide assistance to expedite construction?

The City requires approvals and permits based on applicable laws, contracts and local conditions and such processes are geared toward ensuring quality infrastructure and a safe environment for workers, pedestrians and motorists. The City will consider measures identified by respondents to the RFI for the City's information and in the context of applicable laws and how such proposed measures will contribute to the goal of universal broadband without compromising public safety or worker safety.

Will the city address Building Entrance issues?

Respondents may identify new policies or initiatives to facilitate customer acquisition and private property access for the City's information and consideration.

Will the City allow the developer of the network to monetize the network allowing the developer to launch new wireless technologies and make the network sustainable?

MOCTO welcomes suggestions or information for any potential business model that meets the City's goals and accords with all applicable law.

Will the City fund the network construction or piece parts, if needed? Will the City subsidize construction costs?

The City has already begun making capital investments in broadband infrastructure and will continue to do so. These investments have been dedicated to City-owned infrastructure that may be made available under certain terms to private partners for network deployment. The City is open to considering other means of using City funds to support the costs of network construction, and responses to this RFI may inform other forms of partnership. Respondents should explain how and to what extent these measures, over and above others, will contribute to the goal of universal broadband for New York City.

Will the city consider a Parcel tax or some type of guaranteed revenue to subsidize the buildout?

MOCTO welcomes suggestions of financing mechanisms and business models that would meet the goal of universal broadband. Respondents should explain how and to what extent these measures, over and above others, will contribute to the goal of sustainable universal broadband for New York City.

Is there a potential the City would be a tenant on the network for providing services to residents of NYCHA and other City services resulting in revenues?

Yes.

If the public-private partnership is extensive will the city control and/or restrict (e.g., tariff):

- Rates to commercial entities?
- Rates to the public?

The City will consider, for its information, any aspects of a business model that respondents choose to put forward, including suggestions regarding achieving affordable pricing while still ensuring sustainability of the model. Respondents should explain how and to what extent these measures, over and above others, will contribute to the goal of affordable, universal broadband for New York City.

Will the city consider funding a subsidy or voucher program to provide service to low income parties?

A subsidy or voucher program is one potential approach to the principle of affordability that respondents could propose and that the City could consider, but such an approach would need to account for the complexities of operating such a program and its potential sustainability over time. Respondents should explain how and to what extent these measures, over and above others, will contribute to the goal of universal broadband for New York City.

Will the City publish a list of interested parties?

Yes.