

**OFFICE OF TECHNOLOGY AND INNOVATION TESTIMONY BEFORE THE CITY
COUNCIL COMMITTEE ON TECHNOLOGY**

OVERSIGHT: LINKNYC

MAY 3, 2022

Good Morning, Chair Gutiérrez and members of the City Council Committee on Technology. My name is Michael McGrath and I am the Chief Operating Officer (COO) of the Office of Technology and Innovation (OTI). In my role, I oversee the Office's franchises and broadband portfolio. With me today is Tynia Richard, OTI's General Counsel, and Brett Sikoff, Senior Director of Mobile Telecommunications Franchises. Thank you for the opportunity to provide an update on LinkNYC, the City's revenue-generating program bringing free high-speed Wi-Fi, free calling, mobile device charging, and access to 911 and 311, all at no cost to taxpayers. Over the last year, we've taken many crucial steps to reinvigorate this important program, and I'm pleased to share our progress and the many exciting things to come.

LinkNYC is one of many initiatives that support Mayor Adams's goal to bring broadband access to historically underserved communities. We believe not having reliable, affordable access to broadband severely limits large segments of the population from fully participating in society. Internet access is not a luxury, but a necessity. The pandemic brought the digital divide into focus, laying bare the gaps in learning and productivity for those who did not have the access at their fingertips. While this program does not solve the digital divide alone, the network itself, in addition to the fiber and 5G infrastructure that it will bring to neighborhoods across the City, is a huge step in the right direction.

For those not familiar with the program, LinkNYC, launched in 2015, was originally conceived as an innovative approach to replace the City's outdated public pay telephone (PPT) infrastructure while providing free Wi-Fi as part of an overarching goal to help close the digital divide. The City entered into a non-exclusive franchise with the consortium, CityBridge, to deploy LinkNYC kiosks citywide. The franchise model allows the City to enter into contracts with companies to use the City's rights-of-way (streets and sidewalks) in exchange for fees. Thus, the LinkNYC program does not, and has never, cost the City money. In fact, it has generated over \$108 million to the City over the course of the franchise so far.

Today, LinkNYC kiosks have become a ubiquitous part of the City's streetscape: physically, in that almost every PPT has been removed, and virtually, as their services have impacted millions of people. Over 10.7 million Wi-Fi subscribers have used over 25,000 terabytes of data from nearly 1,900 LinkNYC kiosks installed across all five boroughs. The other services are also frequently used. Over the last year, on average, New York City residents and visitors have made 425,000 calls a month, and accessed Find Help, the app that connects users to nearby social service, about 5,000 times a month.

The impact of the LinkNYC network is so much more than the direct services the kiosks provide. According to CityBridge, about 1 million miles of fiber have been invested in our streets since the program began, and there is a planned expansion of LinkNYC into new neighborhoods that have been historically overlooked as it relates to fiber infrastructure. This fiber does not simply enable the Wi-Fi; it represents a huge investment in infrastructure – all at no cost to taxpayers – for future broadband providers to lease. This lays the groundwork for potential internet service providers to bring in new residential broadband options that are sorely needed.

One illustrative example of the potential for the fiber is the buildout of Gigabit Centers— which are community-based organizations chosen in collaboration with Borough Presidents to be outfitted with high-speed broadband for the general public’s use. The fiber is pulled into the building to create an indoor Wi-Fi network. Recently, we launched the first Gigabit Center at Silicon Harlem in Manhattan. CityBridge has also completed the outfitting of the Bronx’s Gigabit Center at the Andrew Freedman Home, and we plan to locate at least one of these in each borough.

In the coming months, the LinkNYC franchise is bringing another long-term investment in telecommunications infrastructure: 5G. The City is committed to having the most up-to-date, equitably distributed, highest quality telecommunications infrastructure of any major city in the world, and the new LinkNYC kiosk design, Link5G, is a key component of that goal. 5G is ultimately the network that will power mobile device connectivity for years to come, and enabling its expansion is essential. Link5G will be an important component of the City’s overall strategy to proliferate 5G access citywide.

Getting to this point has not been without challenges. The issues we have faced with CityBridge are well-documented. For several years, the program operated, but was no longer expanding. Deployment – particularly in boroughs outside Manhattan – had stalled, and the company was unable to make revenue payments as required by the franchise agreement. We decided that the continued success of the program was important to the City, so we proposed an amendment that would re-structure the franchise and secure its viability in the future.

While a stable revenue model was important, delivering on LinkNYC’s original promise of digital equity was paramount. This is why we committed to deploying 90% of all future LinkNYC kiosks above 96th street in Manhattan and throughout the Bronx, Brooklyn, Staten Island, and Queens. Further, we identified 13 equity districts across all five boroughs that have required build minimums. These districts were chosen based on the lack of broadband options, lower median annual income, lack of existing LinkNYC footprint, and high levels of pedestrian and street traffic.

To keep the program running and expanding it into these neighborhoods, a more realistic and reliable revenue stream was necessary. Instead of relying solely on the demand for advertising space for revenue, we proposed a mixed financial model including advertising and 5G cellular services. This new scheme would allow the proliferation of LinkNYC’s core services, while also bringing next-gen cellular connectivity to underserved areas citywide. I want to emphasize here

that the revenue generated by essentially renting out space on LinkNYC kiosks for wireless companies to use for the propagation of 5G would be consistent and more future-proof.

The amendment to the LinkNYC franchise that included these provisions was approved by the Franchise and Concession Review Committee (FCRC) last June. In order to fulfill the buildout and revenue targets laid out in the new agreement, the LinkNYC kiosk needed to be redesigned to accommodate 5G wireless equipment. Thus, Link5G was conceived, providing for multi-tenant, multi-technology wireless services. The new design aims to maintain the aesthetic of both the existing LinkNYC footprint and the approved 5G shroud for pole tops. Once presented to the Public Design Commission (PDC), the design was improved upon with feedback from commissioners. In December 2021, the PDC approved the new Link5G design for deployment in commercial and manufacturing districts.

With these important milestones behind us, we are very focused on moving forward to fulfill the digital equity promise that this program originally presented. Once the amendment to the franchise agreement was passed, we implemented a new internal governance strategy and immediately got to work laying out plans for deployment. We have since installed LinkNYC kiosks in the original design in several neighborhoods across the city, mostly in places where LinkNYC buildout was a long time coming, including Hunts Point and Inwood. We have proposed dozens of new sites to Borough Presidents, Community Boards, Council Members, and Business Improvement Districts as part of our public outreach process, and are actively working with stakeholders to identify sites that make sense within discrete communities.

Upon PDC's approval of the Link5G design, we started working with CityBridge to identify viable sites once the units were ready for installation. By the end of June, we aim to install and activate the very first Link5G kiosk. Thereafter, Link5G kiosks will be installed in neighborhoods across all five boroughs, ushering in a new era of connectivity that will be available to New Yorkers in every corner of our City.

Thank you for the opportunity to highlight this important program for the Committee. I am happy to answer Council Members' questions.

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Testimony in Support of LinkNYC

May 3, 2022

Prepared for the NYC Council Committee on Technology

Oversight Hearing on LinkNYC

Dear Chairperson Jennifer Gutiérrez and Members of the Committee on Technology:

Tech:NYC is a nonprofit member-based organization that has been made up of as many as 800 technology companies in New York. Our membership includes some of the largest and most innovative tech companies in the world as well as hundreds of small and growing startups. We are committed to supporting New York's economic recovery and to ensuring that all New Yorkers can benefit from innovation. Tech:NYC and our members work with government and community partners to foster a dynamic ecosystem so that New York remains the best place in the country to start and grow a technology company.

Access to public high-speed internet and a seamless connection to free social services is a huge benefit for New Yorkers that LinkNYC has provided and expanded upon since 2016. LinkNYC will soon be rolling out its new design of public wifi kiosks which continue to offer free wifi, device charging, phone calls, 911 calls, access to city services, and now 5th generation cellular network connectivity - aka 5G. This new design will enable the LinkNYC program to continue and expand into the New York City communities that need it most, outside of Manhattan's core, with at least 2,100 new kiosks to be installed through 2025. LinkNYC has already connected over 10 million users to free wi-fi at no cost to city taxpayers, and that number will only increase because of the new kiosk designs and additional sites.

We know that during COVID, 30% of free wi-fi users reported no other means of accessing broadband, and according to the city's Internet Master Plan, 29% of NYC households lack internet access, with 18% of city residents lacking both home-based and mobile broadband access. The new LinkNYC kiosks will enable more people to access their free wi-fi and tablets throughout the city, and will also speed New York City's efforts to implement 5G technology through a cutting-edge multi-provider design. Strong 5G infrastructure will help New York City to keep pace with evolving technology, allow us to remain competitive with cities throughout the world for jobs, foster innovation, and promote the highest quality of life possible for all New Yorkers. Tech:NYC supports LinkNYC's new design and expanded presence within NYC, and looks forward to LinkNYC continuing to provide public benefits throughout all five boroughs in the years ahead.



**TESTIMONY OF THE NEW YORK ELECTRICAL CONTRACTORS ASSOCIATION
BEFORE THE NEW YORK CITY COUNCIL COMMITTEE ON TECHNOLOGY
MAY 3, 2022**

Good morning. Chairwoman Gutiérrez and members of the Committee on Technology, I am Peter Rescigno, Assistant Executive Secretary and Director of Government Affairs for the New York Electrical Contractors Association (NYECA), New York's City's leading trade association of unionized electrical contractors. On behalf of the 200 electrical contractors associated with NYECA and the 10,000 Local Union #3, IBEW electricians employed by NYECA contractors thank you for the opportunity to testify in support of the LinkNYC program.

New Yorkers are familiar with the LinkNYC kiosks that have popped up all over New York City. As a result, New Yorkers are benefiting from free public WI-FI, the ability to make phone calls or charge their phones, access emergency services, and information such as the weather, news, and much more. LinkNYC has grown to become the world's largest and fastest free public Wi-Fi network with over 10 million WI-FI users on over 2000 kiosks around the city.

Perhaps what is less known about LinkNYC is the infrastructure needed to support it and how it is built. Members of the NYECA and the men and women of Local Union #3, IBEW they employ are running the fiber infrastructure through manholes across the city to tie the kiosks in every single day. Nearly one million feet of new fiber infrastructure was installed in the first phase of this project. The Citybridge Consortium, including its new partner ZenFi estimate that the next phase will double that fiber footprint! With more fiber installation, new kiosks can be installed, connecting even more people to the benefits of LinkNYC.

Aside from the benefits of an expanded network, LinkNYC has been a massive driver of economic output and job creation for many New Yorkers. NYECA contractors, through a collective bargaining agreement with Local Union #3, IBEW, pay living wages for the thousands of hours of work that has been performed and will be performed under this program. As I mentioned before, the promise of phase two of this project will require NYECA contractors to place, splice, test & maintain more fiber optic cable, install more kiosks, employ more electricians, pay more wages, and connect more people especially the people living in underserved communities across the Bronx, Brooklyn, Queens, Staten Island, and Upper Manhattan.

In addition to the expanded fiber infrastructure, this next phase of LinkNYC will include the installation of Link5Gs. The deployment of small cells across New York City has provided a significant amount of work since 2008. Over the past two years there has been a slow down in small cell deployments due to a shortage of 5G suitable siting locations. This has impacted our contractors not just in deployment of the nodes, but also in the deployment of new fiber infrastructure. Link5G would provide a much needed opening of supply for the carriers which would translate to significant work opportunities for our contractors.

In closing, the possibilities of LinkNYC are endless. In addition to the critical services provided by the kiosks, the fiber infrastructure being laid now can be used in the future to bring additional broadband options to homes as part of a growing 5G network. 5G is here and this cutting-edge technology will keep our city competitive, our people connected, our children learning, and our electricians working.

Founded in 1892, NYECA helped build New York City by working on its most iconic structures, serving our communities in times of crisis, providing job opportunities and quality training for young people, minority, and women-owned businesses, and promoting the highest standards of worker safety in the industry.

Thank you for the opportunity to submit comments on behalf of NYECA in support of LinkNYC. We are proud to be a partner of this project.



Members of the City Council,

Thank you for the opportunity to speak with you today. My name is John Grant and I am Director of Government Relations for Findhelp. At Findhelp, our mission is to connect all people in need and the programs that serve them with dignity and ease. I am honored to testify today on behalf of Findhelp, which is a partner with CityBridge and the LinkNYC program. Findhelp powers findhelp.org, a service that is designed to connect people with local nonprofits offering social services, while supporting organizations with tools that help them provide the best service. Findhelp is actually the leading referral platform for social services in America, serving the biggest cities and smallest towns. In addition to the free phone calls and Wi-Fi provided by LinkNYC, the kiosks also provide access to critical social services through our platform.

In partnership with findhelp, LinkNYC launched a banner on its tablets providing connections to social services and food pantries in the area using FindHelp.org. During the pandemic, our campaign has been accessed up to 10,000 times per week via LinkNYC, with the majority of users searching for access to food pantries and housing. Additionally, LinkNYC partnered with findhelp to highlight local food pantries on its advertising displays citywide.

Link5G will bring enhanced services into some of New York's most underserved communities. This would be hugely beneficial to those that seek care on findhelp.org. CityBridge has partnered with findhelp in the delivery of critical social services, and we hope the City will continue to be a partner to them so that the program can continue to expand and reach the communities who need us the most. Thank you for the opportunity to speak before you today.

John Grant, Director, Government Relations at Findhelp



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TESTIMONY OF THE JOINT INDUSTRY BOARD OF THE ELECTRICAL INDUSTRY

BEFORE THE NEW YORK CITY COUNCIL COMMITTEE ON TECHNOLOGY

REGARDING LINK NYC

May 3, 2022

Good morning, Chairwoman Gutierrez and distinguished committee members. My name is Dr. Gerald Finkel; I am the Chairman of the Joint Industry Board of the Electrical Industry (JIB). Thank you for the opportunity to submit comments on behalf of the JIB in support of Link NYC.

The Joint Industry Board of the Electrical Industry (JIB) is a labor- management organization founded in 1943 comprised of Local Union No. 3 of the International Brotherhood of Electrical Workers (I.B.E.W), the New York Chapter of the National Electrical Contractors Association (NYECA). The JIB is the ERISA administrator for a family of multi-employer benefits plans serving Local Union No. 3 and its affiliated contractors in the greater New York City area. Local Union No. 3 has over 28,000 members, of which 10,000 work as electricians for over 200 employers. Since its founding in 1943, the Joint Industry Board has provided thousands of New York City residents the opportunity to develop the skills needed to become New York State certified electricians.

Link NYC is a first of its kind communications network across the five boroughs providing superfast, free public Wi-Fi, phone calls, device charging and a tablet access to city services, maps and more. It has grown to become the world's largest and fastest free public Wi-Fi network, with over 10 million Wi-Fi users on over 2000 kiosks around the city. City bridge Consortium, including its new partner Zen Fi have contracted NYECA electrical contractors and their highly skilled Local Union No. 3 electrician workforce to perform a variety of services including Electrical and fiber construction and implementation. Nearly 1 million feet of new fiber infrastructure was installed for the first phase of the program and would expect to roughly double that on this next phase.

Local Union No. 3 affiliated contractors will be deploying thousands of new Link5G structures, with 90% of new deployment in historically underserved communities across the Bronx, Brooklyn, Queens, Staten Island and Upper Manhattan, greatly expanding broadband connectivity to help fuel an equitable digital future for New York. Link NYC will continue to use the services of our contractors on this project, including much needed residential expansion in the future. The fiber being laid out as part of this project will benefit many of the same communities where our members reside.

In addition to the expansion of fiber infrastructure, the next phase will include advanced small cell technology which requires a whole underlying infrastructure that creates jobs and work opportunities including Civil work, node work, and data center work.

The JIB is proud of the important role its partners have played in New York City's complex and impressive electrical infrastructure which has endured for decades. We look forward to our continuing partnership in this transformative project that will greatly benefit NYC's economy and quality of life.

We proudly join Local Union No. 3 and NYECA in supporting Link NYC.

Respectfully submitted on behalf of The Joint Industry Board of the Electrical Industry.

Sincerely,



Dr. Gerald Finkel
Chairman, Joint Industry Board
of the Electrical Industry



Local Union No. 3
International Brotherhood of Electrical Workers
OF GREATER NEW YORK AND VICINITY

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AND ALL STATE AND
CENTRAL BODIES

Good morning. Chairwoman Gutiérrez and members of the Committee on Technology, I am Anthony Falleo, Business Representative with Local 3 International Brotherhood of Electrical Workers. We are proud to represent the more that 28,000 of our members working in various divisions of the electrical industry in the greater New York area. Our members are employed by electrical contractors that install, maintain, repair and engineer the network infrastructure for New York City. This infrastructure is utilized by Wall Street to Main Street enabling all New Yorkers access to the internet, search engines and social media connecting us to the world with support of the LinkNYC program.

As we begin to emerge from the devastation of COVID, work opportunities and employment have become critical to the continued growth and survival of our City. Families are struggling, inflation is at record highs and at time the future may seem uncertain to our citizens. We need to be able to provide good paying jobs with real benefits, we need to provide hope and opportunity where none may exist. We need to step up to the podium and announce that the City is moving forward, that we are prepared to face the future head on. We need strong words and actions and this vital part of upgrading our network infrastructure is a step in the right direction.

Local 3 IBEW is prepared to meet these challenges, we have been representing electrical workers for over 100 years. Our members have built this city, its bridges and tunnels, our subways and skyscrapers. And we are prepared to help move this great city forward with fiber optic internet connections and updated technology for our schools and businesses. New York City needs to maintain its reputation as a City for all people and businesses, that is why we support LinkNYC.

Thank you for the opportunity to submit comments on behalf of Local 3 International Brotherhood of the Electrical Workers in support of LinkNYC. We are proud to be a partner of this project.

Testimony of the Partnership for New York City

New York City Council Committee on Technology

Oversight - LinkNYC

May 3, 2022

Thank you, Chair Gutiérrez and members of the committee, for the opportunity to testify on LinkNYC. The Partnership for New York City represents private sector employers of more than one million New Yorkers. We work together with government, labor and the nonprofit sector to maintain the city's position as the preeminent global center of commerce, innovation and economic opportunity.

The Partnership supports the city's continuation of its contract with LinkNYC to help achieve universal internet access and to accelerate the roll out of 5G technology. The planned expansion of the Link kiosks promises to be the fastest and lowest cost option to achieve these goals.

LinkNYC offers the largest free municipal Wi-Fi network in the United States and has provided internet and other services to more than 10 million users since its inception. We appreciate that the startup of this innovative system had some glitches, but those have been addressed and we feel confident that LinkNYC is well prepared to carry out the next phase of development.

The new Link5G kiosks are designed to support the expanded internet needs of the post-pandemic, digital economy. New York City is behind competitor cities in the development of 5G infrastructure. 5G offers faster cellular service and data speeds that are necessary to keep pace with the demands of business, education, health care and online entertainment. The new kiosks have poles that are high enough to provide good service and accommodate multiple carriers, ensuring that New Yorkers have the most options for service at the lowest possible cost.

We look forward to the continued expansion of the LinkNYC program.

Thank you.

TESTIMONY REGARDING LINKNYC

BEFORE THE NEW YORK CITY COUNCIL'S
COMMITTEE ON TECHNOLOGY

By Michael J. Santorelli, Director
The Advanced Communications Law & Policy Institute
New York Law School

May 3, 2022

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Thank you for the opportunity to offer testimony today.

My name is Michael Santorelli. I am a director of the Advanced Communications Law & Policy Institute (ACLP) at New York Law School.¹ The ACLP has been actively involved in broadband issues in New York City for the past 17 years. During that time, we have had numerous opportunities to work with stakeholders in the public, private, and nonprofit sectors on broadband connectivity challenges facing communities across the city.² A common thread evident in much of that work is that the city, for too long, has underinvested in addressing broadband adoption and digital literacy issues.³

The profound struggles of LinkNYC, which have been chronicled extensively in outlets like THE CITY, offer several lessons that should inform a more comprehensive broadband strategy for the city going forward.⁴

The first lesson is that broadband adoption challenges cannot be solved simply by increasing the supply of broadband. Respectfully, that is not the issue with which we should be grappling. In a city where broadband is universally available, the focus of policymakers and other stakeholders should be on doing everything possible to bring non-adopters online

via available connections.⁵ Connecting the unconnected is hard work because the reasons for non-adoption are largely personal and vary widely from community to community.⁶ Many can't afford a connection. Others don't see broadband as a useful investment. Some see the internet as a dangerous place, while others lack the skills to use broadband in a meaningful way. In short, connecting the unconnected requires intensive hands-on, neighborhood-by-neighborhood work. Fortunately, the city is home to a lot of great organizations that are doing this work every day.⁷ If the city truly is serious about closing the digital divide, then it will provide these groups with more resources so they can increase their reach and bring more people online.

The second lesson is that New York City does not have a broadband supply problem. Broadband abounds here. And for those who qualify, there are multiple options for *free* broadband service from Charter, T-Mobile, and Verizon, among others, thanks to federal subsidies available via the FCC's Affordable Connectivity Program.⁸ In other words, the affordability barrier has been substantially reduced, if not eliminated, for many non-adopters in the city. Is the city aware of these offerings? Does the city have a strategy for maximizing participation in the ACP? Is the city collecting data on ACP enrollment? Is there a strategy for ensuring that those who are availing themselves of these subsidies also have access to digital literacy programming? These questions deserve answers.

The third lesson is that 5G is a viable on-ramp to the internet. The city appears to agree given the nature of its renegotiated deal with CityBridge.⁹ Over the last few years, there has been significant organic growth in both fixed and mobile 5G availability across much of New York City. Offerings by providers like T-Mobile and Starry have injected

additional competition into an already competitive local market. Even so, the city needs to do much more to unlock additional investment in and deployment of 5G. The new CityBridge deal might be helpful in this regard, providing additional locations for antennas, but given LinkNYC's track-record of slow deployment and an inability to meet buildout and other contractual obligations, it is unwise at this time to view this as a viable part of the city's 5G strategy. What more can the city do to facilitate 5G deployment? At the top of the list is streamlining approvals for accessing city-owned assets by those building 5G infrastructure. It is well-documented that the city has been dragging its feet in this regard.¹⁰ Failure to speed up these processes will deprive residents of additional affordable on-ramps to the internet.

The fourth lesson is that there must be more oversight of city-led broadband actions. The city's recent track-record on broadband projects and policymaking is subpar.¹¹ The Council and the Committee on Technology are to be commended for convening this oversight hearing regarding LinkNYC. Additional hearings and scrutiny of other aspects of the city's broadband strategy are required. Is the city doing all that it can to hasten the equitable deployment of 5G? Is the city making enough resources available to support inclusive digital literacy training? Are there opportunities for the city to partner with ISPs to promote the availability of ACP subsidies and free internet subscriptions? Have the funds allocated in support of the city's Internet Master Plan been wisely invested?

In closing, the remaining broadband connectivity challenges in New York City are amenable to targeted interventions. More attention and resources must be allocated to

addressing these mostly demand-side issues. Projects like LinkNYC grab headlines but do little in practice to actually close the digital divide.

Thank you for the opportunity to offer testimony today.

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Notes & Sources

¹ For additional information, please visit www.nyls.edu/aclp.

² The ACLP has testified before the City Council several times before regarding these issues. See, e.g., Michael Santorelli, *Testimony Before the Committee on Technology Regarding Broadband and the Digital Divide*, Oct. 13, 2020, <http://comms.nyls.edu/ACLP/Santorelli%20-%20Testimony%20re%20Broadband%20and%20the%20Digital%20Divide%20-%20NYC%20Council%20-%20October%2013%202020.pdf> (“Santorelli Testimony – Oct. 2020”).

³ Among other things, the ACLP spearheaded the organization of the Digital Equity, Adoption & Literacy (DEAL) Coalition, which focused on educating policymakers and other stakeholders about the need for allocating more attention and resources to demand-side issues like broadband adoption and digital literacy training. These efforts included several letters to the De Blasio administration highlighting (1) guiding principles for effective broadband policymaking, <http://comms.nyls.edu/ACLP/NYC-RFI-Submission-DEAL-Principles-January-19-2018.pdf>, and (2) specific areas where policy reforms could unlock additional resources and make the provision of demand-side services more efficient and effective, <http://comms.nyls.edu/ACLP/DEAL-Coalition-Follow-Up-Letter-June-29-2018.pdf>.

⁴ Gabriel Sandoval and Joshua McWhirter, *Big Tech Pays to Supersize LinkNYC and Revive Broken Promise to Bridge Digital Divide*, April 27, 2022, The City, https://www.thecity.nyc/2022/4/27/23045122/link5g-free-wifi-tech-linknyc?mc_cid=c5beec427a&mc_eid=03ee07ec42 (“Supersize LinkNYC”).

⁵ The universality of broadband in NYC is supported by ample data from the FCC, which is available via its National Broadband Map, https://broadbandmap.fcc.gov/#/area-summary?version=dec2020&type=place&geoid=3651000&tech=acfosw&speed=25_3&vlat=40.697506625089716&vlon=-73.9795060000001&vzoom=7.980524740820521. Per that data, almost 99% of the population can choose from at least two providers of fixed broadband service. The data also indicate that, as of December 2020, 0.33% of the population lacked access to any provider of fixed broadband service.

⁶ For additional discussion, see generally *Santorelli Testimony – Oct. 2020*.

⁷ Many of these groups have participated in the DEAL Coalition. For an overview, see <http://comms.nyls.edu/ACLP/NYC-RFI-Submission-DEAL-Principles-January-19-2018.pdf>.

⁸ See, e.g., Diana Goovaerts, *Charter Joins Verizon, Comcast in Offering Free Internet for ACP Participants*, March 31, 2022, Fierce Telecom, <https://www.fiercetelecom.com/broadband/charter-joins-verizon-comcast-offering-free-internet-acp-participants>.

⁹ *Supersize LinkNYC*.

¹⁰ See, e.g., Max Parrott, *‘Year of 5G’ Falls Flat as DOT Stalls Node Approvals*, March 16, 2022, AM NY, <https://www.amny.com/news/year-of-5g-falls-flat-as-dot-stalls-node-approvals/>.

¹¹ See, e.g., Michael J. Santorelli, *Better Ways to Expand Broadband: City and State Can Expand Access Without Wasting Public Funds*, March 27, 2021, N.Y. Daily News, <https://www.nydailynews.com/opinion/ny-oped-better-broadband-20210327-xr7n6k5agbcgbcfgvcmk57bhi-story.html>.



May 3, 2022

New York City Council
City Hall
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Dear Members of the City Council,

My name is Victoria Lamberth and I'm a co-founder and an executive at ZenFi Networks, the wireless infrastructure partner to CityBridge. I am testifying today in support of LinkNYC.

My partners and I started ZenFi in Chinatown in 2013, and we've since grown to be one of the largest providers of wireless infrastructure in the region. We build fiber networks, wireless sites, and data centers to support service providers, wireless carriers, and institutions. Our business model hinges on the sharing of physical assets by multiple carriers, which ultimately leads to better service and increased competition to users.

As a startup, we won the contract to be the underlying fiber provider to LinkNYC. We won that contract because we invented a customized conduit and fiber assembly that's now being replicated nationally. This helps to conserve congested underground conduit routes – a necessity in New York. This innovative spirit lives on today and was a driving force behind Link5G, which we also expect will be replicated nationally. New York should lead the country in tech innovation, and this program is key to that leadership.

While the LinkNYC program and the original kiosks were visionary and innovative in 2014, the City of New York and we agree it's time for a second, even more innovative phase. That phase is Link5G.

Link5G will enable the deployment of thousands of new kiosks all with the services New Yorkers know and love, plus the benefit of 5G. These structures will help bring New York into the next generation of wireless technology and in line with other major cities. This means better cell service, faster data speeds, and the potential for new and exciting internet capabilities. We worked with the major wireless carriers to design a structure that would accommodate their current and future technology needs. As a result, our design has been lab tested by the carrier equipment manufacturers and two of the big three are planning to take part in initial deployments.

In addition to deploying new kiosks, our 200-million-dollar investment will enable deployment of a million feet of new high-speed broadband fiber, primarily focused outside Manhattan and in equity districts identified by the City. This neutral fiber infrastructure can be tapped by multiple providers in line with the city's internet master plan. Over time, this can enable additional providers to deliver more competitive broadband services to homes and institutions like libraries and NYCHA campuses. We're very proud to be laying this next generation of fiber and supporting the installation of Link kiosks which we believe will help address our City's digital equity goals.

The success of this project and building out 5G in NYC is critical to us. We are the only locally owned and operated wireless infrastructure provider in New York City. Our team lives and works in the tristate area and we take pride in this project and our role in promoting digital equity. We believe that community partnership is critical to our success and our work has a direct and meaningful impact on our neighbors, friends, and family.

I believe that Link5G is a success story for our City. It's a story of innovation and progress. It's a story I am incredibly proud to be part of, and I hope you are too.

Thank you for your time.

Sincerely,

A handwritten signature in black ink that reads "Victoria Lamberth". The signature is fluid and cursive, with a large, stylized "V" and "L".

Victoria Lamberth



May 3, 2022

Public Design Commission of the City of New York
City Hall, Third Floor
New York, NY 10007
Fax: (212) 312-0836
Email: designcommission@cityhall.nyc.gov

Good morning members of the New York City Council,

My name is Arturo Chang, and I am Director and Senior Counsel of State Government Affairs at the Wireless Infrastructure Association (WIA). I am here today to testify today on the LinkNYC program and Link5G structure. WIA represents the businesses that build, develop, own, and operate the nation's wireless infrastructure. Our members include infrastructure providers, wireless carriers, and professional services firms that are responsible for telecommunications facilities in the U.S. and around the globe. On the federal, state, and local levels, WIA advocates for the widespread, responsible deployment of wireless infrastructure to enable mobile broadband access for communities everywhere. WIA supports LinkNYC's mission to provide free and high-speed Wi-Fi in New York City while increasing the reliability of telecommunications networks.

In December, I spoke in support of the new Link5G structure, which I described as revolutionary. The structure is an innovative and inclusive wireless unit capable of supporting a multitude of technologies and has been thoughtfully designed from a technology standpoint to ensure all carriers can collocate in a single structure. Collocation is the ability for a single structure to host multiple providers and is a fundamental principle of wireless infrastructure deployment in the U.S. Not only will this unit augment the wireless cellular footprint in the city, but it will also provide Wi-Fi to New York City consumers, visitors, and residents. Equally noteworthy, the unit is compact with no precluding attachments and blends well with other infrastructure and street furniture already in place.

Across the U.S., cities, communities, and residents are constantly asking the wireless industry for multiple carriers to be placed in a single unit. Collocation reduces visual clutter, lowers barriers to entry, and promotes competition. While there are a variety of smart poles and other similar structures, the Link5G design is unique in not only being able to encapsulate diverse wireless vendors and carriers but also store all related hardware and wiring. From my view, it's incomparable from a single structure services standpoint.



Wireless
Infrastructure
Association

The expansion of the LinkNYC program with Link5G will bring the latest 5G advanced wireless services technology, which will bring many benefits to New York City, including more innovative services and technology ranging from smart homes to smart cities. Smart cities rely on large amounts of data fed from sensors throughout a municipality that allow for more efficient allocation of resources for critical services such as public safety and public works, including first responders, sanitation, and power generation. Many other services will benefit from 5G networks. For instance, telemedicine expands healthcare services by increasing remote access to treatment while autonomous vehicles provide greater safety and efficiency in delivery and commuter transit services by providing “driverless” options. These services will make communities in the five boroughs safer and more efficient.

WIA strongly supports the Link5G and the LinkNYC program. Thank you for hearing testimony on this important issue. Sincerely,

A handwritten signature in blue ink, appearing to read "Arturo Chang", written over a large, stylized blue star or asterisk symbol.

Arturo Chang
Director and Senior Counsel, State Government Affairs
703.535.7451
Arturo.Chang@WIA.org

Good afternoon esteemed Members of the City Council,

My name is Angie Brown and I'm the Assistant Director of the FAB Fulton BID in Fort Greene and Clinton Hill, Brooklyn. Our mission is to help the many businesses in our corridor succeed, and to keep our streets clean and safe for the community. We've been very proud of our partnership with CityBridge and the LinkNYC program over the past several years, where the Links in our area have regularly highlighted BID happenings like our annual signature ART360 events, free outdoor jazz concerts and fun movie nights as well as featuring our local small businesses through Link Local and Small Business Sweetie campaigns. These partnership services are in addition to the critical free Wi-Fi and access to city services they provide, which are so helpful to our businesses, residents, and visitors alike. We're very glad to have these kiosks in our corridor and hope that many other communities can benefit from them the way we have. We look forward to many more years of partnership with CityBridge and are grateful for the opportunity to testify today.