NYCOTI
Office of Technology & Innovation

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

Oversight - Evaluating the City's plan to Connect All New Yorkers to Internet.

Int 0198-2024: Reporting on discounted internet service program utilization rates and improving outreach to eligible households.

Int 0481-2024: Information on affordable internet programs and community-based internet services.

Int 0483-2024: Program to provide public access to wireless networks.

Int 0486-2024: Information on affordable internet programs for students and families.

Int 0878-2024: Establishing a cable franchise agreements website.

Int 1122-2024: Plan for expanding home access to broadband internet.

April 29, 2025

Good morning, Chair Gutiérrez and members of the City Council Committee on Technology. My name is Brett Sikoff, and I am the Executive Director of Broadband and Franchise Administration for the Office of Technology and Innovation (OTI). With me is Samantha Wright, OTI's Associate Commissioner for External Partnerships, and Chantal Senatus, OTI's Deputy Commissioner for Legal Matters. We're pleased to discuss our recent efforts and future plans related to broadband and digital equity with the Committee today.

Under the leadership of Chief Technology Officer Matthew Fraser, OTI has spearheaded numerous programs and initiatives focused on accomplishing Mayor Adams' vision of bridging the digital divide. Internet access is essential to fully participate in our modern digital society, and we consider it akin to a modern utility like heat or hot water. Prior to this administration, 30 to 40 percent of public housing residents lacked this basic modern necessity – an injustice that caused real harm to our older adults, students, families, and jobseekers during the pandemic. Today, thanks to the leadership of Mayor Adams and CTO Fraser, New York City provides more residents with free high-speed internet than any other city in the nation. We also supply equitable access to devices, digital skills training, and support programs to ensure New Yorkers across the five boroughs are equipped to use the internet.

Recognizing the urgent need for broadband access in public housing, we launched Big Apple Connect (BAC) in the first year of this administration. Big Apple Connect, the nation's largest municipal subsidized broadband program, provides free in-home broadband and basic cable access

to over 330,000 New Yorkers in 220 NYCHA sites. The program's popularity is demonstrated by its 80 percent citywide adoption rate, and we continue efforts to increase adoption. Last week, we sent a survey to thousands of NYCHA households enrolled in BAC to assess the quality of services being provided and to better understand the ongoing digital needs of residents. Since the federal Affordable Connectivity Program (ACP) ended in 2024, the city's provision of these essential services to NYCHA residents has taken on an even greater significance and we are committed to a baseline in the OTI budget.

We're extremely proud of Big Apple Connect's success, but it is important to note that it is just one piece of our digital equity efforts. Last month, we released the NYC Digital Equity Roadmap with $2.4 million in investments designed to enhance free internet access and the skills and support to use it. The Roadmap, which is the product of extensive inter-agency collaboration, focuses on meeting the immediate needs of New Yorkers while also laying the foundation for future success. We are making this initial investment to upgrade technology in older adult centers, libraries, and the NYCHA Digital Van program. This month, we held our first convening of a Digital Equity Working Group that will build upon existing city government partnerships, and we will be hiring a Chief Digital Equity Officer to lead this important work.

Given the recent enactment of the New York State Affordable Broadband Act, which requires internet service providers to offer a low-cost broadband option to eligible households, we have also been in close coordination with the ConnectAll team, and plan to collaborate on efforts to amplify the availability of these services.

As mentioned in the Roadmap, we recently released a Request for Information (RFI) to further explore how expanding the use of public infrastructure can improve digital equity outcomes. We look forward to hearing from a wide range of stakeholders, including elected officials, before the May 30 response deadline. The RFI seeks to build on our current franchise portfolio, comprised of non-exclusive agreements with dozens of companies that provide services such as cable television, public communications structures, mobile telecommunications, and information services. It is important to note that although the cable television franchisees – Charter, Altice, and Verizon – also provide broadband services, the franchise agreements are limited to the provision of cable television, subject to applicable federal law.

The Adams administration is committed to keeping New Yorkers connected wherever they live, work, and travel across the five boroughs. As part of our broadband offerings, LinkNYC operates about 2,200 kiosks – including original Links and the newer Link5G smart poles – that reach over 18 million subscribers. These kiosks provide free Wi-Fi, nationwide calling, device charging, and quick access to 911 and government services. Ninety percent of Link5Gs, which are built to provide the added benefit of multi-tenant 5G, will be located outside of Manhattan's Central

Business District. We continue to work with the franchisee, CityBridge, to expand the Link5G network across the city.

In addition to Link5G, my team administers mobile telecommunications franchises. These franchises allow companies to install 4G and 5G equipment on light poles and utility poles. Through this franchise, mobile carriers enhance and densify their cellular networks, providing crucial service to anyone who owns a cell phone. More recently, we provided incentives for these companies to build their equipment in historically underserved areas of the city, ensuring that mobile coverage is equitable.

Finally, information services franchises are held by companies that install and operate fiber optic cable in city streets for the purpose of offering voice, data, and/or business-to-business internet service across the five boroughs. In the past year, the city has entered into 13 of these franchises, and we continue to consider qualified companies on a rolling basis.

Now, I will turn to the legislation considered today.

Int 0198-2024: Reporting on discounted internet service program utilization rates and improving outreach to eligible households.

Chair Gutiérrez's bill, Int 198-2024, would require OTI to report on discounted internet service program utilization rates, and report to the Council about outreach efforts related to such programs. Currently, we do provide information through our website on eligibility for Big Apple Connect, and we intend to post a dashboard that shows the utilization rates of all eligible households citywide. As mentioned, Big Apple Connect is directly administered by Altice and Charter, and they have dedicated resources to outreach since the program launched. We can work with these companies to detail such efforts on the Big Apple Connect webpage.

Int 0481-2024: Information on affordable internet programs and community-based internet services.

Int 481-2024, sponsored by Council Member Won, would require OTI to disseminate information on affordable internet programs and community-based internet services to Community Based Organization (CBOs). As written, it is unclear what the intended reach is for this dissemination, which makes it challenging for OTI to assess the resources required for such efforts. Further, while we are working to amplify information on statewide programs like the discounts provided through the Affordable Broadband Act, it is more challenging to catalogue community-based internet services and target the appropriate geographic areas where such networks may be available. We'd like to discuss with the Council how we may address existing gaps.

Int 0483-2024: Program to provide public access to wireless networks.

Council Member Won's bill, Introduction 483-2024, would require OTI to establish a program whereby city agencies provide wireless network access for the public to utilize the internet. We appreciate the spirit of this proposal but we are unclear whether the proposal intends to provide service to agencies' walk-in customers or to the general public. Further, an agency's capability to provide this service is highly dependent on numerous factors and may require significant infrastructure investments and different network requirements depending on the intended constituency. We'd like to discuss further what the sponsor envisions with this bill, considering the operational and fiscal implications as written.

Int 0486-2024: Information on affordable internet programs for students and families.

Introduction 486-2024, also sponsored by Council Member Won, would require OTI to provide written materials about affordable internet for wide-ranging outreach to students and families. We appreciate the Council's focus on educating students and their families about the low- or no-cost broadband services available to them. In the past, we have collaborated with the Public Engagement Unit and NYC Schools (NYCPS) to promote the Affordable Connectivity Program (ACP), which is unfortunately no longer available.

Given the enactment of the Affordable Broadband Act, we are already working towards a day of action at the beginning of the school year. NYCPS has advised that they can share provided information on affordable broadband by posting on their family-facing website, actively notifying students and families via enterprise digital communication tools, as well as making hard copies available. We can further discuss with NYCPS and the Council additional strategies to better get the word out about current offerings.

Int 0878-2024: Establishing a cable franchise agreements website.

Int 878-2024, sponsored by Council Member Holden, would require OTI to post information on our website related to cable franchise agreements. Our website contains wide-ranging information about all our franchises, including cable franchises, that is easily accessible to the general public. We welcome any feedback on how it may be improved.

Int 1122-2024: Plan for expanding home access to broadband internet.

Finally, Int 1122-2024, sponsored by Chair Gutiérrez, would require OTI to publish a plan to make universal, affordable, and equitable internet available in homes throughout the city. The plan would be required to be published every five years, along with an annual progress report. This bill also establishes an advisory board that would review OTI's plans and make recommendations.

It is laudable for the Council to advocate for a future-proof broadband plan that envisions access for all. We agree that it is important for all New Yorkers to have access to affordable in-home broadband, and we are aligned on the importance of setting goals to increase that access. However, we have concerns that the legislation, as written, does not align with our current work and future planning; could result in the duplication of efforts; and assumes future funding streams that may not materialize.

As we have laid out above, OTI has several ongoing and planned efforts with respect to broadband and digital equity. The Digital Equity Roadmap underscores many of those efforts and lays out the groundwork for both short- and long-term goals.

As written, Int. 1122 does touch on many of the items we are currently working to address, including digital inclusion efforts, and the incentivization for multi-tenant structures. Other areas the legislation seeks to address – including creating opportunities for non-profit and M/WBE ISPs and expanding Wi-Fi availability within city-owned buildings – come with unknown budget implications. We're interested in discussing the ways we may better align on other aspects of the legislation that the Council feels have not been addressed by our recently proposed plans.

Finally, we are aware that the aim of this bill has been described as "resurrecting the Internet Master Plan." That plan featured data representing an outdated snapshot of the state of broadband access in New York City in early 2020 – a lifetime ago in our post-pandemic world. After the Adams administration took office – and Mayor Adams created OTI – we evaluated how we could provide the best service to the largest amount of people as quickly as possible – not five or 10 years down the road. This led to the creation of Big Apple Connect. Our change in course from the Internet Master Plan to Big Apple Connect has proven to be both less expensive and a more effective way to deliver high-speed broadband service to New Yorkers. We believe a pivot back to the Internet Master Plan as it had been proposed over five years ago would hinder the progress we've made over the past three years, cost taxpayers more money, and could harm residents of communities on the wrong side of the digital divide.

That said, it is worth emphasizing that there are many opportunities for us to work towards our shared goals without holding the prior administration's plan on a pedestal.

Thank you for the opportunity to testify today. I will now take Council Members' questions.

Internet Master Plan

TESTIMONY: NYC COUNCIL TECHNOLOGY COMMITTEE

Thank you for the opportunity to submit written testimony on behalf of Tech:NYC in support of Intro 1122, which would require the Office of Technology and Innovation (OTI) to develop and publish a comprehensive plan to achieve universal, affordable, and equitable broadband access for all New Yorkers.

Tech:NYC is a nonprofit organization that represents more than 550 member companies — from early-stage startups to some of the world's largest technology firms. We are proud to support policies that foster inclusive innovation and economic opportunity across all five boroughs. Central to this mission is ensuring that all New Yorkers, regardless of income level or zip code, have access to high-quality internet service. Broadband is no longer a luxury — it is a basic necessity for education, employment, healthcare, and civic participation.

While recent progress has been made in expanding connectivity, many New Yorkers still face persistent barriers to reliable and affordable internet. These challenges are particularly acute in lower-income neighborhoods and public housing developments, where affordability concerns remain a hurdle. Intro 1122 addresses these issues head-on by proposing a clear framework for how the City can assess existing service, target underserved communities, and work toward long-term digital equity.

By requiring the City to develop a detailed, publicly available plan, this legislation increases transparency and accountability while providing a roadmap for action. The bill rightly calls for robust public engagement, mapping of service coverage, and coordination across agencies and internet service providers to identify and address infrastructure gaps.

Importantly, Intro 1122 acknowledges that bridging the digital divide is about more than just laying fiber or upgrading hardware. It's about collaboration — between city government, the private sector, community-based organizations, and residents — to ensure that broadband expansion efforts are inclusive, responsive, and sustainable. The legislation's provisions for multi-agency coordination, partnership building, and periodic reporting will help ensure these efforts are strategic and measurable.

Expanding broadband access is not only a matter of equity but of economic and civic strength. A more connected population supports a stronger pipeline of tech talent, more effective delivery of public services, and greater opportunities for civic engagement. By investing in equitable broadband now, New York City will be better positioned for long-term, inclusive growth.

We commend the Council for advancing this legislation and call on you to move swiftly toward its passage. Tech:NYC looks forward to supporting the implementation of this plan and continuing to work in partnership with city leaders to ensure every New Yorker has access to the tools and opportunities of the digital age.

Thank you again for your leadership and the opportunity to provide testimony.

Sincerely,
Alex Spyropoulos
Director of Government Relations
Tech:NYC

MANHATTAN CHAMBER OF COMMERCE

WRITTEN COMMENTS TO THE NEW YORK CITY COUNCIL
COMMITTEE ON TECHNOLOGY

HEARING TOPIC:
EVALUATING THE CITY'S PLAN TO CONNECT ALL NEW YORKERS TO INTERNET

APRIL 29, 2025

The Manhattan Chamber of Commerce represents the 129,000 businesses throughout the borough of Manhattan, which is New York's economic center.

From what we see on the ground, New York City is currently on the right track and has the right plan in place to address the root causes of the digital divide.

Broadband providers have invested billions of dollars to build sound, reliable internet infrastructure throughout New York City. Today, virtually every New York City resident has access to service from multiple wired and wireless internet providers. And more and more companies are investing to expand and upgrade their services every day.

But challenges remain, most notably broadband adoption, ensuring seniors have digital literacy skills and providing every home with a computer or tablet to access the internet. Major strides have been made to address these problems, through public and private investment, which is connecting people to the internet service that is already accessible in their communities.

Overall, broadband is widely available and increased competition and new policies have drastically lowered the price of internet service, particularly for our city's most vulnerable populations. We are moving in the right direction today so now is not the time to stray from what is working.

That is why we oppose Int. 1122, which would divert from the current path by creating additional network, pricing, and speed mandates on internet service providers who already provide high-quality, low-cost

internet options throughout the City. The plan would also impose additional financial burdens on internet service providers who are already doing what is required to address the digital divide. The plan would be a costly, time-consuming approach that would NOT result in getting more people connected because it is trying to solve the wrong the problem.

Instead, our focus must be on spreading the news about these existing programs and leveraging the investment that private broadband providers have already made in our community. Wasting taxpayer dollars to build duplicative infrastructure in areas that already have broadband service, which includes all of New York City, is expensive to build, slow to deploy, and difficult to maintain. Cost is no longer a barrier to entry for our community's low-income families. And more and more providers are building service in the City without the need to spend more public dollars. Now is the time to double down on the current plan to connect all of New York — because it's working.

Finally, we also have concerns about Int. 878, which is largely unnecessary because it would duplicate information already provided by the Office of Technology and Innovation (OTI). OTI maintains a publicly accessible website that includes copies of the existing cable franchise agreements that set forth the geographical areas served. The information sought by Int. 878 is available in interactive and easily digestible formats via the FCC National Broadband Map and the New York State Broadband Map.

As such, we urge the Committee to hold both bills. As always, we stand ready to work with you on these important issues. Thank you.

Testimony to the New York City Council
Oversight Hearing "Evaluating the City's Plan to Connect All New Yorkers to Internet"
Committee on Technology
April 29, 2025

Good morning, Chair Gutiérrez and members of the Committee on Technology. My name is Rodney Capel, and I am Vice President of Government Affairs for Charter Communications (Charter) in New York City. I appreciate the opportunity to submit testimony highlighting the broadband connectivity programs and offerings that Charter participates in and provides by way of its Spectrum branded services and in partnership with the City of New York.

About Charter Communications

Charter is a connectivity company and cable operator providing broadband, voice, video and mobile services to more than 31 million customers across 41 states.

Our employees are entirely based in the United States. In New York, over 9,000 employees contribute to, and support, the superior connectivity services provided to the more than 3.4 million Spectrum customers statewide. Similarly, in New York City, approximately 3,000 employees are assigned to offices across the five boroughs supporting our over one-million customer base.

In many cases, our employees are our own customers and, in turn, reflections of the communities we serve. This animates Charter's ongoing investment in our hyperlocal and award-winning news channel, NY1 and NY1 Noticias and spurs long-term investments in our workforce.

At Charter, our workforce is critical to our long-term success. Long-term investments in our workforce span competitive wages and benefits to learning experiences such as tuition-free degree and certificate programs and on-the-job training.

Our market-competitive compensation is tailored to the location and responsibilities of each role. All hourly employees have a starting minimum wage of at least $20 per hour, above any state and federal minimum wage, and nearly 85% of our employees are eligible for additional variable compensation based on their performance. We provide high-quality, comprehensive medical, dental, and vision coverage for all full-time and part-time employees. To keep this coverage affordable for our employees and their families, we have absorbed the full premium cost increase for medical, dental, and vision coverage for the last 12 years. Finally, we provide competitive financial benefits to all employees, such as a 401(k) Plan with a dollar-for-dollar company match up to 6% of their eligible pay. Most of our employees are also eligible to receive an additional non-elective contribution to a Retirement Accumulation Plan equal to 3% of their eligible pay.

We offer thousands of learning experiences including professional skills training and continued education opportunities both online and in the classroom. Each major business unit at Charter has a learning organization that manages and maintains role-specific training for employees, from new hires to directors. Our Broadband Technician Apprenticeship Program, for example, is U.S. Department of Labor certified, and has been highlighted as emblematic by the National Telecommunications and Information Administration.[1]

[1] NTIA, *Case Study: Charter's Broadband Field Technician Apprenticeship Program* (Aug. 16, 2023), https://www.internetforall.gov/blog/case-study-charters-broadband-field-technician-apprenticeship-program ("*NTIA Charter Apprenticeship Program Case Study*").

In 2023, we introduced a tuition-free degree and certificate program, removing financial barriers for employees to continue their education through convenient online learning. We also provide traditional tuition reimbursement of up to $10,000 per year for those pursuing other external programs.

Our collective investments fuel the cornerstone component of Charter's *Life Unlimited* platform to keep our customers connected whenever and wherever they need us.

Spectrum Internet

Charter's fiber-based network delivers gigabit, or faster, speeds across our entire footprint. Pursuant to franchise agreements with the City of New York, Charter's footprint includes all of Manhattan, Queens, Staten Island, and the westernmost portions of Brooklyn, from Williamsburg to Bay Ridge. Charter does not have a franchise agreement to serve the Bronx.

Our franchise agreements stipulate various customer service provisions and requirements including that we have complete residential buildout in our service areas. In other words, excepting instances where a building owner does not provide access to their property, there are *no unserved areas* in our footprint.

Our franchise agreement with the City also facilitates tens of millions of dollars in capital investment to not for profit public access partners including MNN, QPTV, Staten Island Access, and BRIC, as well as free channel carriage for the City for public, educational and governmental programming. Charter has paid approximately $377 million in franchise fees to the City over the last 8 years.

Charter's mature and complete broadband infrastructure is award winning. Opensignal, an independent analytics company, found that Spectrum internet service is the most reliable in the country[2] with the fastest speeds.[3] And for the seventh consecutive year, Charter exceeded 100% of advertised download speeds and upload speeds on all tiers measured in the FCC's most recent "Measuring Broadband America Fixed Broadband Report".[4] Charter's growth strategies and investments including, its innovative approach to converged connectivity[5] and planned network evolution,[6] have made it a reliable and effective partner to deliver connectivity to New York City residents.

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[2] *See* Opensignal, *USA Fixed Broadband Reliability Experience – National View – August 2024* (Aug. 29, 2024), https://www.opensignal.com/2024/08/29/usa-fixed-broadband-reliability-experience-national-view-august-2024?utm_campaign=Market%20Impact&utm_source=Press&utm_medium=Coverage&utm_term=US%26Canada&utm_content=Insight

[3] *See* Opensignal, *USA Fixed Broadband Experience – National View – May 2024* (May 20, 2024), https://www.opensignal.com/2024/05/20/usa-fixed-broadband-experience-national-view-may-2024.

[4] *FCC 13th MBA Report*.

[5] Spectrum Speed Boost for Spectrum Mobile and Spectrum Internet Subscribers, as well as Spectrum Internet customers' access to over half a million out-of-home Wi-Fi hotspots nationally, leverage faster connections and broader connectivity options for subscribers.

[6] Charter is investing more than $6B to upgrade its network nationally to deliver multigigabit speeds to homes and businesses, including hundreds of millions in New York.

Charter
COMMUNICATIONS

Delivering Connectivity to New Yorkers

Accessibility and Affordability

The Public Service Commission has recognized that high-speed broadband is widely available across New York State.[7] And as independent internet research websites like *Broadband Now* can affirm, within Charter's New York City footprint alone, there are double digit providers that offer high-speed broadband service, and most of those providers deliver ten times the FCC's high-speed standard, or gigabit service. Especially with the abundance of wireline and wireless competition in New York City, facilitating additional infrastructure build is neither an effective use of taxpayer dollars, nor an appropriate vehicle to address affordability.

Former Mayor Bill de Blasio's Internet Master Plan, which contemplated building redundant broadband infrastructure, was estimated by its own authors, to cost taxpayers $2.1 billion;[8] an astronomical price tag that undoubtedly could be better used for more pressing public needs citywide. Furthermore, the municipal, or open-access infrastructure, contemplated by the Internet Master Plan, has a history of failure nationally and doesn't guarantee customers any lower rates.

The Phoenix Center, a think-tank providing independent assessments of various economic policies in the U.S., issued a study finding that average broadband prices are 13% higher in cities with a municipal provider than in cities without a publicly owned network.[9] Moreover, the University of Pennsylvania's Center for Technology, Innovation and Competition reported that, of the municipal broadband networks studied, only a fraction covered their own project costs and an overwhelming majority were abject failures.[10] The cost of publicly managed broadband is not just financial. As the New York Times reported in 2019, New York City government's mismanagement of its wireless network, NYCWiN, disrupted public safety hampering the Department of Transportation's ability to program traffic lights and the NYPD's collection and transmission functions.[11]

For Charter's part, the company remains committed to clear and simple pricing models and providing exceptional customer service to set itself apart. Charter's retail rates and broadband speed tiers are universal throughout our national service area. There are no annual contracts for residential services and no data caps. So, customers can change providers at any time with no risk of fees. Customer service members are available 24/7/365 when a customer needs. Customers are made aware of service disruptions within fifteen minutes of Charter identifying an outage, and disruptions are resolved quickly, and technicians are dispatched same day in many cases. All customers are entitled to their money back if they are not fully satisfied with our services within the first 30 days.

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[7] *See* FCC National Broadband Map, Area Summary for State of New York, Fixed Broadband Results *(data as of June 30, 2022, last updated on Feb. 16, 2023)*, available at https://broadbandmap.fcc.gov/home.

[8] *The New York City Internet Master Plan*

[9] *See* Phoenix Center for Advanced Legal & Economic Public Policy Studies, OTI's Cost of Connectivity 2020 Report, available at https://www.phoenix-center.org/perspectives/Perspective20-06Final.pdf.

[10] *See* University of Pennsylvania Law School, Municipal Fiber in the United States: An Empirical Assessment of Financial Performance, available at https://www.law.upenn.edu/live/files/6611-report-municipal-fiber-in-the-united-states-an

[11] Neuman, William. "New York City Has a Y2K-Like Problem, and It Doesn't Want You to Know About It." 10 April 2019. https://www.nytimes.com/2019/04/10/nyregion/nyc-gps-wireless.html. Accessed April 28th 2025.

Broadband is already affordable in New York City. In addition to our $15 Spectrum Internet Assist (SIA) product which comports with the eligibility requirements under New York State's Affordable Broadband Act, additional savings is available to customers that bundle Spectrum services - including a recently launched 500Mbps internet plan for just $30 per month.

Even steeper discounts can be achieved with bulk billing. Bulk-billing arrangements and programs link eligibility to a physical location, as opposed to programs that link eligibility, or connectivity, to individuals. Invariably, this reduces operational challenges to enrollment in the arrangement; avoids service disruptions if individuals move in, or out, of a dwelling; and prevents disconnection of service for non-payment, or other items. A 2010 report and order from the FCC supports the merits of bulk purchasing.[12]

Partnership with the City of New York

Big Apple Connect

Big Apple Connect is an example of an effective bulk arrangement and partnership Charter enjoys with the City of New York.

In September 2022, the City partnered with Charter and signed a historic business deal to provide Spectrum Internet for free to New York City Housing Authority (NYCHA) tenants. Serving over 83,000 eligible households across 119 developments in Charter's footprint alone, and nearly 200 developments and more than 300,000 New Yorkers citywide, the program is the largest bulk municipal broadband program in the country.[13]

The service, provided to residents for free and paid for by the City, includes Spectrum TV Basic, Spectrum Internet (300 Mbps), Wi-Fi Service, and a Spectrum Receiver. As Spectrum Internet customers, all Big Apple Connect recipients have access to Security Suite which uses real-time cloud-based technology to provide the fastest protection against viruses, spyware, and other malicious software. The City pays a bulk rate for all of these services per household at a fraction of its retail cost.

The adaptability of bulk billing arrangements helped foster Big Apple Connect's success. For example, the program was designed so that existing Spectrum public housing subscribers would be automatically "opted in" without any additional paperwork or certification, and the program was "stackable" with federal credits like ACP.

There are inherent benefits to the City partnering with existing internet service providers, not the least of which is the fact that the City can leverage existing state-of-the-art broadband infrastructure maintained by a specialized workforce of technicians and engineers. These partnerships yield exponential cost savings to taxpayers and customers alike comparative to building redundant infrastructure networks.

Partnerships with incumbents make programs like Big Apple Connect scalable and adaptable to serve other constituencies, including older adults or public-school students. The Council can, and should,

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[12] *Second Report and Order FCC 10-35 (2010).*

[13] *See* Press Release: NYC Office of the Mayor, Mayor Adams Expands 'Big Apple Connect' to Deliver Free Internet, TV to More Than 300,000 New Yorkers at 200 NYCHA Developments (March 23, 2023), available at https://www.nyc.gov/office-of-the-mayor/news/208-23/mayor-adams-expands-big-apple-connect-deliver-free-internet-tv-more-300-000-new#/0.

support efforts for the City to facilitate access in ways that have proven and measurable success, like Big Apple Connect, and unlike the Internet Master Plan.

Family Shelters

Charter also partners with the City in other capacities including with the NYC Department of Social Service (DSS) to provide fixed broadband connectivity to over 4,000 families at more than 70 family homeless shelters citywide. In-unit connectivity provides numerous benefits, including stable service for transient populations, reduced administrative burdens, and protection against disconnection due to non-payment.

New York's Affordable Broadband Act

Charter complies with New York State's Affordable Broadband Act. Charter's SIA product provides $15 per month broadband service at double the required speed directed by law. Eligibility for SIA includes, but is not limited to, those who qualify for Supplemental Security Income (SSI), Medicaid, Senior Citizen and Disability Rent Increase Exemptions (SCRIE, DRIE), Supplemental Nutrition Assistance Program (SNAP), National School Lunch Program (NSLP), and more. If low-income individuals in your district need discounted service, they can enroll online at SpectrumInternetAssist.com.

Community Partnership

The City should continue to partner with providers that have demonstrated capabilities to promote adoption and affordability.

Charter's investment in the community, along with its best-in-class services, foster digital equity and funding in areas of need. Our support spans communities and non-profits across the City from grass-roots community organizations like S.A.F.E.S.T and LifeCamp to large institutions such as Hispanic Federation and the New York Urban League. Our CEO, Chris Winfrey, is a proud board member of the National Urban League.

We contribute philanthropically to the fabric of New York City. In the past year alone, we have held over 50 events and a multitude of engagements across the City including partnerships with Tenant Association leaders to financially support NYCHA Family Days, preparing children for the school year by giving away over two thousand backpacks to students at events with nonprofits and elected officials including Council Members Nantasha Williams and Farah Louis, Manhattan Borough President Mark Levine and Queens Borough President Donovan Richards and ensuring that families have access to a warm meal or turkey for Thanksgiving and the holidays at events with nonprofits like the YMCA and the Showing Hearts Foundation.

As a company, we have been addressing the digital divide for years and have continued to invest and support digital equity and access through programs including Spectrum Digital Education, Spectrum Community Center Assist and our learning labs. Spectrum Community Center Assist is a digital equity initiative that distributes grants to nonprofits while creating opportunities for community members by expanding access to digital access, skills training and resources. Charter has committed $1 million to Spectrum Digital Education in 2025, raising its total investment in the program to more than $11 million. Since 2017, Spectrum Digital Education has awarded 327 grants to 170 organizations, benefiting over 173,000 community members across Spectrum's national service area. With grant funding, nonprofits have distributed more than 18,700 laptops and other devices and sponsored over 42,000 classes focused on digital education. Charter has awarded Spectrum Digital Education grants to nonprofit organizations in New York City for programs such as teaching seniors digital skills, setting up technology labs, providing

online classes for families that need homework and job support, and purchasing laptops for underserved groups.

Spectrum Community Center Assist is a $30 million, five-year philanthropic initiative that aims to improve the physical condition of community centers in underserved rural and urban communities throughout Charter's 41-state footprint, as well as to support programs that provide job skills training for the people in those local communities. Each community center receives financial support for job skills training programs, new technology and gigabit high-speed internet service, as well as building refurbishments and repairs. Since its launch in 2021, Charter has revitalized several NYC nonprofits and community centers including Ocean Bay CDC, Urban Upbound in Queens, and the Center for Family Life in Brooklyn.

Additionally, we have partnered with nonprofits like Woodside on the Move, the LGBT Center, Hudson Guild, Korean Community Service of Metropolitan New York (KCS), Hispanic Federation, National Action Network, Catholic Charities, Hudson Guild, and the Lower East Side Girls Club to build technology labs. Each one of these learning labs costs roughly $100,000 to equip and maintain with free broadband service for a total commitment of approximately $4 million. In 2023, Charter invested nearly a quarter of a million dollars towards the renovation and upgrade of 16 learning labs. Spectrum Learning Labs can be found in neighborhoods across the City in Spectrum service areas and is an initiative that is unique to Charter among all wireline and wireless broadband ISPs in New York City.

We are proud of our work with the communities of the City and appreciate sharing the resources of the company to improve the lives of our customers and your constituents.

Thank you for the opportunity to submit testimony, and please do not hesitate to contact me with any questions or thoughts you may have regarding my testimony.

verizon

To: Members of the New York City Council Technology Committee

From: Verizon
Ashley Greenspan, State & Local Government Affairs
ashley.greenspan@verizon.com

Date: Tuesday, April 29, 2025

Subject: Testimony Submitted to the New York City Council Committee on Technology Regarding Int. 1122 and Int. 878 on behalf of Verizon

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Dear Chair Jennifer Gutiérrez, Councilmember Holden and members of the Committee;

Thank you for the opportunity to submit testimony on behalf of Verizon regarding Int. 1122, a proposal to expand home access to broadband internet in New York City; and Int. 878, which would require OTI to create and maintain an online portal containing information related to cable franchises.

Verizon supports the goal of universal and affordable internet access for all New York City residents. Verizon has already demonstrated a robust commitment to promoting broadband accessibility and affordability in New York City (the "City"). We offer these comments to express our support for achieving these laudable goals and to caution against including heavy-handed mandates into any "Plan for Broadband Internet Access" ("Plan") that would hinder an internet service provider's ability to achieve these goals.

Since 2020, Verizon has demonstrated a commitment to providing affordable internet to residents of the City through its Verizon Forward program — Verizon's broadband offering for low-income households.[1] Verizon Forward offers Verizon Home Internet to eligible subscribers for as little as $20 a month, including Fios 300 Mbps at $20 per month for eligible residential customers who qualify for Verizon Forward and Lifeline.

Eligible subscribers can choose the plan that works best for them and apply Verizon Forward's discounts and savings — all with no equipment charges or annual contracts. Unlike other providers' home internet assistance programs that limit subscribers to slower speeds and fewer features than other subscribers, Verizon Forward offers its subscribers the same high-quality service and speeds as all Verizon customers. Verizon also complies with New York State's Affordable Broadband Act.

Verizon also offers an extensive team of employees that works closely with the community in New York City to: drive awareness of Verizon's services through community events and marketing activations, assist with signing residents up for service, facilitate resolution for escalations related to either resident

[1] Qualifying through one of certain assistance programs within 180 days of application:
- Affordable Connectivity Program,
- Lifeline – income 135% or less of the Federal Poverty Guidelines, or using SNAP, Medicaid, or other programs,
- Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), or
- Received a Federal Pell Grant within a year prior to application.

accounts or Verizon infrastructure on site, and ensuring residents and staff have a point of contact for any Verizon related issue.

And Verizon regularly invests in education and small business in the communities in which it operates, with a focus on bridging the digital divide and supporting the public safety community. For instance, to help bridge the digital divide in education, Verizon works with nonprofit partners and edtech leaders on the Verizon Innovative Learning initiative with a goal of providing 10 million youth with digital skills training by 2030. Within New York City itself, Verizon will provide 76,000 students with digital skills training by 2030. Additionally, Verizon has expanded access to its education programs to all educators nationwide through free access to immersive applications for any device and tech-focused learning resources on the portal, Verizon Innovative Learning HQ.

Verizon also offers Small Business Digital Ready, a free online curriculum for small business owners with courses, expert coaching, peer networking and exclusive incentives and grant opportunities. Verizon understands that small businesses are truly the lifeblood of our communities and Verizon also knows technology plays an increasingly critical role in small business success. As a result, in 2020 Verizon announced a 10-year commitment to provide one million small businesses with resources to help them thrive in the digital economy by 2030 — with a specific focus on supporting diverse businesses. Within New York City itself, Verizon will provide 20,000 small businesses with resources to help them thrive in the digital economy by 2030.

Verizon invests heavily in the City communities it serves, and will continue to do so. It applauds the City for this effort and believes the proposed Plan should avoid creating additional network, pricing, and speed mandates on internet service providers who already provide high-quality, low-cost internet options throughout the City.

With that context, we have a number of comments regarding elements of the Plan suggested in the proposed ordinance. With respect to infrastructure, Verizon has invested extensively in broadband infrastructure throughout the City and remains committed to continuing our investment in the shared goal of making affordable, high-quality broadband accessible to all residents. We recognize the important role public assets and infrastructure can play in achieving the goal of universal connectivity. Facilitating access to City property for network deployment, as well as encouraging shared use of infrastructure, including poles and buildings, can allow for more cost effective and efficient deployment. It will be important to implement a coordinated, transparent, and streamlined approach to managing assets made available for this purpose, including simple and standardized approval processes and clear guidelines for site access and cost allocation that ensure timely and equitable access for participating providers.

Verizon also welcomes efforts to identify and promote opportunities for both public and private investment in network infrastructure and looks forward to collaborating with the City to develop policies and processes that would effectively leverage City assets and public/private partnerships to advance the Plan's core objectives.

With respect to providing information on internet service providers' services, including the types of internet connections, speed packages, data caps, and usage policies, the Federal Communications Commission through its broadband label and broadband mapping requirements, and New York State through its own broadband mapping initiative, have already more than covered the field in ensuring the public has adequate information regarding these issues. We would recommend that the Plan direct

consumers to these existing resources rather than imposing an unnecessary requirement that would only confuse City residents given the other resources available.

Similarly, imposing response times for inquiries and complaint resolution procedures would not help City residents. The broadband industry is a competitive market, and consumers demonstrate whether providers offer adequate service by their choices in that marketplace. As a result, companies create processes to resolve complaints in the best way to compete for customers. Imposing such standards would divert scarce resources away from the meaningful efforts to ensure accessible and affordable broadband is available.
Finally, any funding mechanism for the Plan must come from existing City resources, and not impose any additional financial burden on internet service providers.

Verizon remains committed to partnering with the City to promote the objective of this Plan. We respectfully request consideration of the above-noted concerns and we would be happy to answer any questions you might have.

Regarding Int. 878, Verizon appreciates the Council's interest in transparency and the public availability of information related to cable franchise agreements. However, intro. 878 duplicates information already provided by the Office of Technology and Innovation (OTI). As the Council may be aware, OTI maintains a publicly accessible website that includes copies of the existing cable franchise agreements that set forth the geographical areas served.

Similar to the transparency goals of Int 1122, the information sought by Int. 878 is available in interactive and easily digestible formats via the FCC National Broadband Map, the New York State Broadband Map, and through the broadband consumer labels provided on Verizon's website as required by the FCC.

Verizon is committed to continuously investing in our network and remains committed to sharing information about our cable television service as required by the Cable Franchise Agreement. In fact, each year Verizon provides to OTI in its Annual Cable Consumer Report Card information about its customer service performance, subscriber rights and remedies, prices, channel changes and improvements, and significant outages. We believe that the current approach by OTI strikes the appropriate balance between transparency and practicality.

Testimony of AARP New York
Before the New York City Council Committee on Technology
April 29, 2025

Good morning, Chair Gutiérrez and members of the Committee on Technology. My name is Kevin Jones, and I am the AARP New York Associate State Director for Advocacy. I am here today on behalf of our 750,000 members in New York City and the more than 3.5 million older adults living in the five boroughs.

Reliable and affordable internet is no longer a luxury but a necessity. Internet access connects older adults to essential services like telehealth, online banking, grocery deliveries, educational programs, and social networks. It also plays a critical role in reducing social isolation and loneliness, which are significant threats to the health and well-being of older adults.

Yet, disparities in internet access significantly limit older adults' ability to live independently. Far too many older New Yorkers — especially in communities of color and low-income areas — remain on the wrong side of the digital divide. Research from Older Adults Technology Services (OATS) by AARP found that 22 million older adults in the United States lack broadband at home. In New York, only 61% of residents over the age of 65 subscribe to high-speed internet at home. For older adults, a lack of internet access impedes efforts to acquire the technical skills needed to remain active in the workforce.

AARP New York strongly supports the package of bills before the Committee today as vital steps toward making high-speed internet more affordable and accessible for all New Yorkers, particularly older adults.

In addition to our support for Intro 1122, AARP supports Intro 198, which would increase participation in discounted internet service programs through improved outreach and reporting. Older adults are often eligible for these programs but may not know they exist. We encourage the Council to ensure that outreach materials are multilingual, include information about digital literacy programs, and track older adult participation across neighborhoods.

We also support Intro 481, which promotes awareness of community-based broadband options. Expanding community broadband is a proven strategy to drive down costs and improve service quality. Additionally, we support Intro 483, which would expand free public Wi-Fi access through City agencies. While Intro 486 is primarily aimed at students and families, it will also benefit intergenerational households, including grandparents who are increasingly living with and helping raise school-aged children.

Finally, we support Intro 878, which would bring much-needed transparency to broadband availability, pricing, and service quality through an online portal. Publishing disaggregated data — by speed, technology, price, and zip code—will help expose digital inequities such as "digital redlining" and support smarter, more equitable policymaking.

Internet access is essential for aging in place, economic security, health, and civic participation. Every New Yorker, regardless of age, deserves to be connected. Older New Yorkers helped build

our city and make it great, and they deserve the tools to age with dignity and to thrive in the communities they love.

Thank you.

To: NYC Council – Committee on Technology
From: Noel Hidalgo, Executive Director of BetaNYC

Re: Internet Master Plan Hearing[1]

Tuesday, 29 April 2025

Dear Chair Gutiérrez, fellow Council Members, and Staff,

Digital literacy must be viewed as critical infrastructure.

Introduction

BetaNYC is a public interest technology non-profit dedicated to helping New Yorkers access information and use technology.

Since 2008, we have brought diverse groups of people to learn, earn, and grow their networks. We have trained and employed this committee's staff. We have taught over 50,000 New Yorkers how to use their data and mentored a new generation of civil servants on whom we depend. Our work has equipped New Yorkers with digital and data literacy tools to hold the government accountable.

For transparency, we are recipients of the State's Digital Equity Technical Assistance Grant.

Additionally, I am a father to a brilliant 33-month-old boy who was born with profound hearing loss and many medical complications. We have been dependent on telehealth and virtual therapists since his birth. Twice a week, my wife, son, and I leverage virtual meeting tools to meet with his teacher at Lexington School for the Deaf in Queens. We use the same technology to meet with representatives from the Department of Education and Early Intervention, who are scattered across the City. Every day, we use Signing Time, Signing Savvy, PBS Kids, YouTube, and a handful of digital media tools to entertain and learn American Sign Language.

The highlight of our week is when two aunties, Lauren and I, meet with our American Sign Language instructor, a Lexington graduate, to teach us ASL via Zoom.

At home, I have used every conceivable network connection—cable, DSL, and cell modem—and it took 10 years for FIOS to come to my small Greenpoint apartment. By the way, I'm delighted with FIOS, but I wish there were some competition.

[1] https://nyc.legistar.com/MeetingDetail.aspx?LEGID=21519&GID=61&G=2FD004F1-D85B-4588-A648-0A736C77D6E3

Your Internet Master Plan would ensure fast, bi-directional, high-speed internet connections, fueling my work, education, and my son's future.

About the Bills today

BetaNYC supports the Council's efforts to revive the Internet Master Plan. After a thorough read, we feel every bill should have a few additions.

- **Int 0198-2024**[2] - should ensure the data is publicly available on the City's open data portal.
- **Int 0481-2024**[3] **& Int 0486-2024**[4] - promotional materials should also be recorded in video with native American Sign Language (ASL) users, and there should be appropriate promotional materials in audio. Many of the City's materials are not designed for the City's D/deaf and blind communities.
- **Int 0483-2024**[5] - should prioritize all government buildings hosting public meetings. For example, every Borough Hall, School gymnasium, theater, DCAS-controlled conference space, every agency headquarters conference room, every, all Park or Library facilities with meeting rooms, etc.—*every government meeting room should have a secure, publicly accessible internet, period.*
- **Int 0878-2024**[6] - Historical rate data should be kept and published to the open data portal. There should be absolute transparency on speed, connectivity rates, and locations.
- **Int 1122-2024**[7] - We love that this bill has an advisory board. We propose leveraging this bill to help OTI execute its digital equity roadmap while ensuring that digital literacy is as critical as infrastructure.

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2 https://nyc.legistar.com/LegislationDetail.aspx?ID=6557530&GUID=6EE3C2FB-1FC6-4561-857A-4E9067A1363D&G=2FD004F1-D85B-4588-A648-0A736C77D6E3&Options=&Search=

3 https://nyc.legistar.com/LegislationDetail.aspx?ID=6558149&GUID=D16CB902-E069-4898-996C-9A3FE6F9C530&G=2FD004F1-D85B-4588-A648-0A736C77D6E3&Options=&Search=

4 https://nyc.legistar.com/LegislationDetail.aspx?ID=6558147&GUID=47E5DCDD-224C-4270-A0D7-744CDC049986&G=2FD004F1-D85B-4588-A648-0A736C77D6E3&Options=&Search=

5 https://nyc.legistar.com/LegislationDetail.aspx?ID=6558143&GUID=FAA1821D-1A8A-4687-A03F-B8098728B1FD&G=2FD004F1-D85B-4588-A648-0A736C77D6E3&Options=&Search=

6 https://nyc.legistar.com/LegislationDetail.aspx?ID=6695208&GUID=560055CA-DC10-49B4-9073-476AC5B160A5&G=2FD004F1-D85B-4588-A648-0A736C77D6E3&Options=&Search=

7 https://nyc.legistar.com/LegislationDetail.aspx?ID=7029043&GUID=1796A95A-4157-4070-A45C-3281D9637135&G=2FD004F1-D85B-4588-A648-0A736C77D6E3&Options=&Search=

Linking Digital Equity and Infrastructure

In 2021, the Biden Administration set out to link investments in infrastructure with economic recovery.[8] This led to digital equity being baked into a national strategy that fundamentally linked access to networks with literacy.[9] This is something that the state wrote extensively about in its 2024 plan, and the City has echoed again in its research with Section 8 recipients.[10][11][12] Digital literacy is as critical as infrastructure.

Ironically, the current Mayor entered office with a comprehensive digital equity strategy drafted, but it was built on top of the Internet Master Plan.[13] This former strategy would have placed NYC in a premier position to access federal funding.

Unfortunately, that plan was scrapped, and the city's digital equity plan would launch under a new federal administration. In March 2025, OTI released a digital equity roadmap that placed its focus on network access, not literacy.[14]

It is up to the Council to ensure that digital literacy is as critical as infrastructure. New York City needs digital equity goals and an Internet Master Plan that are not at the whims of corporations or administrations.

The City's plan calls for a Digital Equity Officer, which should be written into the Internet Master Plan while adopting digital literacy and digital equity, as defined by the NDIA, the State's Digital Equity Plan[15] and the Federal Digital Equity Act[16], so we're all working off of the same set of goals. (Digital Equity Act of 2021, Sec. 60301; NYC Digital Equity Roadmap, p 25.)

Second, the Mayor's plan calls for an advisory board. **We want the Council to provide guidelines and ensure that a revived internet master plan and all digital equity plans have the same advisory board**; these efforts must be unified. (NYC Digital Equity Roadmap, p 24)

Next, **we want every City-controlled conference room, theater, gymnasium, or public meeting room to have a secure, publicly accessible internet connection**. Additionally, if the City is going to invest in public institutions, like libraries, parks, and gigabit centers, they need to

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[8] https://www.congress.gov/bill/117th-congress/house-bill/3684
[9] https://www.brookings.edu/articles/the-american-rescue-plan-is-the-broadband-down-payment-the-country-needs/
[10] https://broadband.ny.gov/digital-equity
[11] https://www.nyc.gov/content/oti/pages/digital-equity
[12] https://www.nyc.gov/site/hpd/news/015-25/city-launches-neighborhood-tech-help-bridge-digital-divide-across-boroughs
[13] https://nextcity.org/features/what-happened-to-new-york-citys-internet-master-plan
[14] https://www.nyc.gov/content/oti/pages/digital-equity
[15] https://www.digitalinclusion.org/definitions/
[16] https://www.congress.gov/bill/117th-congress/house-bill/3684

be open when people need them. So, those locations need to be accessible when people need them.

Furthermore, **we need the City to invest in digital literacy for English language learners and language minorities, including users of American Sign Language**. (NYS Digital Equity Plan, p 100)

Next, **we need the IMP's Digital Equity to focus on easy-to-access NYC government information systems**. This is a noted challenge in the State's Digital Equity Plan. (NYS Digital Equity Plan, p 100)

Lastly, with significant federal funding cuts in education, research, and literacy, every digital literacy program that isn't bankrolled by big tech faces an uncertain future. With the federal government threatening free speech and equity programs, the City's underresourced communities are at a further disadvantage. **The City must baseline digital equity funding, or let big tech dictate our digital future.**

This is why digital literacy is as critical as infrastructure.

Thank you for giving us this opportunity, and I look forward to meeting with you about these details.

Noel Hidalgo
Father
Executive Director

Caribbean Preparedness & Response, Inc.

Testimony of José Luis Rodríguez
Executive Director, Caribbean Preparedness and Response (CPR)
New York City Council – Committee on Technology

April 29, 2025

Good morning, Chair Gutiérrez and members of the Committee. My name is José Luis Rodríguez, and I serve as Executive Director of Caribbean Preparedness and Response, or CPR.

CPR is a nonprofit organization dedicated to resilience and digital participation for Caribbean and Latino communities, both here in New York City and across the broader region—including other parts of the state, Puerto Rico, Connecticut, and Pennsylvania. Since our inception responding to emergencies in the Caribbean, our mission has focused on the role of communications and connectivity in disaster preparedness and recovery involving diaspora communities. Today, we are leading efforts to expand access to broadband in under-resourced communities through satellite-based solutions, digital navigation programs, digital community centers, youth-centered digital learning initiatives, and workforce development, among others, with the goal of continuing operating and growing as a nonprofit internet provider for our communities.

We believe that any legislative effort to bolster access to broadband is not only noble but essential. These bills reflect a shared understanding that connectivity is a lifeline for education, employment, health, and civic participation. We fully support these introductions—particularly Intros 198, 481, 483, 486, and 1122.

However, I want to raise an important gap. The City's digital equity framework does not reference the State's Digital Equity Plan, nor does the current Internet Master Plan meaningfully integrate digital equity as a guiding principle. We urge the Council to ensure future versions of both plans center this concept more explicitly and coordinate across all levels of government.

Finally, with regard to Intro 1122—we believe this bill is critical. A comprehensive and regularly updated broadband expansion plan, including the use of alternative technologies as defined by the State—such as unlicensed fixed wireless and low Earth orbit (LEO) satellite services—paired with an advisory board, is exactly the kind of strategic infrastructure we need. CPR would be honored to support this effort in any capacity that may be helpful. Additionally, the City should include provisions to incentivize and support alternative internet service providers like CPR as part of these broadband expansion plans, ensuring that community-based and mission-driven models are part of the solution.

Thank you for the opportunity to testify, and for your leadership on digital equity.

José Luis Rodríguez
Executive Director
Caribbean Preparedness and Response, Inc.
jlrodriguez@cprcaribe.org
[redacted]

New York City Council Committee on Technology's hearing on Expanding Internet Access for All New Yorkers
Tuesday, April 29, 2025

Testimony by Andrew Rasiej, Founder of Civic Hall and MOUSE.org

Hello, my name is Andrew Rasiej. I am the founder of Civic Hall, the City's and the country'slargest digital skills training center focused on providing underestimated populations with the skills they need to compete for jobs in New York's growing tech ecosystem.

I am also the founder of MOUSE.org, which began wiring New York City public schools to the internet all the way back in 1997 — at a time when even if a single teacher in a school had an AOL account, Vice President Al Gore would have considered that school "wired to the internet." Suffice it to say, bridging the digital divide has been my life's work.

A quality education, safe and secure housing, and access to essential infrastructure are the pillars that lift up marginalized communities — and today, broadband access must be recognized as essential infrastructure.

Thanks to years of both public and private investment, virtually every New Yorker now lives in an area where reliable broadband service is available. But availability alone isn't enough. The real challenges we face are adoption — ensuring seniors and low-income families have the digital skills they need — and making sure every household has a computer or tablet to actually access the internet.

We have made important strides. Irrespective of some of the criticism's heard today, programs like Big Apple Connect are providing free internet to more than 300,000 New York City Housing Authority residents — and that number continues to grow. Big Apple Connect shows what's possible when the City works hand-in-hand with providers to deliver fast, affordable service by leveraging the infrastructure already in place.

Another important tool is the state's requirement that broadband providers offer $15-a-month service to low-income families who qualify through programs like SNAP, Medicaid, and the National School Lunch Program. Many New Yorkers are eligible today — the challenge is getting the word out and helping them enroll.

As we move forward, we must be careful about investing in duplicative infrastructure in ways that make sense but also thoughtful about ways some of those resources could be directed toward bridging other parts of the digital divide — including funding digital skills training and providing devices, so that all New Yorkers can fully participate in the opportunities broadband access creates.

The good news is broadband is more affordable and more accessible than ever before. Now is the time to finish what we have begun with broadband and moving on to ensure that every New Yorker can use it effectively to meaningfully participate in digital economy of our City.

Thank you for your time and for your commitment to closing the digital divide in New York City.

Andrew@CivicHall.org.

hispanicfederation

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Testimony re: Evaluating the City's Plan to Connect All New Yorkers to the Internet

Submitted to New York City Council Committee on Technology

Submitted by Ingrid Álvarez, Vice President for Policy and Strategic Engagement

April 29, 2025

Thank you, Chair Gutiérrez, and members of the Committee, for the opportunity to submit written testimony. My name is Ingrid Álvarez, and I serve as Vice President for Policy and Strategic Engagement at the Hispanic Federation (HF)— a nonprofit organization dedicated to empowering and advancing Hispanic communities through programs and legislative advocacy. HF's testimony is also informed by the insights of our more than 100 New York City-based member agencies, all committed to improving outcomes and shared opportunities for Latinos across New York.

We know that digital access and literacy are no longer optional—they are essential. According to the National Skills Coalition, over 90% of today's job postings require at least one digital skill, and half of all workplace tasks will be digitally oriented within the next decade. Yet, more than half of Latino workers have limited or no digital skills and remain among the least likely racial and ethnic groups to have reliable broadband at home.

This is a stark disparity—and one we are committed to changing every single day.

Thanks to programs like Big Apple Connect and affordable internet offerings such as the $15/month service plans, more Latino families are gaining access to broadband than ever before. These gains have been made possible through sustained investments by both the City and private internet providers, and they represent a major milestone in addressing the challenge of internet accessibility.

However, access alone is not enough. We must match this progress with an equally robust investment in digital skills development. It is critical that all New Yorkers—particularly those in historically marginalized communities—can learn in settings that are accessible, culturally responsive, and community-based.

Digital equity isn't just about connecting devices—it's about connecting people. When we invest in an inclusive digital future for New York, we unlock the power of diverse perspectives and experiences needed to lead and innovate. A level playing field empowers historically marginalized communities and drives better outcomes for all New Yorkers.

Hispanic Federation's initiatives, such as the Latino Digital Accelerator, local learning labs, and workforce training programs, are helping families and workers build the 21st-century skills needed to succeed. These efforts are already making a measurable difference, both immediately and in the long term.

We deeply appreciate the Council's leadership in expanding broadband adoption, funding digital navigator programs, and supporting tech-skills training. Your commitment to equity and innovation has helped set a national example for what is possible when government leads with intention.

The City's digital equity strategy is working—and Hispanic Federation is proud to be a partner in this important work. But we cannot lose momentum. We urge you to continue prioritizing the programs that are delivering real results in our communities.

Our families—and our city—are stronger when everyone has a chance to thrive in the digital age.

Thank you for your leadership and continued support.

Sincerely,

Hispanic Federation

TESTIMONY REGARDING "EVALUATING THE CITY'S PLAN TO CONNECT ALL NEW YORKERS TO INTERNET"

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

April 29, 2025

* * * * * *

Executive Summary

New York City is a well-connected city. In this testimony, the ACLP respectfully offers the Council, the Mayor, and other stakeholders in city government five foundational recommendations for developing focused, forward-looking broadband policy:

- **Recommendation #1 (p. 3-4)**: Define broadband connectivity terms like "access" and "adoption" accurately.
- **Recommendation #2 (p. 4-7)**: Understand what the data say about broadband connectivity in NYC. These data make clear that (1) broadband is available to 99.98% of households and (2) broadband adoption rates have plateaued in recent years despite the availability of subsidies to offset subscription prices.
- **Recommendation #3 (p. 7)**: Inventory existing efforts to close NYC 's digital divide. The city can and should engage more and more effectively with the expert private and nonprofit firms working to bring more people online and delivering critical digital literacy training.
- **Recommendation #4 (p. 7-9)**: Understand the costs and benefits of city actions to address broadband issues. Numerous past endeavors by city government underscore that NYC is poorly suited to build broadband infrastructure but well positioned to support targeted demand-side programming.
- **Recommendation #5 (p. 9)**: Use these inputs to develop a strategy that positions city government as an enabler of the successful efforts of others to close the city's digital divide.

Introduction

Thank you for the opportunity to offer testimony today.

My name is Michael Santorelli. I am the 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 20 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]

Today, the Council is addressing a question that has been asked and answered in different ways by a variety of Council Members, Mayors, and other stakeholders over the last two decades, namely: what can the city do to "achieve universal, affordable, and equitable access to internet in homes" across NYC?[3] The framing of this question seems to suggest:

1. New York City still lacks "universal, affordable, and equitable" internet access across the five boroughs, and
2. City government must play a lead role in achieving these goals.

Data, however, tell a much different story about the state of broadband in NYC and the most impactful role for government vis-à-vis enhancing connectivity. In this testimony, we respectfully urge the Council – and city government more broadly – to use data to precisely calibrate its actions in the broadband space. Doing so will ensure that city government plays only a limited role in addressing connectivity challenges, one that supports, rather than supplants, the efforts of stakeholders in the private and nonprofit sectors to bring more New Yorkers online.

This testimony offers the Council, the Mayor, and other stakeholders in city government 5 recommendations for addressing broadband challenges facing New Yorkers:

- **Recommendation #1**: Define terms accurately.
- **Recommendation #2**: Understand what the data say about broadband connectivity in NYC.
- **Recommendation #3**: Inventory existing efforts to close NYC 's digital divide.
- **Recommendation #4**: Understand the costs and benefits of city actions to address broadband issues.
- **Recommendation #5**: Use these inputs to develop a strategy that positions city government as an enabler of the successful efforts to close the city's digital divide.

Each recommendation is discussed more fully below.

Recommendation #1: Define Terms Accurately

Broadband discussions in NYC and elsewhere tend to be muddled by the misuse of key terms and concepts describing broadband connectivity. To assure productive discussions and support impactful planning, it is critical that all stakeholders define and deploy these terms correctly.[4]

Access & Adoption. For example, the Council and other stakeholders often confuse broadband "access" with "adoption."[5] Like most terms discussed here, these are terms of art in the broadband space, which means they have specific definitions. In general, "access" is typically used interchangeably with "availability" – *i.e.,* broadband is accessible to a consumer if a connection is readily available. "Adoption," on the other hand, indicates when a person or household subscribes to broadband. Adoption requires access to an available broadband connection.

Affordability. Similarly, broadband "affordability" is often mistakenly used in broadband policy discussions as a synonym for low-cost or free internet access. This, in turn, incorrectly suggests that the affordability of broadband is solely a function of how much it costs. As the ACLP has discussed extensively elsewhere:

> "Deciding whether something is "affordable" is almost entirely subjective and hinges on a variety of personal factors, like the extent to which someone views a good or service as necessary. For these reasons, affordability is typically viewed as a consumer sentiment rather than an objective economic indicator. Unfortunately, these nuances rarely come up in conversations about broadband. Instead, policymakers, commentators, and others continue to assert, despite ample data to the contrary, that the "affordability" of broadband is the primary, if not sole, impediment to more robust adoption and use. Sadly, this misinformed view has begun to influence policy.
>
> "A leading example comes from the $42.5 billion BEAD program. A creature of the Bipartisan Infrastructure Law, BEAD represents the largest ever expenditure of federal resources for broadband. A goal of BEAD is to bolster "affordable" broadband by requiring grant recipients to offer low-cost broadband service at a set price – typically in the range of $30-$60/month – to qualifying low-income households.
>
> "The explicit linkage of price and affordability – that low prices automatically make something affordable – reflects the reductive thinking about broadband adoption that has prevailed for years. It also underscores the need for having a more exacting focus on the many other factors that influence whether people subscribe to high-speed internet service."[6]

As discussed more fully below, data on broadband adoption trends in NYC over the last few years support this more nuanced view of affordability, one that revolves around subjective notions like relevance rather than solely on how much broadband costs.

Digital Equity & Digital Inclusion. Finally, numerous stakeholders have begun to incorporate notions of equity into broadband connectivity discussions. The Council, for example, wishes to assure "equitable" internet access.[7] The Council, however, leaves this term undefined. "Digital equity" was recently defined by Congress as "the condition in which individuals and communities have the information technology capacity that is needed for full participation in the society and economy of the United States."[8] This is a flexible definition encompassing the critical notion of people having a meaningful opportunity to harness or benefit from the transformative power of broadband. The Council might wish to adopt this definition.

In addition, the Council might wish to also use the term "digital inclusion," which describes the mechanics by which digital equity can be achieved.[9] Congress has defined "digital inclusion" as "the activities that are necessary to ensure that all individuals in the United States have access to, and the use of, affordable information and communications technologies" and includes critical activities like digital literacy training and similar demand-side interventions.[10] Digital inclusion seems to be a more precise term in the context of broadband connectivity discussions and might also be appropriate.

Recommendation #2: Understand What the Data Say About Broadband Connectivity in NYC

Too often, broadband discussions in NYC and elsewhere are not sufficiently informed by the latest data regarding broadband availability and adoption. Fortunately, present discussions about broadband connectivity come at a time when data collection has improved significantly due to the ongoing planning for allocating federal grant funding, notably via the BEAD program.

Broadband Availability in New York City. Data collected by the New York State broadband office (aka ConnectALL) as part of the BEAD Challenge Process indicates that broadband of at least 100/20 Mbps is available to 99.98% of households across the city.[11] This means that, across NYC's 3.9 million locations capable of supporting a broadband connection, the vast majority of which are households, there are 723 locations that lack access to a broadband connection capable of delivering 25/3 Mbps or faster service and only 17 locations that lack access to a connection of at least 100/20 Mbps or faster.[12] The following table identifies where these gaps remain.[13]

Borough	Remaining Unserved & Underserved Locations
Bronx	82
Brooklyn	217
Manhattan	229
Queens	176
Staten Island	36

These data should be seen as authoritative because they have been scrutinized by federal and state officials, as well as ISPs, residents, and other community stakeholders.[14] Indeed, community stakeholders were given numerous opportunities to challenge the veracity of this information. Accordingly, as of early 2025, these data make clear that broadband is just about universally available across the city.

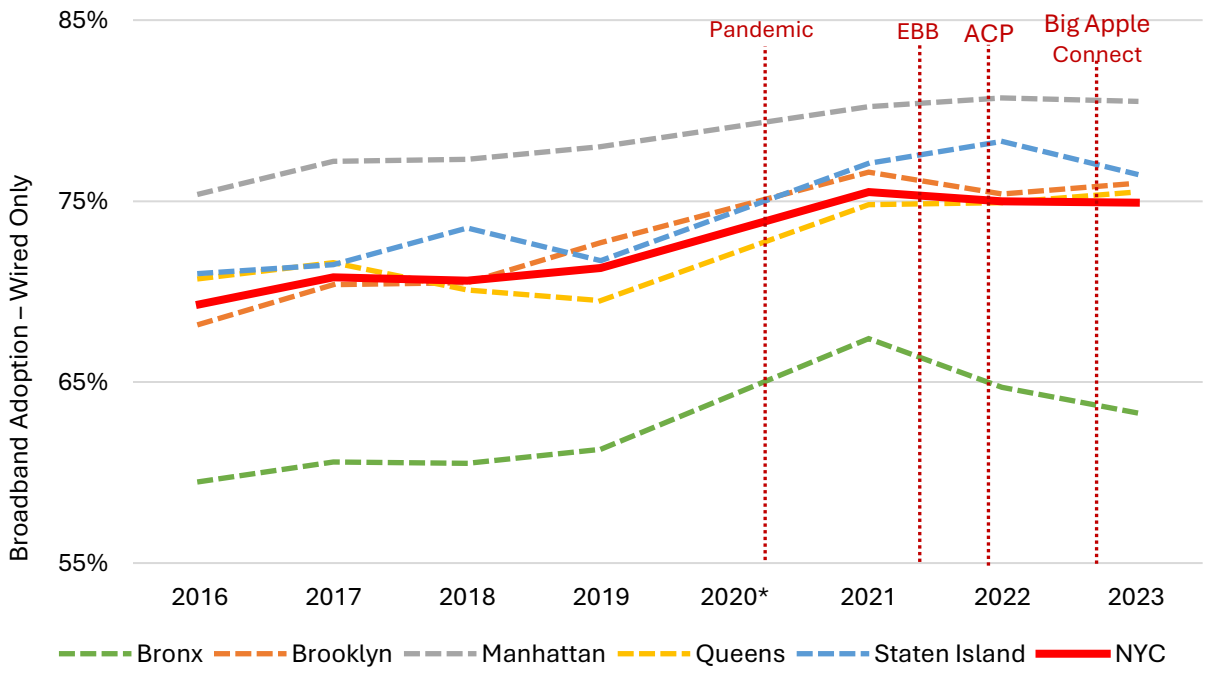
Broadband Adoption in New York City. Broadband adoption data are not quite as fresh as availability data because adoption data is collected nationally and processed by the Census Bureau, creating a lag of several years between data collection and release. Even so, the latest broadband adoption data for NYC (from 2023) offer several important insights that should inform policy discussions at the Council going forward.

The first insight is that broadband adoption has continued to tick up in recent years. Per the Census Bureau's American Community Survey, adoption rates of both broadband "of any type" (*i.e.*, anything-but-dialup, including wireless connections) and wired broadband (*i.e.*, "cable, fiber optic or DSL") have increased since 2016. The following table summarizes these data.[15]

	Wired & Wireless Adoption	Wired Adoption
2023	91.8%	74.9%
2022	89.5%	75.0%
2021	90.0%	75.5%
2019	85.1%	71.3%
2018	84.0%	70.6%
2017	82.4%	70.8%
2016	80.0%	69.3%

The second insight is that these gains appear to be driven in part by the availability of subsidies to offset the cost of a broadband subscription. The chart below depicts the growth

of broadband adoption in NYC along with the timing of previous interventions aimed at boosting take-rates.



Source: US Census Bureau ACS 1-Year Estimates **Data for 2020 is imputed*

This chart demonstrates that pandemic-era interventions, notably the provision of significant monthly subsidies to offset the cost of a broadband subscription, first via the Emergency Broadband Benefit (EBB) and its successor, the Affordable Connectivity Program (ACP), helped to increase adoption rates by several percentage points. Those programs were aimed at making broadband more "affordable" by lowering the cost to zero in many cases when the subsidies were combined with low-cost offerings by ISPs like Charter and Verizon.[16]

The third insight is that broadband adoption rates will only increase so much even when broadband is available at discounted prices or for free. One recent study found that ACP yielded a 3% overall increase in broadband adoption.[17] Survey data collected by the FCC confirms this dynamic: Only about 20% of ACP enrollees used their subsidy to purchase their first internet connection; all other enrollees used their subsidies to purchase *additional* broadband services (*e.g.,* to upgrade a service offering, add another mobile broadband plan to their bill, etc.).[18]

These data make clear that government interventions that focus on bringing down the cost of broadband will only yield minimal improvements to the overall broadband adoption rate. *Indeed, some surveys have found that, even when offered for free, many people will still choose to remain offline. Why? Because they do not see broadband as relevant to their life.*

As such, they are less willing to invest any amount of money in broadband or accept it for free. This is eye-opening but not shocking because relevance has long topped the list of reasons why people remain unconnected to broadband.[19] *Unfortunately, policymakers at every level of government continue to ignore this core finding and choose instead to focus on making broadband more "affordable" by trying to lower its cost – rather than increasing it relevance*. A more robust focus on increasing the value proposition to digital holdouts is thus necessary – and long overdue – in NYC.

Recommendation #3: Inventory Existing Efforts to Close NYC's Digital Divide

New York City has long been home to an impressive array of private and nonprofit organizations that have helped close the digital divide and deliver much-needed training to broadband users across demographics. Many of these entities participated in the state's digital equity planning processes, providing input to inform New York's strategy for leveraging available digital equity grant funding to expand the reach of new and existing offerings.[20] However, it does not appear that the city has endeavored to inventory all the organizations, let alone seek to understand what they offer, how they operate, and what the city can do to extend their reach. The mayor's recently released "Digital Equity Roadmap" does not appear to acknowledge the robustness of the city's social infrastructure, which has proven incredibly effective at delivering tailored outreach and training programs in under-adopting communities across NYC.[21]

Creating an inventory of organizations that have helped and are helping close the digital divide – and developing strategies to help extend the reach and efficacy of those organizations – is an important next step.

Recommendation #4: Understand the Costs & Benefits of City Actions to Address Broadband Issues

As the Council and Mayor contemplate whether and how to engage in broadband planning, examining the outputs of the many previous attempts by the city to develop and implement broadband strategies is instructive. The Council and Mayor should endeavor to use the lessons of these past activities – including failures – to inform its efforts going forward.

In terms of broadband planning efforts, there have been many over the years, including, among others:

- Bloomberg-era Telecommunications Action Plan (2005) developed by DOITT, DSBS, and EDC with the support of a task force comprised of experts from the private and nonprofit sectors and academia.[22]
- NYC Council legislation (2006) establishing a broadband advisory committee that was tasked with convening hearings in each borough and delivering a report to the

mayor.[23] Hearings were convened between 2006 and 2009; a formal report was never issued.

- Mayor Bloomberg's Roadmap for the Digital City report (2011)[24] and subsequent Digital Leadership Roadmap (2013).[25]
- A de Blasio-era Broadband Task Force (2015), which does not appear to have issued any formal reports or recommendations.[26]
- Mayor de Blasio's Internet Master Plan (2020), which baselessly called for the city to invest $2+ billion to overbuild existing broadband infrastructure with a citywide open access fiber network.[27]
- Mayor Adams's Digital Equity Roadmap (2025).

In addition to these activities, the city has also played a variety of supporting and lead roles in attempting to address broadband challenges. These have included, among others:

- Administering $40 million in federal BTOP grants focused on bolstering broadband adoption in underserved communities (2009-2010).[28]
- Investing nearly $1 billion to build a public safety wireless network (NYCWiN) that teetered on the brink of failure several years ago because of the city failed to upgrade its software.[29] Since then, the city has forged a public-private partnership with T-Mobile to enhance wireless services for public safety.[30]
- LinkNYC (2016), a public-private partnership initially hailed as a primary means of closing the city's digital divide. Over time, however, the project has faltered numerous times and failed to achieve any of its initial goals.[31] Subsequently, the city has attempted to revive this struggling initiative by rebranding it as Link 5G and repurposing some LinkNYC kiosks as miniature (or not so miniature) wireless towers capable of housing 5G antennae.[32]
- During the pandemic (2020-2021), the city partnered with a variety of ISPs to deliver low-cost connectivity and free hardware (*e.g.,* tablets) to help assure adequate connectivity for remote work, schooling, and healthcare.[33]
- In 2022, Mayor Adams launched Big Apple Connect, a program that, in partnership with cable ISPs, provides free broadband connectivity to over 100,000 NYCHA residents.[34]

The primary lesson learned from these activities – including numerous costly failures – is that the city is best positioned to serve as a supporter of efforts by private and nonprofit partners to bring more people online. In the past, such supportive, demand-side efforts have yielded sizeable gains in broadband adoption – from BTOP-era programs administered by DOE and DOITT through Big Apple Connect.

As evidenced by the myriad, costly failures of the city to try to build broadband infrastructure, the city is poorly suited to play the lead-role in addressing these issues. There has never been a need for the city to build public broadband networks, as broadband has been widely available for years. Further, broadband is now universally accessible. That the city has achieved 99.98% broadband availability without having to build city-owned broadband infrastructure should be celebrated. It should not be interpreted as an invitation to meddle in what by every measure is an incredibly vibrant and intensely competitive local market for wireline and wireless broadband services.

Recommendation #5: Use These Inputs to Develop a Strategy for Positioning the City as an Enabler of the Successful Efforts of Others to Close NYC's Digital Divide

In view of the above, the optimal role for city government vis-à-vis enhancing broadband connectivity is to continue: (1) facilitating broadband expansion and encouraging network upgrades by private ISPs; and (2) supporting the expansion of programs and approaches that have succeeded in bringing more people online and delivering digital literacy training.

The preceding analysis also demonstrates that the city's broadband challenges lie solely on the demand-side – *i.e.,* lagging broadband adoption in certain communities, a need for more robust digital literacy offerings, etc. Unfortunately, the city, for too long, has underinvested in addressing these demand-side issues. It has taken laudable steps in recent years, notably launching Big Apple Connect, and during the pandemic, it also facilitated partnerships with ISPs and others to deliver access devices and connections to those who needed them most. Significantly more coordination and support for these kinds of initiatives that are led by expert private and nonprofit firms is needed to make continued progress towards bringing as many New Yorkers online as possible.

Conclusion

In sum, the city alone cannot close the digital divide, enhance digital literacy, upskill the work force, or otherwise prepare New Yorkers to thrive in the modern digital world. Achieving these goals will require the collaboration of dozens of organizations across the public, private, and nonprofit sectors working in concert to deliver programming and services to under-adopting communities across the city. Making progress on this front requires knowledge of the myriad potential partners already working to connect the unconnected and deliver digital literacy training. Identifying and partnering with these firms must be the priority for the city going forward.

Thank you again for the opportunity to offer testimony today.

Notes & Sources

[1] For additional information, please visit www.nyls.edu/aclp and www.broadbandexpanded.com.
[2] The ACLP has testified before the City Council numerous times 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.
[3] *A Local Law to amend the administrative code of the city of New York, in relation to a plan for expanding home access to broadband internet*, Int. 1122-2024, https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=7029043&GUID=1796A95A-4157-4070-A45C-3281D9637135&Options=&Search= ("*Int. 1122-2024*").
[4] For further discussion on these and related topics, please see *State and Local Policymaker's Broadband Planning Tool Kit*, ACLP at New York Law School (Oct. 2022), https://broadbandexpanded.com/files/toolkit/ACLP%20-%20Broadband%20Planning%20Tool%20Kit%20-%20October%202022.pdf ("*Broadband Planning Tool Kit*").
[5] *See, e.g.,* https://council.nyc.gov/data/internet-access/.
[6] Michael Santorelli, *Why It's Time to Get Over the Broadband Affordability Fixation,* Sept. 26, 2024, Forbes, https://www.forbes.com/sites/washingtonbytes/2024/09/26/why-its-time-to-get-over-the-broadband-affordability-fixation/ ("*Affordability Fixation*").
[7] *See, e.g., Int. 1122-2024*.
[8] Bipartisan Infrastructure Law § 60302 (10).
[9] For further discussion, *see Broadband Planning Tool Kit*.
[10] Bipartisan Infrastructure Law § 60302 (11).
[11] Data and analysis on file with the ACLP.
[12] Data and analysis on file with the ACLP.
[13] Data and analysis on file with the ACLP.
[14] For an overview of this process, see https://broadband.ny.gov/new-york-state-broadband-challenge-process.
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[16] For an overview of those offerings, *see Broadband Planning Tool Kit*.
[17] Hernan Galperin et al., *A Preliminary Assessment of the ACP Program,* Aug. 2024, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4913528.
[18] *Measuring the Impact of ACP: Survey Results,* FCC, https://www.fcc.gov/sites/default/files/ACP-Survey-Results.pdf.
[19] *Affordability Fixation*.
[20] *See generally New York State Digital Equity Plan* (June 2024), https://broadband.ny.gov/system/files/documents/2024/06/final_new-york-state-digital-equity-plan-accessible.pdf.
[21] *The New York City Digital Equity Roadmap* (March 2025), https://www.nyc.gov/assets/oti/downloads/pdf/DE-Roadmap.pdf.
[22] On file with the ACLP.
[23] Local Law 126 of 2005.
[24] See https://www.nyc.gov/html/media/media/PDF/90dayreport.pdf.
[25] See https://www.nyc.gov/office-of-the-mayor/news/338-13/mayor-bloomberg-releases-to-digital-roadmap-plan-ensure-new-york-city-remains-leading#/0.
[26] See https://www.nyc.gov/office-of-the-mayor/news/226-15/de-blasio-administration-escalates-efforts-close-digital-divide-drive-down-cost-internet.
[27] See https://www.nyc.gov/assets/cto/downloads/internet-master-plan/NYC_IMP_1.7.20_FINAL-2.pdf.
[28] For an overview of these programs, see https://nycdoitt.tumblr.com/post/88280937187/nyc-connected-programs-honored-at-the-first-ever.
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[30] *See, e.g.,* Keely Quinlan, *NYC Selects T-Mobile as City Operations, First Responder Network Carrier,* Feb. 26, 2025, State Scoop, https://statescoop.com/t-mobile-nyc-carrier-deal-2025/.
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[34] NYC, Big Apple Connect, https://www.nyc.gov/assets/bigappleconnect/index.html.

New York
Urban League

New York City Council
Committee on Technology
City Hall
New York, NY 10007

Dear Council Members,

On behalf of the New York Urban League and the communities we serve, I write to express our strong support for the Big Apple Connect program and to urge the City Council to continue investing in these types of practical, equitable solutions that advance digital equity for all New Yorkers, especially those who have historically been left behind.

We believe that quality education, access to good jobs, and healthcare are the pillars that lift up marginalized communities and advance racial and economic justice. As we all know, the world is changing around us, and part of that change is our reliance on the internet. Reliable, high-speed internet is not a luxury anymore. It is a necessity for learning, working, and fully participating in civic life. The COVID-19 pandemic showed us how devastating the digital divide can be, disproportionately affecting communities of color and low-income families. We have seen firsthand how lack of quality internet can cut students off from learning opportunities and adults from participating in the workforce.

Big Apple Connect is a powerful example of how targeted, public-private partnerships can make a real difference. By using existing broadband infrastructure and working with trusted providers, the city has delivered free internet and TV services to over 300,000 NYCHA residents, reaching some of our most vulnerable neighbors quickly and efficiently. This approach aligns with the Urban League's values. This is a gamechanger for helping people get connected, for school or for work. Rather than investing in costly, slow-to-deploy infrastructure, Big Apple Connect focuses on connecting people now where they are.

Broadband availability in New York City is among the best in the nation, with many neighborhoods served by multiple providers and new technologies like 5G and satellite expanding access even further. Research from the independent internet research website *Broadband Now* shows that almost all of New York City is served by 2 or more providers with the average home in Manhattan being served by 5 to 6 providers. But, even with all of this competition, as our National Urban League President Marc Morial has emphasized, one of the main obstacles in urban communities is digital literacy. I commend the city for implementing programs like Neighborhood Tech Help to educate low-income New Yorkers to learn how to get online, set up their devices, and help people avoid online scams. This program along with Big Apple Connect will help bridge the digital divide in our city and make it more equitable.

New York Urban League

We urge you to keep the focus on what works: scaling up proven programs, spreading awareness about existing low-cost options, and ensuring that every family, regardless of zip code, race, or income, can access the opportunities that come with being connected. Digital equity is within our grasp, and New York City is leading the way. Let's continue to build on this momentum and make sure no one is left behind.

Sincerely,

Arva Rice
President & CEO
New York Urban League

New York City Council Committee on Technology

Honorable Jennifer Gutiérrez, Chair

Oversight and Legislation: Evaluating the City's Plan to Connect all New Yorkers to Internet

April 29, 2025

Testimony of Nell Eckersley, New York City Alliance for Digital Equity (NYCADE)

Good morning, Council Members. My name is Nell Eckersley and I am submitting this testimony today representing the **New York City Alliance for Digital Equity (NYCADE)**. **NYCADE is an umbrella group of individuals, organizations, and coalitions from across New York City working on digital equity and access issues**. Our **vision** is **to ensure every individual and community in New York City has the resources and opportunities to thrive in a digitally-connected world, breaking down barriers to access and fostering a future where digital equity is a reality for all**. Our **mission** is **to champion comprehensive digital inclusivity by uniting coalitions, organizations, and individuals dedicated to equitable access to digital tools, high-speed internet, and digital literacy education resources**. We empower our members through advocacy, education, and collaboration. We understand that this

Committee is considering Int. 1122-2024, a Local Law to amend the administrative code of the city of New York in relation to a plan for expanding home access to broadband internet.

NYCADE **strongly supports the intention of this bill** to develop and publish a plan to make universal, affordable, and equitable internet available in homes throughout the city. We recognize this important effort as building upon the groundwork of the **New York City Internet Master Plan** published in January 2020. This earlier plan also aimed to make the internet affordable and inclusive for City residents and presented a vision for universal connectivity. It recognized that millions of New Yorkers lacked home or mobile broadband and that affordability was a major barrier. The Master Plan laid out a vision for the City's role in shaping broadband infrastructure and service towards universal access. Council Member Gutiérrez has also expressed the desire to "resurrect the Internet Master Plan".

As you move forward with Int. 1122-2024, we urge the Council to ensure that this new plan is **explicitly connected to and mutually reinforcing with the existing ConnectALL New York State Digital Equity Plan**.

The ConnectALL initiative, led by the New York State Empire State Development ConnectALL Office, is a comprehensive statewide effort. Its mission is to build New York State's digital infrastructure to connect all New Yorkers to internet service and ensure they can benefit from being online. This plan is grounded in a theory of change that aligns with the vision of ending the digital divide and ensuring universal access to high-speed, reliable, and affordable broadband. Aligning the City's plan with ConnectALL is key to ConnectALL's overarching strategy. ConnectALL has convened representatives from State

agencies since 2020 to develop strategy and identify partners. They also worked closely with the New York City Office of Technology and Innovation (OTI) to develop recommendations, incorporating insights from City agencies serving covered populations. Furthermore, ConnectALL partnered with **Digital Equity Coalitions (DECs)** and community groups across the state and in every Borough of New York City to host listening sessions, demonstrating a commitment to incorporating local needs. These listening sessions helped solidify regional partnerships and gather baseline data. The ConnectALL plan also includes a Digital Equity Asset Inventory, a searchable database of programs and organizations. This inventory represents a baseline capacity for New York and includes benchmarks for growth.

Connecting the City's plan to this statewide strategy will be crucial for several reasons. Firstly, it will allow for the alignment of efforts towards a common goal of digital equity across the state. Secondly, it will leverage potential state and federal funding opportunities available through programs like the Broadband Equity, Access, and Deployment (BEAD) Program. ConnectALL has already developed a Five-Year Action Plan for the BEAD program. Coordinating with the state plan can ensure that the City's initiatives are strategically positioned to capitalize on these funding streams. Finally, it will ensure a consistent and equitable approach to digital equity for all New Yorkers, regardless of where they reside. The ConnectALL plan itself reviewed existing county and municipal plans, suggesting a framework for integrating local initiatives.

Int. 1122-2024 takes an important step towards addressing digital equity by mandating a plan to make **universal, affordable, and equitable internet available in**

homes. The bill explicitly mentions the need to **prioritize access for areas that do not have at least 1 affordable home internet service option**, which aligns with the affordability concerns addressed by ConnectALL and the earlier Internet Master Plan. The requirement for the department to **solicit public input through public hearings and comments from stakeholders and the public** mirrors the extensive stakeholder engagement undertaken by ConnectALL.

Furthermore, NYCADE respectfully requests that any plan developed under Int. 1122, and indeed any discussion or allocation of internet funding by the City, **explicitly incorporates all the elements defined under digital inclusion**. The ConnectALL plan also reflects this holistic approach in its broad strategies. These elements are:

1. **Affordable, robust broadband internet service:** Int. 1122 specifically mentions "affordable" and "low-cost" home internet. The ConnectALL plan also addresses affordability through strategies like increasing awareness and adoption of internet affordability programs, including the Affordable Connectivity Program (ACP). However, the City's plan should consider a range of affordability solutions and explore sustainable models beyond existing federal subsidies, aligning with ConnectALL's broader goal of ensuring affordable broadband. The importance of "reliable broadband" is also noted in ConnectALL's mission and the comments received during its development.
2. **Internet-enabled devices that meet the needs of the user:** The ConnectALL plan includes an "Accessible Device & Device Support Strategy". The City's plan

should include provisions for device access and support, potentially coordinating with statewide efforts and exploring device refurbishment programs as suggested in the ConnectALL feedback.

3. **Access to digital literacy training:** The ConnectALL plan has a dedicated "Digital Literacy Strategy" and recognizes its critical role. The City's plan should build upon existing digital literacy assets, such as libraries and community-based organizations, and ensure coordination with any statewide digital literacy initiatives under ConnectALL. Several public comments on the ConnectALL plan emphasized the importance of digital literacy training and support. The City of New York already has a "**Neighborhood Tech Help**" initiative, demonstrating the need for such support.

4. **Quality technical support:** The need for technical support is evident in the ConnectALL plan, particularly regarding device support and assisting individuals with online portals. The City's plan should consider providing quality technical support, potentially by investing in digital navigator programs and supporting existing community-based support networks, aligning with suggestions made during the ConnectALL public comment period.

5. **Applications and online content designed to enable and encourage self-sufficiency, participation, and collaboration:** ConnectALL aims to improve civic and social engagement through digital access. The City's plan should prioritize the accessibility and usability of online city services and resources, ensuring they meet

the diverse needs of all residents, including those with disabilities and language barriers, echoing concerns raised during ConnectALL's development.

Finally, Int. 1122-2024 proposes the creation of an **internet advisory board**. To ensure the plan is truly effective and reflects the needs of all New Yorkers, NYCADE respectfully requests that this board includes **representation from organizations actively working on digital equity in New York City**, including the New York City Alliance for Digital Equity, as well as other community-based practitioners with direct experience in addressing the digital divide. Their expertise and on-the-ground knowledge will be invaluable in reviewing plans and making recommendations for policy related to internet access and infrastructure needs in the city. ConnectALL also emphasizes the importance of supporting existing organizations with community trust.

By explicitly connecting the City's plan to the ConnectALL New York State Digital Equity Plan, by ensuring that all discussions and initiatives related to internet funding encompass these five essential elements of digital inclusion, and by including experienced digital equity advocates on the internet advisory board, the City Council can create a truly effective and sustainable framework for achieving universal, affordable, and equitable internet access for all New Yorkers. This coordinated and comprehensive approach will maximize the impact of both city and state efforts and ensure that no one is left behind in the digital age.

Thank you for your time and consideration of our testimony. We look forward to working with the Committee on Technology to advance digital equity in New York City.

THE GREATER RIDGEWOOD YOUTH COUNCIL, INC.
59-03 SUMMERFIELD STREET, RIDGEWOOD, N.Y. 11385 - 5935
(718) 456-KIDS (5437) Website: www.thegryc.org Fax: (718) 366-3053

"Serving the Communities of Queens Since 1980."

Creating smiles,
one child at a time.

April 29, 2025

Dear Members of the New York City Council,

The Greater Ridgewood Youth Council, Inc., is proud to offer services dedicated to providing educational opportunities for children. Our mission is to improve the lives of youth and families in Queens and Brooklyn by making valuable resources accessible to them. One way we achieve this is through our learning lab, which was donated by Grace Meng, representing the 6th District of New York, from Time Warner Cable in 2014. They generously provided $50,000 to help us offer resources for families with access to high-quality broadband. Ensuring that every family has a reliable internet connection is crucial, and this is being addressed today thanks to the investments made by private broadband providers. In addition to other investments, in 2023, Spectrum, formerly known as Time Warner Cable, donated $18,000 to upgrade our lab. While internet access has improved, challenges remain, such as addressing digital literacy skills for all and providing access to every home. Our organization tackles these issues by partnering with public and private entities, such as Spectrum, to connect people to internet services in our area. We have also learned that the city has taken significant steps through the Big Apple Connect program, which provides free internet and basic TV services to New York City Housing Authority residents. This initiative makes internet access free of charge for over 300,000 New Yorkers and continues to grow. This public-private partnership effectively connects our most vulnerable populations by leveraging existing infrastructure. We aim to share information about existing programs and utilize the investments that private providers have already made in Queens and beyond. Moreover, we have discovered that more providers are expanding their services throughout the city daily without requiring additional public funding. We urge Spectrum to continue supporting families in providing resources throughout New York.

Sincerely,

Bob Monahan
President
The Greater Ridgewood Youth Council Inc.

Testimony from Jerelyn Rodriguez, CEO of The Knowledge House
Re: Committee on Technology Testimony re: Evaluating the City's plan to Connect All New Yorkers to the Internet
Tuesday, April 29, 2025

Good morning Chair Gutiérrez and Members of the Technology Committee. Thank you for the opportunity to testify today. My name is Jerelyn Rodriguez, the CEO and cofounder of The Knowledge House.

We are a nonprofit with proud roots in the South Bronx who deliver tech workforce development programs through New York City, Newark, Atlanta, Los Angeles, and Washington DC. Our mission is to empower and sustain a talent pipeline of technologists and digital leaders who will uplift their communities.

41% of households with incomes below $30,000 per year don't own a computer; 43% are without broadband access in their homes.Historic underrepresentation in the STEM workforce continues to persist with only 11% of Black and 9% of Hispanic workers in STEM roles.

We work to change that.

Having impacted over 2,500 students through fellowships, The Knowledge House is committed to changing the career trajectory of young men and women across NYC and breaking the cycle of poverty by providing high paying fellowships for students in the tech space.

We operate 3 core programs: ***Innovation Fellowship*** focused on training job seeking adults in three tracks: Data Science, Web Development & Cybersecurity which ends with certification and full-time placement in jobs, internships or apprenticeships; our High School program, ***the Kharim Karbouch fellowship,*** which trains high school youth in foundational coding and design, explore STEM careers and college prep with opportunities for industry-facing internships or apprenticeships; and our newest program, ***Digital Literacy***, which helps any New Yorkers - regardless of age or background - develop basic digital literacy skills, provide employable tech knowledge, and help participants understand how to responsibly use AI.

Our students have an average of $20,000 in individual income, or total household income of $60,000 – which then skyrockets to $76,000 after taking our program.

THE KNOWLEDGE HOUSE

Affordable internet connection is a critical piece of our work. We are so grateful to Council Members Gutierrez, Won, Holden, Menin, Restler and Brewer for championing legislation being heard today to enhance connectivity opportunities for low-income New Yorkers and ensure there is transparency around such opportunities. We would like to specifically uplift the following legislation, Intro 1122 and 486, which would provide a roadmap to equitable internet across NYC and urge DOE to provide necessary information on low cost internet options to families.

This year, the Knowledge House is requesting first time funding from the Speaker's Initiative, College and Career Readiness, Educational Programs for Students, and local discretionary and Digital Inclusion and Literacy to support our efforts to recruit and enroll more of our community members. We believe that the work to close the education to-employment pipeline takes serious collaboration community based organizations, schools, and government partners. We look forward to partnering with the Council to bridge the digital divide for all New Yorkers.

PARTNERSHIP for New York City

Testimony of the Partnership for New York City
New York City Council Committee on Technology
Int. 1122 of 2024 – A plan for universal, affordable, and equitable access to home internet
April 29, 2025

Thank you, Chair Gutiérrez and members of the committee, for the opportunity to testify on Int. 1122 of 2024, a bill that would require the city to develop a plan to achieve universal, affordable, and equitable access to home internet throughout the city.

The Partnership supports the goal of Int. 1122 to achieve universal access to home internet service across the city. The main factors that determine the ability to achieve this goal are access and affordability. While some access challenges remain, affordability is the main barrier to universal access.

City government does not need to create incentives for the development and use of network infrastructure that can be used by multiple providers (i.e., open access infrastructure) to ensure access. According to the independent broadband research site Broadband Now, the city already has widespread broadband coverage and enough providers to ensure competition. Instead of focusing on open access infrastructure, the city should coordinate infrastructure development with private sector providers already working to expand access. The city's existing broadband companies have the resources and expertise to meet the city's needs and are eager to collaborate with government to encourage increased adoption.

One impediment to access that deserves the city's focus is the regulatory and bureaucratic processes that have gotten in the way of industry's efforts to expand coverage. Service providers must obtain approvals from multiple agencies to install or upgrade equipment, delaying implementation of new technology and increasing the cost of services. It is unlikely the city will be able to create universal access without addressing these issues, yet Int. 1122 makes no mention of them.

The Partnership also encourages the city to focus on addressing the affordability issues that, more than coverage, are the biggest impediment to the universal adoption of internet service. Existing programs are making progress in connecting people to coverage. The state requires that internet providers offer a $15 per month option for low-income families. The city's Big Apple Connect program has brough free internet and basic cable service to more than 300,000 residents of the New York City Housing Authority. These types of public-private partnerships deserve to be the focus of the city's efforts and funding.

The Partnership for New York City represents the city's business leaders and largest employers. Our members employ about a half million people in the city and deliver approximately $236 billion in annual economic output. We work with government, labor, and the nonprofit sector to promote economic growth and maintain the city's prominence as a global center of economic opportunity, upward mobility, and innovation.

The BAC:
While NYCHA tenants certainly deserve and need free broadband, **millions of low-income New Yorkers** outside of NYCHA housing were **completely excluded**. It created a two-tiered system: "if you're in NYCHA, you get free broadband; if you're struggling elsewhere, you don't." This was especially problematic in neighborhoods like Harlem, the Bronx, and parts of Queens where many low-income people live in non-NYCHA affordable housing.

It was a **short-term service solution, not infrastructure investment.** They didn't build *new fiber or wireless infrastructure*; they simply paid ISPs to deliver existing service. In contrast, the Internet Master Plan (pre-2022) aimed to actually build out public fiber infrastructure, empowering communities and creating long-term ownership. Big Apple Connect **missed the transformational moment** to own critical infrastructure for future generations.

Category	Big Apple Connect	Internet Master Plan
Goal	Provide free broadband/cable to NYCHA residents quickly	Create a citywide, open-access, affordable broadband infrastructure
Scope	Limited to NYCHA housing only (~300,000 residents)	All New Yorkers, especially underserved and low-income residents
Providers Involved	Mainly Spectrum (Charter) and Optimum (Altice)	Diverse mix: community ISPs, nonprofits, startups, private companies
Infrastructure Investment	No new infrastructure built; paid for existing service	Proposed city-built fiber and new access points
Sustainability	Annual city budget allocations; no long-term guarantee	Sustainable, with public infrastructure ownership reducing budget reliance
Equity Approach	Focused narrowly on NYCHA; non-NYCHA low-income residents excluded	Universal; aimed at every household and small business needing access
Digital Literacy Integration	None; no tie-in with devices, skills, or tech support	High; integrated with devices, skills training, and public tech hubs
Economic Development Impact	Minimal; focused only on immediate service access	High; spurred local entrepreneurship, jobs, and growth in the tech economy
Political Motivation	High; positioned as a flagship success of the Adams administration	Lower; focused on long-term systemic change over political optics
Community Empowerment	Low; residents remain dependent customers of major ISPs	High; public and small providers would own/operate infrastructure

In short summary:

- **Big Apple Connect = quick fix, limited reach, no ownership, high politics.**
- **Internet Master Plan = deep fix, broad reach, true ownership, sustainable empowerment.**

_____

Mr. Banks

CEO
Silicon Harlem
2025

TSCI
The Smart Community Initiative

THE NEW YORK CITY COUNCIL – Committee on Technology

Public Testimony – April 29th, 2025

Thank you for this opportunity to speak about The Internet Master Plan, and the City Council's plan for its resurrection. My name is Stuart Reid, and I am the Co-Chair of The Smart Community Initiative, a resident-led not-for profit organization focused on providing free internet applications and services to public housing communities.

The Smart Community Initiative, or TSCI, was among those organizations selected to receive funding from the $157 million that the City Council set aside and designated to fund the Internet Master Plan in 2021.

The Internet Master Plan proposed that municipally-owned technology facilities be installed, operated and managed by community not-for-profits and others, thereby delivering community-managed and operated benefits directly to residents of public housing and low-income communities, over and above just plain old access services.

For TSCI this was the very heart of the Internet Master Plan, funding Black and Latino non-profit organizations that would stimulate and empower community-led and run services within the communities served.

In fact, TSCI may have been the only Internet Master Plan RFP respondent selected and fully vetted that did not propose as a core service the selling of Internet services to themselves as NYCHA residents. TSCI did not see the value in selling Internet access to their neighbors, though we were in fact certified by the FCC as an ACP (Affordable Connectivity Program) provider, probably the only resident organization in the country so designated.

While TSCI did propose and currently does provide FREE emergency internet access service in NYCHA developments in Northern Manhattan, Harlem and Brooklyn, the core of TSCI's services addresses the empowerment of public housing resident communities consistent with the original intent of the Internet Master Plan.

TSCI has long-recognized that the Internet is a problem-solving tool – and that mere connectivity does not empower people to improve their lives. This was the primary focus of TSCI's Master Plan proposal – for TSCI it's all about what you DO with the Internet. The real challenge is how can it be used to improve the quality-of-life of its users.

TSCI

TSCI believes the solution focuses on applications and serviced designed by and for the stakeholders and residents who use them; to make them smarter and more self-sufficient; essential elements of the TSCI approach.

TSCI's *Streaming University Project* and its *Resident Teaching Network* empower residents to use technology tools and applications that they control, to monitor their own development public spaces, to create communication platforms that amplify their voices, and to connect with each other in real-time over community networks that they operate. The *Resident Teaching Network* is recreating neighborhood connectivity in a way that hasn't been seen in our communities in generations.

TSCI's *Resident Teaching Network* is also an emergency communications network that utilizes redundant, alternative and hardened facilities to ensure communications during emergencies and catastrophic events. This type of network and operational resiliency helps to improve emergency preparedness and mitigation in our public housing communities.

Most recently, working in collaboration with our partners at the WHCR Emergency Broadcast Team (www.whcrebt.org), TSCI has installed Emergency Operations Centers (EOC's) and Emergency Mobile Access Services (EMAS) at public housing developments and emergency evacuation centers, one of which is located within one (1) block of the ocean in the far reaches of Brooklyn's Coney Island. This Flood Zone 1 EOC deployment will help this highly flood-vulnerable community to stay in communication with each other as well as first responders before, during and after emergencies.

TSCI's *Resident Teaching Network* is a comprehensive, holistic solution installed, managed and operated by residents themselves. The *Resident Teaching Network* is embedded in the very fabric of community and is sustainable by the very users of the network, applications and services.

Where is the community opportunity in the current iteration of the Council plan as administered by this administration? Certainly, it is not in anything we have seen. The administration currently pays millions annually to broadband incumbents, Spectrum and Optimum, while our group was told by the current administration that we would be included. We have seen nothing in follow-up to what can only be described as a hollow promise. Nor is there anything resembling community network inclusion or real opportunity contained in the recently announced RFI for expansion of public infrastructure, despite its claim to support digital equity.

TSCI

Here we are three (3) year after the current administration decided it had a better solution and "paused" TSCI's community operated and controlled project, and OTI efforts to bring broadband equity, opportunity equity or community-led and operated stimulation to our public housing and lower income communities have been underwhelming and financially lugubrious, at best.

TSCI believes that the City Council needs for its plan to honor the original intentions of the City Council, a plan that enables community-based non-profits to create, manage and operate our own community broadband networks and services.

TSCI's project should be un-paused, as it had little to do with selling Internet service. Our group also has an FCC certification (garnered through the current administration), the same as RCN, that authorizes it to provide citywide service, two of the stated reasons for pausing other Internet Master Plan selectees.

We should be aware and understand the current state of economic participation in our country by others. Many of you may not know that in the 140-year history of the US stock exchanges there have been no more than 12 Black-owned companies listed on any of the exchanges. Community-controlled and managed opportunity equity at any meaningful scale has been and continues today to be largely non-existent for Blacks and Latinos.

It is for this reason that it is ever more important for the City Council not to abandon its plans to provide significant funding for out-of-the box, innovative solutions and organizations that address the chronic distress in our public housing and other low-income communities

TSCI's Internet Master Plan project does just that and should be un-paused and fully funded.

Thank you.

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TESTIMONY OF WIRED BROADBAND, INC.

By Odette J. Wilkens

President & General Counsel

at Committee on Technology Hearing

April 29, 2025, 10am

I am Odette Wilkens, President & General Counsel of Wired Broadband, Inc., a non-profit advocating for safe telecommunications. I have been a technology transactional attorney for over 20 years having represented multinational corporations. I also recently served on the Federal Communications Commission's Communications, Equity and Diversity Council (CEDC), along with Chair Gutierrez and representatives of equity organizations from across the country. We at Wired Broadband are keenly interested in digital equity and inclusion, but the bills purporting to provide affordable broadband access to all NYC residents and expand wireless access do not adequately address these issues, neither does the Master Plan.

NYC should have a cohesive and sustainable plan, not patchwork. NYC should have municipal broadband, where it owns the telecom infrastructure, and then leases it out to the telecoms. That means connecting everyone with fiber. That would provide what Int. 486 seeks to achieve – providing Internet to students and families. Chattanooga, TN is a model with 600 square miles of fiber connected to every home, business, school. It has the fastest internet in the U.S. offering symmetrical 1 Gig download and upload speeds, at affordable prices, and one of the fastest in the world. With a windfall of profits, they are providing free internet to every household with a school-aged child.

But Int. 1121 sets the minimum speeds at the FCC's 25 Mbps download / 3 Mbps upload to accommodate wireless's lesser capacity. Wireless suffers from line-of-sight obstructions, slower speed, inclement weather, lack of scalability, lack of cybersecurity,

thereby making it unreliable in emergencies.[1] Wireless and wired are not tech neutral nor are they equivalent technologies. Fixed wireless is a race to the bottom.

Sixteen community boards, representing 25% of NYC residents, over 2 mil people, oppose the 5G Cell Towers in their districts. Message is clear:

They don't want the 5G Towers and they don't need them.

Residents also don't like the poletop antennas or pods on utility poles outside their windows or rooftop antennas directly above their apartments. Prioritize fiber, which is what most Americans want[2] in Int. 198, 481, 483, 486, 1121.

Respectfully submitted,

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[1] https://www.benton.org/blog/how-fixed-wireless-technologies-compare-fiber.

[2] https://www.fibre-systems.com/article/fiber-connect-2023-two-thirds-us-consumers-prefer-fibre?iframe=1; see also, "The Market Has Spoken," Fiber Broadband Association, https://5217051.fs1.hubspotusercontent-na1.net/hubfs/5217051/Events/IQGeo%20Meetup%202022%20-%20Denver/Meetup%20Day%201%20presentations/2_FBA%20Keynote_The_market_has_spoken_IQGeo_Meetup_2022.pdf?hsCtaTracking=72374350-4b3e-455a-b8ed-031e09618cd7%7Ced1704fb-9b86-4c4b-a0a6-7f7d6b47b5de.

WRITTEN COMMENTS OF WIRED BROADBAND, INC.

By Odette J. Wilkens

President & General Counsel

at Committee on Technology Hearing

April 29, 2025, 10am

I am Odette Wilkens, President & General Counsel of Wired Broadband, Inc., a non-profit advocating for safe telecommunications, and am part of the NYC Alliance for Safe Technology. I have been a technology transactional attorney for over 20 years having represented multinational corporations. I also recently served on the Federal Communications Commission's Communications, Equity and Diversity Council (CEDC), along with Chair Gutierrez and representatives of equity organizations from across the country. We at Wired Broadband are keenly interested in digital equity and inclusion, but the bills purporting to provide affordable broadband access to all NYC residents and expand wireless access do not adequately address these issues, neither does the Master Plan. We are commenting on the following bills: Int. 198, 481, 483, 486, 1121.

The bills say nothing of how to make Internet affordable, how to identify where the access gaps are or how to safely deploy telecom infrastructure that preserves the health of the communities. It also leaves to the discretion of unelected administrators at the Office of Technology & Innovation (OTI) who work in partnership with the telecom industry, but not in partnership with the communities. I have witnessed OTI's participation at community boards, and OTI's track record has been abysmal, with a complete disregard for community input on the irresponsible deployment of wireless telecom infrastructure in our communities threatening our health, especially our children, and property values. In short, OTI has been steamrolling over community opposition who do not want the 5G Towers or antennas placed right outside their windows, including outside the windows of their children's bedrooms.

We are proposing some alternatives to ensure long-term affordability and accessibility to the best possible Internet service for NYC. We will also summarize OTI's unresponsiveness to community concerns.

(1) **NYC should have a cohesive and sustainable plan, not patchwork.**

NYC should have municipal broadband, where it owns the telecom infrastructure, and then leases it out to the telecoms. That means connecting everyone with fiber. That would provide what **Int. 486** seeks to achieve – providing Internet to students and families. Chattanooga, TN is a model with 600 square miles of fiber connected to every home, business, school. It has the fastest internet in the U.S. offering symmetrical 1 Gig download and upload speeds, at affordable prices, and one of the fastest in the world.[1] Because of its fiber buildout, it can go to the next generation of fiber capacity, and that is quantum capacity, and developing the most secure network in the world. With a windfall of profits, they are providing free internet to every household with a school-aged child.[2] NYC should have a similar model without reliance on subsidies or federal handouts.

The following bills should prioritize wired connectivity, such as fiber or cable (the rationale is set forth herein): Int. 198, 481, 483, 486, 1121. When the Affordable Connectivity Program (ACP) ended, wireline services retained 90% of subscribers while wireless services lost 80%.[3] Verizon was to wire all of NYC with fiber in exchange for the subsidies they received from surcharges on our phone bills dating back to the 1990s to current time. The Committee should find out what happened to the monies Verizon received to wire all of NYC.

Attached is a chart of the bills and recommended actions. In summary, we recommend the following:

1. **Int. 198, 481, 483, 486, 1121**, prioritize wired, such as fiber or cable, which is what most Americans want.[4] The rationale is provided herein.

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[1] *How Blazing Internet Speeds Helped Chattanooga Shed its Smokestack Past,* Cnet.com, August 20, 2015, https://www.cnet.com/tech/services-and-software/how-blazing-internet-speeds-helped-chattanooga-shed-its-smokestack-past/; *Why Chattanooga Has the Fastest Internet in the US*, https://tech.co/news/chattanooga-fastest-internet-usa-2018-08.

[2] See Town Hall "Gig City Goes Quantum" at https://thenationalcall.org/resources/.

[3] https://broadbandbreakfast.com/acp-fallout-wireline-retains-most-wireless-and-satellite-face-major-losses/.

[4] https://www.fibre-systems.com/article/fiber-connect-2023-two-thirds-us-consumers-prefer-fibre?iframe=1; see also, "The Market Has Spoken," Fiber Broadband Association, https://5217051.fs1.hubspotusercontent-na1.net/hubfs/5217051/Events/IQGeo%20Meetup%202022%20-%20Denver/Meetup%20Day%201%20presentations/2_FBA%20Keynote_The_market_has_spoken_IQGeo_Meetup

2. **Int. 1121** sets the minimum speeds at the FCC's 25 Mbps download / 3 Mbps upload to accommodate wireless's lesser capacity. Speeds should symmetrical and at least 100 Mbps download/upload. Wireless suffers from line-of-sight obstructions, slower speed, inclement weather, lack of scalability, lack of cybersecurity, thereby making it unreliable in emergencies.[5] Wireless and wired are not tech neutral nor are they equivalent technologies. Fixed wireless is a race to the bottom. Also, Int 1121 provides for an Internet Advisory Board, but there is no direct representation by the community. Representation by community boards for their districts should be included.

3. The wireless franchise agreements should be amended to require that the telecoms show evidence of a gap in service prior to installing wireless antennas. That's the legal rule in NY under the Second Circuit of the Federal Court of Appeals.

The market has spoken and two-thirds of Americans want wired connections, such as fiber.[6] In fact, when the Affordable Connectivity Program (ACP) ended, wireline services retained 90% of subscribers while wireless services lost 80%.[7] Verizon was to wire all of NYC with fiber in exchange for the subsidies they received from surcharges on our phone bills dating back to the 1990s to current time.[8] The Committee should find out what happened to the monies Verizon received to wire all of NYC.

Fiber can also be an economic boon.[9] For example, Chattanooga, TN used fiber optics under a municipal broadband framework to spring into a clean energy economy and create a vibrant workforce, earning it the accolade of "Gig City," with the fastest broadband network in the U.S. The economic value of its fiber infrastructure over a 10-year period from 2011 to 2020 exceeded $2.69 billion and produced 9,516 jobs, well beyond

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[5] https://www.benton.org/blog/how-fixed-wireless-technologies-compare-fiber.

[6] https://www.fibre-systems.com/article/fiber-connect-2023-two-thirds-us-consumers-prefer-fibre?iframe=1; see also, "The Market Has Spoken," Fiber Broadband Association, https://5217051.fs1.hubspotusercontent-na1.net/hubfs/5217051/Events/IQGeo%20Meetup%202022%20-%20Denver/Meetup%20Day%201%20presentations/2_FBA%20Keynote_The_market_has_spoken_IQGeo_Meetup_2022.pdf?hsCtaTracking=72374350-4b3e-455a-b8ed-031e09618cd7%7Ced1704fb-9b86-4c4b-a0a6-7f7d6b47b5de.

[7] https://broadbandbreakfast.com/acp-fallout-wireline-retains-most-wireless-and-satellite-face-major-losses/.

[8] Violations & Egregious Acts, Trillion Dollar Broadband Scandal, 2022, Bruce Kushnik with David Rosen.

[9] *How Blazing Internet Speeds Helped Chattanooga Shed its Smokestack Past,* Cnet.com, August 20, 2015, https://www.cnet.com/tech/services-and-software/how-blazing-internet-speeds-helped-chattanooga-shed-its-smokestack-past/; *Why Chattanooga Has the Fastest Internet in the US*, https://tech.co/news/chattanooga-fastest-internet-usa-2018-08.

expectations.[10] Chattanooga's city-owned utility, EPB, can be viewed in a town hall discussing their successes and future plans for quantum connectivity, only possible with their fiber optics infrastructure.[11] If Chattanooga can achieve these successes, why can't NYC have a similar fiber optics infrastructure so NYC residents can reap similar successes?

Pharr, TX previously known as one of the worst connected cities for broadband decided in 2022 to build fiber to the home (FTTH) municipal broadband with a service goal of 1 Gbps.[12] The city found that FTTH was the best solution to bridge the digital divide as most carriers bypassed the city whose residents average a low income. FTTH would give children the ability to do their homework at home rather than seeking connectivity after school at the campus doorstep.

Medina County, OH and Fairlawn, OH are part of a statewide coalition of legislators promoting municipal fiber broadband, opposing state efforts to otherwise prevent municipal broadband or fiber access, and reaping municipal income streams.[13] Medica County is providing fiber open access meaning that the county owns the fiber and leases it out to businesses. Fairlawn is offering FTTH at up to 10 Gbps and 180 Gbps for businesses.[14]

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[10] "Ten Years of Fiber Optic and Smart Grid Infrastructure in Hamilton County, Tennessee," Bento J. Lobo, Ph.D., CFA First Tennessee Bank Distinguished Professor of Finance, The University of Tennessee at Chattanooga, August 31, 2020, https://www.researchgate.net/publication/352221978_Ten_Years_of_Fiber_Optic_and_Smart_Grid_Infrastructure_in_Hamilton_County_Tennessee;
See also, *How Blazing Internet Speeds Helped Chattanooga Shed its Smokestack Past*, Cnet.com, August 20, 2015, https://www.cnet.com/tech/services-and-software/how-blazing-internet-speeds-helped-chattanooga-shed-its-smokestack-past/; *Chattanooga Mayor Pushes Back on 5G as Smart Cities Cure All*, MeriTalk, February 13, 2019, https://www.meritalkslg.com/articles/chattanooga-mayor-pushes-back-on-5g-as-smart-cities-cure-all/.
See also, for economic benefits of fiber deployment, In Kansas, Rural Chanute Built Its Own Gigabit Fiber and Wireless Network," Christopher Mitchell 10-2-21, https://ilsr.org/chanute-rural-gigabit/; and https://www.soar-ky.org/prtc/.

[11] Town Hall: *"Gig City Goes Quantum: the Amazing Chattanooga, TN Fiber Network Success Story! A Broadband Blueprint for NYC and for Cities across the U.S.,"* July 19, 2023, featuring Gary Bolton, President of the Fiber Broadband Association, Katie Espeseth, VP New Products, EPB, and Clayton Banks, CEO, Silicon Harlem, https://thenationalcall.org/resources/.

[12] https://www.bbcmag.com/economic-development/pharr-texas-takes-diy-approach-to-build-gigabit-fiber.

[13] Medina County joins statewide public broadband advocacy group, https://medina-gazette.com/news/290521/medina-county-joins-statewide-public-broadband-advocacy-board-fiber-construction-hits-snag-in-montville/.

[14] Local Leaders Launch Broadband Access Ohio to advocate municipal broadband services, https://ohiocapitaljournal.com/2022/02/17/local-leaders-launch-broadband-access-ohio-to-advocate-for-municipal-broadband-services/.

Utopia Fiber is a group of Utah cities working together and who have chosen to bring fiber optics to the premises in their communities, and exporting their model to other cities.[15]

There are several problems with the fiber network being laid out by CityBridge.

1. Contrary to the assertion by OTI that the fiber being laid by CityBridge is free, it is not all free. At the expiration of the franchise agreement with CityBridge, if NYC wants to use the "free" fiber, NYC would have to pay market rate for any fiber installed by CityBridge's third party fiber providers.[16] **That runs contrary to the bills that seek to provide affordable prices for subscribers for the future.**
2. Fiber architecture for fixed wireless facilities is not necessarily compatible with fiber architecture to the premises. Therefore, that NYC would have to make perpetual payments to those fiber providers to maintain fixed wireless broadband, where the fiber architecture for fixed wireless may not be compatible with otherwise superior fiber architecture to the premises, and because wireless provides vastly slower speeds than fiber to the premises, makes this arrangement a lose-lose proposition for NYC.
3. OTI has asserted that CityBridge will be building out the fiber optic network for free. However, there is already a fiber optic network built out by Verizon, apparently, to many parts of the City, and CityBridge has been reported trying to connect to Verizon's already existing fiber.[17] Moreover, Verizon is laying out additional fiber to half a million homes in NYC as part of a recent settlement agreement with the City.[18]
4. Fiber buildout is only to the pole, not to the premises. That means that residents will get the vastly lower speeds that wireless offers, including 5G. [19] The vastly

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[15] Town Hall: *"Broadband Freedom of Choice,"* September 6, 2023, with Gigi Sohn, Executive Director, American Association for Public Broadband, Kimberly McKinley, Chief Marketing Officer, Utopia Fiber, Timothy Schoechle, Senior Research Fellow, National Institute of Science, Law and Public Policy, and guest appearance by Clayton Banks, CEO, Silicon Harlem, https://thenationalcall.org/resources/.

[16] Amendment No. 3 to the Franchise Agreement between CityBridge and OTI, March 21, 2020, Sec 3.13.3(ii), https://www.nyc.gov/assets/oti/downloads/pdf/linknyc-franchises/linknyc-public-communications-structure-franchise-agreement-amendment-3.pdf.

[17] https://www.thecity.nyc/2020/3/3/21210474/city-hall-may-pull-plug-on-linknyc-owner-over-missing-kiosks-and-75m-owed

[18] Verizon fails to fulfill its obligation to provide fiber to every household in the five boroughs, https://www.nyc.gov/office-of-the-mayor/news/415-15/de-blasio-administration-releases-audit-report-verizon-s-citywide-fios-implementation; https://www.nyc.gov/office-of-the-mayor/news/807-20/mayor-de-blasio-holds-verizon-accountable-connect-half-million-new-york-city-households-to; see also, https://arstechnica.com/tech-policy/2020/11/verizon-wiring-up-500k-homes-with-fios-to-settle-years-long-fight-with-nyc/.

[19] https://www.digitaltrends.com/mobile/how-fast-is-5g/.

slower speeds of wireless, NYC having to pay providers for using the fiber, among other shortcomings, makes it a lose-lose proposition for NYC.

Fiber optics to and through the premises (FTTP) or cable is the preferred and superior method of providing telecommunications connectivity. "Fiber has a minimal ecological impact, reduces waste, consumes very little energy and helps decrease greenhouse gas emissions."[20] Fiber optics has "[l]ower energy consumption, reduced waste and sustainable architecture, characteristics that make fiber infrastructure an environmentally advantageous choice."[21]

FTTP provides the best capacity for remote learning for children and students and more reliable access to medical and other services for the elderly and disabled during emergencies or severe weather when wireless service is more likely to be interrupted.

The Fiber Broadband Association (FBA), the largest fiber optics trade association in the U.S., has shown that consumers prefer the higher upload and download symmetrical speeds that fiber provides (which wireless cannot provide)[22] hence, ***"If it isn't fiber, it isn't broadband."*** [23] The FBA also shows in its report, "The Market Has Spoken, If it's not fiber, it's not broadband," that 2/3 of people polled prefer the superior technology of fiber.[24] It has been an environmental justice issue to get fiber to the premises, e.g., Los Angeles, where a low-income community's digital divide didn't get solved until they got fiber.[25]

- **Fiber Already Promised to New Yorkers**

City Bridge is being touted by OTI as building out fiber optics networks in NYC for free. However, NYC residents have already paid for fiber to the premises for every home in NYC. It has been reported that Verizon promised it would do so from surcharges on NYC telephone bills since the 1990s (which apparently continue to the present),[26] but has not

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[20] Fiber Optic Broadband, A Greener Internet Solution, https://www.otelco.com/a-greener-internet-solution/.
[21] https://www.cablinginstall.com/cable/fiber/article/16465844/how-fiber-can-help-make-your-network-greener.
[22] https://s3.amazonaws.com/files.fiberbroadband.org/download/3555.4237?AWSAccessKeyId=AKIAIZGD7FMLIYLBZNIA&Expires=1650065068&Signature=CfFGHmOkZaAovAfuGmXXs2hDpKo%3D.
[23] https://www.broadbandworldnews.com/document.asp?doc_id=773546.
[24] https://5217051.fs1.hubspotusercontent-na1.net/hubfs/5217051/Events/IQGeo%20Meetup%202022%20-%20Denver/Meetup%20Day%201%20presentations/2_FBA%20Keynote_The_market_has_spoken_IQGeo_Meetup_2022.pdf?hsCtaTracking=72374350-4b3e-455a-b8ed-031e09618cd7%7Ced1704fb-9b86-4c4b-a0a6-7f7d6b47b5de
[25] https://thenationalcall.org/wp-content/uploads/2024/03/fires_telecom-fed-wireless-bills_R13r.pdf , p. 7.
[26] See, e.g., "New York City Must Call for a Halt to the Billion + Dollars of Cross-Subsidies and Overcharging by Verizon NY, the Public Telco Utility," https://kushnickbruce.medium.com/new-york-city-must-call-for-a-halt-

done so. NYC does not need free services from CityBridge; it needs Verizon to comply with its obligations.

Wireless is meant for mobility. Wired connections, such as copper, cable and fiber are meant for stationary uses at home, school and businesses.

References to "broadband" in the bills needs to specify whether it is wired or wireless. The bills refer to "broadband" which needs to be specified because wired and wireless are for different purposes and are not equivalent technologies.

A brief word on what has been bandied about as "technology neutral" that deems wireless and wired as equivalent technologies. They are not. Former FCC Chair Tom Wheeler (former CEO of CTIA) testified that fiber is future proof with **wireless to be used only as a last resort**.[27] Wireless is inferior in every way compared to wired, e.g., 5G will never be as fast, reliable, secure or safe as fiber, short life span of wireless of up to 5 yrs, constant maintenance. Wheeler states that "[t]he nature of 5G networks exacerbates the cybersecurity threat,"[28] and has coined the term "the 5G CyberParadox."[29] The U.S. Government Accountability Office has stated that 5G is like to exacerbate the digital divide.[30]

To be clear, wired and wireless technologies are not equivalent technologies and the costs of wireless deployment outweigh the benefits. Deeming wired and wireless to be "technology neutral" does not rectify this infirmity. Wireless is not a substitute for wired broadband. For example, the Fiber Broadband Association (the largest fiber trade association in the U.S.) has stated, "if it isn't fiber, it isn't broadband." [31]

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to-the-billion-dollars-of-cross-subsidies-and-overcharging-by-27fad87186f0; see also, http://irregulators.org/.

[27] Tom Wheeler's Testimony to Congress, https://energycommerce.house.gov/sites/democrats.energycommerce.house.gov/files/documents/Witness%20Testimony_Wheeler_FC_2021.03.22.pdf.

[28] https://www.wita.org/nextgentrade/why-5g-requires-new-approaches-to-cybersecurity/.

[29] "Why 5G Requires New Approaches to Cybersecurity," Tom Wheeler and David Simpson, Brookings Institute, Sept 3, 2019, https://www.wita.org/nextgentrade/why-5g-requires-new-approaches-to-cybersecurity/.

[30] US Government Accountability Office 2020 Report "FCC Needs Comprehensive Strategic Planning to Guide Its Efforts," https://www.gao.gov/products/gao-20-468 (p.3). Full report https://www.gao.gov/assets/gao-20-468.pdf (p.14).

[31] https://www.broadbandworldnews.com/document.asp?doc_id=773546.

1. Wireless infrastructure's lifespan is only five years, making it a poor use of taxpayer subsidies whereas fiber lasts 25-50 years.[32] As between wireless and fiber, fiber has been found to be "the most fiscally prudent expenditure of public funds in most circumstances because of its longevity and technical advantages."[33]
2. Billions of dollars in subsidies to wireless have not provided the promised ubiquitous service, according to former CTIA CEO and former FCC Chair, Tom Wheeler.[34]
3. Wireless suffers from line-of-sight obstructions, slower speed, inclement weather, lack of scalability, lack of cybersecurity, thereby making it unreliable in emergencies.
4. "[F]ixed-wireless networks have inherent capacity limitations that sharply limit the number of users on a network using a given amount of spectrum."[35]
5. Upfront capital costs for fiber may be higher, but after 30 years, they are comparable to wireless.[36]
6. Wired infrastructure is cheaper over the life of the infrastructure.[37] Fixed wireless costs are higher than fiber because of the ongoing need to regularly replace wireless equipment, with 40% to 80% of its capital investment needing to be replaced every five years. In contrast, only 1% to 10% of capital investment in a fiber network needs to be replaced every 10 years (fiber's life span is 50-70 years). **Fixed wireless network providers must re-invest every five years to maintain the network.** That is not sustainable in the long-run.

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[32] Tom Wheeler, former FCC chair and former CEO of CTIA, testified in 2021 that fiber is future proof with **wireless only as a last resort,** https://democrats-energycommerce.house.gov/sites/evo-subsites/democrats-energycommerce.house.gov/files/documents/Witness%20Testimony_Wheeler_FC_2021.03.22.pdf
Fixed Wireless Technologies and Their Suitability for Broadband Delivery, June 2022 https://www.benton.org/publications/FixedWireless.

[33] https://www.benton.org/publications/FixedWireless.

[34] In testimony to the House Energy and Commerce Committee, March 2021, former FCC Chair and former CTIA CEO Tom Wheeler spoke disappointingly that despite approximately $40 billion of government subsidies "over the last decade," those subsidies "have failed to deliver the goal of universal access to high-speed broadband … because it failed to insist on futureproof technology, … and focused more on the companies being subsidized than the technology being used or the people who were supposed to be served."

[35] https://www.benton.org/blog/how-fixed-wireless-technologies-compare-fiber.

[36] https://www.benton.org/publications/FixedWireless.

[37] https://www.benton.org/blog/how-fixed-wireless-technologies-compare-fiber.

NYC owned fiber would allow equitable access to the Internet and lock in affordable prices for the future. Leasing out municipal fiber to providers that would provide a continuous stream of income for NYC would be a win-win for New Yorkers.

NYC can be a success story, following in the footsteps of cities that have set FTTP and are reaping the economic benefits of municipal fiber broadband, such as Chattanooga, TN. **NYC should hop on the Chattanooga choo-choo!**

(2) Office of Technology and Innovation 's (OTI) Utter Disregard of Community Concerns

OTI has received an overwhelming amount of negative responses to the 5G Towers and antennas (pole tops and backpacks on utility poles) right outside people's windows. We are including our position paper to accompany our comments, that chronicles the opposition to the 5G Towers by historic preservation societies, community boards, and political leaders from the NYC Council, Manhattan Borough President, NYS Assembly and Senate and Congress.

What OTI has not told this committee:

(a) **Complete disregard for community board concerns.** Mr. Sikoff has not told the committee that when OTI (usually Mr. Sikoff or Ms. Gardner) and/or CityBridge would present to the community boards, their message was clear, they were there to give notice that the 5G Towers would be installed, and the only choice was to consider whether the proposed location of a 5G Tower should be moved, not to stop the installation. OTI was sometimes absent at the meetings. Wired Broadband, Inc. and New Yorkers 4 Wired Tech were at many of these meetings.

Therefore, we disagree with Mr. Sikoff's statement at the hearing of OTI's "very substantial community engagement" with community boards and constituents and their concerns and if there were "no issues, then OTI issues the franchises and the permits." On the contrary, OTI has stated at community board meetings that they are only interested on where to site the towers -- not whether they are needed or wanted by NYC residents.

Mr. Sikoff also did not state that, as reported by Mr. Robert Sokota of CityBridge, that OTI and CityBridge are ignoring the letters of disapproval and formal resolutions for moratoria to stop the 5G Towers, and instead are moving forward with construction. Mr. Sokota stated this to the Section 106 consulting parties, of which Wired

Broadband, Inc. is one, that they are ignoring the moratoria (and disapprovals), thus moving forward with construction. This despite massive opposition.

Sixteen community boards have either disapproved or issued resolutions requesting a moratorium until their questions and concerns would be addressed. [38] That represents over 25% of New York City residents, over 2 million people who oppose the 5G Cell Towers in their districts.

Message is clear: **They don't want the 5G Towers and they don't need them.**

Residents also don't want the poletop antennas or pods on utility poles outside their windows or rooftop antennas directly above their apartments. The only community engagement for the poletop antennas and pods on utility poles is that if they are being placed less than 10 feet from a structure, OTI must notify the community board; otherwise, there is no notice, and they can be installed. Unfortunately, the only requirement is to give community boards 15 days' notice but they don't have the right to disapprove, although some have attempted to do so in resolutions, e.g., MCB8 and QCB6. There was a poletop that was installed less than 10 feet outside a child's bedroom on the Upper East Side. After the tenants complained, it was discovered that the poletop was less than 10 feet and the community board had not been notified. They have had to go through the expense of retaining counsel. The poletop has not been removed. This is the view:

[38] See community board resolutions and disapprovals: https://www.dropbox.com/scl/fi/rjci4lvt1vgeza9bqzr76/AA-Link5G-16-CB-Resolutions-Disapprovals.pdf?rlkey=7ol8i2qvd1e3vyzr6yk54hntb&st=5lcp5m5d&dl=0 and https://www.dropbox.com/scl/fi/x584uzaeitwfrr7coi8w2/MCB1-Political-Letters-and-Resolutions-Opposing-5G-Towers.pdf?rlkey=pn4y2e1eab97ndrfaoobyodbw&st=esej1bxy&dl=0.

In addition, t the Mayor's request, OTI met virtually with a small group of us, including a former FCC NEPA (National Environmental Policy Act) attorney. They did not come on camera, refused to discuss anything with us, and now two years later have not answered the questions we sent to them. I also have FOILs outstanding for over two years that have gone unanswered by OTI.

(b) **Public safety – no setback requirement:** Mr. Sikoff confirmed that the 5G Towers at 32' tall or 3-story towers have **no setback requirement** on how close they can be to any structure, be it a home, school, hospital or business, or how close they can be to vehicular or pedestrian traffic. That means that in the event of structural failure, the towers may collapse onto nearby structures or onto the street, risking serious property damage and personal injury. This is a problem near LaGuardia and JFK Airports. Residents around Far Rockaway have noticed that the planes taking off and arriving at the airports cause structures to reverberate. That can degrade structural integrity.

(c) **Public health – is 5G safe?** The predominant question among community boards. **5G has never been tested for safety.** There are few studies on 5G, and eight case

studies show biological effects in everyone exposed to 5G towers.[39] In not answering the question, Mr. Sikoff cites the FCC's regulatory responsibility over health impacts, even though the FCC has abandoned that responsibility. OTI and CityBridge in their presentations to community boards have failed to address or acknowledge that there are any scientific studies showing harm, or that they have actual knowledge of New Yorkers having been injured. This despite the D.C. Circuit Court of Appeals' decision in 2021 that acknowledged the 11,000 pages of peer-reviewed scientific studies submitted into the FCC docket showing harm even below the FCC limits. The Court ruled against the FCC and remanded back its limits for failure to review those studies, or examine its effects on children or long-term exposure (Environmental Health Trust v. FCC). To date, the FCC has failed to update its limits dating back to 1996, and can no longer be viewed as safety limits.

Previously healthy individuals developed typical "microwave syndrome" symptoms shortly after the towers were installed: headaches, abnormal fatigue, heart arrythmia, burning skin, trouble concentrating.[40] The significance of these reports is that non-ionizing radiation[41] from 5G — well below levels allowed by authorities — can cause health problems in individuals who had no prior history of electromagnetic sensitivity.[42] Dr. Lennart Hardell, lead author of the reports and a world-renowned scientist on cancer risks from radiation, affirms these reports as "groundbreaking" because they serve as the "first warning of a health hazard."[43]

(d) **Injured New Yorkers.** During the June 7, 2023 hearing of the Committee on Technology, Council Member Kagan asked OTI if there were any complaints of adverse health effects. In not answering the question, OTI responded that franchisees are contractually required to comply with the FCC emission limits. OTI failed to disclose that in Jan 2023, they heard directly from a police lieutenant in

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[39]

[40] https://mdsafetech.org/2023/11/20/5g-health-effects-5-case-reports-of-health-symptoms-after-5g-cell-towers-placed-in-sweden/; e.g., Jan 2023 study of 63 year old man and 62 year old woman where 5G antennas were installed on the rooftop of their home, https://www.gavinpublishers.com/assets/articles_pdf/Case-Report-The-Microwave-Syndrome-after--Installation-of-5G-Emphasizes-the-Need-for--Protection-from-Radiofrequency-Radiation.pdf and https://childrenshealthdefense.org/defender/5g-radiation-microwave-syndrome-symptoms/; Feb 2023 study of two previously healthy men where 5G antennas were installed on the rooftop of their business, https://www.anncaserep.com/open-access/development-of-the-microwave-syndrome-in-two-men-shortly-after-9589.pdf; April 2023 study of 52 year old woman whose apartment was 60 meters from a 5G base station, https://acmcasereport.com/pdf/ACMCR-v10-1926.pdf?fbclid=IwAR2J-mE3XeBxqaXPQdFxslf9Q23bMCer9vgUBHnCvJXBrgBv-w7YdRUDwF0; see also, The microwave syndrome or electro-hypersensitivity: historical background https://pubmed.ncbi.nlm.nih.gov/26556835/.

[41] https://childrenshealthdefense.org/emr/emf-key-terms-descriptions/.

[42] https://childrenshealthdefense.org/emr/emf-wireless-health-impacts/.

[43] https://www.stralskyddsstiftelsen.se/two-studies-show-that-5g-caused-the-microwave-syndrome-in-healthy-persons/.

Queens Community Board 1 (Astoria) that when an antenna was placed on top of a utility pole outside his third floor window, he was severely injured experiencing heart arrythmias, sleeplessness and other adverse health symptoms. Only when he evacuated his house did the symptoms disappear. Although requested, OTI has done nothing to move that antenna. Wired Broadband, Inc. was present at QCB1 when the lieutenant spoke. I went to his house to measure the radio frequency (RF) radiation levels and found them to be very high. After having spent only an hour in the house, I returned home with a constellation of simultaneously symptoms -- in a state of complete disorientation where I felt uncertain of where my apartment door of floor was, felt very nauseous and then projectile vomited. Full recovery took about 24 hours. The offending antenna is owned by Extenet who assured the lieutenant that it was within FCC's emission limits for human exposure. However, that is no reassurance given the FCC's failure to comply with a federal appellate court order to review their limits in light of current science.

(e) **Federal preemption for environmental effects.** OTI incorrectly cites federal preemption on the 5G Tower installation. In a 2022 NY federal court decision, the FCC's 5G Order that would otherwise require 5G deployment[44] ***is not binding within the NY jurisdiction.*** It underscored Second Circuit caselaw that wireless carriers have the burden of showing that there is ***a gap in phone service, and that they are using the least intrusive means possible to fill that gap*** *and* "improved capacity and speed are desirable (and, no doubt, profitable) ... ***but they are not protected by the [Telecommunications Act of 1996].***"[45]

That means no federal preemption in NY for 5G Towers.

(f) **Public safety – tops of the 5G Towers may fall off.** Although the CEO of CityBridge, Nick Colvin, had assured Manhattan Community Board 7 that the 5G Tower would not fall, he said that the tops of the poles are made of light plastic that can fall off, but assured MCB7 that no one would get hurt.[46] From his lips to God's ears, as they say. Despite Mr. Colvin's assurances, there is no clearer evidence that these structures are not safe for the public. Particularly concerning was Mr. Colvin's insistence that his presentation to MCB7 not be recorded, as reported by a constituent in that district who had been told by the district manager. However, Wired Broadband, Inc. and New Yorkers 4 Wired Tech were present and witnessed Mr. Colvin's remarks.

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[44] 33 FCC Rcd 9088, 9104-05 (2018) (FCC Doc # 18-133), https://www.fcc.gov/document/fcc-facilitates-wireless-infrastructure-deployment-5g.

[45] ExteNet Sys. v. Vill. of Flower Hill, No. 19-CV-5588-FB-VMS, 9 (E.D.N.Y. Jul. 29, 2022), 2022 WL 3019650, https://casetext.com/case/extenet-sys-v-vill-of-flower-hill; see also, https://ehtrust.org/flowerhillny/.

[46] CityBridge CEO Nick Colvin's presentation to the Landmarks Committee of Manhattan Community Board 7 on 5-30-23, where the author and a constituent were present.

(g) **No evidence of a gap in service – telecoms deem that information proprietary.** When community boards have asked how the proposed 5G Tower locations were identified or stated that those locations do not lack service, OTI and CityBridge's responses have has been that the telecoms have identified those sites but their rationale is proprietary.[47] If telecoms are using public assets, i.e., our rights-of-way, then the information on how they chose the locations should be fully transparent. However, the information is not accessible.

(h) **No evidence required contractually of a gap in service** - In entering into the agreement for the 5G Towers, or with any other wireless franchisees, NYC has failed to preserve the rights of New Yorkers to require documentary evidence of a gap in service, and reject deployment, that fails to meet the Second Circuit standard of evidence of a gap in service. In conflict with federal case law in New York, the 5G Tower deployment, as well as other wireless infrastructure deployment, is not based on evidence of a gap in service, rather, OTI has effectively stripped local communities from any meaningful participation in determining whether they need or want them. If these are supposed to "bridge the digital divide," how can that be assessed if there's no required disclosure of evidence of a gap in service?

(i) **Privacy/security threat.** This has also been expressed as a concern by community boards. This also has not been addressed. OTI may not be aware of a letter emanating from their own office from 2020. NYC's Chief Technology Officer and Chief Information Security Officer spotlighted 5G's security vulnerabilities in a letter to the National Telecommunications and Information Administration (NTIA) in 2020:

> Such complex systems [5G] present ***more opportunities for security and privacy breaches***. By moving away from firmware-based technology of 4G telecommunication components to ***software-based 5G telecommunication components that will need to be updated, the opportunity for manipulation exists*** within the supply chain. Furthermore, movement away from centralized network systems to decentralized network systems ***increases the attack surface of a network***. That increased attack surface is ***amplified*** by the anticipated introduction of the increasing number and variety of connected devices (IoT) and big data industries. (top of p.3) [emphasis added]

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[47] See, e.g., MCB8's Transportation Committee meeting in Dec 2022 at https://www.cb8m.com/event/24978/ , MCB1's Environmental Protection Committee Meeting Sept 16, 2024 at 00:20:20 for OTI presentation and 1:58:20 for Odette Wilkens' rebuttal at https://www.youtube.com/watch?v=26u_neZ8MTo and MCB1's Board Meeting Sept 24, 2024 starting at 52:00:00 at https://www.youtube.com/watch?v=N6soYhp0kEo with opposition also by Landmarks Committee, and MCB5's Parks and Public Spaces Committee meeting Sept 30, 2024 at https://www.youtube.com/watch?v=vSwHp6wyfyM.

(j) **Opposition by communities to SHPO.** Mr. Sikoff did not report on the massive opposition by the major historic preservation organizations. All 5G Towers in NYC are subject to review for any adverse aesthetic impact under the National Historic Preservation Act. Even when the organizations are opposed to the Towers on historic preservation grounds, and SHPO does not agree with them, OTI proceeds with construction.

For instance, the NYS Historic Preservation Office (SHPO) had already designated PS 144 as eligible for listing on the National Register of Historic Places. Residents and the Association joined in a submission to SHPO made by Wired Broadband, Inc. that the 5G Tower at PS 144 would clash and have an adverse aesthetic impact on the school that would "noticeably diminish" the integrity of the characteristics qualifying the school for eligibility for listing on the National Register. SHPO disagreed with the community, and the tower is now constructed. The 5G Tower:

- Would be out of scale with nearby single-family houses with no visual buffers
- Would attract unsavory and unaesthetic elements which would significantly diminish the historic school's streetscape, and create a public safety and nuisance issue:
- Dilapidation. The risk of the top plastic coverings falling off in inclement weather would create a safety hazard for children, school faculty and neighbors, and further marring the aesthetics, with the towers likely taking on the appearance of having missing teeth.
- Magnet for graffiti. A 5G Tower in Rego Park has already fallen prey to graffiti, which, even after an attempted cleaning, has not been entirely removed.

- Seedy Element. Recharging station and screen would attract a seedy element back into the community with buskers and vagrants loitering,

attracting gangs and drugs which the community has since gotten rid of, and, as reported by other communities, watching pornography on the screen.

(k) **Despite rally, 5G Tower installed at elementary school.** A rally was held on April 1, 2025 to oppose a 5G Tower at PS 144 in Forest Hills, Queens. Tower was installed last week. Mr. Brett Sikoff of OTI and Mr. Robert Sokota of CityBridge received notice of the rally. Mr. Sikoff did not respond and Mr. Sokota did respond and emailed back that he would not be able to attend.

- Video of the rally **https://vimeo.com/1072648308?share=copy#t=0**
- Photos from the rally (below)
- Press release (see Addendum A)
- Post rally press release identifying the speakers at the rally and quotes (see Addendum B)
- Petition garnered 160 signatures at https://docs.google.com/forms/d/e/1FAIpQLSe34v_Sss0Zrg5RETw3rJPeiyjaqvyQjvr9AFX5w20Pr65KNg/viewform

More on PS 144:

Recently, Gov. Hochul proposed a restriction on cellular devices in schools, with growing support from Mayor Adams and Schools Chancellor Aviles-Ramos, to reduce kids' mobile screen addiction. Why, then, would Mayor Adams want to put a cell tower right next to an elementary school that would only be a temptation for children to use their cell phones during school?

Historical significance. The school has been designated by the New York State Historic Preservation Office (SHPO) as eligible for the National Register of Historic Places. PS 144 is also known as Col. Jeromus Remsen School. Col. Remsen served in the Am Rev War under George Washington and protected this area. He and his family are buried a few blocks from the school.

The school was constructed in 1931 by John Kennedy & Co., noted for building Roman Catholic schools and churches. The architect was Walter L. Martin, Superintendent of School Buildings for NYC's Board of Education.

Wired Broadband made several submissions to SHPO that 5G Tower would have an adverse aesthetic impact. SHPO agreed when it was next to the historic part of the school. Now that 5G Tower is closer to the new annex, only 140 feet from the historic part of the school, SHPO concurs with CityBridge of no adverse aesthetic impact. Respectfully, we

disagree. It is directly in line of sight from the historic school and impacts the school's setting which is a character-defining feature that makes it eligible for the National Register.

The schools' structure is an important architectural and historical landmark of our Forest Hills neighborhood. Forest Hills was developed in the early decades of the twentieth century by the Cord Meyer Development Corporation. This school was built in response to the dramatic increase in the population which rose from 9,500 in 1927 to 18,207 residents in 1930.

Queens Community Board 6 points to lack of transparency. Queens Community Board 6 noted such lack of transparency in its October 16, 2024 letter to NYC's Office of Technology:

> " . . . it is unclear if there are any other selection criteria, other than preference by the cellular carriers that there is a supposed network need. Community Board 6 requests that there is greater transparency in the site selection process . . . "[48]

[48] https://www.dropbox.com/scl/fi/4cwq9nedrkaf83kdyl1ui/QCB6-Letter-10-16-24-to-OTI-PS-144-69-23-Juno-Street.pdf?rlkey=b8qyizkb0fsasfzi546nvwvwh&st=f7x8hj0c&dl=0.


OUR
Community,
OUR
CHOICE!
OUR HEALTH
is NOT
a TEST!


OUR
Community,
OUR
HOICE!
OUR HEALTH
is NOT
a TEST!
NO 5G TOWER
PS144/JUNO
STREET

Studies have shown that children are more susceptible to wireless's adverse biological effects, including cancer. The WHO just published a review citing wireless's high cancer risk. 5G has never been tested for safety. No federal agency is testing for wireless safety. 5G is likely to exacerbate the digital divide, according to the US Got Accountability Office.

Bill	What it aims to do	Problems / issues
Int 198	Agreement with providers to provide affordable services.	Wired is more affordable than wireless. Should include wired broadband.
Int 481	Provide affordable internet programs, and community based internet service (CBIS) that is "built, used and managed by local communities." Providing info on affordable internet programs and CBIS.	1. CBIS should prioritize fiber, not wireless mesh networks. 2. 25% NYC residents do not want or need the 5G Towers, or wireless antennas on utility poles (pods or poletops), or rooftop antennas. 3. Wired and wireless are not tech neutral nor equivalent technologies.
Int 483	City agencies to provide secure wireless Internet access to NYC residents, including in an accessible area.	1. Should provide for accommodation for individuals with Electromagnetic Radiation Syndrome (EMR-Syndrome) or poisoning from wireless radiation. 2. On record is the 6-hour June 7, 2023 hearing of the Committee on Technology, with testimony of injuries from wireless radiation. 3. Sixteen community boards, representing at least 25% of NYC residents, 2 mil residents, oppose the 5G Towers. 4. 5G is not secure, is a software based system, making it difficult to quarantine a security breach. Hacking access to one node can gain access to the entire system. 5. Wireless will not bridge the digital divide. U.S. Gov't Accountability Office states that 5G is likely to exacerbate the divide. 6. Fiber should be prioritized. Former FCC Chair and former Pres of the CTIA (largest wireless trade assoc in US) Tom Wheeler stated that fiber is futureproof, while wireless should only be used as a last resort.
Int 486	Affordable internet services for students and families	NYC should follow the Chattanooga, TN model for municipal fiber broadband. The got a windfall and are providing each household with a school age child free internet.

Int 878	Online portal of cable services.	Need the same for wireless, where it is easier to track 5G towers. Where is NYC's map to track them?
Int 1121	Meet min speeds set by FCC which is 25 Mbps download / 3 Mbps upload, Internet advisory board 3 from mayor, 3 from city council speaker, 1 from public advocate.	1. Advance municipal broadband with fiber buildout. 25/3 are to meet wireless's lesser capacity. 2. Advisory council should have representatives from community boards. Community board disapprovals have been ignored during the 5G rollout. 3. Franchise agreements should be amended to require gap in service in order to place telecom infrastructure. Preserve the 2nd Circuit Federal Court of Appeals requirement of a gap in service, using the least intrusive means to fill that gap. 5G Towers, rooftop antenna farms – no proof of gaps in service and are the most intrusive.

The NYC Council has denied NYC residents the right to stop the irresponsible deployment of wireless antennas.

Respectfully submitted,

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718.575.8784

APPENDIX A

PRESS RELEASE
RALLY TO OPPOSE THE INSTALLATION OF A 5G TOWER
IN FRONT OF PS 144 IN FOREST HILLS, QUEENS

When: Tuesday, April 1, 2025, 2pm
Where: Across from 69-23 Juno Street, Near PS 144, Forest Hills, NY 11375

Contacts:

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eotalora@gmail.com
(718) 809-6644

Odette Wilkens
Wired Broadband, Inc.
owilkens@wiredbroadband.org
(646) 939-6855

On Tuesday, April 1st, at 2:00 PM, concerned residents in Forest Hills, Queens plan to gather to voice their concerns about the adverse effects a 5G Tower will have in their community, especially on the children at elementary school PS 144. The school serves pre-kindergarten and elementary grades up to 5th grade, and the 5G Tower will be directly in front of the Pre-K playground.

A 5G Tower is 32' high (3 stories) and contains 5 bays for antennas: one is for free Wi-Fi, while the other 4 bays are for 4G and 5G antennas for paying customers. That makes the 5G Tower largely a private enterprise using our public rights-of-way. Therefore, our community should have a say in whether it is needed.

Queens Community Board 6 wrote to the city in October 2024 that there were no complaints of gaps in coverage, and that there was a lack of transparency, other than the telecommunications carriers' preference, to site the 5G Tower at PS 144.

Similar complaints have been voiced by community boards around the city. While 2000 5G Towers are planned for NYC, 16 community boards have either sent letters of disapproval or resolutions calling for moratoria on 5G Tower deployment in their respective districts. This represents 25% of NYC residents who are saying "no" to 5G Towers.

Recently, Gov. Hochul proposed a restriction on cellular devices in schools, with growing support from Mayor Adams and Schools Chancellor Aviles-Ramos, to reduce kids' mobile screen addiction. At PS 144, most children under the age of 10 do not have a cell phone, nor are they allowed to stream YouTube videos on their cell phones during class. Although the city promotes the 5G Towers as bridging the "digital divide" in the outer boroughs, the siting of a 5G Tower at PS 144 is not filling a gap in service.

The site where the city wishes to place the 5G Tower is within the district and jurisdiction of the Forest Hills Van Court Association, which enforces restrictive aesthetic covenants. Those covenants hail from the time when the district was managed by the Forest Hills Gardens Corporation along with the adjacent Forest Hills Gardens, an exclusive and private enclave of Tudor-influenced architecture and landscaping. The Association's main priority is to ensure that the aesthetic integrity of the community's architecture and landscaping is maintained, and to protect homeowners' property values.

Residents have expressed disapproval that the 5G Tower does not comply with the covenants and has no place within the community. The aesthetic of the quiet streets of Forest Hills with most homes built over 100 years ago would be disrupted by the 5G Tower that would add a grossly discordant element to this aesthetic, contradicting the very aesthetic covenants to which the homeowners are bound and that have protected and preserved the streetscape, including around the historic school.

All 5G Towers in NYC are subject to review for any adverse aesthetic impact under the National Historic Preservation Act. The NYS Historic Preservation Office (SHPO) had already designated PS 144 as eligible for listing on the National Register of Historic Places. Residents and the Association joined in a submission to SHPO made by Wired Broadband, Inc., a non-profit based in Forest Hills, that the 5G Tower at PS 144 would clash and have an adverse aesthetic impact on the school that would "noticeably diminish" the integrity of the characteristics qualifying the school for eligibility for listing on the National Register. SHPO disagreed with the community. Respectfully, the community disagrees with SHPO and would request reversal. The 5G Tower:

- Would be out of scale with nearby single-family houses with no visual buffers
- Would attract unsavory and unaesthetic elements which would significantly diminish the historic school's streetscape, and create a public safety and nuisance issue:
    a. Dilapidation. The risk of the top plastic coverings falling off in inclement weather would create a safety hazard for children, school faculty and neighbors, and further marring the aesthetics, with the towers likely taking on the appearance of having missing teeth.
    b. Magnet for graffiti. A 5G Tower in Rego Park has already fallen prey to graffiti, which, even after an attempted cleaning, has not been entirely removed.
    c. Seedy Element. Recharging station and screen would attract a seedy element back into the community with buskers and vagrants loitering, attracting gangs and drugs which the community has since gotten rid of, and, as reported by other communities, watching pornography on the screen.

While OTI denies any health safety issues, the city has been misinformed about the risks that cell towers pose, especially for our children. It is well known that when there is mention of a cell tower, conversations about the adverse effects of radiation exposure will follow. Exposure to wireless radiation from cell towers has led to reports of chronic disease clusters. E.g., in Rippon, CA, four children ages 6-11 came down with liver, kidney and brain cancer, and four teachers came down with breast cancer. After the cell tower was removed, there were no more reported cases of cancer at the school. This should not be surprising, as the WHO's International Agency on Research on Cancer in 2011 classified wireless radiation as a Class 2B possible carcinogen, and the FDA's National Toxicology Program's 2018 results showed clear evidence of cancer in lab animals from wireless radiation.[49] NYS Assembly Member Seawright introduced bill AO8367 to set up a commission to study 5G health effects. A federal appellate court in 2021 ordered the FCC to review its outdated wireless exposure limits based on the 11,000 pages of scientific peer-reviewed studies showing harm within its limits; the FCC has failed to do so. Studying the cause of chronic disease in children from wireless radiation is now a federal priority.[50]

[49] See Biological Hazards of Wireless Radiation, below the fold under "Additional Valuable Resources" at https://thenationalcall.org/resources-2/.

[50] See Executive Order, 2-13-25, Sec 4(a) https://www.whitehouse.gov/presidential-actions/2025/02/establishing-the-presidents-make-america-healthy-again-commission/.

Therefore, the siting of 5G Towers in Forest Hills poses more potential threats than benefits, does not serve our residents, and we join and are a part of the 25% of NYC residents who are saying “no” to 5G Towers.

APPENDIX B

PRESS RELEASE
POST RALLY TO OPPOSE THE INSTALLATION OF A 5G TOWER
IN FRONT OF PS 144 IN FOREST HILLS, QUEENS
April 8, 2025

When: Tuesday, April 1, 2025, 2pm
Where: Across from 69-23 Juno Street, Near PS 144, Forest Hills, NY 11375

Contacts:

Emily Otalora
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(718) 809-6644

Odette Wilkens
Wired Broadband, Inc.
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(646) 939-6855

The first rally in NYC opposing the installation of a 5G Tower was held on Tuesday, April 1st in the Van Court section of Forest Hills, Queens. NYC has already broken ground on the sidewalk in front of PS 144 at 69-20 Juno Street in Forest Hills for a 5G Tower which it claims will provide needed broadband coverage.[51] But Queens Community Board 6 wrote to the city in October 2024 that there were no complaints of gaps in coverage, and that there was a lack of transparency, other than the telecommunications carriers' preference, to site the 5G Tower at PS 144.

Concerned residents in Forest Hills, Queens voiced their concerns about the adverse effects a 5G Tower will have on their community -- decreased property values, attracting vagrants, encouraging cell phone use at a time when the city is looking to reduce childhood addiction to social media, and adverse biological effects – especially on the children at elementary school PS 144. The school serves pre-kindergarten and elementary grades up to 5th grade, and the 5G Tower will be directly in front of the Pre-K playground.

A 5G Tower is 32' high (3 stories) and contains 5 bays for antennas: one is for free Wi-Fi, while the other 4 bays are for 4G and 5G antennas for paying customers. That makes the 5G Tower largely a private enterprise using our public rights-of-way. Therefore, our community should have a say in whether it is needed.

Community opposition to the 5G Tower at PS 144 has been growing. A community petition has garnered almost 160 signatures at the petition site https://forms.gle/6aZSMzLK4tZ4sYzk6.

Many members of the community, including those living across the street from where the 5G Tower is to be constructed, expressed their opposition. Emily Otalora, a local resident,

[51] https://www.nyc.gov/assets/designcommission/downloads/pdf/12-13-2021-pres-DoITT-p-Link-5G-1.pdf.

who introduced the speakers, expressed her concerns, “the city is planning another intrusion into our lives.” She noted that there is no need for the large 5G Tower since the shorter, 9’ LinkNYC kiosks, provide similar features as the 5G Tower is supposed to provide, e.g., free Wi-Fi, charging ports, free calls. The slated 5G Tower is in stark contrast to “the quiet streets of Forest Hills with most homes built over 100 years ago . . . We residents pay annual dues to ensure the preservation of the street and the buildings . . . The city wishes to place this Tower within the Van Court Association whose main priority is to ensure that residents . . . maintain the historical beautification of the area, and the Tower does not comply.”

Emily has further commented that “The 5G towers are banal eyesores that sharply contrast with the historic facades that convey great beauty. Most importantly, they present health hazards that we should not be exposed to . . . The community’s wishes must not be ignored, if this is truly a democracy. Installing one on the [sidewalk] of PS 144 will set a negative precedent by leading to the installation of others that we do not need. The technology exists without these risky eyesores anyway. What a waste of funds and an obliteration of our streets.”

The Van Court Association is the homeowners’ association in whose district PS 144 is located and where the 5G Tower is to be sited. Steve Reichstein, Vice President of the Association, said that “The Forest Hills Van Court Association has voted unanimously against the Tower being erected here . . . We represent a community of 300 people.” The Association joined as a signer to the submission made in Nov. 2024 to the NY State Historic Preservation Office (SHPO) to oppose the 5G Tower at PS 144. The submission was led by Wired Broadband, Inc., a local non-profit advocating for the safe deployment of technology. Other local residents also joined in the submission.

Young-ah Hur, a 35-year resident living across from PS 144 with her family, whose son went to PS 144, focused on the adverse biological impacts of wireless radiation. As a health care professional and former registered nurse having worked in hospitals, she talked about what can happen to people who live near cell towers: “headache, fatigue, irritability, concentration and memory problems, depression and anxiety . . .cardiovascular issues, muscular and joint pains.” When the people move away from the cell towers, “their symptoms vanished.” “Sweden, Italy and Portugal have banned the 5G Towers near schools, nursing homes and residential areas, but here not.”

Her husband, Hur, asked “nobody knows what’s going to happen in five years, ten years . . . there’s a young kid here” who may get leukemia. There “is not a guarantee that electricity and magnetic fields [do] not affect our health . . . ”

Bernard Otalora, a retired physical education teacher, said that “P.S. 144, a bridge to the future, . . . [is] at risk of being under an electromagnetic field 24/7 if the 5G Tower is erected. The children, the teachers, the staff and the school principal are all at risk . . . Health is our most precious capital, we cannot play Russian Roulette with it. We do not need this

Tower . . . It will be a magnet for vagrants . . . We need a safe environment. We would like the school superintendent and all elected officials to have this project nipped in the bud . . . P.S. 144 must remain a haven for all future generations to come. Fight for the children . . . ”

Maria Luisa Otalora, a retired travel consultant, having lived in Forest Hills her entire life, said that the 5G Tower “is a manmade disaster in the making . . . It’s threatening our health. Many studies that the telecommunications companies refer to are outdated, and the companies ignore the truth about the 5G Towers . . . We need to tell our elected officials that this community has no need for 5G Towers and it will serve no purpose other than to cause physical harm to the residents, students, teachers, and staff here at PS 144 and the community at large . . . It can potentially attract an undesirable element that we managed to eliminate years ago.”

Samantha Wolner, a life-long resident of Forest Hills, working in scientific publishing for over a decade, has an 8 year old son who goes to school nearby. She addressed the technology and smartphone addiction among children as chronicled in Jonathan Haidt’s book, “The Anxious Generation: How the Great Rewiring of Childhood is Causing an Epidemic of Mental Illness.” She mentioned how the World Health Organization has classified wireless radiation “as a Class 2B possible carcinogen.” When she first learned of this issue a few years ago, she “immediately dismissed it as fringe conspiracy theory. Cell phones, Wi-Fi, and cell towers are everywhere; ‘What's the big deal?’ . . . It took me three years to understand what the whistleblowers have been saying all along . . . The electromagnetic field emissions from these technologies . . . may be invisible, but they are not imaginary . . . they are measurable with the right tools . . . The published scientific research is extensive. Ten years ago, Dr. Martin Blank from Columbia University's Department of Physiology and Cellular Biophysics published . . . ‘Overpowered: The Dangers of Electromagnetic Radiation and What You Can Do About It’. . . Dr. Blank discovered that low, non-thermal/non-ionizing electromagnetic radiation (which is considered "safe" by regulatory agencies), in fact activates a cellular stress response, damaging DNA . . . why would we risk exposing our community to this infrastructure? Our children are the most vulnerable--still growing and developing with cells that consequently multiply at a faster rate than those of adults, making them more susceptible to changes on a cellular level--and to install a 5G tower steps away from where they learn and play is unconscionable . . . It is crucial that we educate and empower our community to step up and speak out; we will otherwise be acquiescing to industry and participating in a risky biological experiment without informed consent.”

Odette Wilkens, a long-time resident of Forest Hills since 1976, has been a technology transactional attorney for over 20 years, and President & General Counsel of Wired Broadband, Inc., a non-profit in Forest Hills, advocating for the safe installment of technology in communities. Addressing screen addiction, she said “recently, Gov. Hochul proposed a restriction on cellular devices in schools, with growing support from Mayor Adams and Schools Chancellor Aviles-Ramos, to reduce kids’ mobile screen addiction.

Why, then, would Mayor Adams want to put a cell tower right next to an elementary school that would only be a temptation for children to use their cell phones?"

"The school has been designated by the New York State Historic Preservation Office (SHPO) as eligible for the National Register of Historic Places. PS 144 is also known as Col. Jeromus Remsen School. Col. Remsen served in the Am Rev War under George Washington. The school was constructed in 1931 by John Kennedy & Co., noted for building Roman Catholic schools and churches. The architect was Walter L. Martin, Superintendent of School Buildings for NYC's Board of Education."

"Exposure to wireless radiation from cell towers has led to reports of chronic disease clusters. In Rippon, CA, four children ages 6-11 came down with liver, kidney and brain cancer, and four teachers came down with breast cancer. After the cell tower was removed, there were no more reported cases of cancer at the school . . . The FDA's National Toxicology Program's 2018 results showed clear evidence of cancer in lab animals from wireless radiation. Clear evidence is the highest evidence. NYS Assembly Member Seawright introduced bill AO8367 to set up a commission to study 5G health effects. A federal appellate court in 2021 ordered the FCC to review its outdated wireless exposure limits based on the 11,000 pages of scientific peer-reviewed studies showing harm within its limits; the FCC has failed to do so. Studying the cause of chronic disease in children from wireless radiation is now a federal priority."[52]

"Therefore, the siting of 5G Towers in Forest Hills poses more potential threats than benefits, does not serve our residents, and we join and are a part of the 25% of NYC residents who are saying 'no' to 5G Towers."

[52] See Executive Order, 2-13-25, Sec 4(a) https://www.whitehouse.gov/presidential-actions/2025/02/establishing-the-presidents-make-america-healthy-again-commission/.

APPENDIX C

Biological Hazards of Wireless Radiation – Executive Summary

April 25, 2025

The FCC's standards for wireless radiation were established back in 1996, and have not been reviewed, updated or verified despite significant changes in the wireless technology in use today. The FCC's standards relate solely to wireless radiation's thermal impacts on a body (e.g. how the body reacts to being heated), and do not consider other known adverse biological impacts of non-thermal levels of RF radiation (such as damage to DNA or other changes to cells). The FCC's limits were established long before the existence of 2G, 3G, 4G, or 5G technology.

Congress eliminated the EPA's funding for electromagnetic research in 1996, knee capping the EPA from studying biological impacts of RF radiation for nearly 30 years. *At the very least, the FCC's standards should be reconsidered (FCC is under federal court order to do so, but has not) given current technology.*

Wireless radiation, also referred to as radio frequency (RF) radiation, produces biological effects and evidence of its hazards are clear and convincing, yet the hazards are not generally publicized, and the hazards are unnecessary to reap the benefits of wireless technology.

- **Industry Funded Research** – The wireless industry has funded studies that show adverse biological impacts. A 1990s $28.5 million study found that RF radiation produces biological effects that are potentially hazardous to humans in ways that have nothing to do with heated tissue. A 2000 study for a major telecom carrier found RF radiation has links to cancer, neurological disorders and cognitive impairment. Insurance companies will not insure for personal injury from RF radiation, reflecting their concerns about the possible magnitude of their liability, e.g., that 5G is a high, "off the leash" risk.

- **Reports from Federal Agencies** – A 2018 $30 million US National Toxicology Program (NTP) study found "clear evidence of cancer" in lab rats from wireless radiation. In 2019, the FCC admitted that RF radiation can have non-thermal impacts on humans, but it has conducted no studies to determine what those impacts might be or what changes should be made to its RF radiation emission limits. In 2021, the DC Circuit Court of Appeals ruled in *Environmental Health Trust, et al* v. *FCC* that the FCC's lack of action was arbitrary and capricious for failing to review its emission standards in light of new science and current technology and that it should consider non-cancer health impacts of wireless radiation. So far, the FCC has failed to comply with the Court order. As early as 1971, the US Naval Medical Research Academy concluded from 2300 studies that RF radiation, including millimeter (e.g. 5G), are linked to cardiac, neurological and other disorders.

- **Independent Studies** – Several major independent studies have concluded biological effects from RF radiation, including by the Int'l Agency on Research on Cancer (IARC) of the World Health Organization in 2011 (classifying wireless radiation as a Class 2B carcinogen), the Ramazzini Institute in 2018 (clear evidence of cancer in lab rats, corroborating the NTP's

results) and the New Hampshire Commission in 2020 (all forms of wireless radiation are harmful). The American Academy of Pediatrics warns that children are disproportionately affected by cell phone radiation. Studies concluded increased risk for ADHD, delayed motor skills, diabetes and demyelination of fetuses' brain neurons.

- **Chronic Diseases and Clusters near Cell Towers** – Illnesses near cell towers, e.g., nausea, rashes, stroke, atrial fibrillation and a variety of cancers, have been documented near Duluth, MN (51 strokes), Pittsfield, MA (17 residents fell ill and many evacuated, one resident who remained died), Rippon, CA (4 children and 4 teachers developed cancer; one child died) and Eagle, ID (atrial fibrillations from 5G cell towers).

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BIOLOGICAL HAZARDS OF WIRELESS RADIATION -- SOME HIGHLIGHTS

April 25, 2025

"The evidence presented to the Board includes well over one thousand peer-reviewed scientific and medical studies which consistently find that pulsed and modulated RFR has bio-effects and can lead to short- and long-term adverse health effects in humans, either directly or by aggravating other existing medical conditions. Credible, independent peer-reviewed scientific and medical studies show profoundly deleterious effects on human health, including but not limited to: neurological and dermatological effects; increased risk of cancer and brain tumors; DNA damage; oxidative stress; immune dysfunction; cognitive processing effects; altered brain development, sleep and memory disturbances, ADHD, abnormal behavior, sperm dysfunction, and damage to the blood-brain barrier."[53]

~ Board of Health, Pittsfield, MA, Emergency Cease & Desist Order to remove cell tower that was sickening 17 residents simultaneously.

What the Industry Knows About the Biological Hazards of RF Radiation:

1. **Industry Funded Research Finds Biological Effects**. A 1990s research program funded by the wireless industry at $28.5 million under the independent non-profit, Wireless Technology Research, LLC (WTR), found that wireless radiation (i.e., non-thermal radiation) is **biologically active producing biological effects and potentially hazardous to human health**.[54] That means the radiation does not need to heat human tissue. (Note that the FCC limits only account for thermal, not non-thermal, adverse effects.)

[53] https://ehtrust.org/cease-and-desist-order-against-verizon-cell-tower-by-board-of-health-pittsfield-ma/, see below the fold for link to the Order at 3, 2nd "Whereas" clause, paragraph #1.
[54] Wireless Phones and Health II: State of the Science 2002 Edition, edited by George L. Carlo; Wireless Phones and Health: Scientific Progress, edited by George L. Carlo.

a) The research was peer-reviewed with scientific oversight by both an independent Peer Review Board at the Harvard School of Public Health and a U.S. Government Interagency Working Group, chaired by the FDA, and including EPA, OSHA, NIOSH, CDC, FCC, and NIH.[55]
b) Abruptly after these findings, the EPA was defunded from doing any further research on the biological effects of wireless radiation.[56]

2. **Industry Commissioned Study Finds Biological Effects.** A study in 2000 commissioned by a major telecom carrier found links to cancer, leukemia, neurological disorders and cognitive impairment, with special caution for children and an acknowledgement of those already disabled from the radiation.[57]
3. **Industry Patents Point to Health Risks.** Telecom and cell phone manufacturers have filed patents to reduce the level of wireless exposure tied directly to health risks such as neurological disorders and cancer.[58]

4. **Risk Warnings of Litigation.** Industry annual reports warn their shareholders of litigation risk from potential personal injury claims from RF radiation and potential financial losses.[59]

5. **RF Radiation is a Pollutant.** The telecom industry characterizes RF radiation as a pollutant in their device protection plans and disclaim insurance liability.[60]

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[55] Ibid.

[56] Overpowered, What Science Tells Us About the Dangers of Cell Phones and Other WiFi-Age Devices, Martin Blank, PhD, 2014 at 110-112.

[57] T-Mobil Deutsche Telekom commissioned study by the Ecolog-Institute, April 2000, "Mobile Telecommunications and Health Review of the Current Scientific Research in View of Precautionary Health Protection," https://ehtrust.org/wp-content/uploads/ecolog2000.pdf.

[58] Swisscom patent, 2004 at https://www.dropbox.com/scl/fi/nwdfklq7r7j2wwsipv7ws/SwissCom-Patent-application-2003-2004-WO2004075583A1-1-1.pdf?rlkey=liuy6175hamj24lbuszpe7vux&st=5p2oy0ji&dl=0; "Manufacturers Own Patents to Cut Radiation," RCR Wireless, June 4, 2001 at https://www.dropbox.com/scl/fi/0rfwys743dgeqpifwu3ua/Manufacturer-own-patents-to-cut-radiation-RCR-Wireless-News.pdf?rlkey=e5hm46nyp9an6ugu4y005ldm3&st=xr7ocreh&dl=0.

[59] AT&T, Inc., 2021 Annual Report, https://investors.att.com/~/media/Files/A/ATT-IR-V2/financial-reports/annual-reports/2021/complete-2021-annual-report.pdf at 41.
Verizon's 2021 U.S. SEC Form 10–K at 17, https://www.verizon.com/about/sites/default/files/2020-Annual-Report-on-Form-10-K.PDF.

[60] Exclusions of loss from electromagnetic radiation from insurance coverage:

- Verizon, Sec B "Exclusions," Subsection 16 "Pollution," https://ehtrust.org/wp-content/uploads/device-protection-brochure-nationwide.pdf;
- AT&T, Sec II "Exclusions," Subsection H. Loss from "Pollutants," Sec IX.T. Definition of "Pollutants," https://ehtrust.org/wp-content/uploads/ATT-Multi-Device-Protection-Pack-Insurance.pdf;
- Sprint, Sec II "Exclusions," Subsection H. Loss from "Pollutants," Sec IX.P. Definition of "Pollutants," https://ehtrust.org/wp-content/uploads/Sprint-Insurance-Terms-and-Conditions-Downloaded-2019.pdf.

6. **Insurance Companies Exclude Injury Coverage for RF Radiation.** Insurance companies such as Lloyd's of London will not insure for personal injury from RF radiation because of the high risk of claims, with Swiss Re characterizing "5G" as "high," "off-the-leash" risk.[61]

7. **No 5G Pre-Market Testing.** Telecom executives during a Feb. 2019 Senate hearing confirmed no industry pre-market testing of 5G for public health or safety. Sen. Blumenthal (CT) criticized the FCC and FDA for inadequate answers on questions of public health, and concluded, "We're kind of flying blind here as far as health and safety is concerned." [62]

8. **"Why Tech Leaders Don't Let Their Kids Use Tech."[63]** The article reports that technology executives restrict or forbid their children's use of the very technology that they are providing to the public, including "the makers of smartphones and tablets, of social media channels and game boxes." Technology "titans" such as former Apple's Steve Jobs and Bill and Melinda Gates have admitted to placing restrictions on their children's use of technology. Chris Anderson, former Wired magazine editor and CEO of 3D Robotics, said that his kids "accuse me and my wife of being fascists and overly concerned about tech, and they say that none of their friends have the same rules. That's because we have seen the dangers of technology firsthand. I've seen it in myself, I don't want to see that happen to my kids."[64]

What Federal Agencies Know About the Biological Effects of Wireless Radiation and Have Disregarded:

1. **Food and Drug Administration (FDA).** The U.S. National Toxicology Program's (NTP) 2018 report concluded **clear evidence of cancer** in lab rats from wireless radiation (similar to 2G and 3G cell phones).[65] NTP found malignant heart schwannomas and malignant brain gliomas.[66] NTP is one of the most prestigious toxicology institutions in the world. In 1999, the FDA had nominated the NTP to conduct a $30 million study of RF radiation "with a high priority," to conduct animal studies, stating that it was "not scientifically possible to

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[61] https://ehtrust.org/key-issues/electromagnetic-field-insurance-policy-exclusions/.
[62] https://ehtrust.org/health-effects-of-5g-wireless-technology-confirmed-at-us-senate-hearing-after-senator-blumenthal-questions-industry/; see also, https://mdsafetech.org/2019/02/13/no-research-on-5g-safety-senator-blumenthal-question-answered/.
[63] "Why Tech Leaders Don't Let Their Kids Use Tech," https://kidzu.co/health-wellbeing/why-tech-leaders-dont-let-their-kids-use-tech/.
[64] Ibid.
[65] See letter of Dr. Birnbaum, former NIH and NTP Director, and hyperlinked amicus brief https://www.dropbox.com/scl/fi/nc7l00p8zxk8tj0l2a1yr/Dr.-Linda-Birnbaum-cell-tower-letter.pdf?rlkey=vq1i363i74umg9ybydrrhmn5d&st=q9l49h88&dl=0 ; see also, https://ehtrust.org/former-niehs-director-dr-linda-birnbaum-interviewed-about-cell-phone-radiation/.
[66] https://ntp.niehs.nih.gov/whatwestudy/topics/cellphones#studies *Environmental Health Trust, et al v. FCC*, Motion for Leave to File Brief of Amicus Curiae Joseph Sandri in Support of Petitioners Urging Reversal, Aug. 5, 2020, https://ehtrust.org/wp-content/uploads/20-1025-Amicus-Brief-Joe-Sandri.pdf.

guarantee that non-thermal levels of microwave radiation . . . will not cause long-term adverse health effects."[67]

a) Dr. Linda Birnbaum, former NIH and NTP director, has stated: "Every agent known to cause cancer in humans will also produce it in animals when adequately tested."[68] **"**Overall, the NTP findings demonstrate the potential for RFR **to cause cancer in humans**."[69] [Emphasis added.]

2. **Federal Communications Commission (FCC).**

a) The FCC admitted in 2019 that at least some types of RF radiation can cause instantaneous non-thermal adverse effects with RF radiation frequencies ranging between 3 KHz and 10 MHz.[70] The FCC averages exposure levels over 30 minutes,[71] which completely obscures the effects of the constant peaking and pulsations of RF radiation which causes adverse health effects, and does not account for 24/7 exposure by the population.[72]

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[67] Note that the following letter is no longer available at the below URL, although it was originally accessed from there. Letter from the Dept of Health and Human Services to the National Toxicology Program at the National Institute for Environmental Health Studies, May 19, 1999, https://ntp.niehs.nih.gov/sites/default/files/ntp/htdocs/chem_background/exsumpdf/wireless051999_508.pdf.

[68] Dr. Birnbaum's statement in Attorney Joe Sandri's Amicus Brief filed 8-5-2020 in connection with *Environmental Health Trust, et al v. FCC, https://ehtrust.org/fcc-amicus-briefs/* (below the fold, right column) at 9.

[69] Ibid, 11.

[70] Proposed Changes in the Commission's Rule Regarding Human Exposure to Radiofrequency Electromagnetic Fields, 34 FCC Rcd 11687, 11743-11745, ¶¶122- 124 & nn. 322-335 (2019).

[71] 47 CFR 1.1307(b)(2): "Time-averaging period is a time period not to exceed 30 minutes for fixed RF sources or a time period inherent from device transmission characteristics not to exceed 30 minutes for mobile and portable RF sources," https://www.ecfr.gov/current/title-47/chapter-I/subchapter-A/part-1/subpart-I/section-1.1307#p-1.1307(b).

[72] Human-made electromagnetic fields: Ion forced-oscillation and voltage-gated ion channel dysfunction, oxidative stress and DNA damage (Review) (2021) Pangopolous DJ, et al. International Journal of Oncology. August 23, 2021. https://pubmed.ncbi.nlm.nih.gov/34617575/.

Computational modeling investigation of pulsed high peak power microwaves and the potential for traumatic brain injury. Sci Adv. 2021 Oct; 7(44). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8555891/. "These studies reveal that the MAE threshold depends on the energy in a single pulse (not the average power density) for sufficiently short pulses [e.g., 32 μs in (46)], and peak power densities of 102 to 105 mW/cm2 have been known to cause auditory effects in human participants (45)."

"Diplomats' Mystery Illness and Pulsed Radiofrequency/Microwave Radiation," Dr. Beatrice Golomb. Neural Comput. 2018 Nov; 30(11):2882-2985. https://pubmed.ncbi.nlm.nih.gov/30183509/; "Reported facts appear consistent with pulsed RF/MW as the source of injury in affected diplomats."

"5G: Great risk for EU, U.S. and International Health! Compelling Evidence for Eight Distinct Types of Great Harm Caused by Electromagnetic Field (EMF) Exposures and the Mechanism that Causes Them," Martin L. Pall, PhD, https://peaceinspace.blogs.com/files/5g-emf-hazards--dr-martin-l.-pall--eu-emf2018-6-11us3.pdf.

b) The FCC received in its docket, when requesting public comment on the adequacy of its 1996 RF radiation emission limits, 11,000 pages of peer-reviewed, scientific studies showing biological effects from RF radiation and a couple hundred personal submissions of injury. When the FCC closed the docket, it declined to update its limits. The FCC was sued and in 2021 the D.C. Circuit Court of Appeals ruled against the FCC and remanded the case back to the FCC because the FCC failed to provide a reasoned explanation for not updating its limits and ignoring the current science.[73] The FCC has not yet complied.

3. **A U.S. Naval Medical Academy Research** report from 1971 by Dr. Zory Glaser[74] linked 23 chronic diseases to RF radiation based on over 2300 studies.[75] A Feb 2025 report correlates Dr. Glaser's findings from 1971 of biological effects of RF radiation and millimeter wave (5G) technology to reported cases of chronic disease.[76] The 2025 report states that Dr. Glaser reported biological effects and diseases related to the central and autonomic nervous systems, genetic / chromosomal, vascular, blood, metabolic, endocrine and gastrointestinal disorders.[77] In 1976, Dr. Glaser updated the total bibliography to 3700 reports relating to the biological effects of RF radiation.[78]

4. **Central Intelligence Agency (CIA).** In 2012, the CIA declassified and approved for release a 1977 Russian study on the "Biological Effects of Millimeter Radiowaves" which found that while millimeter waves only penetrate the skin, they trigger a cascade of adverse biological effects within the body.[79]
    a) The study coins the term **"radiowave disease"** to describe these effects.[80] Adverse effects on the skin included demyelination of sections of nerve fibers (damage or destruction to the insulation around nerve fibers which disrupts normal nerve impulse transmission), fragmented neural conductors, and deformation of sensory receptors, leading to neurological disorders.

Belyaev, I., Dean, A., Eger, H. et al. "EUROPAEM EMF Guideline 2016 for the prevention, diagnosis, and treatment of EMF-related health problems and illnesses." Rev environ Health. 2016;31(3):363-397. Doi:10.1515/reveh-2016-0011.

B. W. G. (2012). "Bioinitiative Report 2012: A Rationale for Biologically-based Exposure Standards for Low-Intensity Electromagnetic Radiation."

[73] https://media.cadc.uscourts.gov/opinions/docs/2021/08/20-1025-1910111.pdf
[74] About Dr. Zory Glaser, https://zoryglaser.com/.
[75] https://www.magdahavas.com/wp-content/uploads/2010/06/Navy_Radiowave_Brief.pdf.
[76] Report: "Safety of Wireless Radiation, a Scientific View, Feb 2025, Richard Lear and Camilla Rees, https://www.researchgate.net/publication/388763046_Safety_of_Wireless_Technologies_The_Scientific_View at 12-13.
[77] Ibid at 3.
[78] https://ehtrust.org/wp-content/uploads/Naval-MRI-Glaser-Report-1976.pdf.
[79] https://mdsafetech.org/wp-content/uploads/2019/02/biological-effects-of-millimeter-wavelengths.-zalyubovskaya-declassif-by-cia-1977-biol-eff-mm-waves.pdf.
[80] Ibid at 57.

b) The people observed working with millimeter radio wave generators had disturbances in their blood and immuno-biology.[81]
c) Exposure in lab animals caused many disorders including of the liver, spleen, heart and brain, inhibiting "oxygen consumption rate by the mitochondria of those organs."[82]
d) The degree of adverse effects **increased with more exposure**;[83] the lab animals had been exposed for 15 minutes a day for 60 days. When exposure ceases, apparently disorders from low millimeter radio waves are reversible.[84] However, if adverse effects depend on duration of exposure, then Americans exposed continuously 24/7, 365 days a year, would suffer adverse biological effects, but without reprieve and without the ability to recover.

5. **Chronology of Federal Agencies** expressing since at least the 1990s that the FCC's wireless limits address only thermal (heating of human tissue), not non-thermal exposure, of RF radiation,[85] despite the fact that non-thermal exposure produces biological effects and disease.

Independent Research on Biological Effects of RF Radiation, Disregarded by Federal Agencies:

1. **The World Health Organization (WHO) published a review in February 2025 linking electromagnetic radiation to high risk of cancer, especially of the heart and brain.** [86]

    a. **The WHO's International Agency for Research on Cancer (IARC)** classified wireless radiation (2G and 3G) as a **Class 2B possible human carcinogen** in 2011,[87] (similar to lead, diesel fuel and gasoline engine exhaust). This was based on "epidemiological observations in humans which exhibited higher risks for the glioma-type of malignant brain cancer and of benign vestibular schwannoma of the vestibulocochlear nerve among heavy or long-term subscribers of cell or mobile phones."[88]

    b. "[R]esults from animal experiments that the IARC was lacking were later provided by the U.S. National Toxicology Program (NTP) report of two types of cancers in

[81] Ibid at 60.
[82] Ibid at 59.
[83] Ibid at 59.
[84] Ibid at 58.
[85] https://ehtrust.org/timeline-of-development-of-safety-limits-for-wireless-radiation-in-us/.
[86] Effects of radiofrequency electromagnetic field exposure on cancer in laboratory animal studies, a systematic review, April 2025 (available online), https://www.sciencedirect.com/science/article/pii/S0160412025002338.
[87] https://www.iarc.who.int/wp-content/uploads/2018/07/pr208_E.pdf.
[88] J. C. Lin, "RF Health Safety Limits and Recommendations [Health Matters]," in IEEE Microwave Magazine, vol. 24, no. 6, pp. 18-77, June 2023, doi: 10.1109/MMM.2023.3255659. keywords: {Radiation detectors;Human factors;Safety;Radiation effects;Cellular phones;Radio frequency}.

laboratory rats that were exposed, lifelong, to 2G and 3G cell phone RF radiation frequencies below 6 GHz . . . did not exceed 1°C,"[89] i.e., did not heat tissue.

c. Since the WHO 2011 IARC cancer finding by independent scientists, other factions within the WHO have sought to produce industry-aligned pronouncements. For example, its website states a lack of causality of harm from wireless radiation[90]. However, over a decade later, a number of the IARC scientists are saying the opposite – that radiofrequency should be upgraded to a group 1 carcinogen (the highest level of evidence).[91] Dr. Miller, a former Senior Epidemiologist and Senior Scientist at the IARC has stated, **"[t]here is sufficient evidence to now classify radiofrequency radiation as a human carcinogen."** [92]

   i. The WHO recently commissioned a study by Karpidis, et al, which concluded in 2024 no hazards from wireless radiation,[93] however, the study has been found to be severely flawed with no scientifically valid assessment,[94] and its conclusion

[89] J. C. Lin, "RF Health Safety Limits and Recommendations [Health Matters]," in IEEE Microwave Magazine, vol. 24, no. 6, pp. 18-77, June 2023, doi: 10.1109/MMM.2023.3255659. keywords: {Radiation detectors;Human factors;Safety;Radiation effects;Cellular phones;Radio frequency}.

[90] https://www.who.int/news-room/questions-and-answers/item/radiation-5g-mobile-networks-and-health.

[91] Hardell, L., Carlberg, M."Comments on the US National Toxicology Program technical reports on toxicology and carcinogenesis study in rats exposed to whole-body radiofrequency radiation at 900 MHz and in mice exposed to whole-body radiofrequency radiation at 1,900 MHz". International Journal of Oncology 54, no. 1 (2019): 111-127. https://doi.org/10.3892/ijo.2018.4606

[92] Professor Miller, MD, FRCP, FRCP (C), FFPH, FACE, is an eminent physician and expert in preventative medicine, a scientific advisor to various scientific and health authorities, and a former Senior Epidemiologist and Senior Scientist at the World Health Organization's (WHO) International Agency for Research on Cancer (IARC), https://phiremedical.org/2020-nir-consensus-statement-press-release/; see Prof. Miller's statement at 00:15:06 at https://www.youtube.com/watch?v=S16QI6-w9I8; see also Proceedings from a Symposium on the Impacts of Wireless Technology on Health, Prof. Miller at 8, https://www.womenscollegehospital.ca/wp-content/uploads/2022/06/Symposium_Document_Final_Jan_12.pdf.

[93] K. Karipidis, D. Baaken, T. Loney, M. Blettner, C. Brzozek, M. Elwood, C. Narh, N. Orsini, M. Röösli, M.S. Paulo, S. Lagorio, The effect of exposure to radiofrequency fields on cancer risk in the general and working population: A systematic review of human observational studies - Part I: Most researched outcomes
Environ Int., 191 (2024), Article 108983, 10.1016/j.envint.2024.108983.

[94] John W. Frank, Joel M. Moskowitz, Ronald L. Melnick, Lennart Hardell, Alasdair Philips, Paul Héroux, Elizabeth Kelley, *The Systematic Review on RF-EMF Exposure and Cancer by Karipidis et al. (2024) has Serious Flaws that Undermine the Validity of the Study's Conclusions*, Environment International, Vol. 195, 2025, 109200, ISSN 0160-4120, https://doi.org/10.1016/j.envint.2024.109200.
(https://www.sciencedirect.com/science/article/pii/S0160412024007876)

contradicted scientific evidence and was drawn from data showing hazards.[95] Researchers have called for a retraction of the study.[96]

ii. Potential conflict of interest: note that the Karpidis study was done by the WHO's EMF Project, not by the IARC, the latter being an advisory group consisting of 29 scientists from 18 countries.[97]

iii. Another WHO study in 2024 on RF-induced oxidative stress identified 11,599 studies on oxidative stress within the 800-2450 MHz range, but discarded more than 99% of those studies.[98] Researchers have called for a retraction of the study.[99]

2. **The Ramazzini Institute** in Italy in 2018 found increased malignant heart schwannomas and malignant brain gliomas in lab animals from cell tower base stations, similar to what the NTP found from 2G/3G.[100]

Note: *"Since the IARC evaluation in 2011, the evidence on human cancer risks from RF radiation has been strengthened based on human cancer epidemiology reports [IARC Class 2B designation for RF radiation], animal carcinogenicity studies [NTP study finding clear evidence of cancer] and experimental findings on oxidative mechanisms [associated with increased DNA damage]* [101] *and*

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[95] "WHO to build neglect of RF-EMF exposure hazards on flawed EHC reviews? Case study demonstrates how 'no hazards' conclusion is drawn from data showing hazards," 7/10/24, https://www.degruyter.com/document/doi/10.1515/reveh-2024-0089/html;
"WHO's EMF Project's Systemic Reviews on the Association between RF Exposure and Health Effects Encounter Challenges," James Lin, IEEE Microwave Magazine, Jan 2025, https://www.dropbox.com/scl/fi/xq492i5ha6f2431vyxn3g/World_Health_Organizations_EMF_Projects_Systemic_Reviews_on_the_Association_Between_RF_Exposure_and_Health_Effects_Encounter_Challenges_Health_Matters.pdf?rlkey=o77i19den485rdo2k4ktdzhgj&st=842p0rbv&dl=0.

[96] Lennart Hardell, Mona Nilsson. A Critical Analysis of the World Health Organization (WHO) Systematic Review 2024 on Radiofrequency Radiation Exposure and Cancer Risks. Journal of Cancer Science and Clinical Therapeutics. 9 (2025): 09-26., https://cdn.fortunejournals.com/articles/a-critical-analysis-of-the-world-health-organization-who-systematic-review.pdf.

[97] *Health risks from radiofrequency radiation, including 5G, should be assessed by experts with no conflicts of interest,* Lennart Hardell, Michael Carlberg. Oncol Lett. 2020 Jul 15;20(4):15. doi: 10.3892/ol.2020.11876.

[98] Frank, John W., Melnick, Ronald L. and Moskowitz, Joel M.. "A critical appraisal of the WHO 2024 systematic review of the effects of RF-EMF exposure on tinnitus, migraine/headache, and non-specific symptoms" Reviews on Environmental Health, 2024. https://doi.org/10.1515/reveh-2024-0069; "Another WHO RF Review Challenged, More than 99% of Studies on Oxidative Stress Discarded," Microwave News, 8/21/24, https://www.microwavenews.com/short-takes-archive/another-who-rf-systematic-review-challenged.

[99] Ibid.

[100] https://pubmed.ncbi.nlm.nih.gov/29530389/; see also J. C. Lin, "RF Health Safety Limits and Recommendations [Health Matters]," in IEEE Microwave Magazine, vol. 24, no. 6, pp. 18-77, June 2023, doi: 10.1109/MMM.2023.3255659. keywords: {Radiation detectors;Human factors;Safety;Radiation effects;Cellular phones;Radio frequency}.

[101] Yakymenko I, Tsybulin O, Sidorik E, Henshel D, Kyrylenko O, Kyrylenko S. Oxidative mechanisms of biological activity of low-intensity radiofrequency radiation. Electromagn Biol Med. 2016;35:186–202. doi: 10.3109/15368378.2015.1043557.

genotoxicity [associated with increased DNA damage][102]. Therefore, the IARC Category should be upgraded from Group 2B to Group 1, a human carcinogen[103]."[104] [Some internal footnotes omitted]

3. **International Commission on the Biological Effects of Electromagnetic Fields (ICBE-EMF).** "Scientific evidence invalidates health assumptions underlying the FCC and ICNIRP exposure limit determinations for radiofrequency radiation: implications for 5G."[105]

    a. The FCC wireless radiation limits for human exposure are based **largely** on 1980s experiments "**involving 40-60 minute exposures in 5 monkeys and 8 rats**, and then applying arbitrary safety factors to an apparent threshold specific absorption rate (SAR) of 4 W/kg . . . Adverse effects observed at exposures below the assumed threshold SAR include non-thermal induction of reactive oxygen species, DNA damage, cardiomyopathy, carcinogenicity, sperm damage, and neurological effects . . . "[106]

4. **New Hampshire Commission** studied the biological effects of wireless radiation and issued a report Nov. 2020[107] with former commissioner Dr. Kent Chamberlain explaining a "key finding being that exposure to wireless communication radiation is harmful to the health of humans and the environment. Those findings apply to all forms of wireless radiation, which include all generations of cellphone radiation."

5. **Thousands of scientific and medical studies** show neurological disorders; increased risk of cancer and brain tumors; DNA damage; oxidative stress; immune dysfunction; cognitive processing effects; altered brain development, sleep and memory disturbances, ADHD, abnormal behavior, sperm dysfunction, and damage to the blood-brain barrier.[108]

6. **Eight case studies** since Jan 2023 in Sweden show adverse health impacts from exposure to 5G towers. Previously healthy individuals developed typical "microwave syndrome" symptoms shortly after the towers were installed: headaches, abnormal fatigue, heart

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[102] Smith-Roe SL, Wyde ME, Stout MD, Winters JW, Hobbs CA, Shepard KG, Green AS, Kissling GE, Shockley KR, Tice RR, et al. Evaluation of the genotoxicity of cell phone radiofrequency radiation in male and female rats and mice following subchronic exposure. Environ Mol Mutagen. 2020;61:276–290. doi: 10.1002/em.22343.

[103] Carlberg M, Hardell L. Evaluation of mobile phone and cordless phone use and glioma risk using the Bradford Hill viewpoints from 1965 on association or causation. BioMed Res Int. 2017;2017:9218486. doi: 10.1155/2017/9218486.

[104] Health risks from radiofrequency radiation, including 5G, should be assessed by experts with no conflicts of interest, LHardell, MCarlberg, Oncol Lett. 2020 Jul 15;20(4):15. doi: 10.3892/ol.2020.11876.

[105] EnvironHealth 21, 92 (2022). https://doi.org/10.1186/s12940-022-00900-9.

[106] Ibid.

[107] http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf.

[108] A Rationale for Biologically-based Exposure Standards for Low-Intensity Electromagnetic Radiation, 2022, https://bioinitiative.org/conclusions/; see also, Adverse health effects of 5G mobile networking technology under real-life conditions, May 1, 2020, https://pubmed.ncbi.nlm.nih.gov/31991167/; Wireless Radiation (RFR) – Is U.S. Government Ignoring Its Own Evidence for Risk? March, 28, 2019, https://electromagnetichealth.org/electromagnetic-health-blog/u-s-gov-ignoring-own-evidence/; Oxidative Mechanisms of Biological Activity of Low-Intensity Radiofrequency Radiation, Electromagnetic Biology and Medicine, 35(2), 186-202, Yakymenko, I., Tsybulin, O., Sidorik, E., Henshel, D., Kyrylenko, O., & Kyrylenko, S. (2016), https://pubmed.ncbi.nlm.nih.gov/26151230/.

arrythmia, burning skin, trouble concentrating.[109] The significance of these reports is that non-ionizing radiation[110] from 5G — well below levels allowed by authorities — can cause health problems in individuals who had no prior history of electromagnetic sensitivity.[111] Dr. Lennart Hardell, lead author of the reports and world-renowned scientist on cancer risks from radiation, affirms these reports as "groundbreaking" because they serve as the "first warning of a health hazard."[112]

7. **One-third of Americans suffer from symptoms from RF radiation**, based on a 2019 Bevington study which analyzed the prevalence of symptoms from RF radiation within any given population.[113] Based on a population of 332.4 million people in the U.S.,[114] 120 million have symptoms, 2% of which (7 million) have severe symptoms or can't work.

8. **Children absorb more RF radiation and are at greater risk than adults**.[115]

    a. **From cell phones:**[116]

[109] https://mdsafetech.org/2023/11/20/5g-health-effects-5-case-reports-of-health-symptoms-after-5g-cell-towers-placed-in-sweden/; e.g., Jan 2023 study of 63 year old man and 62 year old woman where 5G antennas were installed on the rooftop of their home, https://www.gavinpublishers.com/assets/articles_pdf/Case-Report-The-Microwave-Syndrome-after--Installation-of-5G-Emphasizes-the-Need-for--Protection-from-Radiofrequency-Radiation.pdf and https://childrenshealthdefense.org/defender/5g-radiation-microwave-syndrome-symptoms/; Feb 2023 study of two previously healthy men where 5G antennas were installed on the rooftop of their business, https://www.anncaserep.com/open-access/development-of-the-microwave-syndrome-in-two-men-shortly-after-9589.pdf; April 2023 study of 52 year old woman whose apartment was 60 meters from a 5G base station, https://acmcasereport.com/pdf/ACMCR-v10-1926.pdf?fbclid=IwAR2J-mE3XeBxqaXPQdFxslf9Q23bMCer9vgUBHnCvJXBrgBv-w7YdRUDwF0; see also, "The microwave syndrome or electro-hypersensitivity: historical background," https://pubmed.ncbi.nlm.nih.gov/26556835/.

[110] https://childrenshealthdefense.org/emr/emf-key-terms-descriptions/.

[111] https://childrenshealthdefense.org/emr/emf-wireless-health-impacts/.

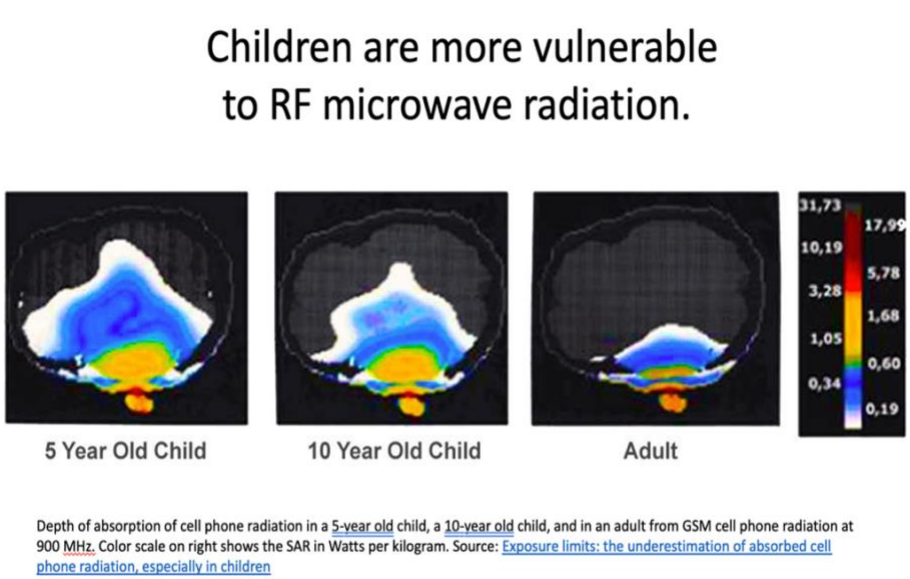
[112] https://www.stralskyddsstiftelsen.se/two-studies-show-that-5g-caused-the-microwave-syndrome-in-healthy-persons/.

[113] "The Prevalence of People with Restricted Access to Work in Manmade Electromagnetic Environments," Journal of Environment and Health Science, https://mdsafetech.files.wordpress.com/2019/10/2018-prevalence-of-electromagnetic-sensitivity.pdf.

[114] https://www.commerce.gov/news/blog/2022/01/us-population-estimated-332403650-jan-1-2022#:~:text=As%20our%20nation%20prepares%20to,since%20New%20Year's%20Day%202021.

[115] Wireless technologies, non-ionizing electromagnetic fields and children: Identifying and reducing health risks," Devra Davis PhD, MPH, Linda Birnbaum PhD, Paul Ben-Ishai PhD, Hugh Taylor MD, Meg Sears MEng, PhD, Tom Butler PhD, MSc, Theodora Scarato MSW, bCurr Probl Pediatr Adolesc Health Care, 2023 Feb;53(2):101374 https://doi.org/10/1016/j.cppeds.2023.101374; see also, *Children and Wireless Radiation,* https://ehtrust.org/educate-yourself/children-and-wireless-faqs/.

[116] Exposure limits: the underestimation of absorbed cell phone radiation, especially in children, Gandhi, Morgan, Augusto de Salles, Han, Heberman, Davis, October 14, 2011, https://pubmed.ncbi.nlm.nih.gov/21999884/.



Depth of absorption of cell phone radiation in a 5-year old child, a 10-year old child, and in an adult from GSM cell phone radiation at 900 MHz. Color scale on right shows the SAR in Watts per kilogram. Source: Exposure limits: the underestimation of absorbed cell phone radiation, especially in children

b. **American Academy of Pediatrics:** children are disproportionately affected by cell phone radiation due to their lower bone density and amount of fluid in the brain allowing for absorption of greater quantities of RF radiation than in adults.[117]

c. **Greater risk for fetuses:** risk of "degeneration of the protective myelin sheath that surrounds brain neurons."[118]

d. **School-age children:** risk of "[d]igital dementia."[119]

e. **Childhood leukemia**, increased risk.[120]

f. **Potential dangers of cell towers near schools.**[121]

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[117] *Key Scientific Evidence and Public Health Policy Recommendations*, Supplement 2012, at 21, David O. Carpenter, MD, Director, Institute for Health and the Environment University at Albany, Cindy Sage, MA, Sage Associates, https://bioinitiative.org/wp-content/uploads/pdfs/sec24_2012_Key_Scientific_Studies.pdf.https://bioinitiative.org/.

[118] *Why children absorb more microwave radiation than adults: The consequences,* Morgan, Kesar and Davis, Journal of Microscopy and Ultrastructure, Vol. 2, Issue 4, December 2014, 197-204, https://www.sciencedirect.com/science/article/pii/S2213879X14000583.

[119] *Why children absorb more microwave radiation than adults: The consequences,* Morgan, Kesar and Davis, Journal of Microscopy and Ultrastructure, Vol. 2, Issue 4, December 2014, 197-204, https://www.sciencedirect.com/science/article/pii/S2213879X14000583.

[120] *Key Scientific Evidence and Public Health Policy Recommendations*, 2007, at 19, David O. Carpenter, MD, Director, Institute for Health and the Environment University at Albany, Cindy Sage, MA, Sage Associates, https://bioinitiative.org/wp-content/uploads/pdfs/sec24_2007_Key_Scientific_Studies.pdf.

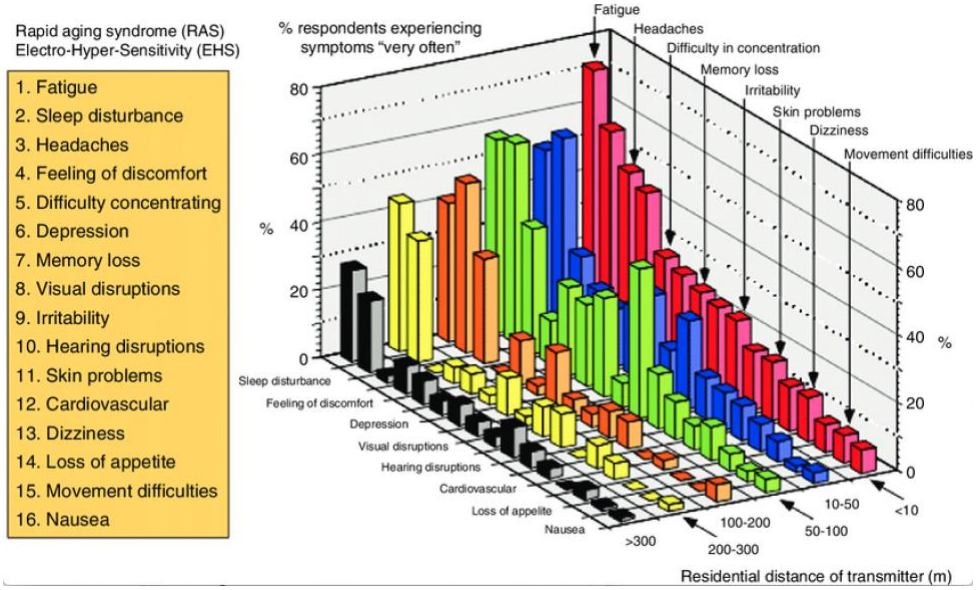
[121] Dr. Magda Havas: WiFi in Schools is Safe. True or False? https://www.youtube.com/watch?v=6v75sKAUFdc.

i. **Elementary school children** exposed to high RF radiation from mobile phone base stations 200 meters from their schools "had a significantly higher risk of type 2 diabetes mellitus" than those exposed to lower RF radiation.[122]

ii. **Adolescent school children** exposed to high RF radiation from mobile phone base stations within 200 meters from their schools had "delayed fine and gross motor skills, spatial working memory and attention" than those exposed to lower RF radiation.[123]

iii. **A ten-year old child** testified of his cardiac condition being caused by exposure to RF radiation from a router in the library where he was being tutored.[124]

9. **Neurobehavioral Symptoms Near Cell Towers.** The following chart shows a worsening of symptoms when closer to a cell tower but a lessening of symptoms when farther away from a cell tower. [125]



[122] *Association of Exposure to Radio-Frequency Electromagnetic Field Radiation (RF-EMFR) Generated by Mobile Phone Base Stations (MPBS)with Glycated Hemoglobin (HbA1c) and Risk of Type 2 Diabetes Mellitus*, Sultan Ayoub Meo et al, International Journal of Environmental Research and Public Health, 2015; https://www.researchgate.net/publication/283726472_Association_of_Exposure_to_Radio-Frequency_Electromagnetic_Field_Radiation_RF-EMFR_Generated_by_Mobile_Phone_Base_Stations_with_Glycated_Hemoglobin_HbA1c_and_Risk_of_Type_2_Diabetes_Mellitus.

[123] Meo, S. A., Almahmoud, M., Alsultan, Q., Alotaibi, N., Alnajashi, I., & Hajjar, W. M. (2018). *Mobile Phone Base Station Tower Settings Adjacent to School Buildings: Impact on Students' Cognitive Health*, American Journal of Men's Health; https://pubmed.ncbi.nlm.nih.gov/30526242/.

[124] Child With Heart Problems From Wireless: 5G Health Risks California SB 649 Hearing, https://www.youtube.com/watch?v=OgNLR9fQOX4&list=PLT6DbkXhTGoDakSqp1i_7milpwGx4xMFq.

[125] *Cell Tower Health Effects*, Physicians for Safe Technology, https://mdsafetech.org/cell-tower-health-effects/.

Symptoms experienced by people near cellular phone base stations; RF radiation affects the blood, heart and autonomic nervous system.[126] Source: Santini, et al (France): Pathol Biol. 2002;50:S369-73; Dr. Magda Havas, PhD.

10. **RF Radiation Effects.** A group of toxicology researchers from multiple universities concluded that overall, high frequency RF radiation even below the FCC limits "can result in: carcinogenicity (brain tumors/glioma, breast cancer, acoustic neuromas, leukemia, parotid gland tumors), genotoxicity (DNA damage, DNA repair inhibition, chromatin structure), mutagenicity, teratogenicity, neurodegenerative diseases (Alzheimer's Disease, Amyotrophic Lateral Sclerosis), neurobehavioral problems, autism, reproductive problems, pregnancy outcomes, excessive reactive oxygen species/oxidative stress, inflammation, apoptosis, blood-brain barrier disruption, pineal gland/melatonin production, sleep disturbance, headache, irritability, fatigue, concentration difficulties, depression, dizziness, tinnitus, burning and flushed skin, digestive disturbance, tremor, cardiac irregularities, adverse impacts on the neural, circulatory, immune, endocrine, and skeletal systems" and "from this perspective, **RF is a highly pervasive cause of disease**." [127]

11. **5G's Biological Effects.** Contrary to claims that 5G's higher frequencies (millimeter waves) simply "bounce" off the skin, researchers have documented that the coiled portion of the skin's sweat duct can be regarded as a helical antenna in the sub-THz band and the skin, our largest organ, can intensely absorb the higher 5G frequencies.[128] The millimeter wave technology of 5G will not only directly and adversely affect the skin and eyes [e.g., skin cancer, cataracts], but will, in turn, cascade into systemic signaling effects within the body, "on the nervous system, heart and immune system."[129] The free radicals accumulating on the skin from 5G (see figure below) cause oxidative stress which can lead to DNA strand breaks, cancer and atherosclerosis.[130]

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[126] Dr. Magda Havas, https://www.researchgate.net/figure/Symptoms-experienced-by-people-near-cellular-phone-base-stations-based-on-the-work-of_fig2_258313941.

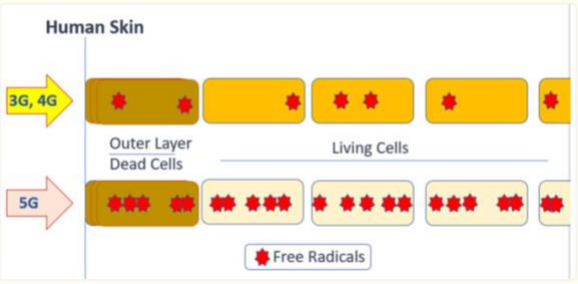
[127] Ronald N. Kostoff, Paul Heroux, Michael Aschner, Aristides Tsatsakis, "Adverse health effects of 5G mobile networking technology under real-life conditions," Toxicology Letters, Vol 323, 2020, pp. 35-40, ISSN 0378-4274, https://doi.org/10.1016/j.toxlet.2020.01.020.

[128] N. Betzalel, Y. Feldman and P. B. Ishai, "The Modeling of the Absorbance of Sub-THz Radiation by Human Skin," in IEEE Transactions on Terahertz Science and Technology, vol. 7, no. 5, pp. 521-528, Sept. 2017, doi: 10.1109/TTHZ.2017.2736345, https://ieeexplore.ieee.org/document/8016593.

[129] Ronald N. Kostoff, Paul Heroux, Michael Aschner, Aristides Tsatsakis, "Adverse health effects of 5G mobile networking technology under real-life conditions," Toxicology Letters, Vol 323, 2020, pp. 35-40, ISSN 0378-4274, https://doi.org/10.1016/j.toxlet.2020.01.020; J J B, A R M, S M J M. A New Look at Three Potential Mechanisms Proposed for the Carcinogenesis of 5G Radiation. J Biomed Phys Eng. 2020 Dec 1;10(6):675-678. doi: 10.31661/jbpe.v0i0.2008-1157. PMID: 33364204; PMCID: PMC7753259, https://pmc.ncbi.nlm.nih.gov/articles/PMC7753259/#ref7.

[130] J J B, A R M, S M J M. A New Look at Three Potential Mechanisms Proposed for the Carcinogenesis of 5G Radiation. J Biomed Phys Eng. 2020 Dec 1;10(6):675-678. doi: 10.31661/jbpe.v0i0.2008-1157. PMID: 33364204; PMCID: PMC7753259, https://pmc.ncbi.nlm.nih.gov/articles/PMC7753259/#ref7; Russell C L. 5 G wireless telecommunications expansion: Public health and environmental implications. EnvironMental Research. 2018;165:484–95. doi: 10.1016/j.envres.2018.01.016.

Figure 1.



12. **Clumping of blood cells.** A Feb 2025 study found that when an otherwise healthy person is in close proximity to a cell phone red blood cells clumped together (rouleaux formation), which leads to blood abnormality, less oxygen transport, and potentially blockages, stroke and heart problems.[131]

13. **"The 5G Appeal"** to the United Nations to halt the proliferation of 5G, warning of potential biological effects, was signed by 252 scientists and professionals from 43 countries, 40 scientists of which are from 15 U.S. states, including scientists and medical professionals from Columbia and Harvard.[132] Other scientists have joined in consensus statements.[133]

14. **International Association of Fire Fighters** passed a resolution in 2004 that disapproved of cell towers on or near fire stations until safety can be proven.[134]

15. **Increases in brain cancer** in the U.S. have been reported, with scientists attributing a high probability on RF radiation from cell phone use.[135]
16. **Comprehensive overview** of the adverse biological effects on people and the environment is provided at https://ehtrust.org/wp-content/uploads/EHT-5G-Health-and-Environment-Open-Letter-3_2021-3.pdf.

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[131] "Hypothesis: ultrasonography can document dynamic in vivo rouleaux formation due to mobile phone exposure," Robert R. Brown, Barbara Biebrich, Front. Cardiovasc. Med. , 10 February 2025 Sec. Atherosclerosis and Vascular Medicine, Volume 12 - 2025 | https://doi.org/10.3389/fcvm.2025.1499499; see also, https://ehtrust.org/cellphones-and-your-blood-what-you-need-to-know/.

[132] http://www.5gappeal.eu/the-5g-appeal/; see also, Dr. Martin Blank, PhD, Dept of Physiology and Cellular Biophysics, Columbia University, announcing the appeal early on and warning on wireless radiation, https://www.youtube.com/watch?v=HgECRrabuZQ; see also, https://childrenshealthdefense.org/defender/5g-rollout-harm-regulation-profit/.

[133] https://phiremedical.org/wp-content/uploads/2020/11/2020-Non-Ionising-Radiation-Consensus-Statement.pdf.

[134] https://www.iaff.org/cell-tower-radiation/.

[135] See, e.g., Brain Tumor Rates Are Rising in the US: The Role of Cellphone & Cordless Phone Use; The Incidence of Meningioma, a Non-Malignant Brain Tumor, is Increasing in the U.S.; New review study finds that heavier cell phone use increases tumor risk; Expert report by former U.S. govt. official: High probability RF radiation causes brain tumors;
Cell phone and cordless phone use causes brain cancer: New review; and https://ehtrust.org/scientific-documentation-cell-phone-radiation-associated-brain-tumor-rates-rising/.

Chronic Disease and Clusters Near Cell Towers

1. **Near Duluth, MN**, a woman suffered 51 strokes after a nearby cell tower was "upgraded," in addition to experiencing nausea, blind spots in her vision, orientation and balance difficulties.[136]

2. **Clusters of sickness near cell towers (not exhaustive).**
    a. **The Board of Health of Pittsfield, MA** issued an emergency cease and desist order in April 2022 to turn off a 4G cell tower that injured 17 residents, most of whom evacuated their homes.[137] One of those who remained has since died of cancer. The order cited residents having reported "headaches, ringing in the ears, dizziness, heart palpitations, nausea, and skin rashes," and, e.g., a child who had "to sleep with a bucket next to her bed in case she needs to throw up."[138] Because the telecom carrier threatened to sue, the Board of Health was compelled to rescind the order. The residents filed suit against the city but lost on federal preemption, i.e., no legal recourse for health claims.

    b. **In Rippon, CA** when a cell tower was placed near an elementary school, 4 children (ages 6-11) got cancer (brain, liver, kidney) and 4 teachers got breast cancer. [139] One of the children who contracted brain cancer (glioblastoma) when he was 10 years died in Aug 2024.[140] Since the tower was removed, it was reported that there were no more instances of cancer at the school.[141]

    c. **In an Idaho town** after 5G cell towers were installed, it was reported that a cluster of residents developed atrial fibrillation (a-fib). One of those residents who had undergone surgery for a-fib is a plaintiff in a lawsuit against the telecom carrier which refuses to provide accommodation under the Americans with Disabilities Act.[142]

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[136] https://childrenshealthdefense.org/defender/marcia-haller-cell-tower-rf-radiation-sickness/.
[137] https://ehtrust.org/cease-and-desist-order-against-verizon-cell-tower-by-board-of-health-pittsfield-ma/, see below the fold for link to the Order, p.12.
[138] https://ehtrust.org/family-injured-by-cell-tower-radiation-in-pittsfield-massachusetts/.
[139] See beginning of video at https://www.youtube.com/watch?v=-9TMTexPb_0&t=128s .
[140] See the lists of treatments and surgeries that this child endured before he died, https://www.gofundme.com/f/support-the-ferrulli-family-in-memory-of-mason.
[141] See beginning of video at https://www.youtube.com/watch?v=-9TMTexPb_0&t=128s .
[142] https://childrenshealthdefense.org/press-release/chd-files-in-series-of-lawsuits-seeking-disability-accommodation-for-people-injured-by-rf-radiation-from-cell-towers/ and https://childrenshealthdefense.org/defender/henry-hank-allen-chd-verizon-lawsuit-radiofrequency-radiation-cell-towers/.

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Position Paper on NYC Link5G "Kiosks" / Cell Towers
Opposed by New York City Residents
By Wired Broadband, Inc.
April 9, 2025

Community boards are increasingly rising in opposition to the Link5G cell towers, 2000 of which are planned for NYC. Seventeen community boards to date have either disapproved or called for moratoria on these towers. This represents (a) 40% of the 40 community board districts being considered for Link5G installations as of 2023,[1] (b) up to 800 community board members,[2] and (c) an average of over 2 million residents.[3] That is more than one-quarter of the NYC population.[4] Elected officials are hearing increasingly from their constituents that they are opposed to these towers in their neighborhoods.[5] Equity districts are bristling at Link5G towers.[6] The message has been clear, they:

Do Not Need Link5G Cell Towers and
Do Not Want Them.

Bridging the "digital divide" has been the city's justification, to provide free Wi-Fi to the unserved and underserved, but when community boards have asked how the proposed 5G Tower locations were identified or stated that those locations do not lack service, the response has been that the telecoms have identified those sites but their rationale is proprietary.[7] Also, the franchise

[1] https://data.cityofnewyork.us/Social-Services/LinkNYC-New-Site-Permit-Applications/xp25-gxux.
[2] "[E]ach [community board] consists of up to 50 unsalaried members." https://www.nyc.gov/site/cau/community-boards/about-commmunity-boards.page.
[3] "Community districts range in … population from a little more than 50,000 residents to more than 200,000." https://www.nyc.gov/site/planning/community/community-portal.page#:~:text=Community%20districts%20range%20in%20size,residents%20to%20more%20than%20200%2C000. Two million is based on an average between 50,000 and 200,000 = 125,000; 125,000 x 16 community boards = 2,000,000.
[4] In 2023, NYC population is 7,888,121, https://worldpopulationreview.com/us-cities/new-york-city-ny-population.
[5] Overview of community board actions in New York City, https://ehtrust.org/5g-in-new-york/.
[6] See, e.g., disapproval and moratorium of Queens Community Board 12, quoting in relevant part, "BE IT FURTHER RESOLVED, that Queens Community Board 12 disapproves of its designation as a district under the "Equitable Deployment Mandate;" https://www.dropbox.com/s/87o4vuw85h9l8sm/QCB12%20Disapproval%20%26%20Moratorium%20Letter%20to%20Electeds%20on%20Resolution%20Link5G%206-21-23.pdf?dl=0.
[7] See, e.g., MCB8's Transportation Committee meeting in Dec 2022 at https://www.cb8m.com/event/24978/ , MCB1's Environmental Protection Committee Meeting Sept 16, 2024 at 00:20:20 for OTI presentation and 1:58:20 for Odette Wilkens' rebuttal at https://www.youtube.com/watch?v=26u_neZ8MTo and MCB1's Board Meeting Sept 24, 2024

agreement requires no evidence showing a gap in service at those locations. Therefore, there is no evidence showing that the 5G towers will bridge the digital divide, and the city's "digital divide" justification crumbles.

Recommendation for community boards: Either **ask for an extension of time, if possible, or vote for disapproval or a moratorium** on the planning and construction of Link5G cell towers and 5G infrastructure and devices in your district, similar to what MCB8 has done (discussed below; see also Addendum D for MCB8's resolutions) until your questions and concerns are addressed.

The 5G towers contain 5 bays for antennas: one is for free Wi-Fi, while the other 4 bays are for 4G and 5G antennas for paying customers (see Addendum G). That makes the 5G towers largely a private enterprise. Whereas CityBridge was paying NYC a franchise fee of 50-55% of gross revenues from advertising from LinkNYC kiosks,[8] payment is now substantially lower for the 5G towers at 8% of gross revenues below $200 million, and 50% of revenues above $200 million.[9] CityBridge was not able to comply with its initial commitment and the Comptroller found that NYC was owed $70 million.[10]

The Federal Communications Commission (FCC) on April 20, 2023 notified CityBridge, the NYC franchisee and site developer for the Link5G cell towers, of its **failure to comply** with environmental and historic preservation reviews otherwise required under federal law – under the National Environmental Policy Act (NEPA) and under Section 106 of the National Historic Preservation Act (NHPA). Those reviews are required prior to construction.

However, CityBridge had already constructed and installed 107 towers throughout the City at the time of the FCC notice,[11] and as to those towers, post-construction reviews are required to be conducted. CityBridge's failure to comply with federal law would mean that they are in material breach of their franchise agreement. Despite these failures, there have been conflicting reports on whether there was a moratorium on current installations pending completion of these reviews; CityBridge had stated that construction halted in a town hall meeting on June 28, 2023.[12] However, it was reported in March 2024 that about 140 towers had already been installed.[13] And as of May 8, 2024, CityBridge reported that 160 towers have already been installed.[14] It is not clear why an

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starting at 52:00:00 at https://www.youtube.com/watch?v=N6soYhp0kEo with opposition also by Landmarks Committee, and MCB5's Parks and Public Spaces Committee meeting Sept 30, 2024 at https://www.youtube.com/watch?v=vSwHp6wyfyM.

[8] https://www.nyc.gov/assets/oti/downloads/pdf/linknyc-franchises/linknyc-public-communications-structure-franchise-agreement.pdf at 34-35.

[9] https://www.nyc.gov/assets/oti/downloads/pdf/linknyc-franchises/linknyc-public-communications-structure-franchise-agreement-amendment-3.pdf at 17-18.

[10] https://www.osc.ny.gov/press/releases/2021/07/dinapoli-examines-faltering-linknyc-program.

[11] CityBridge CEO Nick Colvin's presentation to the Landmarks Committee of Manhattan Community Board 7 on 5-30-23.

[12] Andrew Heineman of Rep. Jerrold Nadler's office reported at the 5-30-23 meeting of the Landmarks Committee of Manhattan Community Board 7 that there is no moratorium in place, while CityBridge during a town hall meeting on 6-28-23 stated that there is no construction being done during the pendency of the review.

[13] https://nyc.streetsblog.org/2024/03/12/tuesdays-headlines-towering-news-edition .

[14] https://citybridgelink5g.azurewebsites.net/ (see video below the fold).

additional 53 towers have been installed while CityBridge is undergoing environmental and historic preservation review on its towers.

The Office of Technology and Innovation (OTI) is the lead city agency in charge of these installations.[15] **This position paper corrects OTI's assertions** of safety, federal oversight, digital equity and privacy and provides a comprehensive analysis of the many adverse implications of the Link5G cell towers, e.g., insufficient fall zones, failure to meet the legal threshold of a gap in phone service to justify imposing these towers in our neighborhoods, and incidents of adverse impacts on first responders from wireless exposure.

This position paper also shows that, if the Link5G deployment can be viewed as a **proof of concept, it has failed** and should be abandoned for a better plan for NYC residents. That plan would require meaningful community input and approval at the inception of any ideas well before any decisions are made or formal agreements entered into, not after the fact, which residents view an attempt to minimize community pushback and input. See one New Yorker's encapsulation of the issues in Harlem.[16]

This failure shines a light on the need for **broadband freedom of choice** for NYC residents. Telecom carriers appear to be dictating the needs of NYC residents. **That conversation needs to be switched** to what NYC residents want and need. To reiterate, OTI and CityBridge have stated that it is the carriers who are determining where the purported gaps in service are, whether for current or future demand, but have shown no documentation justifying either, even when requested at community boards. Remarkably, they state that the carriers will not disclose this information because they consider it proprietary. In most instances, residents are saying that they have no gaps in service where the 5G towers are being planned. With community boards representing more than 25% of the NYC population, a significant portion of the NYC market has spoken in opposition to the Link5G towers.

Community boards have expressed **serious problems** with these installations that range from aesthetic blight, ill placement in historic districts, lack of privacy and security, rat infestations, adverse health impacts[17] and adverse environmental impacts to birds, bees and trees. Several community boards whose districts have been designated as equity districts are bristling at the branding and the accompanying mandate of an exorbitant number of cell towers in their districts, currently, up to 117 towers just in a single district.

These are 32' or 3-story towers with **no setback requirement** on how close they can be to any structure, be it a home, school, hospital or business, or how close they can be to vehicular or

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[15] LinkNYC New Site Permit Applications (Data): https://data.cityofnewyork.us/SocialServices/LinkNYC-NewSite-Permit-Applications/xp25-gxux
LinkNYC New Site Permit Applications (Map): https://data.cityofnewyork.us/SocialServices/LinkNYC-New-Site-Permit-Applications-Map/tdt4-7qzu.

[16] https://ehtrust.org/5g-in-new-york-city-2/.

[17] Queens Community Board 3 Chair responding to OTI and City Bridge, "It's nice to have Wi-Fi. But if I get cancer, or . . . my immune system goes down . . is it worth it to me, for your program, for the city, for the state. I don't think so. Health concerns are for the people." https://www.youtube.com/shorts/ND1PUIN_oZM.

pedestrian traffic. That means that in the event of structural failure, the towers may collapse onto nearby structures or onto the street, risking serious property damage and personal injury. Although the CEO of CityBridge, Nick Colvin, had assured Manhattan Community Board 7 that the structure would not fall, he said that the tops of the poles are made of light plastic that can fall off, but assured MCB7 that no one would get hurt.[18] Despite Mr. Colvin's assurances, there is no clearer evidence that these structures are not safe for the public.

The Link5G towers should have been subject to a new RFP and to Uniform Land Use Review Procedure (ULURP) and that should have involved the community boards. The base franchise agreement with CityBridge referred only to a 9-1/2' kiosk with free Wi-Fi, but in Amendment No. 3 to the agreement, OTI proceeded with a vastly different structure (3-1/3 times taller with a multi-tenant set-up) than originally contemplated under the base agreement and the RFP.

OTI has been providing presentations to community boards, but many of the CBs and residents have **complained that OTI has not been transparent in providing complete or accurate information** regarding, e.g., the complete build-out plan, surveillance risks, and contracts with telecom service providers**.**[19] Indeed, many FOIL requests asking for antenna specifications, frequencies and bandwidths have gone unanswered with perpetual extensions of time to respond, when that information should be publicly available prior to any permits for installation. A FOIL request had been submitted in October 2021 for FCC compliance reports which relate to radiation levels; OTI recently responded that it does not have those reports. How, then, can OTI monitor compliance with the franchise agreement that CityBridge has entered into with OTI?

NYC officials have been **misled to believe that their "hands are tied,"** and must accept 5G deployment as a matter of federal preemption. That is incorrect. A 2022 case in **federal district court in New York struck down an FCC rule that strips local authority** over the placement of cell towers, underscoring the federal Second Circuit standard that places the burden of proof on the telecom carrier to prove a significant gap in phone service and to show that in filling that gap they are using the least intrusive means possible. Again, CityBridge has admitted in a community board meeting that they do not have any reports showing a gap in phone service.[20]

OTI has also claimed that the carriers need to add capacity for future demand and that NYC is federally required to give them access. The same **federal court struck down a similar claim** in New York as not protected under federal law. The court upheld local authority to determine and deny the placement of cell towers. ***Therefore, under either scenario – whether there is a lack of evidence of a significant gap in phone service or adding capacity for future demand – there is no federal preemption for imposing 5G in NYC.***

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[18] CityBridge CEO Nick Colvin's presentation to the Landmarks Committee of Manhattan Community Board 7 on 5-30-23, where the author and a constituent were present.

[19] See, e.g., Manhattan Community Board 8, Transportation Committee meeting of Dec 7, 2023 https://www.cb8m.com/event/24978/.

[20] Manhattan Community Board 8, Transportation Committee meeting of Dec 7, 2023 https://www.cb8m.com/event/24978/.

In entering into the agreement for Link5G towers, NYC has failed to preserve the rights of New Yorkers to reject Link5G deployment that fails to meet the Second Circuit standard of evidence of a gap in service. OTI has stated that they are only interested on where to site the towers, not whether they are needed or wanted by NYC residents. **In conflict with federal case law in New York, the Link5G deployment is not based on evidence of a gap in service, rather it has effectively stripped local communities from any meaningful participation in determining whether they need or want them.**

"Is 5G safe?" is a common refrain heard from constituents focusing on health and environmental risks of cumulative exposure to different frequencies, including hi-powered 5G frequency, in extreme proximity to people's windows, homes, businesses and schools. There has been **no pre-market safety** testing for 5G, as established by Senator Blumenthal in 2019.[21] Contrary to CityBridge's assertion (during the June 7, 2023 hearing at the NYC Council's Committee on Technology) that thousands of 5G studies show safety, in fact, there has been **a dearth of studies** on 5G.[22] **Eight recent 5G case studies since January 2023 consistently showed biological effects**.[23] Electromagnetic radiation (EMR) is biologically active, well established for decades from scientific evidence from the military, industry and independent studies.

During the June 7, 2023 hearing, a Committee member asked OTI if there were any complaints of adverse health effects. In not answering the question, OTI responded that franchisees are contractually required to comply with the FCC emission limits. OTI failed to disclose that in Jan 2023, they heard directly from a police lieutenant in Queens Community Board 1 (Astoria) that when an antenna was placed on top of a utility pole outside his third floor window, he was severely injured experiencing heart arrythmias, sleeplessness and other adverse health symptoms. Only when he evacuated his house did the symptoms disappear. Although requested, OTI has done nothing to move that antenna. Others in NYC have also been severely injured and disabled.

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[21] https://ehtrust.org/health-effects-of-5g-wireless-technology-confirmed-at-us-senate-hearing-after-senator-blumenthal-questions-industry/; see also, https://mdsafetech.org/2019/02/13/no-research-on-5g-safety-senator-blumenthal-question-answered/.

[22] Stop the Global Rollout of 5G Networks Until Safety is Confirmed, Expert Says, BMJ, 1-21-18, https://www.bmj.com/company/newsroom/stop-global-roll-out-of-5g-networks-until-safety-is-confirmed-urges-expert/.

[23] https://mdsafetech.org/2023/11/20/5g-health-effects-5-case-reports-of-health-symptoms-after-5g-cell-towers-placed-in-sweden/; Jan 2023 study of a previously healthy man and woman developed similar "microwave syndrome" symptoms soon after a 5G tower was installed on top of their apartment. https://www.gavinpublishers.com/assets/articles_pdf/Case-Report-The-Microwave-Syndrome-after--Installation-of-5G-Emphasizes-the-Need-for--Protection-from-Radiofrequency-Radiation.pdf.

Feb 2023 study of two previously healthy men rapidly developed typical "microwave syndrome" symptoms shortly after a 5G cell tower was installed on the roof of their office: headaches, joint pain, tinnitus, abnormal fatigue, sleep disturbances, burning skin, anxiety and trouble concentrating. https://www.anncaserep.com/open-access/development-of-the-microwave-syndrome-in-two-men-shortly-after-9589.pdf.

April 2023 study of a 52 year old woman whose apartment was 60 meters from a 5G base station who developed "microwave syndrome" symptoms, https://acmcasereport.com/pdf/ACMCR-v10-1926.pdf?fbclid=IwAR2J-mE3XeBxqaXPQdFxslf9Q23bMCer9vgUBHnCvJXBrgBv-w7YdRUDwF0;

The studies show that non-ionizing radiation from 5G — well below levels allowed by authorities — can cause health problems in individuals who had no prior history of electromagnetic sensitivity (EMS).

OTI in its presentations to community boards has failed to address or acknowledge that there are scientific studies showing harm. This despite the D.C. Circuit Court of Appeals' decision in 2021 that acknowledged the 11,000 pages of peer-reviewed scientific studies submitted into the FCC docket showing harm below the FCC limits. The Court ruled against the FCC and remanded back its limits for failure to review those studies, or examine its effects on children or long-term exposure.[24] To date, the FCC has failed to update its limits dating back to 1996, which **can no longer be viewed as safety limits to protect the public.** Instead, they serve as a **safe harbor for industry to shield them** from liability for personal injury, no matter how severe or fatal.[25]

The economic model for technology companies is to render their products and services artificially obsolete to generate future revenue by compelling consumers to buy new and more expensive devices and services; the cycle for tech companies tends to be about 5 years. Therefore, there is planned, built-in obsolescence to wireless, including 5G. Tech companies artificially retire prior generations; e.g., telecom has already sunsetted 3G. This is forcing consumers **to buy new phones, equipment and more expensive services** with each new generation of wireless service as their old phones and equipment become obsolete and unusable. Therefore, the trend of ever-new generations of wireless networks (5G and beyond) with planned, built-in obsolescence of each new generation **will perpetuate, if not guarantee, the digital divide**. A prominent Harlem community leader testified that **5G is creating the digital divide** because in order to use 5G you need a 5G phone, which is expensive and out of reach of the low-income communities it purports to serve.[26]

5G deployment in NYC has been marketed as bridging the "digital divide" for underserved communities[27] when, in fact, it has been confirmed by CityBridge that it is designed for people on the street, and if the signal reaches far enough, then incidentally for residents in their close-by homes. Ultra-high-band 5G being used for the free Wi-Fi will extend about 500', which will provide only incidental access in the home to the extent that it reaches that far. The 5G Towers are designed for 4G and 5G services on a subscription basis. Who will be able to afford those services and the new devices to access them? Therefore, the claim that these 5G cell towers are going to bridge the digital divide falls flat because the coverage is designed for mobility, not for home use.

In addition, the 5G towers cannot operate without fiber optics. But rather than bringing fiber to and through the premises to assure equitable access to the Internet, the fiber is being installed only for the 5G towers. That means that residents who are paying for mobile services, or trying to get free service if the signals even reach their homes, will get the vastly slower speeds that wireless, including 5G, offers.[28]

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[24] Environmental Health Trust, et al v FCC, D.C. Court of Appeals, 2021.

[25] See also a comprehensive briefing, https://ehtrust.org/wp-content/uploads/Setbacks-Ordinances-Health-Liability-for-Wireless-Facilitites-.pdf and https://ehtrust.org/wp-content/uploads/5G-Health-and-Policy-New-York-City-March-15-2023-.pdf.

[26] Testimony of Clayton Banks, CEO of Silicon Harlem at NYC Council Hearing, June 2023, https://www.youtube.com/shorts/iPlG9yfeaeM.

[27] https://www.techdirt.com/2022/11/22/nycs-new-5g-linknyc-towers-dont-actually-fix-the-digital-divide-and-theyre-ugly-as-hell/.

[28] https://www.digitaltrends.com/mobile/how-fast-is-5g/.

The National Telecommunications Information Administration (NTIA) has set the national priority for fiber to the premises in regards to funding allocations under the Infrastructure Investment and Jobs Act. Two-thirds of the U.S. population want fiber to the premises over fixed wireless.[29] That should also be NYC's priority, but CityBridge is being touted by OTI as building out fiber optics networks in NYC for free. However, NYC residents have already paid for fiber to the premises (FTTP) for every home in NYC -- NYC residents already paid surcharges on their telephone bills since the 1990s for Verizon to build out the fiber network in NYC.[30]

Contrary to the assertion that the fiber being laid by CityBridge is free, it is not all free. Any fiber laid down by CityBridge's third party fiber providers may charge NYC market rates at the expiration of the CityBridge franchise agreement.[31] Also, fiber architecture for fixed wireless facilities is not necessarily compatible with fiber architecture to the premises. Therefore, that NYC would have to make perpetual payments to those fiber providers to maintain fixed wireless broadband, where the fiber architecture for fixed wireless may not be compatible with otherwise superior fiber architecture to the premises, and because wireless provides vastly slower speeds than fiber to the premises, makes this arrangement a lose-lose proposition for NYC. The alternative, municipal broadband – NYC owned fiber – would allow equitable access to the Internet in the home and reap the benefits of leasing out fiber to providers that would provide a continuous stream of income for NYC – a win-win alternative proposition for New Yorkers.

NYC can be a success story, following in the footsteps of cities that have set FTTP and are reaping the economic benefits of municipal fiber broadband, such as Chattanooga, TN. Known as "Gig City." Chattoonga has the **fastest internet in the U.S., and one of the fastest worldwide**,[32] and **provides free internet to every household with** a **school-aged child.[33] If Chattanooga can do it, so can NYC!**

The issues covered in this paper are listed below:

- FCC Notifies CityBridge of Failure to Comply with Federal Law
    - All 5G Towers Subject to Historic Preservation Review
- Link5G Cell Towers, Not "Kiosks"
    - Inadequate Environmental Review

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[29] Fiber Connect 2023: Two-thirds of U.S. Consumers Prefer Fiber, https://www.fibre-systems.com/article/fiber-connect-2023-two-thirds-us-consumers-prefer-fibre?iframe=1.

[30] https://ehtrust.org/new-york-city-link-5g-will-not-solve-the-digital-divide-that-industry-created/; see also, "New York City Must Call for a Halt to the Billion + Dollars of Cross-Subsidies and Overcharging by Verizon NY, the Public Telco Utility," https://kushnickbruce.medium.com/new-york-city-must-call-for-a-halt-to-the-billion-dollars-of-cross-subsidies-and-overcharging-by-27fad87186f0; see also, http://irregulators.org/.

[31] Amendment No. 3 to the Franchise Agreement between CityBridge and OTI, March 21, 2020, Sec 3.13.3(ii), https://www.nyc.gov/assets/oti/downloads/pdf/linknyc-franchises/linknyc-public-communications-structure-franchise-agreement-amendment-3.pdf.

[32] *How Blazing Internet Speeds Helped Chattanooga Shed its Smokestack Past,* Cnet.com, August 20, 2015, https://www.cnet.com/tech/services-and-software/how-blazing-internet-speeds-helped-chattanooga-shed-its-smokestack-past/; *Why Chattanooga Has the Fastest Internet in the US*, https://tech.co/news/chattanooga-fastest-internet-usa-2018-08.

[33] See Town Hall "Gig City Goes Quantum" at https://thenationalcall.org/resources/.

- Opposition
    - Community Board Actions in Opposition
        - Community Reactions
    - Officials in Opposition
    - Historic Preservation Societies in Opposition
- OTI and CityBridge
    - Proof of Concept Has Failed
    - Public Design Commission Requirements for OTI's Pilot Program
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- Public Safety
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- Digital Equity
    - "Digital Divide" – 5G Unlikely to Remedy
    - Devaluation of Property Values and Digital Equity
    - The Built-In Obsolescence of Wireless will Perpetuate the Digital Divide
- FCC's Lack of Oversight and Regulatory Gap
    - FCC Concealed Cell Phone Tests that Exceeded its Limits
    - FCC Does Not Measure Wireless Emissions
    - OTI Claims to Measure Wireless Emissions
    - Telecom Carriers' Propagation Maps are Not Reliable
    - No Gap in Service, No Federal Preemption
    - FCC, Captured Agency: Safe Harbor for Industry, Not Safety for the Public
- FCC Loses Two Cases on Wireless Emissions and Environmental Review
- Telecoms Characterize Wireless Emissions as a Pollutant
- 5G is Unsustainable
    - Wireless is Not Green
    - Fiber Optics – the Superior and Greener Service
    - Fiber Already Promised to New Yorkers
- Adverse Health and Environmental Impacts
    - Public Health
    - Up to 30% of Population Experiencing Symptoms
    - Neurobehavioral Impacts Near Cell Towers
    - Adverse Impacts on Children
    - "Why Tech Leaders Don't Let Their Kids Use Tech"
    - Adverse Impacts on Birds, Bees and Trees
- Conclusion – Recommendation for Disapproval and Moratorium

Addendum A – Photo from OTI's Presentation to PDC, p.40
Addendum B – Photo from OTI's Presentation to PDC, p.15
Addendum C – OTI's Letter to Community Board 8 Manhattan
Addendum D – Moratorium Resolutions by Community Board 8 Manhattan
Addendum E – Take Action to Remove 5G Antenna from 520 E. 90th Street
Addendum F – Letter Jan 6, 2023, from Dr. Kent Chamberlin, Chair Emeritus Dept of Electrical and Computer Engineering, Univ of NH, former NH Commissioner
Addendum G - Comparison of Link5G Cell Towers And LinkNYC Kiosks

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FCC Notifies CityBridge of Failure to Comply with Federal Law

CityBridge has been found to have violated federal law. The FCC notified CityBridge on April 20, 2023, that environmental and historic preservation reviews were required for each Link5G cell tower prior to construction under two federal laws – the National Historic Preservation Act, and the National Environmental Policy Act (NEPA).[34] As of May 30, 2023, CityBridge has already constructed and installed 107 towers throughout the City.[35] As to those towers already constructed, post-construction reviews must also be conducted. The FCC in footnote 14 of the notice did not preclude enforcement actions against CityBridge. [36]

Given that these huge, free-standing structures will house wireless antennas otherwise subject to federal licenses under which the telecom carriers are required to operate, the Link5G cell towers have triggered historic preservation review as a federal "undertaking" and environmental review as a "major Federal action."[37] The New York State Historic Preservation Office (SHPO) would also be involved in the review.

CityBridge's failure to comply with federal law would mean that they are in material breach of their franchise agreement. CityBridge had made representations that it had the "power and authority" to perform under the agreement, that it would not be in material breach with any "statute [or] regulation," and "no material misrepresentation has been made … intentionally or negligently." CityBridge had also covenanted that it "shall comply with all laws."[38] Although there is a cure period so long as the default is susceptible to cure, and the franchisee is diligently working to cure the default, there are "termination defaults" that may allow OTI to terminate the franchise, including

[34] https://www.dropbox.com/preview/Jumbo%205G/Politicians/FCC%20Letter%20to%20CityBridge%204-20-23.pdf?role=personal.
[35] See Landmarks Committee of Manhattan Community Board 7 hearing, comments of Nick Colvin, CEO of CityBridge, 5-30-23.
[36] Id., ftnt 14.
[37] Id, see also, https://parks.ny.gov/shpo/environmental-review/preservation-legislation.aspx; and https://www.achp.gov/sites/default/files/documents/2017-01/CitizenGuide.pdf.
[38] See Sections 15.6.1 (iii), (iv), (vi) and (vii)(a), 15.6.4 and 15.21.1 at https://www.nyc.gov/assets/oti/downloads/pdf/linknyc-franchises/linknyc-public-communications-structure-franchise-agreement.pdf.

claims of misrepresentation. However, OTI would need to serve notice of breach or default to CityBridge, which, to date, has not yet been confirmed by OTI.[39]

Despite these failures and breaches, there have been conflicting reports on whether construction on the Link5G towers had stopped.[40] Although OTI testified at the hearing of the Committee on Technology on June 7, 2023 that construction has halted during the pendency of the federal reviews, it had been previously reported that CityBridge intended to continue construction despite the notice.[41] An eye witness saw workers at an existing Link5G tower in the East Village on May 5, 2023, just two weeks after the FCC's notice[42] (see Exhibit I) which, later on, CityBridge indicated was maintaining the Wi-Fi in the towers which appears not to be part of the federal review.[43] CityBridge stated in June 2023 that construction has halted.[44] Since then, in a May 8, 2024 meeting with Boldyn (formerly CityBridge) on the federal Section 106 historical preservation review, Mr. Robert Sokota stated that 160 towers have been installed.[45] That is 53 more towers since the 107 towers already installed at the time of the FCC notice to CityBridge. Mr. Sokota stated they are being constructed as the tower locations pass environmental and historical preservation reviews. It is not clear where the new towers are being installed.

- **All 5G Towers Subject to Historic Preservation Review**

Under the National Historic Preservation Act, Section 106, consulting parties may comment on whether the placement of cell towers will have an adverse aesthetic impact. Consulting parties include the historic preservation societies in NYC and other New Yorkers, including Wired Broadband, Inc. Boldyn hired EBI Consulting to set up a portal for each community board district, including documentation of correspondence and consulting party submissions. There have been many submissions made to the portal. However, when SHPO found that the 5G Tower at a particular location would have an adverse aesthetic impact, EBI then removed the successful submissions, but

[39] The author, along with others, were in an online meeting with OTI representatives on May 17, 2023, where the question was posed but not answered.

[40] Andrew Heineman of Rep. Jerrold Nadler's office reported at the 5-30-23 meeting of the Landmarks Committee of Manhattan Community Board 7 (not recorded at CityBridge's request) that there is no moratorium in place, while CityBridge during a town hall meeting on 6-28-23 stated that there is no construction being done during the pendency of the review, town hall video at https://youtu.be/wQ0wsGHWnYA.

[41] https://www.nydailynews.com/news/politics/new-york-elections-government/ny-nyc-5g-towers-have-not-undergone-federal-reviews-20230426-v7waeeraozd2xcllibzb7ckmfe-story.html; see also, https://childrenshealthdefense.org/defender/fcc-behemoth-5g-towers-new-york-city/.

[42] The company in the photograph in Exhibit 1 working on the Link5G tower is Hylan Datacom and Electrical, located at 2827 Gulf Ave, Staten Island, NY 10303. "The company designs, builds and powers the installations for telecom providers, owners and municipalities with a complete suite of services including fiber optic cable placement, 5G, small cell and DAS installations, electrical infrastructure . . . and utility construction and maintenance." https://www.linkedin.com/company/hylan-datacom-&-electrical/about/.

[43] Town Hall held June 28, 2023 with CityBridge LLC on Section 106 review under the National Historic Preservation Act , https://youtu.be/wQ0wsGHWnYA.

[44] Id.

[45] May 8, 2024 video starting at 52:00, https://citybridgelink5g.azurewebsites.net/ .

kept the submissions which were not successful. Links to some of the submissions are listed in the footnote.[46]

Link 5G Cell Towers, Not "Kiosks"

OTI's branding of 5G public communications structures as "Link5G kiosks" is inaccurate and misleading. The definition of a kiosk is a small structure or cubicle in a public area used for providing newspapers, tickets, displaying ads or having interactive screens.[47]

The Link5G structures are not small. They are giant, free-standing, towers about 32' tall, or 3 stories in height, with housing for multiple 4G/5G antennas being almost 20' high (see attached Addenda A, B and G).[48] This is part of a plan to install a minimum of 2000 5G cell towers in the entire city.[49] Therefore, they should be called what they really are – "Link5G Cell Towers."

OTI claims that these Link5G cell towers or "kiosks" are simply replacing the old phone booths, as well as adding new structures. The **FCC does not agree**, and called out each of the Link5G cell towers a federal "undertaking" under the National Historic Preservation Act and a "major federal action" under the National Environmental Policy Act, requiring review under both of those federal laws.[50]

Locations of the sites for Link5G cell towers are on Open Data at:

- LinkNYC New Site Permit Applications (Data): https://data.cityofnewyork.us/SocialServices/LinkNYC-NewSite-Permit-Applications/xp25-gxux
- LinkNYC New Site Permit Applications (Map): https://data.cityofnewyork.us/SocialServices/LinkNYC-New-Site-Permit-Applications-Map/tdt4-7qzu
- LinkNYC approved and installed (includes LinkNYC kiosks and Link5G cell towers): https://data.cityofnewyork.us/Social-Services/LinkNYC-Map/tgrn-h24f

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[46] https://www.dropbox.com/scl/fo/ndwddh95rthe3csql63ji/AI7SdrdxYm6dEp8yDbjJ8pA?rlkey=4odsvdoe2r7lwouu0u5q5yscm&st=9om2v3yl&dl=0.

[47] Google Dictionary, https://www.google.com/search?q=definition+kiosk&oq=definition+kiosk&aqs=chrome..69i57j0i15i22i30j0i22i30l8.3085j1j7&sourceid=chrome&ie=UTF-8.

[48] Renditions can be seen in the links for footnote 4 below and at https://manhattanneighbors.org/jumbo-5g-antennas-nyc/.

[49] Link5G ppt presentation to NYC's Public Design Commission by Dept of Info Technology and Telecommunications (DoITT) now called Office of Technology and Innovation (OTI) 10-18-21 at pp. 54-55. https://www1.nyc.gov/assets/designcommission/downloads/pdf/10-18-2021-pres-DoITT-p-Link-5G.pdf; updated presentation, 12-13-21 at https://www1.nyc.gov/assets/designcommission/downloads/pdf/12-13-2021-pres-DoITT-p-Link-5G-1.pdf.

[50] FCC letter to CityBridge, April 20, 2023.

- **Inadequate Environmental Review**

Why is the issue of size important? Based on a search of the City Environmental Quality Review (CEQR) determinations for mobile telecommunications, it appears that OTI did not conduct an adequate environmental review. Instead, OTI piggybacked on the CEQR done on the smaller, 9' LinkNYC kiosks to make a determination of no environmental impact for the 32' Link5G towers. [51]

LinkNYC kiosks were designed to provide public Wi-Fi. Instead, Link5G structures are cell towers designed to house multiple 4G/5G antennas from multiple carriers for private customers, in addition to Wi-Fi. OTI also conducted a CEQR environmental assessment on 5G "small" cells in 2020, and concluded no environmental impact.[52] But that assessment was based on 5G structures being much smaller in size (the size of a large backpack) and would be placed on pre-existing structures (co-locations) like streetlights and light poles.

The Link5G assessment was also based on the incorrect assumption of no significant energy consumption, even though the 5G network requires an exorbitant amount of energy.[53] That means there has been no assessment of the Link5G cell towers on adverse impacts on energy consumption. In fact, telecom carriers have been advising their customers to turn off 5G to save battery life on their devices.[54]

Moreover, because Link5G cell towers are huge, free-standing structures (rather than co-locations), whether they rise to the level of federal undertakings otherwise requiring environmental review on the federal level also warrants further examination. Because the telecom carriers are operating under federal licenses, Link5G cell towers may require prior review under the National Environmental Policy Act.

Therefore, a more thorough CEQR analysis would be required for Link5G Cell Towers before its continued deployment.

Opposition

- **Community Board Actions in Opposition**

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[51] Technical Memorandum, CEQR No. 15DIT001Y, Citywide Public Communications Structures, undated, https://a002-ceqraccess.nyc.gov/Handlers/ProjectFile.ashx?file=MjAxNVwxNURJVDAwMVlcdGVjaF9tZW1vXDE1RElUMDAxWV9UZWNobmljYWxfTWVtb3JhbmR1bV9fMDUyNjIwMjEucGRm0&signature=7bff46e8f4492ec7ca05ec25ebaaf6462822bfde.

[52] Technical Memorandum 001, CEQR No. 20DIT001Y, New York City Department of Information Technology and Telecommunications, Mobile Telecommunications Franchises, May 7, 2020, https://a002ceqraccess.nyc.gov/Handlers/ProjectFile.ashx?file=MjAyMFwyMERJVDAwMVlcdGVjaF9tZW1vXDIwRElUMDAxWV9UZWNobmljYWxfTWVtb3JhbmR1bV9fMDUwODIwMjAucGRm0&signature=cb5e38710e4a95b771ea454efb5ce1b45e767a65; CEQR Environmental Assessment Statement Short Form, Dec 10, 2019, https://a002-ceqraccess.nyc.gov/Handlers/ProjectFile.ashx?file=MjAyMFwyMERJVDAwMVlcZWFzXDIwRElUMDAxWV9FQVNfMTIxMDIwMTkucGRm0&signature=9efc336372ffb4f803d59f76fe9fd0b815651005.

[53] https://ehtrust.org/report-5g-to-increase-energy-consumption-by-61-times/.

[54] "Why are Carrriers Telling Us to Turn Off 5G?" PC Magazine, March 5, 2021, https://www.pcmag.com/opinions/why-are-carriers-telling-us-to-turn-off-5g.

Sixteen community boards to date have disapproved or called for moratoria on Link5G installations. This represents up to 800 community board members,[55] and an average of about 2 million residents.[56] That also represents 40% of the 40 community board districts currently listed on OTI's dataset of proposed site permit applications. Represented in these numbers are equity districts which are bristling at 5G towers.[57]

The number of community boards in opposition to the Link5G Cell Towers is growing, and elected officials are hearing increasingly from their constituents that they are opposed to these towers in their neighborhoods (see also opposition to 5G pole-top antennas in Addendum E).[58] Community boards' concerns about these installations range from aesthetics and out of character with the neighborhood, ill placement in historic districts, lack of privacy and security, rat infestations on current LinkNYC kiosks, and health issues related to exposure to wireless radiation.

Community boards should have received written notice from OTI of proposed installations in their districts, similar to the notice received by Community Board 8 in Manhattan (MCB8)[59] (see attached notice in Addendum C). There is a comment period of 60 days to reply to OTI.

The seventeen community boards in opposition, to date, are listed below:[60]

1. Manhattan CB1 covering the Financial District and Tribeca – moratorium (9/24/24)
2. Manhattan CB2: covering Greenwich Village, SoHo, NoHo, Little Italy and Chinatown - moratorium (1/19/23)
3. Manhattan CB5: covering Times Square and Union Square - disapproval and request for moratorium (1/12/23)
4. Manhattan CB8: covering the Upper East Side - moratorium resolution (12/14/22)

Disapproval/opposition to any 5G pole attachments within 10 feet of buildings, request for notification for any 5G installations. https://www.cb8m.com/wp-content/uploads/2023/02/0323-Opposition-to-5G-Pole-Attachements-within-10-Feet-of-Buildings-Resolution.pdf (3/21/23)
9/4/2024 they voted to oppose more proposed 5G poles Video of Meeting

[55] "[E]ach [community board] consists of up to 50 unsalaried members." https://www.nyc.gov/site/cau/community-boards/about-commmunity-boards.page.
[56] "Community districts range in … population from a little more than 50,000 residents to more than 200,000." https://www.nyc.gov/site/planning/community/community-portal.page#:~:text=Community%20districts%20range%20in%20size,residents%20to%20more%20than%20200%2C000. Two million is based on an average between 50,000 and 200,000 = 125,000; 125,000 x 16 community boards = 2,000,000.
[57] Queens Community Boards 12 and 14 and Brooklyn Community Boards 4 and 9 are designated equity districts and have disapproved or called for moratoria. That accounts for 238 towers.
[58] Overview of community board actions in New York City, https://ehtrust.org/5g-in-new-york/; see also, uproar at Manhattan Community Board 12 in the video embedded in the article, https://patch.com/new-york/washington-heights-inwood/5-more-uptown-5g-tower-sites-revealed-plans-leaving-pol-livid.
[59] https://www.cb8m.com/wp-content/uploads/2022/11/Manhattan-CB8-Greenfields-Nov-2022.pdf.
[60] https://www.dropbox.com/scl/fi/rjci4lvt1vgeza9bqzr76/AA-Link5G-16-CB-Resolutions-Disapprovals.pdf?rlkey=7ol8i2qvd1e3vyzr6yk54hntb&st=oq2jrvh5&dl=0; MCB1 as the 17th CB at https://www.dropbox.com/scl/fi/x584uzaeitwfrr7coi8w2/MCB1-SHPO-Opposition-to-5G-Towers.pdf?rlkey=pn4y2e1eab97ndrfaoobyodbw&st=8tz6skpy&dl=0.

5. Manhattan CB 9: disapproval (1/19/23) - covering Morningside Heights, Harlem and Columbia University
6. Manhattan CB10: covering Harlem - Economic Development & Technogy Committee approve letter calling for a 'hold' on the proposal and a public hearing (4/13/23) (to be approved by Full Board)
7. Manhattan CB11: covering Harlem - Public Safety Committee approved Letter of Dis-Support for installations in MCB11 ratified by Full Board on 4/26/23
8. Bronx CB6: covering Crotona, Belmont and West Farms - letter of rejection of 5G poles - March 16, 2023
9. Brooklyn CB1 - disapproval (3/14/23) - covering Greenpoint and Williamsburg
10. Brooklyn CB4 - moratorium (2/15/23) - covering Bushwick
11. Brooklyn CB9 - moratorium (3/23/23) - covering Crown Heights
12. Brooklyn CB10: covering Bay Ridge and Hamilton Heights - deny support without more information minutes pg 7-8 (1/23/23)
13. Queens CB1- letter of denial (2/28/23) - covering Astoria (see also 1-25-23 meeting of the Environment/Sanitation Cmte for comments by experts and by a police lieutenant severely injured from a wireless antenna placed outside of his house)[61]
14. Queens CB3: covering East Elmhurst, Jackson Heights and North Corona - disapproved 4 out of 5 Link5G Towers
15. Queens CB #6 rejects all future requests for 5G towers until they pass proper historic preservation and environmental review. Video of May 10, 2023 Meeting - covering Forest Hills and Rego Park
16. Queens CB12: covering Jamaica - opposition to the 5G poles (March 15, 2023 Committee meeting)
17. Queens CB14: covering Far Rockaway - letter of disapproval (2/7/23)

There has been publicity in opposition to the 5G Towers.[62]

As an example, MCB8 sent the city a clear message that they do not need these towers and they do not want them. MCB8's passed resolutions disapproving the towers and voting on a moratorium on the planning and construction of Link5G Cell Towers in their district (see Addendum D).[63] MCB8 was slated to have 18 towers installed, 15 in historic districts. The resolution cited many reasons for disapproval, some of which include:

1. A distance of 10' from buildings is an insufficient distance (there is otherwise no distance requirement for the 5G Towers),
2. "Renowned architecture and iconic streetscapes would be interfered with,"

[61] See presentation by a police lieutenant who was injured from exposure to wireless radiation from an antenna placed just feet away from his house and from which he has had to evacuate, starting at about 00:54:00, https://www.youtube.com/watch?v=OGxADW9tp8E.
[62] https://www.tribecatrib.com/content/cb1-slams-citys-plan-towering-5g-transmitters-downtown-sidewalks.
[63] MCB8's moratorium resolution https://www.cb8m.com/wp-content/uploads/2022/11/1222-Link-5G-Resolution.pdf (see also, resolutions of the Transportation Committee and Landmarks Committee, attached as Addendum D reformatted into Word).

3. Illuminated advertising on these towers do not comply with certain historic preservation rules prohibiting such advertising (e.g., see Addendum B),
4. There are no reported gaps in phone or internet service,
5. "Impacts on sidewalk clearances, and rat infestation,"
6. The desire to have telecommunications infrastructure underground for more service reliability and "to minimize visual impacts," and
7. "Long-term health impacts on public health or the environment, including young children, seniors, people with medical implant devices, pets, plants and parks."[64]

For the public hearings at MCB8, see the Transportation Committee hearing with over 130 attendees and about 30 commenters in unanimous opposition,[65] the Landmarks Committee hearing[66] and the full Board hearing and vote passing the moratoria.[67]

A Harlem resident (in the area of MCB9 and MCB10) was outspoken, that the 5G Towers would be a detriment to the community.[68]

As reported on June 4, 2024, within Manhattan Community Board 3, Avenue C Block Association is petitioning City Hall to stop 5G Tower construction in their neighborhood; "'Tower, Tower, Go Away' Chant NYC Neighbors."[69] This hot topic continues to draw media attention as reported on June 10, 2024 in the New York Times "Street Wars" section, "Does NYC Really Need These Giant 5G Towers?"[70]

Manhattan Community Board 1 stated in a report that several of the proposed sites for the 5G Towers were in a flood plain and should have been disclosed in CityBridge's submission to SHPO.[71] The Broadsheet reported on local opposition, "LinkStink, Local Leaders Request Federal Intervention on 5G Towers Planned for Lower Manhattan."[72]

In Queens Community Board 6, the Forest Hills Ledger covered the story, "Slated 5G Towers Spark Controversy in Forest Hills."[73] On April 1, 2025, the first rally opposing the 5G Towers was held in Forest Hills in front of PS 144, an elementary school, attended by local residents and parents.[74]

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[64] Id.
[65] https://www.cb8m.com/event/24978/.
[66] https://www.cb8m.com/event/24983/.
[67] https://www.cb8m.com/event/24871/ (starting at about 28:00).
[68] See below the fold for video, https://ehtrust.org/5g-in-new-york/.
[69] https://insidetowers.com/tower-tower-go-away-chant-nyc-neighbors/; https://evgrieve.com/2024/05/block-association-asking-for-removal-of.html.
[70] https://www.nytimes.com/2024/06/10/nyregion/street-wars-new-york-city-5g-towers.html#commentsContainer.
[71] https://www.dropbox.com/scl/fi/x584uzaeitwfrr7coi8w2/MCB1-SHPO-Opposition-to-5G-Towers.pdf?rlkey=pn4y2e1eab97ndrfaoobyodbw&st=fpgsymyv&dl=0.
[72] https://myemail.constantcontact.com/Link-Stink.html?soid=1101992539878&aid=99a6PME2DHQ.
[73] https://foresthillstimes.com/2023/11/30/slated-5g-towers-spark-controversy-in-forest-hills/.
[74] https://www.dropbox.com/scl/fo/3asl2ha22yo42256d6x9e/AA03mNFX05G0QohPLdl6DyA?rlkey=b4c7rygk6ifnl09fxys1p2hs5&st=slvaubqm&dl=0.

It's noteworthy that the New York State Teachers' Union has a 2017 resolution noting 22 hazards of wireless radiation and how this should be mitigated for children in schools.[75]

- **Officials in Opposition**

Many NYC officials have opposed or requested a pause on deployment:

1. Dec. 21, 2022 letter from NYC Council Member Keith Powers to Chief Technology Officer & Commissioner, Matthew Fraser, NYC Office of Technology and Innovation (OTI) expressing concerns in siting 5G Towers in residential areas.[76]
2. Jan. 16, 2023 letter by Manhattan Borough President, Mark Levine to OTI to pause its deployment in order to address the concerns of his constituents.[77]
3. Jan. 23, 2023 joint letter by the following elected officials sent to the Landmarks Preservation Commission to pause the review of any Link5G installations proposed for historic districts: Council Members Powers and Menin, Assembly members Seawright and Bores, State Senator Krueger, Congressman Nadler, and Manhattan Borough President Levine.[78]
4. Jan. 23, 2023 letter by NYC Council Member Gale Brewer to OTI Commissioner Matt Fraser confirming his statement that no 5G Towers would be put into her district (Upper West Side - UWS).[79]
5. Jan. 26, 2023 letter by former Congress member Carolyn Maloney to the OTI's Matthew Fraser and the NYC Landmarks Preservation Commission opposing the Link5G cell towers and calling for a moratorium.[80]
6. In 2023, Assembly Member Rebecca Seawright introduced NYS Assembly bill A01113 to establish a temporary commission to study the environmental and health effects of evolving 5G technology.[81]
7. For 2023-2024 session, Senator Lanza introduced NYS Senate bill S5123 requiring a setback requirement of 250' from any structure, environmental review, and placement within 250' only with prior approval of owners and community boards.[82]
8. April 11, 2023 letter by NYC Council Member Julie Menin to OTI's Matthew Fraser opposing the 5G Towers, stating that her office had received "an overwhelming outpouring of complaints." [83]

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[75] https://ehtrust.org/new-york-state-united-teachers-resolution-22-hazards-of-wireless-radiation-emission/.
[76] https://www.dropbox.com/scl/fi/t1gso8kqbqw445bfj2qrv/Keith-Powers-Letter-to-OTI-12-21-22.pdf?rlkey=mjyrsp59zf635wz34320l3gff&st=l6k9jl9g&dl=0.
[77] https://ehtrust.org/wp-content/uploads/January-16-2023-Letter-on-5G-Poles-from-New-York-Manhattan-Borough-President-to-Matthew-C.-Fraser-Chief-Technology-Officer-Office-of-Technology-Innovation-of-The-NYC-Office-of-Technology-Innovation.pdf.
[78] https://nylc.wpenginepowered.com/wp-content/uploads/2023/01/Joint-Electeds-Link-5G-Letter-to-LPC-1-23-2023-1.pdf; see also, Rep. Nadler letter at , City Council Member Menin letter at https://www.carnegiehillneighbors.org/_files/ugd/02baf5_e1841418e98243d4bf31287bba2f700b.pdf.
[79] https://www.dropbox.com/scl/fi/gjim7qxtfcdiu1f5lrfwd/GBrewer-5G-1-23-23-Ltr-to-OTI.pdf?rlkey=c61sde5ev4enta9txeypy15ck&st=ojw1an9l&dl=0 .
[80] https://www.carnegiehillneighbors.org/_files/ugd/02baf5_f7c4ca2a58af437b9ef4932d12e32a44.pdf.
[81] https://nyassembly.gov/leg/?bn=A06633&leg_video=.
[82] https://www.nysenate.gov/legislation/bills/2023/S5123.
[83] https://www.carnegiehillneighbors.org/_files/ugd/02baf5_e1841418e98243d4bf31287bba2f700b.pdf.

9. April 12, 2023 letter by U.S. Rep. Jerrold Nadler to the FCC that the 5G Towers should be subject to historic preservation review under the National Historic Preservation Act (NHPA).[84]
    a. April 20, 2023 letter from the FCC to CityBridge that historic preservation reviews are required prior to construction not only under the NHPA, and also under the National Environmental Preservation Act (NEPA).[85]
10. Feb. 9, 2024, Assembly Member Seawright posted on her official website "Local Elected Officials Win Battle Against 32-Foot Sidewalk Cell Towers," lauding the NYS Historic Preservation Office's decision that the Towers would cause an adverse aesthetic effect on the Upper East Side.[86]
11. June 18, 2024 letter by NYC Council Member Brewer to the NY State Historic Preservation Office (SHPO) opposing 5G Towers in her district, upon learning that 5G Towers are planned for her district even though OTI stated that none would be in her district (see Brewer Jan 23, 2023 letter to OTI).[87]
12. Sept. 30, 2024 letter by NYC Council Member Christopher Marte to OTI's Matthew Fraser and Deputy Commissioner McKay opposing the 5G Towers.[88]
13. Oct. 2, 2024 letter by Assembly Members Grace Lee, Deborah Glick and Charles Fall to OTI's Matthew Fraser and Deputy Commissioner Daniel McKay of the NYS Historic Preservation Office (SHPO) opposing the 5G Towers.[89]
14. Oct 29, 2024 joint letter to the FCC from NYC Council Member Christopher Marte, Manhattan Borough President Mark Levine, Assemblyman Charles Fall, and Manhattan Community Board 1 Chair, Tammy Meltzer, and Vice Chair, Alice Blank.[90]
15. Assembly member Andrew Hevesi wrote to Matthew Fraser, CTO on March 31, 2025[91] and to Commissioner Erik Kulleseid at SHPO on March 31, 2025,[92] opposing a 5G Tower to be installed next to PS 144, an elementary school in Forest Hills, Queens.

- **Historic Preservation Societies in Opposition**

Hearing from preservation societies within his district, Rep. Nadler urged the FCC to require a review under the National Historic Preservation Act (NHPA) (Sec 106) for Link5G cell towers proposed in

[84] https://nadler.house.gov/uploadedfiles/nadler_letter_to_fcc_re_section_106_review_of_link5g_towers.pdf.
[85] FCC Letter to CityBridge, April 20, 2023, https://www.dropbox.com/s/u483jswa8y72zua/FCC%20Letter%20to%20CityBridge%204-20-23.pdf?dl=0.
[86] https://assembly.state.ny.us/mem/Rebecca-A-Seawright/story/109053.
[87] https://www.dropbox.com/scl/fi/75sqbox9tebjom7rdiqv1/GBrewer-Letter-to-Daniel-Mackay-Deputy-Commissioner-SHPO-5G-Towers-6-18-24.pdf?rlkey=cmggtl9pmnqq4a20hhycgntju&st=avoif223&dl=0 .
[88] https://www.dropbox.com/scl/fi/x584uzaeitwfrr7coi8w2/MCB1-SHPO-Opposition-to-5G-Towers.pdf?rlkey=pn4y2e1eab97ndrfaoobyodbw&st=lmnc60kk&dl=0 at p.4.
[89] https://www.dropbox.com/scl/fi/x584uzaeitwfrr7coi8w2/MCB1-SHPO-Opposition-to-5G-Towers.pdf?rlkey=pn4y2e1eab97ndrfaoobyodbw&st=lmnc60kk&dl=0 at p.2.
[90] https://www.dropbox.com/scl/fi/vu9lxwq2z79kgjwpqyt8f/Alice-Blank-FCC-Letter-5G-10-29-24-MCB1-BPML-AMCF-CMCM.pdf?rlkey=81s2efolpvbzag26kzs6trbck&st=czcmtimc&dl=0.
[91] https://www.dropbox.com/scl/fi/8czxn220hq84hmdgvddls/Hevesi-OTI-Letter-3-31-25-PS-144.pdf?rlkey=nxntm081c9s723ecqendu7erx&st=u347nhhv&dl=0.
[92] https://www.dropbox.com/scl/fi/jeomudm4cp0kdafs4u8pc/Hevesi_-SHPO-letter-3-31-25.docx-PS-144.pdf?rlkey=s3r1fg1eyq17g8dppipmat31l&st=cwuprrru&dl=0.

historic districts.[93] A week later, on April 20, 2023, the FCC notified CityBridge that reviews are required prior to construction not only under the NHPA, but also under the NEPA.[94] As to those towers already constructed, post-construction reviews must also be conducted.[95] The FCC notice should serve to halt Link5G construction and installation while the reviews are being conducted, however, it has been reported that CityBridge intends to continue construction despite the FCC letter.[96] In fact, it has been recently reported that there is no moratorium on current Link5G construction and installations.[97]

Link5G cell towers do not belong in historic districts. Many historical preservation societies in NYC have opposed their installation. An online petition by Carnegie Hill Neighbors in CB8-Manhattan has already garnered over 3000 signatures under the banner "Don't Sell Our Streets to 5G Towers." [98] Another online petition by Village Preservation in CB2-Manhattan has a letter writing campaign to local representatives under the banner "Stop the Siting of Oversized and Unnecessary 5G Towers in Our Neighborhood!" [99]

Eight historic preservation societies voiced their opposition jointly in a Jan 12, 2023 letter to First Deputy Mayor Sheena Wright and Deputy Mayor Maria Torres-Springer requesting more transparency on the city's process of choosing and siting locations, particularly in historic districts, and expressing their dismay at the potential "severe, negative and permanent impacts" if they were to be placed in historic districts. [100]

Friends of the Upper East Side (FUES), an historical preservation society, issued a December 23, 2022 letter to the Mayor, the Public Design Commission, the Office of Technology and Innovation and the Landmarks Preservation Commission, expressing that the Link5G Cell Towers would conflict with a master plan not to have flash-screen advertising on Madison Avenue, and would contribute to congestion and the uneven clustering of cell towers, for example, 5 cell towers on one block.[101] FUES also cites opposition to Link5G's privatization of our public streets.[102] Others have also

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[93] https://nadler.house.gov/news/documentsingle.aspx?DocumentID=394982.
[94] FCC Letter to CityBridge, April 20, 2023, https://www.dropbox.com/s/u483jswa8y72zua/FCC%20Letter%20to%20CityBridge%204-20-23.pdf?dl=0.
[95] Id.
[96] https://www.nydailynews.com/news/politics/new-york-elections-government/ny-nyc-5g-towers-have-not-undergone-federal-reviews-20230426-v7waeeraozd2xcllibzb7ckmfe-story.html; see also, https://childrenshealthdefense.org/defender/fcc-behemoth-5g-towers-new-york-city/.
[97] Reported by Andrew Heineman of Rep. Jerrold Nadler's office at 5-30-23 meeting of the Landmarks Committee of Manhattan Community Board 7.
[98] Carnegie Hill Neighbors petition, https://www.carnegiehillneighbors.org/; see also, https://www.carnegiehillneighbors.org/5g-opposition.
[99] Greenwich Village Society for Historical Preservation petition, https://p2a.co/cebw5as.
[100] http://friends-ues.org/wp-content/uploads/2023/01/Preservation-Group-Request-to-Deputy-Mayors-on-5G-Towers.pdf?emci=4a0975a4-0698-ed11-994c-00224832eb73&emdi=fa3fe730-0f98-ed11-994c-00224832eb73&ceid=6757961; see also, https://www.mas.org/news/link5g-towers-spark-concern/.
[101] http://friends-ues.org/wp-content/uploads/2023/01/FRIENDS-Link5G-towers-letter-122322.pdf?emci=4a0975a4-0698-ed11-994c-00224832eb73&emdi=fa3fe730-0f98-ed11-994c-00224832eb73&ceid=6757961.
[102] https://friends-ues.org/advocacy/linknyc/.

expressed opposition, e.g., Save Chelsea,[103] Save Gansevoort,[104] Municipal Arts Society,[105] and the Madison Avenue Business Improvement District.[106]

- **Lack of Compliance with NYC Rules and Federal Laws**

Link5G cell towers do not comply with the Rules of the NYC Landmarks Preservation Commission. According to the Rules, public communications structures, such as the Link5G cell towers, must have "an exterior dimension no greater than 11" wide x 35" deep x 122.9" high."[107] At 32 feet high and a width of 18 inches,[108] the Link5G cell tower exceeds the allowable dimensions.

Link5G cell towers have been constructed and installed in violation of federal law. On April 20, 2023, the FCC notified CityBridge that reviews are required prior to construction under the federal National Historic Preservation Act (NHPA), and under the National Environmental Policy Act (NEPA), essentially halting Link5G construction and installation while the reviews are being conducted. [109] As to those towers already constructed, post-construction reviews under NHPA and NEPA must also be conducted.[110] The FCC did not preclude enforcement actions against CityBridge for having constructed and installed Link5G without prior reviews.[111]

The FCC notice came on the heels of a letter which Congressman Nadler sent to the FCC requesting a Section 106 review under the NHPA in historic districts.[112]

OTI and CityBridge

- **Proof of Concept Has Failed**

OTI entered into an agreement with a vendor, CityBridge, LLC, to install 4000 (which can approach 7500) Link5G Cell Towers without first engaging the community for input on the entire project prior to entering into a franchise agreement with CityBridge. CityBridge's assertion that there was

[103] In testimony at the PDC, at 2:38:25, https://www.youtube.com/watch?v=nTBM95YcdF8.
[104] By letter on April 10, 2023 to the FCC and State Historical Preservation Office.
[105] https://www.ntd.com/5g-tower-configuration-not-compatible-with-historic-nyc-neighborhoods-municipal-art-society_1015345.html.
[106] http://friends-ues.org/wp-content/uploads/2023/10/Madison-Ave-BID-letter-to-SHPO-re-Section-106.pdf.
[107] Rules of the New York City Landmarks Preervation Commission, Title 63, §2-23(c)(2)(iv), https://www1.nyc.gov/assets/lpc/downloads/pdf/Rules/Rules%20of%20the%20NYC%20Landmarks%20Preservation%20Commission_01.22.2019.pdf.
[108] CityBridge presentation to CB6-Queens Executive Committee, 2-15-23.
[109] FCC Letter to CityBridge, April 20, 2023, https://www.dropbox.com/s/u483jswa8y72zua/FCC%20Letter%20to%20CityBridge%204-20-23.pdf?dl=0.
[110] Id.
[111] Id., ftnt 14.
[112] Congressman Nadler's letter to the FCC requesting a Section 106 review of the Link5G cell towers in historic districts: https://nadler.house.gov/uploadedfiles/nadler_letter_to_fcc_re_section_106_review_of_link5g_towers.pdf; see also, press release, https://nadler.house.gov/news/documentsingle.aspx?DocumentID=394982.

overwhelming support for the Link5G towers was only based on a survey of 1303 people.[113] That is hardly a large enough sample to represent almost 8 million New Yorkers.[114] OTI is now attempting to retrofit communities into an ill-conceived plan. Given the growing opposition by community boards, historic preservation societies, elected officials and others, Link5G deployment, if viewed as a **proof of concept, has failed** and should be abandoned for a better plan for NYC residents.

- **Public Design Commission Requirements for OTI's Pilot Program**

The Public Design Commission (PDC) reviewed the Link5G proposal.[115] The PDC approved a pilot program of 200 Link5G Cell Towers in order to gauge community reaction, specifically, to "provide details on the community reception of the poles, including the design and provisioning of service."[116] Instead, OTI is already proposing over 300 towers which may be more than what OTI has been authorized to do,[117] although it is not clear whether the 200 limit only applies to residential neighborhoods. The PDC pointed to OTI's obligation to gauge the community's reaction on the design, which has been largely negative.[118]

- **FOIL Requests for Link5G Specifications Outstanding for Over One Year**

Many community boards and residents have complained of a lack of transparency in providing the public with information related to the Link5G program. OTI has failed to respond to requests for information under numerous Freedom of Information Law requests (FOILs) dating as far back as

[113] Link NYC – Link5G in Residential Zoning and Historic Districts, PDC Preliminary/Final Review, Aug 8, 2022, see footnote referencing GfK Independent survey of 1303 New Yorkers at 10, https://www.nyc.gov/assets/designcommission/downloads/pdf/08-08-2022-pres-OTI-f-Link%205G.pdf.
[114] See Manhattan Community Board 8, Transportation Committee hearing where OTI and CityBridge presented on Dec 7, 2022, where this issue arose, https://www.cb8m.com/event/24978/.
[115] PDC Meetings and Minutes:
PDC Meeting 10-18-21 Video (starts at 1:38), https://www.youtube.com/watch?v=Nr4IWCYATAg
PDC Meeting 10-18-21 Minutes (no mention of Link5G), https://www.nyc.gov/assets/designcommission/downloads/pdf/Meeting%20Minutes%2010-18-21.pdf
PDC Meeting 12-13-21 Video (starts at 2:00), https://www.youtube.com/watch?v=nTBM95YcdF8
PDC Meeting 12-13-21 Minutes (see Certificate 27973, p.26), https://www.nyc.gov/assets/designcommission/downloads/Meeting%20Minutes%2012-13-21.pdf
PDC Meeting 8-8-22 Video (starts at 0:24:00), https://www.youtube.com/watch?v=Bc9U5pLWI2I
PDC Meeting 8-8-22 Minutes (see Certificate 28200, p.24), https://www.nyc.gov/assets/designcommission/downloads/pdf/Meeting-Minutes-8-8-22-REVISED.pdf
PDC Meeting 9-12-22 Video (starts at 0:33:25), https://www.youtube.com/watch?v=K-pUkQAivGI
PDC Meeting 9-12-22 Minutes (see Certificate 28229), https://www.nyc.gov/assets/designcommission/downloads/pdf/minutes-9-12-22-rev-2.pdf
[116] PDC Meeting 9-12-22 Minutes (see Certificate 28229), https://www.nyc.gov/assets/designcommission/downloads/pdf/minutes-9-12-22-rev-2.pdf
[117] See, NYC Open Data portal for "Link5G New Site Permit Applications," https://data.cityofnewyork.us/Social-Services/LinkNYC-New-Site-Permit-Applications/xp25-gxux.
[118] PDC Meeting 9-12-22 Minutes (see Certificate 28229), https://www.nyc.gov/assets/designcommission/downloads/pdf/minutes-9-12-22-rev-2.pdf.

October of 2021, with perpetual monthly extensions to respond,[119] and, more recently, from the Environmental Health Trust, a scientific think tank.[120]

OTI has yet to provide: FCC compliance reports, FCC frequency bands of the antennas, antenna model number, antenna gain, power potential, antenna manufacturers, antenna installers, electrical and engineering drawings, correspondence with any other city, state or federal agency, correspondence with City Bridge, the borough-wide plans being provided to the borough presidents, documentation related to the build-out, approvals, impacts on historic districts, visual impact studies, real estate reports, propagation maps, drive-by tests, denial of service reports, detailed pilot proposals submitted by OTI to the Public Design Commission, and more.[121] Other cities require applications for each tower accompanied by radio frequency and FCC compliance reports, among other requirements, and are publicly available; see. e.g., applications in Takoma Park, MD.[122]

OTI recently responded and confirmed that it does not have records relating to:

- FCC and radio frequency (RF) compliance reports, which certify telecom carriers' compliance with FCC emission limits
- Model number and manufacturers of the antennas
- Any correspondence with the Public Design Commission (PDC) or any other city agency regarding impact on landmarks
- Denial of service
- Frequency bands under which the antennas would be operating
- Build-out plans for the towers.

On appealing OTI's response, the question asked of OTI was, if OTI does not have those records, then how does OTI know that CityBridge is in compliance with all laws or licenses under which it operates, and how does OTI know that CityBridge is in compliance with the franchise agreement? OTI did not answer any of those questions in its response to the appeal.

- **4G/5G is Already Installed on Existing Structures**

There are already 13,580 reservations by the city's franchisees for the installation of 4G antennas and 5G "small" cells on existing structures, such as light poles and streetlights, and pole-top installations.[123] Their statuses are either installed, approved or proposed:

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[119] E.g., FOIL #s 2021-858-00282, 283, 285, 331, 332; 2022-858-00008; 2023-858-00001, 002, 003, 004, 005, 006, 007, 024.

[120] Letter to NYC requesting information regarding Link5G cell towers https://ehtrust.org/wp-content/uploads/Letter-RF-Reports-New-York-City-Office-of-Technology-and-Innovation-11.pdf.

[121] E.g., FOIL #s 2021-858-00282, 283, 285, 331, 332; 2022-858-00008; 2023-858-00001, 002, 003, 004, 005, 006, 007, 024.

[122] https://takomaparkmd.gov/initiatives/project-directory/small-cell-antennas-in-the-citys-rights-of-way/.

[123] Mobile Telecommunications Franchise Pole Reservations, https://data.cityofnewyork.us/City-Government/Mobile-Telecommunications-Franchise-Pole-Reservati/tbgj-tdd6; see also photos of 4G/5G installations in NYC, https://ourtownourchoice.org/ny/wtf/.

- 7,487 already installed,[124]
- 2,992 additional approved,[125] and
- 3,010 proposed.[126]

Since most – 10,379 – have already been installed or approved, the sheer number of these should obviate the need for any Link5G Cell Towers for wireless services.

- **NYC Comptroller's Negative Report on Existing LinkNYC Kiosks**

The NYC Comptroller conducted an audit of the existing LinkNYC kiosk program by a consortium of providers, including CityBridge, and found little accountability by OTI in terms of the moneys owed to the city and the upkeep of the kiosks.[127] OTI neglected to collect almost $70 million due to the city and neglected in ensuring equitable distribution of broadband to the city's underserved areas.

The audit also found the consortium's failure to maintain the kiosks in proper order. The kiosks were to be inspected twice a week to ensure they worked, were free of grime and graffiti, and that "any

[124] https://data.cityofnewyork.us/City-Government/Mobile-Telecommunications-Franchise-Pole-Reservati/tbgj-tdd6/explore/query/SELECT%0A%20%20%60id%60%2C%0A%20%20%60reservation_date%60%2C%0A%20%20%60franchisee%60%2C%0A%20%20%60status%60%2C%0A%20%20%60installation_date%60%2C%0A%20%20%60pole_type%60%2C%0A%20%20%60borough%60%2C%0A%20%20%60x_coord%60%2C%0A%20%20%60y_coord%60%2C%0A%20%20%60latitude%60%2C%0A%20%20%60longitude%60%2C%0A%20%20%60zone%60%2C%0A%20%20%60on_street%60%2C%0A%20%20%60cross_street_1%60%2C%0A%20%20%60cross_street_2%60%2C%0A%20%20%60park_advisory%60%2C%0A%20%20%60historic_advisory%60%2C%0A%20%20%60scenic_landmark_advisory%60%2C%0A%20%20%60bid_advisory%60%2C%0A%20%20%60school_advisory%60%2C%0A%20%20%60zipcode%60%2C%0A%20%20%60community_board%60%2C%0A%20%20%60council_district%60%0ASEARCH%20%27installed%27/page/filter.

[125] https://data.cityofnewyork.us/City-Government/Mobile-Telecommunications-Franchise-Pole-Reservati/tbgj-tdd6/explore/query/SELECT%0A%20%20%60id%60%2C%0A%20%20%60reservation_date%60%2C%0A%20%20%60franchisee%60%2C%0A%20%20%60status%60%2C%0A%20%20%60installation_date%60%2C%0A%20%20%60pole_type%60%2C%0A%20%20%60borough%60%2C%0A%20%20%60x_coord%60%2C%0A%20%20%60y_coord%60%2C%0A%20%20%60latitude%60%2C%0A%20%20%60longitude%60%2C%0A%20%20%60zone%60%2C%0A%20%20%60on_street%60%2C%0A%20%20%60cross_street_1%60%2C%0A%20%20%60cross_street_2%60%2C%0A%20%20%60park_advisory%60%2C%0A%20%20%60historic_advisory%60%2C%0A%20%20%60scenic_landmark_advisory%60%2C%0A%20%20%60bid_advisory%60%2C%0A%20%20%60school_advisory%60%2C%0A%20%20%60zipcode%60%2C%0A%20%20%60community_board%60%2C%0A%20%20%60council_district%60%0AWHERE%20%60status%60%20IN%20%28%27Approved%27%29%0ASEARCH%20%27approved%27/page/filter

[126] https://data.cityofnewyork.us/City-Government/Mobile-Telecommunications-Franchise-Pole-Reservati/tbgj-tdd6/explore/query/SELECT%0A%20%20%60id%60%2C%0A%20%20%60reservation_date%60%2C%0A%20%20%60franchisee%60%2C%0A%20%20%60status%60%2C%0A%20%20%60installation_date%60%2C%0A%20%20%60pole_type%60%2C%0A%20%20%60borough%60%2C%0A%20%20%60x_coord%60%2C%0A%20%20%60y_coord%60%2C%0A%20%20%60latitude%60%2C%0A%20%20%60longitude%60%2C%0A%20%20%60zone%60%2C%0A%20%20%60on_street%60%2C%0A%20%20%60cross_street_1%60%2C%0A%20%20%60cross_street_2%60%2C%0A%20%20%60park_advisory%60%2C%0A%20%20%60historic_advisory%60%2C%0A%20%20%60scenic_landmark_advisory%60%2C%0A%20%20%60bid_advisory%60%2C%0A%20%20%60school_advisory%60%2C%0A%20%20%60zipcode%60%2C%0A%20%20%60community_board%60%2C%0A%20%20%60council_district%60%0ASEARCH%20%27installed%27/page/filter.

[127] DiNapoli Examines Faltering LinkNYC Program, press release, July 20, 2021, https://www.osc.state.ny.us/press/releases/2021/07/dinapoli-examines-faltering-linknyc-program; see also, Comptroller's Report, July 2021, https://www.osc.state.ny.us/files/state-agencies/audits/pdf/sga-2021-19n5.pdf.

broken or damaged parts were to be repaired or replaced within 24 hours." The audit found that 76% sampled had "grimy screens, physical damage, and defective screens, icons, telephones and charging ports."

This does not instill confidence that CityBridge will now comply with its obligations or that OTI will sufficiently oversee, rather than deflect responsibility for, CityBridge's operations in connection with the Link5G program.

- **Lack of ULURP Review**

The Uniform Land Use Review Procedure (ULURP) requires that if there are any land use "impacts" or "implications," the project must be subject to review and approval by the community boards. "Implications" need not rise to the level of a significant impact.[128] The franchise agreement between CityBridge and OTI references a letter from the Dept of City Planning (DCP) dating back to April 28, 2014 that there would be no land use impacts or implications, thereby not requiring ULURP review: "a franchise consistent with the RFP would not have land use impacts or implications and that review under Section 197-c of the Charter would not be necessary."[129]

This poses a number of problems related to Link5G installations.

1. The base franchise agreement related to the smaller 9-1/2' LinkNYC kiosks, well before Amendment No. 3 which introduced the giant 32' Link5G towers, dated March 21, 2020.
2. Amendment No. 3 to the franchise agreement substantially revised the franchise, e.g., with towers 3-1/3 times taller than the original structures and providing for multi-tenancy, so that the revised franchise no longer matches the original RFP.
3. The Link5G towers should have been subject to ULURP since the threshold for review is simply "land use implications," that would otherwise require community board approval. [130]
4. Based on the text in Amendment No. 3, there was no recitation of a new RFP being issued for the larger towers or a new determination by the DCP. This would run counter to the NYC Charter which would require a new RFP and a new determination by the DCP.[131]
5. The 60-day comment period provided by OTI to the community boards is not a substitute for a full ULURP review.

[128] See, Uhlfelder v. Weinshall, 10Misc.sd 151, 810 N.Y.S.2d 275, 2005 NY Slip Op 25349 (N.Y. Sup. Ct. 2005).
[129] See Section entitled "Background and Authority," Franchise Agreement at 9, https://www.nyc.gov/content/oti/pages/franchises/linknyc-franchises.
[130] See, Uhlfelder v. Weinshall, 10Misc.sd 151, 810 N.Y.S.2d 275, 2005 NY Slip Op 25349 (N.Y. Sup. Ct. 2005).
[131] The NYC Charter Chapter 14 (Franchises …) Sec 363(e) states in relevant part: "Pursuant to an authorizing resolution adopted by the council, the responsible agency may issue one or more requests for proposals or other solicitations of proposals, provided that … (2) no such request or solicitation shall be issued unless … the department of city planning has determined that the proposed franchise would not have land use impacts or implications … "

The Briefing Paper of the Infrastructure Division of the NYC Council in preparation for the hearing held by the Committee on Technology on June 7, 2023, points only to one RFP which was for the smaller 9 ½' kiosks. The Link5G towers should have been subject to a new RFP, a new determination by the DCP and ULURP. OTI, having proceeded with a vastly different structure (3-1/3 times taller with a multi-tenant set-up) than originally contemplated under the base franchise agreement and the RFP, means that it did so without any apparent legal authorization otherwise required under NYC law.

- **What Does CityBridge Have to Hide?**

On May 30, 2023, the Landmarks Committee of Manhattan Community Board 7, held a public hearing/meeting with Nick Colvin, CEO of CityBridge. CityBridge requested that the hearing/meeting not be recorded, and where the public was asked to submit questions ahead of time so that OTI would sift through and determine which questions CityBridge would answer.[132] The public was not allowed to ask questions during the hearing. Indeed, none of the questions that the author and others posed to CityBridge was answered. What does CityBridge have to hide?

In addition, Mr. Colvin stated that while he didn't think that the towers would collapse, he did mention that the top was made of light plastic which could easily fall off. But he gave his assurance that it would not hurt anyone. As the saying goes, "from his lips to God's ears." Even light plastic hurtling from 3 stories can cause injury or property damage, just based on Newtonian physics of gravity and velocity. There is no clearer evidence that these structures are not safe for the public. Another factor is that the aesthetic that has been promoted by CityBridge would be marred, with the towers likely taking on the appearance of having missing teeth.

Public Safety

- **Privacy Vulnerabilities**

There was concern at MCB8 that 5G towers would track their children's locations. 5G uses a beam-forming technology that tracks your cell phone.[133] Will our children's locations be tracked?

The privacy policy in the City's franchise agreement with CityBridge states that CityBridge does not support a "do not track" function, [134] therefore, users' (and children's) online activities can be

[132] CityBridge CEO Nick Colvin's presentation to the Landmarks Committee of Manhattan Community Board 7 on 5-30-23, where the author and a constituent were present. There is no recording of the 5-30-23 meeting because, as the district manager stated to the constituent, CityBridge did not want the meeting recorded, and "we committed to CityBridge to not record and archive for the public."

[133] RF Coherency technology drives 5G RAN innovation, June 22, 2022, https://www.rcrwireless.com/20220622/5g/rf-coherency-technology-drives-5g-ran-innovation-reader-forum; see also, What is 5G?, https://cdn.shopify.com/s/files/1/0266/5411/3837/files/5G_White_Paper_-_EMR_Australia.v1.1.pdf?v=1613734363.

[134] CityBridge Privacy Policy, Exhibit 2 to Franchise Agreement between Department of Information Technology and Innovation (DoITT) and CityBridge, LLC, undated and unexecuted version, p. 4,

tracked. CityBridge also states that, although they "do not collect information about your precise location," they "can determine your general location" when you are using their services.

OTI had stated that personal information would not be exploited by CityBridge,[135] but the privacy policy states that third party providers would be managing email addresses without a stated obligation that those providers would maintain confidentiality and would also not exploit personal information.[136] In addition, CityBridge states that it "cannot guarantee against access" to personal information by unauthorized third parties, and that "[t]he security of your data transmitted" using their services "is at your own risk."[137]

CityBridge in its presentation to CB8 Manhattan denied that it had any affiliation with Google. But there was an association with Alphabet (parent of Google with its massive personal data collection[138]), an investor in one of the companies that formed a consortium with CityBridge for the buildout of LinkNYC, the predecessor to Link5G. Although this was a prior association, there is still the concern over the potential tracking and commodification of our locations and our personal data.[139]

The New York Civil Liberties Union (NYCLU) had warned that the LinkNYC network has significant privacy vulnerabilities, with its collection of personal information including e-mail addresses, browsing data and camera surveillance.[140] Although changes were reported to have been made to alleviate those concerns for the LinkNYC network,[141] serious doubts still remain at the NYCLU.[142] and it is not clear that any of those changes apply to the Link5G network.

At the June 7, 2023 hearing of the NYC Council Committee on Technology, the NYCLU pointed to violations of CityBridge's privacy policy found by an OTI audit, and that after nine years of LinkNYC operations, there still remains a lack of disclosure on "a detailed list of the thirty sensors included in

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https://www.nyc.gov/assets/oti/downloads/pdf/linknyc-franchises/linknyc-public-communications-structure-franchise-exhibit-2.pdf.

[135] See, e.g., Public Design Commission Meeting 12-13-21 Video (starts at 2:00), https://www.youtube.com/watch?v=nTBM95YcdF8.

[136] CityBridge Privacy Policy, Exhibit 2 to Franchise Agreement between DoITT and CityBridge, LLC, undated and unexecuted version, pp. 3-4, https://www.nyc.gov/assets/oti/downloads/pdf/linknyc-franchises/linknyc-public-communications-structure-franchise-exhibit-2.pdf.

[137] Id.

[138] Google faces $5 billion lawsuit in U.S. for tracking 'private' internet use, June 2, 2020, https://www.reuters.com/article/us-alphabet-google-privacy-lawsuit/google-faces-5-billion-lawsuit-in-u-s-for-tracking-private-internet-use-idUSKBN23933H.

[139] CityBridge, a consortium with Google, https://www.politico.com/states/new-york/albany/story/2020/03/03/city-hall-calls-google-backed-linknyc-consortium-delinquent-1264966; CityBridge affiliated with Alphabet (Google's parent), https://www.theverge.com/2020/3/5/21166057/linknyc-wifi-free-kiosk-google-new-york-sidewalk-labs-payments-revenue. See also, NYCLU Privacy Conference which gives the history of LinkNYC and its corporate affiliations, https://livestream.com/internetsociety/hopeconf/videos/130816888.

[140] NYCLU Privacy Conference: gives the history of LinkNYC, along with privacy issues https://livestream.com/internetsociety/hopeconf/videos/130816888.

[141] https://www.nyclu.org/en/press-releases/city-strengthens-public-wi-fi-privacy-policy-after-nyclu-raises-concerns.

[142] NYCLU: "LinkNYC is a Privacy Disaster. Here's Why," July 31, 2023, https://www.nyclu.org/en/news/linknyc-privacy-disaster-heres-why; see also, https://www.techdirt.com/company/citybridge/.

the kiosks" and "how LinkNYC uses the personal information it collects in its ad-driven business model."[143]

- **Security Vulnerabilities**

Although Link5G cell towers have been touted to provide free services, including free public charging stations for cell phones, the FBI is warning against using free public charging stations as bad actors have been infecting devices with malware through these stations.[144]

Security vulnerabilities are inherent in 5G architecture and, while 5G is being deployed, these vulnerabilities have not been resolved. As to 5G's hackability, former FCC Chairman, Tom Wheeler has coined the term, the "5G Cyber Paradox," that the increased efficiency of 5G architecture renders it more insecure. "5G networks are much more vulnerable to cyberattacks than their predecessors."[145] Whereas the 4G network is a centralized, hardware-based switching network with hardware choke points to quarantine any security breach events, 5G is a distributed, software-based network of digital routers with thousands of nodes and access points that a hacker can exploit; there is no choke point control.[146] If a hacker gains control of the 5G software managing the networks, the hacker can also control the 5G network.[147] In fact, in 2018 a hacker gained access to a Nevada casino's network through its internet connected "smart" thermostat system located in a fish tank at the casino, and was able to extract information out through the thermostat and load it into the cloud.[148] This shows that the architecture of 5G that is supposed to facilitate the Internet of Things (IoT) poses a serious risk of security breaches.

Even NYC's Chief Technology Officer and Chief Information Security Officer spotlighted 5G's security vulnerabilities in a letter to the National Telecommunications and Information Administration (NTIA) in 2020 (emphasis added):

> Such complex systems [5G] present ***more opportunities for security and privacy breaches***. By moving away from firmware-based technology of 4G telecommunication components to ***software-based 5G telecommunication components that will need to be updated, the opportunity for manipulation***

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[143] https://www.nyclu.org/en/publications/testimony-regarding-oversight-linknyc.
[144] https://www.theepochtimes.com/fbi-warns-against-free-public-charging-stations-for-phones-citing-hacking-risks_5184153.html?utm_source=share-btn-copylink.
[145] Why 5G Requires New Approaches to Cybersecurity, Tom Wheeler and David Simpson, Brookings Institute, Sept 3, 2019, https://www.wita.org/nextgentrade/why-5g-requires-new-approaches-to-cybersecurity/.
[146] *Why 5G Requires New Approaches to Cybersecurity*, Tom Wheeler and David Simpson, Brookings Institute, Sept 3, 2019, https://www.wita.org/nextgentrade/why-5g-requires-new-approaches-to-cybersecurity/; see also, *Why 5G Networks Are Disrupting The Cybersecurity Industry*, Oct 29, 2021, https://www.forbes.com/sites/forbestechcouncil/2021/10/29/why-5g-networks-are-disrupting-the-cybersecurity-industry/?sh=5186fc041fe9.
[147] *Why 5G Requires New Approaches to Cybersecurity*, Tom Wheeler and David Simpson, Brookings Institute, Sept 3, 2019, https://www.wita.org/nextgentrade/why-5g-requires-new-approaches-to-cybersecurity/.
[148] https://www.casino.org/news/hackers-stole-las-vegas-casino-high-roller-database-via-its-fish-tank/; https://www.forbes.com/sites/leemathews/2017/07/27/criminals-hacked-a-fish-tank-to-steal-data-from-a-casino/; https://www.washingtonpost.com/news/innovations/wp/2017/07/21/how-a-fish-tank-helped-hack-a-casino/.

> ***exists*** within the supply chain. Furthermore, movement away from centralized network systems to decentralized network systems ***increases the attack surface of a network***. That increased attack surface is ***amplified*** by the anticipated introduction of the increasing number and variety of connected devices (IoT) and big data industries. (top of p.3)
>
> The problem of IoT vulnerabilities will only become ***exacerbated by the increased speeds of 5G*** and other future wireless broadband technologies. (middle of p.3)
>
> IoT protection is historically poor and ***malware distribution is easily scalable***, which suggests that the creation of IoT botnets ("robot networks") for malicious purposes, including ***large-scale distributed denial of service (DdoS) attacks***, is ***likely to increase*** as well. This poses a ***significant threat*** to vital digital infrastructure and resident services at all levels of government, as well as private sector enterprise. (penultimate paragraph on p.3)[149]

To further amplify the last point, it has been reported that:

> "***Botnet and denial of service (DdoS) type attacks can bring down whole portions of the network simply by overloading a single [5G] node.***"[150]

- **Fire Hazards**

Cell towers have been known to catch on fire.[151] Therefore, people need time to escape. The 5G Towers are cell towers with 5 bays for concentrated telecommunications equipment. If a 5G Tower catches on fire, and it is near or on school grounds or just feet from a window, how will people especially children be able to escape in time? The problem is that firefighters cannot put out the fire unless the power to the cell tower is turned off, otherwise they can be electrocuted. As this can take up to an hour, the fire may have the opportunity to spread rapidly.

Cell towers are, essentially, electrical installations and should require compliance with strict electrical building codes.[152] Industry commentary admits that 5G runs hot as 5G circuits are inefficient."[153] A lot of heat needs to be dissipated because of the amount of equipment,

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[149] Letter from Chief Information Security Officer, Geoff Brown, and Chief Technology Officer, John Paul Farmer, to National Telecommunications Information Administration of the U.S. Chamber of Commerce, June 2, 2020, https://www.dropbox.com/scl/fi/0cxjktjxstmb825gqih25/NYC-Comments-5G-to-NTIA-6-25-20.pdf?rlkey=dgmc3m04dxd57qfz7z1g12ckh&dl=0.

[150] Why 5G Networks Are Disrupting The Cybersecurity Industry, Oct 29, 2021, Forbes, https://www.forbes.com/sites/forbestechcouncil/2021/10/29/why-5g-networks-are-disrupting-the-cybersecurity-industry/?sh=5186fc041fe9.

[151] https://ehtrust.org/cell-tower-safety-risks-fires-and-collapse/ .

[152] Guest Commentary: Is 5G a Potential Fire Hazard?, Tony Simmons, P.E., The Aspen Times, June 13, 2021, https://www.aspentimes.com/opinion/guest-commentary-is-5g-a-potential-fire-hazard/.

[153] 5G Heats Up Base Stations, https://semiengineering.com/5g-heats-up-base-stations/.

conversions and inefficiencies.[154] Heat builds up at the cell tower because it is tightly packed with lots of equipment required to do digital to analog conversions, and they are "power-hungry" requiring a large amount of energy consumption.[155] In fact, wireless antennas from various carriers may be tightly packed in the Link5G Cell Towers, with housing for multiple 5G antennas at 5 circular bay stations surrounding the pole being almost 20' high (see Addendum A).[156]

There were four notable fires in California that were started in whole or in part by failures or overload of telecommunications equipment. The Guejito Fire in San Diego in 2007, [157] the Malibu Canyon Fire in 2007,[158] the Silverado Fire in 2020, and the Woolsey Fire in 2018 being the worst in California history.[159] The Guejito Fire in San Diego in 2007 was started by a Cox Communications lashing wire. This fire merged into the Witch Creek Fire which became the largest and deadliest in San Diego history, and also forced the largest mass evacuation in California history.[160]

Many instances of cell tower fires abound. [161] In 2021 in Brooklyn, the cause of fire on an apartment building rooftop was reported to be caused by an "electrical malfunction of a cell tower on the roof of a building."[162] In Hanover, VA in 2020, a cell tower was engulfed in flames which officials believed to have been caused by electrical/mechanical issues.[163] In Chula Vista, CA in 2021, a cell tower at a school stadium burst into flames, and while firefighters were waiting for the power to be shut off, it had become molten plasma.[164] The incident report stated the reason as "electrical arcing," which means that the temperature can reach as high as 35,000 degrees Fahrenheit, three times the estimated temperature of the sun's surface. The tower also collapsed onto the bleachers near a football field, burning the track and, destroying the bleachers.

Exacerbating the problem is that cell site developers tend to construct monopole cell towers as quickly and as cheaply as possible, meaning that any quality control over their manufacture, construction or maintenance is probably close to non-existent.

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[154] Id.

[155] 5G Heats Up Base Stations, https://semiengineering.com/5g-heats-up-base-stations/.

[156] Renditions can be seen in the links for footnote 4 above and at https://manhattanneighbors.org/jumbo-5g-antennas-nyc/.

[157] PROTECTING LA COUNTY'S FUTURE: HOW FIRE RISKS FROM TELECOMMUNICATIONS EQUIPMENT, CLIMATE CHALLENGES & A DANGEROUS SHIFT AWAY FROM ENVIRONMENTAL REVIEW THREATEN LOS ANGELES COUNTY'S FUTURE, Susan Foster, November 15, 2022, p. 11.

[158] *California Public Utilities Commission, Incident Investigation Report*, 10/21/2008, at 6, http://file.lacounty.gov/SDSInter/bos/bc/115889_ReportBack-BoardMotion60A-SessionWildfireReport.pdf.

[159] *City of Los Angeles, After Action Review of the Woolsey Fire Incident*, Citigate Associates, LLC, Nov. 17, 2019, at 4, http://file.lacounty.gov/SDSInter/bos/supdocs/144968.pdf; Guest Commentary: Is 5G a Potential Fire Hazard?, Tony Simmons, P.E., The Aspen Times, June 13, 2021, https://www.aspentimes.com/opinion/guest-commentary-is-5g-a-potential-fire-hazard/.

[160] PROTECTING LA COUNTY'S FUTURE: HOW FIRE RISKS FROM TELECOMMUNICATIONS EQUIPMENT, CLIMATE CHALLENGES & A DANGEROUS SHIFT AWAY FROM ENVIRONMENTAL REVIEW THREATEN LOS ANGELES COUNTY'S FUTURE, Susan Foster, November 15, 2022, p. 11.

[161] https://ehtrust.org/cell-tower-safety-risks-fires-and-collapse/ .

[162] *Fire on Rooftop With Cell Antennas in Brooklyn New York*, Apr 19, 2021, https://ehtrust.org/firecell-tower-brooklyn-new-york/.

[163] *Hanover cell tower catches fire*, NBC 12 Newsroom, June 26, 2020, https://www.nbc12.com/2020/06/26/cell-phone-tower-hanover-catches-fire/.

[164] https://thenationalcall.org/resources/ below the fold at "Additional Valuable Resources," see "Cell Towers & Fires."

- **Insufficient Fall Zone**

At 3 stories high and placed as close as 10.6' to buildings, Link5G Cell Towers do not have a sufficient fall zone in case the tower collapses. "Fall zone means the area, defined as the furthest distance from the tower base, in which a tower will collapse in the event of a structural failure."[165] The fall zones would generally be at least 110% of the height of the cell tower.[166]

At 3 stories high, that would mean a clearance would be required with a circumference of more than 3 stories around the tower from any nearby structure, traffic and pedestrian sidewalks. Instead, these Link5G towers can be placed in extreme proximity, as close as 10.6' to buildings, although it could be closer upon notice to the community board. That means that in the event of their collapse, they could crash into people's windows and injure people in their homes and on the street. In the case of towers being proposed close to schools or playgrounds, they could crash into the school or onto the playgrounds and injure the children.

- **Protecting our First Responders – Firefighter as Canaries in the Mine**

Ensuring that our first responders are protected and are not adversely affected by cell towers, including Link5G Cell Towers, would be important elements in securing the public's safety. There are instances of fire fighters and a police lieutenant who were injured from wireless antennas where they work and where they live.

When the best and the most fit among us, such as firefighters, become injured from microwave (MW), electro-magnetic frequency (EMF) or radio frequency (RF) radiation, then we know we have a big problem for the rest of the population.

Firefighters in California were injured after a cell tower was installed on their station house property. They experienced headaches, and memory, sleeping and neurological disorders. Testing results showed delay in reaction time and difficulty in mental focus and SPECT brain scans found abnormalities associated with wireless radiation.[167] During actual emergency calls, they would sometimes become disoriented and could not respond to emergencies with the speed, cognition and orientation required to perform their duties at optimal capacity.

> "Firefighters have reported getting lost on 911 calls in the same community they grew up in, and one veteran medic forgot where he was in the midst of basic CPR on a cardiac victim and couldn't recall how to start the procedure

[165] https://www.lawinsider.com/dictionary/fall-zone.

[166] See, e.g., Board of Zoning Appeals Denies Cell Tower Requests, July 31, 2020, (requiring a 160 foot cell tower to have a fall zone of an additional 25 feet above the tower's height, and rejecting Verizon's "engineered" fall zone of less than the cell tower height), https://www.greenevillesun.com/news/local_news/board-of-zoning-appeals-denies-cell-tower-requests/article_45d979ac-7b14-5749-af48-b237fe67dee3.html.

[167] https://ehtrust.org/a-cautionary-tale-from-firefighters-of-california-fighting-cell-towers-on-stations/.

> over again…Prior to the installation of the tower on his station, this medic had not made a single mistake in 20 years." [168]

Consequently, the International Association of Firefighters passed a resolution opposing, and calling for a moratorium, on the placement of cell towers near fire stations in the U.S. and Canada.[169]

A police lieutenant living in Queens, NY has suffered injuries by a pole-top antenna installed just feet away from his house. [170] He was otherwise healthy before exposure to radiation from the wireless antenna, which caused him to suffer from heart arrhythmias and sleep deprivation. He underwent invasive medical cardiac procedures where the doctors found his condition could not be replicated in their offices away from the source of radiation. When he realized that his condition improved away from his home, he was compelled to evacuate his own home, along with his sister, while still shouldering the financial burden of a substantial mortgage on a house which has now become toxic and likely unmarketable.

His sister, who had just completed chemotherapy, became very sick after the antenna installation, and was advised by her oncologist that if she stayed, she would have a recurrence of the cancer.

In his own words:

> For the first time in my life, I went from being perfectly healthy, to suffering from heart arrhythmias, headaches, and not being able to sleep, out of nowhere … The lack of empathy from city officials, and the lack of resident control – like all of our freedoms are taken away with these towers – is like nothing I've ever seen before. It doesn't make any sense.
>
> I've been a public servant all my life. I was a full paramedic at 19 – the youngest in New York City. A police officer at 20. I worked my way up doing every beat that you can do. I was at ground zero after 9/11 with my partner. We took turns going into the World Trade Center to pull people out. As I would pull a person out to safety, my partner would run back in. We'd switch. It was during one of those switches, as I was pulling a person to safety, my partner ran back in and then the tower collapsed. My partner was later found in the rubble.[171]

Note: OTI executives, Stacey Gardener and Brett Sikoff, were present when the police lieutenant recounted his heart-wrenching story at the Queens CB1 meeting of the

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[168] Ibid.

[169] https://www.iaff.org/cell-tower-radiation/; International Association of Firefighters (IAFF) Votes To Study Health Effects of Cell Towers on Fire Stations, Call for Moratorium on New Cell Towers on Fire Stations Until Health Effects Can Be Studied, https://ehtrust.org/wp-content/uploads/pr_iaff_vote-1.pdf.

[170] See CB1-Queens, Joint Environmental/Sanitation and Transportation Committees, 1-25-23 starting at about 00:54:00.

[171] Written comments submitted by the police lieutenant in connection with presentation to CB1 Queens on 1-25-23; Id.

Environment & Sanitation Committee on January 25, 2023.[172] They did not respond and offered no assistance in moving the antenna away from his home.

Digital Equity

- **"Digital Divide" – 5G Unlikely to Remedy**

5G deployment in NYC has been marketed as bridging the "digital divide" for underserved communities[173] when, in fact, it is designed to bridge the digital divide for people on the street, but not for people in their homes.[174] Ultra-high-band 5G being used for the free Wi-Fi will extend only about 500',[175] which will provide only incidental access in the home to the extent that it reaches that far, and yet no customer service in case the service goes down in the home.

It has been reported by the US Government Accountability Office (GAO) that 5G deployment is likely to exacerbate disparities in accessing telecommunications services.[176] The GAO is the highest audit institution of the federal government.[177] Moreover, the National Digital Inclusion Alliance testified in Congress that "5G will not solve the digital divide" and 5G service will require 5G capable cell phones, which the underserved, low income households, will likely not be able to afford.[178] As to the longevity of a 5G phone, telecom carriers have been advising their customers to turn off 5G on their cell phones to save battery life on their devices.[179]

In fact, the New York Civil Liberties Union (NYCLU) spotlighted the major underlying flaws of the LinkNYC project, how it has "failed to deliver on its promise to improve New Yorkers' access to the internet and close the digital divide" and that it does not "offer the speed and reliability of a broadband connection."[180] Yet, the current Link5G cell towers are built on the LinkNYC concept.

The "digital divide" justification begs the question of whether the situation is due to lack of affordable broadband, lack of infrastructure (e.g., lack of fiber optics connection to the home), lack

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[172] See CB1-Queens, Joint Environmental/Sanitation and Transportation Committees, 1-25-23 starting at about 00:54:00.
[173] https://www.techdirt.com/2022/11/22/nycs-new-5g-linknyc-towers-dont-actually-fix-the-digital-divide-and-theyre-ugly-as-hell/.
[174] See, e.g., CityBridge CEO Nick Colvin's presentation to the Landmarks Committee of Manhattan Community Board 7 on 5-30-23; CityBridge Q&A at NYC Council Speaker Adrienne Adams' Information Session, 6-28-23.
[175] Id.
[176] US Government Accountability Office 2020 Report "FCC Needs Comprehensive Strategic Planning to Guide Its Efforts," https://www.gao.gov/products/gao-20-468 (p.3). Full report https://www.gao.gov/assets/gao-20-468.pdf (p.14).
[177] https://en.wikipedia.org/wiki/Government_Accountability_Office.
[178] Testimony of Angela Siefer, Executive Director, National Digital Inclusion Alliance, before the U.S. House of Representatives, Subcommittee on Communications and Technology, Committee on Energy and Commerce, Jan 29, 2020, https://www.congress.gov/116/meeting/house/110416/witnesses/HHRG-116-IF16-Wstate-SieferA-20200129.pdf; video of testimony at https://givingcompass.org/nonprofit/national-digital-inclusion-alliance?gclid=CjwKCAjw67ajBhAVEiwA2g_jEMPJ3ET3xWZhbc8lBCH9_FIuP4nXRASue_6oPyMDyvxO9uysvJfELRoC5XgQAvD_BwE at 2:27 and 2:50.
[179] "Why are Carrriers Telling Us to Turn Off 5G?" PC Magazine, March 5, 2021, https://www.pcmag.com/opinions/why-are-carriers-telling-us-to-turn-off-5g.
[180] https://www.techdirt.com/company/citybridge/.

of affordable computers or lack of digital literacy, just to name a few. And how do we know that wireless services will actually connect the unconnected, not just on the street but at home? Although this and other questions were posed by the Environmental Health Trust in a letter to OTI in January, 2023, they remain unanswered.[181]

The sagacity of Mayor Adams' administration's move to scrap former Mayor diBlasio"s Master Plan for NY has been questioned.[182] It is argued that the Master Plan would have provided a city-wide open access fiber network and "would have boosted city broadband competition and driven down broadband access costs for all city residents."[183] The NYCLU suggests that NYC "deliver affordable fiber broadband to all city residents **so they don't need to huddle in the street [in front of LinkNYC kiosks] in the first place**."[184] [Emphasis added.]

It has been theorized that "a city-owned municipal network would understandably upset regional mono/duopolies Verizon and regional cable giant Charter Communications (Spectrum)."[185] In the BigApple Connect program, NYC is paying out $90 million to provide free fiber broadband for 3 years to about 400,000 people in public housing in NYC, who, after those 3 years, will find themselves having to pay market rates to a company that will then have a monopoly in providing services to them. Instead, NYC could have applied that $90 million to pay for the $156 million to build an open access fiber network where all service providers could compete and join other cities doing the same that are able to provide "better, faster and cheaper broadband."[186]

As to the number of underserved New Yorkers, OTI may be overstating the number of New Yorkers lacking broadband. At 3.4 million reported by OTI to be underserved, it is referring to those without home ***and*** mobile broadband" [emphasis added]. [187] Does that mean that homes otherwise having only cable/fiber broadband are considered "underserved?" In fact, those homes would have exponentially greater broadband capacity than wireless, particularly if they are serviced by fiber.

OTI claims that these Link5G towers will solve the digital divide, as if providing free Wi-Fi in the 5th bay is assured; however, their claim appears to be speculative. There is no transparency as to what contracts CityBridge has entered into with the telecom carriers, and whether contracts are even in place to provide free Wi-Fi in the 5th bay of all proposed towers. The only requirement in the pilot program by the Public Design Commission was that there would be at least one wireless contract for each pole that is constructed, and that one contract may or may not be for Wi-Fi.[188] Unless there is evidence of contracts to provide the promised Wi-Fi to underserved communities, it means that OTI's assertions may be speculative.

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[181] Letter to NYC requesting information regarding Link5G cell towers https://ehtrust.org/wp-content/uploads/Letter-RF-Reports-New-York-City-Office-of-Technology-and-Innovation-11.pdf.
[182] https://www.techdirt.com/company/citybridge/.
[183] Id.
[184] Id.
[185] Id.
[186] Id.
[187] Link5G ppt presentation to NYC's Public Design Commission by Dept of Info Technology and Telecommunications (DoITT) now called Office of Technology and Innovation (OTI), 12-13-21, p.4 at https://www1.nyc.gov/assets/designcommission/downloads/pdf/12-13-2021-pres-DoITT-p-Link-5G-1.pdf.
[188] Link5G_PDC_Deck_Residential_Historic_Phase1_8_19_22.pptx at 3.

In addition, only one bay will be for public Wi-Fi, while four out of the five bays will be 4G/5G services for paying customers. The Link5G deployment is largely a private enterprise with a minimum of free Wi-Fi. Will one bay be sufficient to service thousands of users for free, simultaneously? In contrast, fiber optics, wired to the home, can handle an exponentially greater broadband capacity to bridge the digital divide in the home.

- **Devaluation of Property Values and Digital Equity**

Installing these giant 5G cell towers under purported "digital equity" to underserved communities may undermine the ability of these communities to obtain federal mortgage and home ownership assistance. The U.S. Department of Housing and Urban Development (HUD) classifies towers under "Hazards and Nuisances," and requires real estate appraisers report if a property is within the fall zone of a tower.[189] Although HUD does not appear to have a definition for "tower," the FCC's definition for "Tower is any structure built for the sole or primary purpose of supporting FCC-licensed antennas and their associated facilities."[190] Link5G towers fall squarely within the FCC's definition. Being that Link5G towers are being placed just feet from residential structures, the homes are within the fall zone of the Link5G towers.

HUD's Federal Housing Administration (FHA) insures mortgages and requires that the property "must be free of all known hazards and adverse conditions that:

- may affect the health and safety of the occupants
- may affect the structural soundness of the improvements
- may impair the customary use and enjoyment of the property."[191]

The FHA will not underwrite mortgages for properties that meet the criteria for "unacceptable sites:"

> "A. UNACCEPTABLE SITES
> FHA guidelines require that a site be **rejected** if the property being appraised is subject to **hazards, environmental contaminants,** noxious odors, **offensive sights** or excessive noises

[189] Hazards & Nuisances: Overhead High Voltage Transmission Towers and Lines
Chapter 1: Appraisal & Property Requirements (Page 1-18f)
https://archives.hud.gov/offices/hsg/sfh/ref/sfh1-18f.cfm. See also, *Powerlines and Cell Antennas Lower Property Values*, https://ehtrust.org/cell-phone-towers-lower-property-values-documentation-research/; see also online commentary, https://www.city-data.com/forum/mortgages/577383-fha-loans-cellphone-towers-did-you.html.
[190] APPENDIX A–DA 16-519 AMENDED NATIONWIDE PROGRAMMATIC AGREEMENT for the COLLOCATION OF WIRELESS ANTENNAS Executed by The FEDERAL COMMUNICATIONS COMMISSION, The NATIONAL CONFERENCE OF STATE HISTORIC PRESERVATION OFFICERS and The ADVISORY COUNCIL ON HISTORIC PRESERVATION, https://docs.fcc.gov/public/attachments/DA-16-519A2.pdf.
[191] Valuation Analysis for Single Family One- to Four- Unit Dwellings, Sec 3-6 General Acceptability Criteria For FHA-Insured Mortgages , A. General Acceptability Criteria, 2. Hazards, https://www.hud.gov/sites/documents/41502HBHSGH.DOC&wdOrigin=BROWSELINK.

to the point of endangering the physical improvements or affecting the livability of the property, its marketability or the health and safety of its occupants."[192] [Emphasis added]

Moreover, any proximity of the property to certain conditions must be noted by the appraiser:

"… The appraiser must evaluate whether the property is free of hazards, noxious odors, grossly offensive sights or excessive noises that may:

- endanger the physical improvements
- affect the livability of the property or its marketability
- affect the health and safety of its occupants

"If any of these conditions exist, recommend correction of the problem or rejection of the property and explain."[193]

In addition, in determining eligibility for an FHA insured mortgage, the appraiser is required to identify "inharmonious land uses:"

"Inharmonious Land Uses … The appraiser must identify all inharmonious land uses in a neighborhood that affect value. Clearly define the current and long-term effect that inharmonious uses will have on the market value and the economic life of the subject property. **If inharmonious land use represents a serious detriment to either the health or safety of the occupants or to the economic security of the property, clearly note safety of the occupants or to the economic security of the property …. Recommend that the property be rejected by the Lender**."[194] [Emphasis added.]

HUD also looks at the marketability of property:

"The demand for home ownership in a neighborhood is directly related to the marketability of the homes in the neighborhood or in competitive neighborhoods."[195]

There are potential buyers who do not want to live near cell towers, and in some areas that have cell towers, property values have gone down by as much as 20%.[196]

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[192] Valuation Analysis for Single Family One- to Four- Unit Dwellings, Sec 2-2 Special Neighborhoods Hazards and Nuisances, A. Unacceptable Sites, https://www.hud.gov/sites/documents/41502HBHSGH.DOC&wdOrigin=BROWSELINK.
[193] Valuation Analysis for Single Family One- to Four- Unit Dwellings, Sec. 4-2, https://www.hud.gov/sites/documents/41502HBHSGH.DOC&wdOrigin=BROWSELINK.
[194] Valuation Analysis for Single Family One- to Four- Unit Dwellings, Sec. 2-1 Site Requirements, E. Land Use Restrictions, 3. Inharmonious Land Uses, https://www.hud.gov/sites/documents/41502HBHSGH.DOC&wdOrigin=BROWSELINK.
[195] HUD Handbook 4150.2 Section 2-1 Site Requirements, J. Marketability, https://www.hud.gov/sites/documents/41502C2HSGH.PDF.
[196] *The Electrifying Factor Affecting Your Property's Value*, Wall Street Journal, Aug 15, 2018, https://www.wsj.com/articles/the-electrifying-factor-affecting-your-propertys-value-1534343506. A study spanning 1984 to 2002 found that the prices for 4,283 residential sales in 4 suburbs were reduced by about 21% (see, *Cell Towers and Our Real Estate Values*, October 4, 2014, https://dscelltower.wordpress.com/2014/10/04/cell-towers-and-our-real-estate-values/).

Residents in other cities have expressed their concern over the devaluation of their homes in close proximity to cell towers. For example, in the Town of Islip, on Long Island, the zoning board denied the application for the siting of a cell tower based, among other things, on the potential devaluation of their homes, corroborated by experts."[197]

- **The Built-In Obsolescence of Wireless will Perpetuate the Digital Divide**

There is a planned, built-in obsolescence with wireless. This is a trend, as reported by an industry publication, where "companies have turned to planned obsolescence to artificially render older products obsolete."[198] It is a tactic used to ensure that tech companies "can consistently turn a profit every time they launch new products."[199]

For instance, the major telecom carriers are already sunsetting their 3G networks, by design, as reported by the FCC.[200] That means that 3G-enabled only phones will become obsolete and consumers will be forced to buy a new cell phone for the new network.[201] It would also apply to other 3G-enabled equipment, such as "medical devices, tablets, smart watches, vehicle SOS services, home security systems."[202] This is artificially creating demand for later generation services, such as 5G as people are forced to buy 5G-enabled cell phones and equipment, and soon 6G and beyond.

Buying into the 5G rhetoric is relegating people to a perpetual cycle of obsolescence, apparently for corporate profit. This cycle will be perpetuated with future generations of wireless as it becomes necessary for more devices to be connected to ever-newer generations of wireless in order for devices to work. Those who cannot afford new devices will be left behind, perpetuating, if not guaranteeing, the digital divide.

Moreover, wireless equipment and facilities have a much shorter life span, and require continuous periodic maintenance and replacement. Fiber has been federally prioritized as the superior choice to implement broadband nationwide to bridge the "digital divide." There is no planned, built-in obsolescence with fiber (which lasts 25-50 years), and is therefore more cost effective for underserved communities, ensuring that they are not left behind.

FCC Lack of Oversight and Regulatory Gap

- **Regulatory Gap**

There is no federal agency testing wireless radiation for public safety,[203] other than perhaps ad hoc testing by the FCC. The history in a nutshell – prior to the Telecommunications Act of 1996, cabinet-

[197] *T-Mobile Northeast LLC v. Town of Islip*, 893 F. Supp. 2d 338, 359 (E.D.N.Y. 2012), https://casetext.com/case/tmobile-ne-llc-v-town-of-islip.
[198] https://cellularnews.com/mobile-phone/planned-obsolescence/.
[199] Id.
[200] https://www.fcc.gov/consumers/guides/plan-ahead-phase-out-3g-cellular-networks-and-service.
[201] Id.
[202] Id.
[203] https://ehtrust.org/the-regulation-of-wireless-radiation-in-the-united-states-exemplar-of-a-regulatory-gap/.

level regulatory agencies were responsible for the safety of those exposed to radio frequency radiation: FDA was responsible for devices including cell phones; EPA was responsible for emissions from wireless infrastructure including cell towers; OSHA was responsible for workplace exposures. In the Telecommunications Act of 1996, as a means of simplifying deployment of new digital wireless phones and facilitating the first-ever spectrum auctions to the private sector, the FDA, EPA and OSHA were relegated to advisory roles and the full authority for public safety was vested in the non-regulatory agency, the politically structured FCC.[204] The FCC had neither the competency nor the resources to carry out the regulatory responsibilities; therefore, wireless technology remains to this date in a regulatory void where consumers, proximal residents, and the environment are largely un-protected. [205]

- **FCC Concealed Cell Phone Tests that Exceeded its Limits**

It was revealed in September 2023 that the FCC concealed from the public cell phone tests conducted in 2019 showing that human radiation exposure limits "were exceeded."[206] The FCC failed to reveal those results during its open rule-making on its wireless emission limits and during a court case on those limits (Environmental Health Trust, et al v. FCC, decided 2021).[207]

- **FCC Does Not Measure Wireless Emissions**

Although the FCC regulates the limits of allowable wireless emissions, unfortunately, the FCC does not measure wireless emissions to determine if telecom carriers are in compliance with the FCC's emission limits. The FCC's own website states in its FAQ section in response to "Does the FCC Routinely Monitor Radiofrequency Radiation from Antennas?": "The FCC does not have the resources or the personnel to routinely monitor the exposure levels due at all of the thousands of transmitters that are subject to FCC jurisdiction."[208]

Moreover, the FCC typically does not track or require that a cell tower less than 200 feet be registered with the FCC,[209] unless the tower is subject to an Environmental Assessment (EA) under NEPA or NHPA, in which event the tower will be tracked and registered (along with an EA submission).[210] Indeed, the need for tracking all towers and having a database was underscored by

[204] Ibid.
[205] Ibid.
[206] https://ehtrust.org/press-release-concealed-fcc-cell-phone-radiation-tests-show-human-exposure-limits-were-exceeded/.
[207] Ibid.
[208] RF Safety FAQ, https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety#Q24 (accessed 7-28-22).
[209] Cell Tower Mapping, https://www.waveform.com/a/b/guides/cell-tower-mapping, "Unfortunately, there's no government regulation requiring carriers to publicize their 4G or 5G tower locations. The Federal Communications Commission (FCC) is the body that regulates cell carriers like AT&T, Verizon, and T-Mobile ... Their rules only require those carriers to register towers that are over 200 feet tall."
[210] See Instructions for filing FCC Form 854 Item 48.

the safety and health director of the Mechanical Workers Association of America representing 270,000 workers requesting such a database of the FCC as far back as 2014.[211]

Since the FCC has notified CityBridge of its lack of compliance with NEPA and NHPA, those towers that trigger an EA would be registered. However, there is a catch. The determination of whether an NEPA and NHPA is triggered is determined by the applicant, in this case CityBridge. That means an indeterminate number of 5G towers will still not be tracked by the FCC for compliance.[212] Furthermore, EAs no longer need to be filed if the parties (the applicant, FCC, tribes and the State Historical Preservation Office – SHPO) sign a memorandum of Agreement addressing NHPA issues.

- **OTI Claims to Measure Wireless Emissions**

The onus usually falls on residents and local governments to measure emissions to determine compliance and to pay for those measurements. OTI has said that the telecoms are required to measure their own emissions, that an independent company is taking measurement, and that they have been in compliance.[213] But, there are a number of questions:

- Where are the reports and who is verifying the results?
- Why are these reports not readily available to the public for inspection?
- Do the reports measure the emissions from one antenna or the cumulative emissions of multiple antennas from a Link5G cell towers, as well as from surrounding antennas and cell towers?

OTI should be measuring emissions on a random, unannounced basis to verify compliance, otherwise, it is seemingly a case of the fox guarding the henhouse. There should also be projected measurements of the cumulative exposure of multiple antennas on a Link5G tower, and at different distances. In fact, it was reported in 2014 that tests performed by independent radio-frequency engineers on 9,000 sites nationwide found that 10% of cell towers exceeded FCC limits.[214]

- **Telecom Carriers' Propagation Maps are Not Reliable**

Although OTI has stated that these towers are to fill a gap in telecommunications service and that the telecommunications carriers have identified these gaps, when asked, neither OTI nor CityBridge had any reports documenting evidence of any such gaps in service and they confirmed that they had no such reports.[215] OTI is also saying that a gap may not exist now, but that the carriers are anticipating a future gap so they want to add 5G antennas for capacity.[216] The problem is that there

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[211] *Cellphone Boom Spurs Antenna Safety Worries*, Wall Street Journal, Oct 2, 2014, https://www.wsj.com/articles/cellphone-boom-spurs-antenna-safety-worries-1412293055.
[212] *Cellphone Boom Spurs Antenna Safety Worries*, Wall Street Journal, Oct 2, 2014, https://www.wsj.com/articles/cellphone-boom-spurs-antenna-safety-worries-1412293055.
[213] See, PDC Meeting 12-13-21 Video, Q&A with DoITT (now OTI) Commissioner Tisch (starts at 2:00), https://www.youtube.com/watch?v=nTBM95YcdF8
[214] Id.
[215] CB8-Manhattan Transportation Committee video of OTI presentation and public comments, https://www.cb8m.com/event/24978/.
[216] CB6-Queens Executive Committee meeting 2-15-23 with OTI presenting.

are no reports showing how those anticipated gaps were identified. Apparently, OTI used a firm, HR&A Advisors, but no reports have been forthcoming when the Environment Committee of CB1 Queens specifically asked for those reports.[217] OTI responded that they would only provide a "sample report," which also has not been provided.

Moreover, the telecoms use computer-generated propagation maps that purport to show gaps in phone service, but these are largely inaccurate and of little use. The FCC Enforcement Bureau found their accuracy rates at best 64.3% and at worst 16.2%.[218] FCC field agents had performed drive-by tests to physically determine gaps in phone service across 12 states, driving more than 10,000 miles, and conducting 24,649 tests. They performed an additional 5,916 stationary speed tests at 42 locations in 9 states. As a result, FCC staff has recommended that computer-generated propagation maps no longer be accepted, without actual drive-test data to back them up, and also recommended penalties for inaccurate or false propagation map filings as they would violate federal law.[219]

- **No Gap in Service, No Federal Preemption**

OTI has tried to justify the Link5G program by saying that telecom carriers need to add capacity (5G) to their systems to handle potential future demand. That, however, is not a sufficient justification to impose Link5G Cell Towers on the residents of NYC who do not need them or want them.

NYC officials have been misled to believe that their "hands are tied," and must accept 5G deployment as a matter of federal preemption. That is incorrect. In a sweeping decision in NY in 2022, a senior federal district court judge, in ruling against a telecommunications carrier, struck down the FCC rule that strips local authority over the placement of cell towers,[220] and upheld local authority to determine the number and placement of cell towers and deny the irresponsible placement of cell towers.[221]

In fact, OTI incorrectly stated at CB3-Queens that the federal government does not allow the city to remove 5G antennas.[222] To be clear, no federal law, rule or regulation, under NY jurisdiction, requires us to give carriers access to our streets to add capacity to their systems. That would include

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[217] CB1 – Queens, 1-25-23, Joint Environmental/Sanitation and Transportation Committees.

[218] "FCC Mobility Fund Phase II, Coverage Maps Investigation, Staff Report," GN Docket No. 19-367, "… the Commission launched an ***investigation*** into whether one or more major mobile providers violated the requirements of the one-time collection of coverage data … Commission staff initially requested information directly from several providers in order to understand providers' mapping processes, and later ***issued subpoenas to Verizon and U.S. Cellular."*** One of the recommendations was that "the Commission should release an Enforcement Advisory on broadband deployment data submissions, including ***a detailing of the penalties associated with filings that violate federal law*** … Providers should be required to submit actual on-the-ground evidence of network performance (e.g., speed test measurement samplings, including targeted drive test and stationary test data) that validate the propagation model used to generate the coverage maps." https://docs.fcc.gov/public/attachments/DOC-361165A1.pdf.

[219] Id.

[220] 33 FCC Rcd 9088, 9104-05 (2018) (FCC Doc # 18-133), https://www.fcc.gov/document/fcc-facilitates-wireless-infrastructure-deployment-5g.

[221] ExteNet Sys. v. Vill. of Flower Hill, No. 19-CV-5588-FB-VMS, 9 (E.D.N.Y. Jul. 29, 2022), 2022 WL 3019650, https://casetext.com/case/extenet-sys-v-vill-of-flower-hill; see also, https://ehtrust.org/flowerhillny/.

[222] See, e.g., OTI's presentation to Community Board 3 in Queens on Jan 19, 2023, starting at about 0:40:00, https://www.youtube.com/watch?v=N_6c81RaAlM.

either installing 5G antennas or removing them. The Telecommunications Act of 1996 (TCA) has given local government the explicit authority on the number and the placement of cell towers.[223]

Moreover, the court did not agree with the FCC ruling that interpreted the TCA to provide preemption for telecom carriers to add capacity without evidence of a gap in service,[224] that, quoting from precedent, "[I]t is not up to the FCC to construe the [Act] to say something it does not say … "[225]

Therefore, the court ruled that cell tower installations to add capacity rather than ensuring phone service connection are not federally protected and consequently there is no federal preemption or imprimatur to install them.[226] In summary, the court clarified that:

1. The FCC's 5G Order in trying to strip local government of its control for regulating the placement of towers[227] ***is not binding within the NY jurisdiction,***

2. Wireless carriers have the burden of showing that there is ***a gap in phone service, and that they are using the least intrusive means possible to fill that gap*** *and*

3. "Improved capacity and speed are desirable (and, no doubt, profitable) … ***but they are not protected by the [TCA].***" [228]

ExteNet Sys. v. Vill. of Flower Hill, No. 19-CV-5588-FB-VMS, 9-10 (E.D.N.Y. Jul. 29, 2022)

The court ruled that, under the TCA, local governments have authority over the number and placement of wireless facilities, and to deny the irresponsible placement of wireless facilities. [229]

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[223] See 47 U.S.C. §332(c)(7)(A) entitled "general authority" shows how Congress has preserved to state and local governments the general authority to regulate the siting, placement, construction and maintenance of wireless facilities (cell towers, small cells, etc.) within their respective jurisdictions, https://www.law.cornell.edu/uscode/text/47/332.

[224] 33 FCC Rcd 9088, 9104-05 (2018) (FCC Doc # 18-133), https://www.fcc.gov/document/fcc-facilitates-wireless-infrastructure-deployment-5g.

[225] Clear Wireless LLC v. Bldg. Dep't of Vill. of Lynbrook, 2012 WL 826749, at *9 (E.D.N.Y. Mar. 8, 2012) ("[I]t is not up to the FCC to construe the [Act] to say something it does not say, nor up to the Court to find broadband communication encompassed by the law." (internal quotation marks omitted)).

[226] ExteNet Sys. v. Vill. of Flower Hill, No. 19-CV-5588-FB-VMS, 9 (E.D.N.Y. Jul. 29, 2022), 2022 WL 3019650, https://casetext.com/case/extenet-sys-v-vill-of-flower-hill; see also, https://ehtrust.org/flowerhillny/.

[227] 33 FCC Rcd 9088, 9104-05 (2018) (FCC Doc # 18-133), https://www.fcc.gov/document/fcc-facilitates-wireless-infrastructure-deployment-5g.

[228] ExteNet Sys. v. Vill. of Flower Hill, No. 19-CV-5588-FB-VMS, 9 (E.D.N.Y. Jul. 29, 2022), 2022 WL 3019650, https://casetext.com/case/extenet-sys-v-vill-of-flower-hill; see also, https://ehtrust.org/flowerhillny/.

[229] Id, Extenet had sued the Village of Flower Hill, Nassau County, New York because its wireless facility application for 18 4G installations was denied and claimed that the denial was an effective prohibition in providing telecom services in violation of the TCA – basically, that Extenet was entitled to install them to add capacity to their systems because of federal preemption. The Court disagreed because Extenet failed to meet its burden of proof to show a significant gap in phone service and the use of the least intrusive means to fill that gap; see also, 47 U.S.C. §332(c)(7)(A), https://www.law.cornell.edu/uscode/text/47/332.

Therefore, the FCC rule that makes the deployment of 5G automatically preemptible under the TCA[230] is erroneous, does not comply with the TCA and does not apply to NY jurisdictions.

- **FCC, Captured Agency: Safe Harbor for Industry, Not Safety for the Public**

The FCC is an agency influenced and "captured" by the very industry that it is charged by law to regulate. Formerly with the FCC as a NEPA attorney in the FCC's Wireless Telecommunications Bureau, Erica Rosenberg within the FCC's National Environmental Policy Act (NEPA) department, recently published an article on how the FCC is a captured agency.[231] The Center for Ethics at Harvard also published an article that underscored this issue.[232] It is also alleged that FCC employees own telecom stock in the very companies that the FCC is regulating, which does not imbue confidence that the FCC is working in the public interest.[233] Many articles have proliferated on the subject of FCC capture and inaction.[234]

Whenever residents ask OTI if 5G is safe, OTI's scripted answer is that the telecom industry is contractually required by NYC to comply with the FCC emission limits. But those limits are a **safe harbor for industry** – if the industry is within those limits, **they are shielded from liability for personal injury**. **The industry is protected, no matter how many people are injured.** Therefore, the FCC limits are not safety limits to protect the public.[235]

In fact, the FCC was ordered by a federal appeals court in 2021 to re-evaluate its limits in light of many scientific studies showing harm from radiation below those limits, especially for children. [236] To date, the FCC has failed to do so.

FCC Loses Two Cases on Wireless Emissions and Environmental Review

The FCC which sets the wireless emission limits for the U.S. lost a major case in federal court in 2021 when the court called into question, and remanded, the FCC's outdated 1996 emission limits

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[230] 33 FCC Rcd 9088, 9104-05 (2018) (FCC Doc # 18-133), https://www.fcc.gov/document/fcc-facilitates-wireless-infrastructure-deployment-5g.
[231] https://doi.org/10.1080/00139157.2022.2131190.
[232] "Captured Agency" by Norm Alster, https://ethics.harvard.edu/files/center-for-ethics/files/capturedagency_alster.pdf.
[233] https://arstechnica.com/tech-policy/2023/03/fcc-let-employees-own-stock-in-comcast-and-other-top-isps-watchdog-says/?comments=1&comments-page=1; see also, 47 USC 154.
[234] See, e.g., "The FCC is Supposed to Protect the Environment. It Doesn't." ProPublica, May 2023, https://www.propublica.org/article/fcc-environment-cell-towers-failures?emci=9360893b-ebe8-ed11-8e8b-00224832eb73&emdi=8448fcc6-f1e8-ed11-8e8b-00224832eb73&ceid=8208674.
[235] "How the FCC Shields Companies from Safety Concerns," ProPublica, Nov 2022, https://www.propublica.org/article/fcc-5g-wireless-safety-cellphones-risk?utm_source=sailthru&utm_medium=email&utm_campaign=dailynewsletter&utm_content=feature.
[236] Appeals Court Tells FCC to Address Non-Thermal Health Impacts of Radiation from Wireless Technology on Children, the Public, and the Environment, Aug. 25, 2021, https://ehtrust.org/appeals-court-tells-fcc-to-address-non-thermal-health-impacts-of-radiation-from-wireless-technology-on-children-the-public-and-the-environment/; see also the 27 volumes of evidence in the FCC Docket (click on "Documents Filed with the Court: The Evidence") https://childrenshealthdefense.org/legal_justice/chd-successfully-challenges-the-fccs-outdated-wireless-radiation-exposure-guidelines/#documents.

because the FCC failed to consider the accounts of personal injuries and 11,000 pages of scientific studies showing harm below those limits.[237]

The same court ruled against the FCC in 2019 for violating the Administrative Procedures Act (APA) when the FCC determined that it was in the public interest to not consider its licensing of small cells a major federal action that would otherwise warrant environmental review.[238] Therefore, 5G "small" cells are subject to NEPA review, albeit mostly limited to NHPA and radio-frequency reviews.[239] Unfortunately, 5G continues to be deployed without such review, for the most part, in contravention of the court's ruling.

Studies have shown that the FCC's 1996 emission limits are not protective of the public.[240] Those limits would be illegal in other countries whose limits are thousands of times lower, e.g., in Switzerland, Italy and Russia.[241] Several NYC residents have already been injured or disabled from wireless radiation, including a police lieutenant (who spoke about his experience at QCB1),[242] and an 84 year-old elderly woman in subsidized housing.

Telecoms Characterize Wireless Emissions as a Pollutant / No Insurance for Personal Injury

The telecom industry characterizes wireless radiation as a pollutant in their device protection plans and disclaims any injuries arising from wireless radiation.[243] Insurance companies such as Lloyd's of London and Swiss Re will not insure for personal injury from this radiation because of the high risk of claims, which may leave the city exposed for these injuries.[244]

Telecoms warn their shareholders of the financial risk of adverse health claims,[245] for example:

- Crown Castle SEC 10-K Annual Report 2023:

  If a connection between radio frequency emissions and possible negative health effects were established, our operations, costs, or revenues may be

[237] Id.
[238] Keetoowah Tribe of Cherokee Indians v. FCC (D.C. Cir 2019).
[239] Note 1 at 47 CFR 1.1306.
[240] See, e.g., Scientific evidence invalidates health assumptions underlying the FCC and ICNIRP exposure limit determinations for radiofrequency radiation: implications for 5G, https://icbe-emf.org/wp-content/uploads/2022/10/ICBE-EMF-paper-12940_2022_900_OnlinePDF_Patched-1.pdf; Fact Sheet: Scientific evidence invalidates health assumptions underlying the FCC and ICNIRP exposure limit determinations for radiofrequency radiation: implications for 5G, https://icbe-emf.org/wp-content/uploads/2022/10/fact-sheet-221009-v2.pdf.
[241] See chart of countries' emission limits at 11, https://ehtrust.org/wp-content/uploads/5G-Health-Effects-and-Policy-Issues-April-2023.pdf.
[242] See presentation by a police lieutenant who was injured from exposure to wireless radiation from an antenna placed just feet away from his house and from which he has had to evacuate, starting at about 00:54:00, https://www.youtube.com/watch?v=OGxADW9tp8E.
[243] Verizon https://ehtrust.org/wp-content/uploads/device-protection-brochure-nationwide.pdf;
AT&T https://ehtrust.org/wp-content/uploads/ATT-Multi-Device-Protection-Pack-Insurance.pdf;
Sprint https://ehtrust.org/wp-content/uploads/Sprint-Insurance-Terms-and-Conditions-Downloaded-2019.pdf.
[244] https://ehtrust.org/key-issues/electromagnetic-field-insurance-policy-exclusions/.
[245] https://ehtrust.org/liability-and-risk-from-5g-and-cell-towers/.

> materially and adversely affected. We currently do not maintain any significant insurance with respect to these matters.[246]

- Verizon Communications, Inc.

> [O]ur wireless business also faces personal injury and wrongful death lawsuits relating to alleged health effects of wireless phones or radio frequency transmitters. We may incur significant expenses in defending these lawsuits. In addition, we may be required to pay significant awards or settlements.[247]

5G is Unsustainable

- **5G is Not Green**

Energy consumption from "5G" infrastructure "is expected to increase 61x between 2020 to 2030 due to its energy demands."[248] NYC's assessment of no environmental impact of 5G "small cells" (a "negative declaration") was based on the incorrect assumption that 5G would have no significant change on the consumption of energy even though the 5G network requires an exorbitant amount of energy; additionally, it was based on 5G being much smaller in size ("small" cells) and would be placed on pre-existing structures.[249] In fact, telecom carriers have been advising their customers to turn off 5G to save battery life on their devices.[250]

A thorough environmental review would need to be done to determine if 5G infrastructure even complies with New York State's requirements for energy conservation. Therefore, Link5G Cell Towers would require a CEQR and SEQRA environmental assessment to determine compliance with NYC and NYS environmental standards.

Moreover, NYS adopted a constitutional amendment on environmental rights of residents to clean water and air and a healthful environment, also known as the "Green Amendment." [251] The amendment is enforceable against the government and does not require exhaustion of

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[246] https://investor.crowncastle.com/node/26996/html at 17.
[247] https://www.verizon.com/about/sites/default/files/2023-Annual-Report-on-Form-10k.pdf at 17.
[248] https://ehtrust.org/report-5g-to-increase-energy-consumption-by-61-times/; see also "Reinventing Wires: The Future of Landlines and Networks," at 73, National Institute for Science, Law and Public Policy, authored by Timothy Schoechle, PhD; https://electromagnetichealth.org/wp-content/uploads/2018/02/ReInventing-Wires-1-25-18.pdf.
[249] Technical Memorandum 001, CEQR #20DIT0014, NYC Dept of Information Technology and Telecommunications, Mobile Telecommunications Franchises, May 7, 2020, https://a002ceqraccess.nyc.gov/Handlers/ProjectFile.ashx?file=MjAyMFwyMERJVDAwMVlcdGVjaF9tZW1vXDIwRElUMDAxWV9UZWNobmljYWxfTWVtb3JhbmR1bV9fMDUwODIwMjAucGRm0&signature=cb5e38710e4a95b771ea454efb5ce1b45e767a65; CEQR Environmental Assessment Statement Short Form, Dec 10, 2019, https://a002-ceqraccess.nyc.gov/Handlers/ProjectFile.ashx?file=MjAyMFwyMERJVDAwMVlcZWFzXDIwRElUMDAxWV9FQVNfMTIxMDIwMTkucGRm0&signature=9efc336372ffb4f803d59f76fe9fd0b815651005.
[250] "Why are Carrriers Telling Us to Turn Off 5G?" PC Magazine, March 5, 2021, https://www.pcmag.com/opinions/why-are-carriers-telling-us-to-turn-off-5g.
[251] §19 Art.I, NYS Constitution, effective as of Jan. 1, 2022 ("[e]ach person shall have a right to clean air and water, and a healthful environment)."

administrative remedies. In Dec. 2022, a trial court in NY ruled for plaintiffs in upholding their rights to a healthful environment against government action and inaction.[252] Wireless radiation, as an acknowledged pollutant by the telecom and insurance industries and by scientists, would appear to fall under the harms for which the Green Amendment was conceived.

New York State recently passed the most climate protective law in the country, and is focusing on the "decarbonization of New York" with emphasis on fossil fuels.[253] However, New York's climate change goals cannot be reached without also requiring the decarbonization of energy consumption by telecommunications infrastructure, and that means moving away from wireless to fiber optics.

- **Fiber Optics – the Superior and Greener Service**

It's easy to move away from wireless to fiber optics because 4G and 5G depend on fiber optics. Fiber optics are already running up the pole to supply energy to wireless antennas. The greener alternative would be to extend fiber a few feet or yards to the premises – to homes, businesses, schools, medical facilities, in short, to all locations. Keeping telecommunications infrastructure underground would be without any visual impacts.

NYC can be a success story, following in the footsteps of cities that have set fiber to the premises (FTTP) and reaping the economic benefits of municipal fiber broadband (e.g., leasing its fiber to providers), such as Chattoonga, TN, known as "Gig City" with the fastest internet worldwide. NYC can also follow in the footsteps of the National Telecommunications Information Administration (NTIA). The NTIA is implementing the federal Infrastructure Investment and Jobs Act by prioritizing fiber optics over wireless in creating a future-proof technology grid and bridging the digital divide.[254] New York City should do the same, or be left behind.

Underscoring the importance of fiber over wireless, former FCC Chairman, Tom Wheeler, in his March 2021 Congressional testimony, described fiber as "future proof," and prioritized a "fiber first" policy for the nation.[255] Wheeler's statements point to the fact that wireless and fiber are not equivalent broadband media, [256] and that wireless should be used only as a last resort. "Fiber is unmatched in its speed, performance [and] reliability … "[257] far exceeding those of 5G. In fact, 5G

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[252] *Fresh Air for the Eastside, Inc. v. State*, 2022 N.Y. Slip Op. 34429 (N.Y. Sup. Ct. 2022), https://casetext.com/case/fresh-air-for-the-eastside-inc-v-state?

[253] Climate Leadership and Community Protection Act, https://climate.ny.gov/.

[254] *NTIA Official Acknowledges Clear Preference for Fiber in Infrastructure Deployment Program*, June 13, 2022, https://broadbandbreakfast.com/2022/06/ntia-official-acknowledges-clear-preference-for-fiber-in-infrastructure-deployment-program/.

[255] Tom Wheeler's Testimony to Congress, https://energycommerce.house.gov/sites/democrats.energycommerce.house.gov/files/documents/Witness%20Testimony_Wheeler_FC_2021.03.22.pdf.

[256] "Reinventing Wires: The Future of Landlines and Networks," National Institute for Science, Law and Public Policy, authored by Timothy Schoechle, PhD; https://electromagnetichealth.org/wp-content/uploads/2018/02/ReInventing-Wires-1-25-18.pdf.

[257] Id.

access has been reported to be no faster than 4G.[258] Fiber's life span far exceeds that of wireless (estimated at 5 years), at 25-50 years.[259]

Moreover, wireless equipment has a much shorter life span (about 5 years), and requires continuous periodic maintenance and replacement, and who will pay for its upkeep over time? Fiber has a life span of 25-50 years.

OTI has asserted that CityBridge will be building out the fiber optic network for free. However, there is already a fiber optic network built out by Verizon, apparently, to many parts of the City, and CityBridge has been reported trying to connect to Verizon's already existing fiber.[260] Moreover, Verizon is laying out additional fiber to half a million homes in NYC as part of a recent settlement agreement with the City.[261]

Also, the fiber network is not entirely free. At the expiration of the franchise agreement with CityBridge, if NYC wants to use the "free" fiber, it must pay CityBridge's third party fiber providers for the use of the fiber at market rates.[262]

In addition, the fiber buildout is only to the pole, not to the premises. That means that residents will get the vastly lower speeds that wireless offers, including 5G. [263] The vastly slower speeds of wireless, NYC having to pay providers for using the fiber, among other shortcomings, makes it a lose-lose proposition for NYC.

Fiber optics to and through the premises (FTTP) is the preferred and superior method of providing telecommunications connectivity. "Fiber has a minimal ecological impact, reduces waste, consumes very little energy and helps decrease greenhouse gas emissions."[264] Fiber optics has "[l]ower energy consumption, reduced waste and sustainable architecture, characteristics that make fiber infrastructure an environmentally advantageous choice."[265]

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[258] https://www.digitaltrends.com/mobile/how-fast-is-5g/.
[259] Tom Wheeler's Testimony to Congress, https://energycommerce.house.gov/sites/democrats.energycommerce.house.gov/files/documents/Witness%20Testimony_Wheeler_FC_2021.03.22.pdf.
[260] https://www.thecity.nyc/2020/3/3/21210474/city-hall-may-pull-plug-on-linknyc-owner-over-missing-kiosks-and-75m-owed
[261] Verizon fails to fulfill its obligation to provide fiber to every household in the five boroughs, https://www.nyc.gov/office-of-the-mayor/news/415-15/de-blasio-administration-releases-audit-report-verizon-s-citywide-fios-implementation; https://www.nyc.gov/office-of-the-mayor/news/807-20/mayor-de-blasio-holds-verizon-accountable-connect-half-million-new-york-city-households-to; see also, https://arstechnica.com/tech-policy/2020/11/verizon-wiring-up-500k-homes-with-fios-to-settle-years-long-fight-with-nyc/.
[262] Amendment No. 3 to the Franchise Agreement between CityBridge and OTI, March 21, 2020, Sec 3.13.3(ii), https://www.nyc.gov/assets/oti/downloads/pdf/linknyc-franchises/linknyc-public-communications-structure-franchise-agreement-amendment-3.pdf.
[263] https://www.digitaltrends.com/mobile/how-fast-is-5g/.
[264] Fiber Optic Broadband, A Greener Internet Solution, https://www.otelco.com/a-greener-internet-solution/.
[265] https://www.cablinginstall.com/cable/fiber/article/16465844/how-fiber-can-help-make-your-network-greener.

FTTP provides the best capacity for remote learning for children and students and more reliable access to medical and other services for the elderly and disabled during emergencies or severe weather when wireless service is more likely to be interrupted.

The Fiber Broadband Association (FBA), the largest fiber optics trade association in the U.S., has shown that consumers prefer the higher upload and download symmetrical speeds that fiber provides (which wireless cannot provide)[266] hence, ***"If it isn't fiber, it isn't broadband."*** [267] The FBA also shows in its report, "The Market Has Spoken, If it's not fiber, it's not broadband," that 2/3 of people polled prefer the superior technology of fiber.[268] It has been an environmental justice issue to get fiber to the premises, e.g., Los Angeles, where a low-income community's digital divide didn't get solved until they got fiber.[269]

Fiber can also be an economic boon.[270] For example, Chattanooga, TN used fiber optics under a municipal broadband framework to spring into a clean energy economy and create a vibrant workforce, earning it the accolade of "Gig City," with the fastest broadband network in the U.S. The economic value of its fiber infrastructure over a 10-year period from 2011 to 2020 exceeded $2.69 billion and produced 9,516 jobs, beyond expectations.[271] Chattanooga's city-owned utility, EPB, can be viewed in a town hall discussing their successes and future plans for quantum connectivity, only possible with their fiber optics infrastructure.[272] If Chattanooga can achieve these successes, why can't NYC have a similar fiber optics infrastructure so NYC residents can reap similar successes?

Fiber is being used to bridge the digital divide. Pharr, TX previously known as one of the worst connected cities for broadband decided in 2022 to build fiber to the home (FTTH) municipal

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[266] https://s3.amazonaws.com/files.fiberbroadband.org/download/3555.4237?AWSAccessKeyId=AKIAIZGD7FMLIYLBZNIA&Expires=1650065068&Signature=CfFGHmOkZaAovAfuGmXXs2hDpKo%3D.

[267] https://www.broadbandworldnews.com/document.asp?doc_id=773546.

[268] https://5217051.fs1.hubspotusercontent-na1.net/hubfs/5217051/Events/IQGeo%20Meetup%202022%20-%20Denver/Meetup%20Day%201%20presentations/2_FBA%20Keynote_The_market_has_spoken_IQGeo_Meetup_2022.pdf?hsCtaTracking=72374350-4b3e-455a-b8ed-031e09618cd7%7Ced1704fb-9b86-4c4b-a0a6-7f7d6b47b5de

[269] https://thenationalcall.org/wp-content/uploads/2024/03/fires_telecom-fed-wireless-bills_R13r.pdf , p. 7.

[270] *How Blazing Internet Speeds Helped Chattanooga Shed its Smokestack Past,* Cnet.com, August 20, 2015, https://www.cnet.com/tech/services-and-software/how-blazing-internet-speeds-helped-chattanooga-shed-its-smokestack-past/; *Why Chattanooga Has the Fastest Internet in the US*, https://tech.co/news/chattanooga-fastest-internet-usa-2018-08.

[271] "Ten Years of Fiber Optic and Smart Grid Infrastructure in Hamilton County, Tennessee," Bento J. Lobo, Ph.D., CFA First Tennessee Bank Distinguished Professor of Finance, The University of Tennessee at Chattanooga, August 31, 2020, https://www.researchgate.net/publication/352221978_Ten_Years_of_Fiber_Optic_and_Smart_Grid_Infrastructure_in_Hamilton_County_Tennessee;

See also, *How Blazing Internet Speeds Helped Chattanooga Shed its Smokestack Past*, Cnet.com, August 20, 2015, https://www.cnet.com/tech/services-and-software/how-blazing-internet-speeds-helped-chattanooga-shed-its-smokestack-past/; *Chattanooga Mayor Pushes Back on 5G as Smart Cities Cure All*, MeriTalk, February 13, 2019, https://www.meritalkslg.com/articles/chattanooga-mayor-pushes-back-on-5g-as-smart-cities-cure-all/.

See also, for economic benefits of fiber deployment, In Kansas, Rural Chanute Built Its Own Gigabit Fiber and Wireless Network," Christopher Mitchell 10-2-21, https://ilsr.org/chanute-rural-gigabit/; and https://www.soar-ky.org/prtc/.

[272] Town Hall: *"Gig City Goes Quantum: the Amazing Chattanooga, TN Fiber Network Success Story! A Broadband Blueprint for NYC and for Cities across the U.S.,"* July 19, 2023, featuring Gary Bolton, President of the Fiber Broadband Association, Katie Espeseth, VP New Products, EPB, and Clayton Banks, CEO, Silicon Harlem, https://thenationalcall.org/resources/.

broadband with a service goal of 1 Gbps.[273] The city found that FTTH was the best solution to bridge the digital divide as most carriers bypassed the city whose residents average a low income. FTTH would give children the ability to do their homework at home rather than seeking connectivity after school at the campus doorstep. Rates are as low as $20/month with assistance from the FCC's Affordable Connectivity Program (ACP).

Fiber can provide an opportunity for municipal income streams. Medina County, OH and Fairlawn, OH are part of a statewide coalition of legislators promoting municipal fiber broadband, opposing state efforts to otherwise prevent municipal broadband or fiber access.[274] Medica County is providing fiber open access meaning that the county owns the fiber and leases it out to businesses. Fairlawn is offering FTTH at up to 10 Gbps and 180 Gbps for businesses.[275]

This boils down to the importance of broadband freedom of choice for consumers. In a town hall, Gigi Sohn former FCC counsel to Tom Wheeler, former FCC Chairman, discusses the importance of broadband freedom of choice, along with Utopia Fiber located in Utah about the benefits of municipal fiber.[276] Utopia Fiber is a group of Utah cities working together and who have chosen to bring fiber optics to the premises in their communities.

- **Fiber Already Promised to New Yorkers**

City Bridge is being touted by OTI as building out fiber optics networks in NYC for free. However, NYC residents have already paid for fiber to the premises for every home in NYC. Verizon promised it would do so with its surcharges on NYC telephone bills since the 1990s.[277] However, Verizon has not built out the entire network as promised and as paid. NYC does not need free services from CityBridge; it needs Verizon to comply with its obligations.

Adverse Health and Environmental Impacts

- **Public Health**

[273] https://www.bbcmag.com/economic-development/pharr-texas-takes-diy-approach-to-build-gigabit-fiber.
[274] Medina County joins statewide public broadband advocacy group, https://medina-gazette.com/news/290521/medina-county-joins-statewide-public-broadband-advocacy-board-fiber-construction-hits-snag-in-montville/.
[275] Local Leaders Launch Broadband Access Ohio to advocate municipal broadband services, https://ohiocapitaljournal.com/2022/02/17/local-leaders-launch-broadband-access-ohio-to-advocate-for-municipal-broadband-services/.
[276] Town Hall: *"Broadband Freedom of Choice,"* September 6, 2023, with Gigi Sohn, Executive Director, American Association for Public Broadband, Kimberly McKinley, Chief Marketing Officer, Utopia Fiber, Timothy Schoechle, Senior Research Fellow, National Institute of Science, Law and Public Policy, and guest appearance by Clayton Banks, CEO, Silicon Harlem, https://thenationalcall.org/resources/.
[277] See, e.g., "New York City Must Call for a Halt to the Billion + Dollars of Cross-Subsidies and Overcharging by Verizon NY, the Public Telco Utility," https://kushnickbruce.medium.com/new-york-city-must-call-for-a-halt-to-the-billion-dollars-of-cross-subsidies-and-overcharging-by-27fad87186f0; see also, http://irregulators.org/.

There have been serious concerns for public health and safety, including risk of cancer and adverse health outcomes, from wireless radiation (also referred to as radio-frequency (RF) radiation):

1. There has been no pre-market testing of 5G for public health or safety, as confirmed by US Sen. Blumenthal (CT) during a Feb. 2019 hearing of wireless telecom executives. The telecom executives conceded that they were not aware of any independent scientific studies on the safety of 5G. Sen. Blumenthal also criticized the FCC and the FDA for inadequate answers on questions of public health. Sen. Blumenthal concluded, "We're kind of flying blind here as far as health and safety is concerned." [278]
2. Eight studies since Jan 2023 show adverse health impacts from exposure to 5G towers. Previously healthy individuals developed typical "microwave syndrome" symptoms shortly after the towers were installed: headaches, abnormal fatigue, heart arrythmia, burning skin, trouble concentrating.[279] The significance of these reports is that non-ionizing radiation[280] from 5G — well below levels allowed by authorities — can cause health problems in individuals who had no prior history of electromagnetic sensitivity.[281] Dr. Lennart Hardell, lead author of the reports and a world-renowned scientist on cancer risks from radiation, affirms these reports as "groundbreaking" because they serve as the "first warning of a health hazard."[282]
3. The WHO'S International Agency for Research on Cancer (IARC) classified wireless radiation (2G and 3G) as a **possible human carcinogen** back in 2011,[283] similar to lead, diesel fuel and gasoline engine exhaust. OTI incorrectly presented to CB8 that the WHO said 5G is safe.[284]
    a. The WHO carefully states on its website that "only a few studies have been carried out at the frequencies to be used by 5G"[285] thereby skirting the issue of 5G safety. Indeed, a number of studies since Jan 2023 have already shown harm.[286]

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[278] https://ehtrust.org/health-effects-of-5g-wireless-technology-confirmed-at-us-senate-hearing-after-senator-blumenthal-questions-industry/; see also, https://mdsafetech.org/2019/02/13/no-research-on-5g-safety-senator-blumenthal-question-answered/.

[279] https://mdsafetech.org/2023/11/20/5g-health-effects-5-case-reports-of-health-symptoms-after-5g-cell-towers-placed-in-sweden/; e.g., Jan 2023 study of 63 year old man and 62 year old woman where 5G antennas were installed on the rooftop of their home, https://www.gavinpublishers.com/assets/articles_pdf/Case-Report-The-Microwave-Syndrome-after--Installation-of-5G-Emphasizes-the-Need-for--Protection-from-Radiofrequency-Radiation.pdf and https://childrenshealthdefense.org/defender/5g-radiation-microwave-syndrome-symptoms/; Feb 2023 study of two previously healthy men where 5G antennas were installed on the rooftop of their business, https://www.anncaserep.com/open-access/development-of-the-microwave-syndrome-in-two-men-shortly-after-9589.pdf; April 2023 study of 52 year old woman whose apartment was 60 meters from a 5G base station, https://acmcasereport.com/pdf/ACMCR-v10-1926.pdf?fbclid=IwAR2J-mE3XeBxqaXPQdFxslf9Q23bMCer9vgUBHnCvJXBrgBv-w7YdRUDwF0; see also, The microwave syndrome or electro-hypersensitivity: historical background https://pubmed.ncbi.nlm.nih.gov/26556835/.

[280] https://childrenshealthdefense.org/emr/emf-key-terms-descriptions/.

[281] https://childrenshealthdefense.org/emr/emf-wireless-health-impacts/.

[282] https://www.stralskyddsstiftelsen.se/two-studies-show-that-5g-caused-the-microwave-syndrome-in-healthy-persons/.

[283] https://www.iarc.who.int/wp-content/uploads/2018/07/pr208_E.pdf.

[284] CityBridge CEO Nick Colvin's presentation to the Landmarks Committee of Manhattan Community Board 7 on 5-30-23.

[285] https://www.who.int/news-room/questions-and-answers/item/radiation-5g-mobile-networks-and-health.

[286] https://mdsafetech.org/2023/11/20/5g-health-effects-5-case-reports-of-health-symptoms-after-5g-cell-towers-placed-in-sweden/; Jan 2023 study of 63 year old man and 62 year old woman where 5G antennas were installed on the rooftop of their home, https://www.gavinpublishers.com/assets/articles_pdf/Case-Report-The-Microwave-Syndrome-

b. When the WHO states on its website lack of causality of harm from wireless radiation,[287] it is simply based on its 2011 IARC classification that it is a possible human carcinogen. However, over a decade later, Dr. Miller, a former Senior Epidemiologist and Senior Scientist at the IARC has stated, **"[t]here is sufficient evidence to now classify radiofrequency radiation as a human carcinogen."** [288]

c. The WHO's recent conclusion of "no hazards" from wireless radiation was reported to be flawed, demonstrating that its conclusion was drawn from data showing hazards.[289]

4. The National Toxicology Program of the U.S. Dept of Health and Human Services, commissioned by the Food and Drug Administration to conduct a $30 million study, in 2018 found clear evidence of cancer: heart tumors were malignant schwannomas and brain tumors were malignant gliomas.[290] NTP is one of the most prestigious institutions in the world in toxicology. Indeed, in 1999 the FDA nominated to the NTP the study of RFR "with a high priority," to conduct animal studies, stating that it was "not scientifically possible to

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after--Installation-of-5G-Emphasizes-the-Need-for--Protection-from-Radiofrequency-Radiation.pdf and https://childrenshealthdefense.org/defender/5g-radiation-microwave-syndrome-symptoms/; Feb 2023 study of two previously healthy men where 5G antennas were installed on the rooftop of their business, https://www.anncaserep.com/open-access/development-of-the-microwave-syndrome-in-two-men-shortly-after-9589.pdf; April 2023 study of 52 year old woman whose apartment was 60 meters from a 5G base station, https://acmcasereport.com/pdf/ACMCR-v10-1926.pdf?fbclid=IwAR2J-mE3XeBxqaXPQdFxslf9Q23bMCer9vgUBHnCvJXBrgBv-w7YdRUDwF0; see also, The microwave syndrome or electro-hypersensitivity: historical background https://pubmed.ncbi.nlm.nih.gov/26556835/.

[287] https://www.who.int/news-room/questions-and-answers/item/radiation-5g-mobile-networks-and-health.

[288] Professor Miller, MD, FRCP, FRCP (C), FFPH, FACE, is an eminent physician and expert in preventative medicine, a scientific advisor to various scientific and health authorities, and a former Senior Epidemiologist and Senior Scientist at the World Health Organization's (WHO) International Agency for Research on Cancer (IARC), https://phiremedical.org/2020-nir-consensus-statement-press-release/; **see Prof. Miller's statement at 00:15:06 at https://www.youtube.com/watch?v=S16QI6-w9I8; see also Proceedings from a Symposium on the Impacts of Wireless Technology on Health, Prof. Miller at 8, https://www.womenscollegehospital.ca/wp-content/uploads/2022/06/Symposium_Document_Final_Jan_12.pdf.**

[289] "WHO to build neglect of RF-EMF exposure hazards on flawed EHC reviews? Case study demonstrates how 'no hazards' conclusion is drawn from data showing hazards," 7/10/24, https://www.degruyter.com/document/doi/10.1515/reveh-2024-0089/html;
"WHO's EMF Project's Systemic Reviews on the Association between RF Exposure and Health Effects Encounter Challenges," James Lin, IEEE Microwave Magazine, Jan 2025, https://www.dropbox.com/scl/fi/xq492i5ha6f2431vyxn3g/World_Health_Organizations_EMF_Projects_Systemic_Reviews_on_the_Association_Between_RF_Exposure_and_Health_Effects_Encounter_Challenges_Health_Matters.pdf?rlkey=o77i19den485rdo2k4ktdzhgj&st=842p0rbv&dl=0;
"Another WHO RF Review Challenged, More than 99% of Studies on Oxidative Stress Discarded," Microwave News, 8/21/24, https://www.microwavenews.com/short-takes-archive/another-who-rf-systematic-review-challenged; https://ehtrust.org/former-icnirp-member-james-lin-outdated-fcc-and-icnirp-wireless-radiation-limits-are-questionable/ (James Lin, Google scholar with 13,718 citations https://scholar.google.com/citations?user=yqJUeJQAAAAJ&hl=en; "Professor Emeritus James Lin is one of ScholarGPS's inaugural Highly Ranked Scholar – Lifetime in three areas of study: ninth in microwave, 27th in radio frequency, and 34th in telecommunication. ScholarGPS is the world's most comprehensive scholarly analytics platform, built by scholars and accessible to everyone," Univ of IL, College of Eng, https://engineering.uic.edu/news-stories/james-lin-honored-for-high-scholarly-rankings/).

[290] https://ntp.niehs.nih.gov/whatwestudy/topics/cellphones#studies *Environmental Health Trust, et al v. FCC*, Motion for Leave to File Brief of Amicus Curiae Joseph Sandri in Support of Petitioners Urging Reversal, Aug. 5, 2020, https://ehtrust.org/wp-content/uploads/20-1025-Amicus-Brief-Joe-Sandri.pdf.

guarantee that non-thermal levels of microwave radiation . . . will not cause long-term adverse health effects."[291]

5. A study in 2000 commissioned by one of the major telecom carriers found links to cancer, leukemia, neurological disorders and cognitive impairment, with special caution for children and an acknowledgement of those already disabled from the radiation.[292]
6. Telecom and cell phone manufacturers have filed patents to reduce the level of wireless exposure tied directly to health risks such as neurological disorders and cancer.[293]
7. As early as 2015, over 230 scientists from over 40 countries have signed "The 5G Appeal" to halt the proliferation of 5G -- The International Scientists' Appeal to the United Nations to Protect Humans and Wildlife from the unconstrained proliferation of wireless radiation.[294] Other scientists have joined in consensus statements about their 5G concerns.[295]
8. Thousands of scientific and medical studies show neurological disorders; increased risk of cancer and brain tumors; DNA damage; oxidative stress; immune dysfunction; cognitive processing effects; altered brain development, sleep and memory disturbances, ADHD, abnormal behavior, sperm dysfunction, and damage to the blood-brain barrier.[296]
9. New Hampshire Commission that studied the health impacts of wireless radiation found that levels below the FCC emission limits can be harmful (see Addendum F, a letter from Dr. Kent Chamberlin to CB9 Manhattan).[297]
10. The Board of Health of Pittsfield, MA issued an emergency order to turn off a 4G cell tower that injured 17 residents most of whom evacuated their homes.[298] Children were found vomiting in their beds, pets were vomiting and residents were becoming ill.[299]

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[291] Letter from the Dept of Health and Human Services to the National Toxicology Program at the National Institute for Environmental Health Studies, May 19, 1999, https://ntp.niehs.nih.gov/sites/default/files/ntp/htdocs/chem_background/exsumpdf/wireless051999_508.pdf.

[292] T-Mobil Deutsche Telekom commissioned study by the Ecolog-Institute, April 2000, "Mobile Telecommunications and Health Review of the Current Scientific Research in View of Precautionary Health Protection," https://ehtrust.org/wp-content/uploads/ecolog2000.pdf.

[293] Swisscom patent, 2004 at https://www.dropbox.com/scl/fi/nwdfklq7r7j2wwsipv7ws/SwissCom-Patent-application-2003-2004-WO2004075583A1-1-1.pdf?rlkey=liuy6175hamj24lbuszpe7vux&st=5p2oy0ji&dl=0; see also, "Manufacturers Own Patents to Cut Radiation," RCR Wireless, June 4, 2001 at https://www.dropbox.com/scl/fi/0rfwys743dgeqpifwu3ua/Manufacturers-own-patents-to-cut-radiation-RCR-Wireless-News.pdf?rlkey=e5hm46nyp9an6ugu4y005ldm3&st=xr7ocreh&dl=0.

[294] http://www.5gappeal.eu/the-5g-appeal/; see also, Dr. Martin Blank, PhD, Dept of Physiology and Cellular Biophysics, Columbia University, announcing the appeal early on and warning on wireless radiation, https://www.youtube.com/watch?v=HgECRrabuZQ; see also, https://childrenshealthdefense.org/defender/5g-rollout-harm-regulation-profit/.

[295] https://phiremedical.org/wp-content/uploads/2020/11/2020-Non-Ionising-Radiation-Consensus-Statement.pdf.

[296] A Rationale for Biologically-based Exposure Standards for Low-Intensity Electromagnetic Radiation, 2022, https://bioinitiative.org/conclusions/; see also, Adverse health effects of 5G mobile networking technology under real-life conditions, May 1, 2020, https://pubmed.ncbi.nlm.nih.gov/31991167/; Wireless Radiation (RFR) – Is U.S. Government Ignoring Its Own Evidence for Risk? March, 28, 2019, https://electromagnetichealth.org/electromagnetic-health-blog/u-s-gov-ignoring-own-evidence/; Oxidative Mechanisms of Biological Activity of Low-Intensity Radiofrequency Radiation, Electromagnetic Biology and Medicine, 35(2), 186-202, Yakymenko, I., Tsybulin, O., Sidorik, E., Henshel, D., Kyrylenko, O., & Kyrylenko, S. (2016), https://pubmed.ncbi.nlm.nih.gov/26151230/.

[297] https://gc.nh.gov/statstudcomm/committees/1474/reports/5G%20final%20report.pdf.

[298] https://ehtrust.org/cease-and-desist-order-against-verizon-cell-tower-by-board-of-health-pittsfield-ma/.

[299] https://ehtrust.org/family-injured-by-cell-tower-radiation-in-pittsfield-massachusetts/.

11. A comprehensive overview of the adverse biological effects on people and the environment is provided at https://ehtrust.org/wp-content/uploads/EHT-5G-Health-and-Environment-Open-Letter-3_2021-3.pdf.
12. Near Duluth, MN, a woman suffered 51 strokes after a nearby cell tower was "upgraded," in addition to experiencing nausea, blind spots in her vision, orientation and balance difficulties.[300]
13. There have been clusters of sickness around cell towers. For example:
    a. The Board of Health of Pittsfield, MA issued an emergency order to turn off a 4G cell tower that injured 17 residents most of whom evacuated their homes.[301] Children were found vomiting in their beds, pets were vomiting and residents were becoming ill.[302] Because Verizon threatened to sue, the Board of Health was compelled to rescind the order, and the residents are filing suit against the city.
    b. In Rippon, CA when a cell tower was placed near an elementary school, 4 children (ages 6-11) got cancer (brain, liver, kidney) and 4 teachers got breast cancer.[303] One child with brain cancer (glioblastoma) died in Aug 2024.[304] Since the tower was removed, it was reported that there were no more instances of cancer at the school.[305]
    c. In an Idaho town after 5G cell towers were installed, it was reported that a cluster of residents developed atrial fibrillation (a-fib). One of those residents who had undergone surgery for a-fib is a plaintiff in a lawsuit against the telecom carrier which refuses to provide accommodation under the Americans with Disabilities Act.[306]
    d. 6 school cancer clusters – Virginia Farver
14. With respect to cell phone use, increases of brain cancer in the U.S. have been reported, with scientists attributing a high probability on RF radiation from cell phone use.[307]

- **About 30% of Any Given Population Experiencing Symptoms**

There may be adverse implications for the economy and workforce as more NYC residents become affected by exposure to wireless radiation. With each new "generation" of wireless technology, including 5G, people are being further exposed to wireless radiation which they cannot avoid.[308]

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[300] https://childrenshealthdefense.org/defender/marcia-haller-cell-tower-rf-radiation-sickness/.
[301] https://ehtrust.org/cease-and-desist-order-against-verizon-cell-tower-by-board-of-health-pittsfield-ma/.
[302] https://ehtrust.org/family-injured-by-cell-tower-radiation-in-pittsfield-massachusetts/.
[303] See beginning of video at https://www.youtube.com/watch?v=-9TMTexPb_0&t=128s .
[304] https://www.gofundme.com/f/support-the-ferrulli-family-in-memory-of-mason.
[305] See beginning of video at https://www.youtube.com/watch?v=-9TMTexPb_0&t=128s .
[306] https://childrenshealthdefense.org/press-release/chd-files-in-series-of-lawsuits-seeking-disability-accommodation-for-people-injured-by-rf-radiation-from-cell-towers/ and https://childrenshealthdefense.org/defender/henry-hank-allen-chd-verizon-lawsuit-radiofrequency-radiation-cell-towers/.
[307] See, e.g., Brain Tumor Rates Are Rising in the US: The Role of Cellphone & Cordless Phone Use; The Incidence of Meningioma, a Non-Malignant Brain Tumor, is Increasing in the U.S.; New review study finds that heavier cell phone use increases tumor risk; Expert report by former U.S. govt. official: High probability RF radiation causes brain tumors; and Cell phone and cordless phone use causes brain cancer: New review.

[308] Letter by Dr. Beatrice Golomb, Professor of Medicine, UC San Diego School of Medicine, Aug. 22, 2017, https://mdsafetech.org/wp-content/uploads/2017/09/golomb-sb649-5g-letter-8-22-20171.pdf.

The U.S. Access Board (which advises the Justice Department and other state and federal agencies under the Americans with Disabilities Act) notes that a U.S. National Institute of Building Sciences survey of a representative region found that 2-6% of the population are sensitive to electro-magnetic fields, referring to wireless radiation.[309] Based on a population of 7.888 million people in NYC in 2023,[310] the numbers would range from 157,760 to 473,280 people.

A 2019 Bevington study[311] analyzed the prevalence of symptoms from radiation sickness within any given population. Based on the same number, the results are also high:

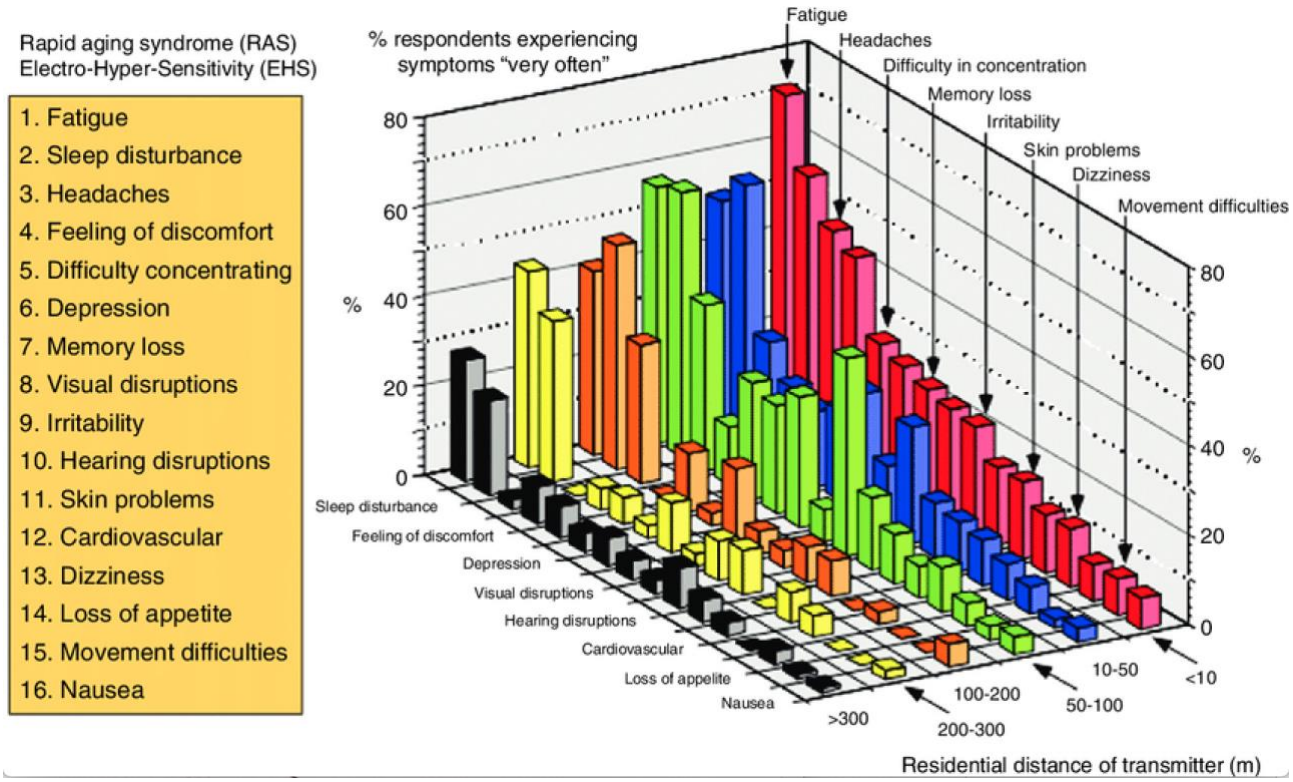
Percentages	Projected Number of Affected NYC Residents
Can't work – 0.65%	51,272
Severe symptom – 1.5%	118,320
Moderate symptoms – 5%	394,400
Mild symptoms – 30%	2,366,400

- **Neurobehavioral Symptoms Near Cell Towers**[312]

The following chart shows a worsening of symptoms when closer to a cell tower but a lessening of symptoms when farther away from a cell tower.

[309] U.S. Access Board – Advancing Full Access & Inclusion for All - "Indoor Environmental Quality Project," https://www.access-board.gov/research/building/indoor-environmental-quality/.
[310] https://worldpopulationreview.com/us-cities/new-york-city-ny-population.
[311] The Prevalence of People with Restricted Access to Work in Manmade Electromagnetic Environments, https://mdsafetech.files.wordpress.com/2019/10/2018-prevalence-of-electromagnetic-sensitivity.pdf.

[312] *Cell Tower Health Effects*, Physicians for Safe Technology, https://mdsafetech.org/cell-tower-health-effects/.



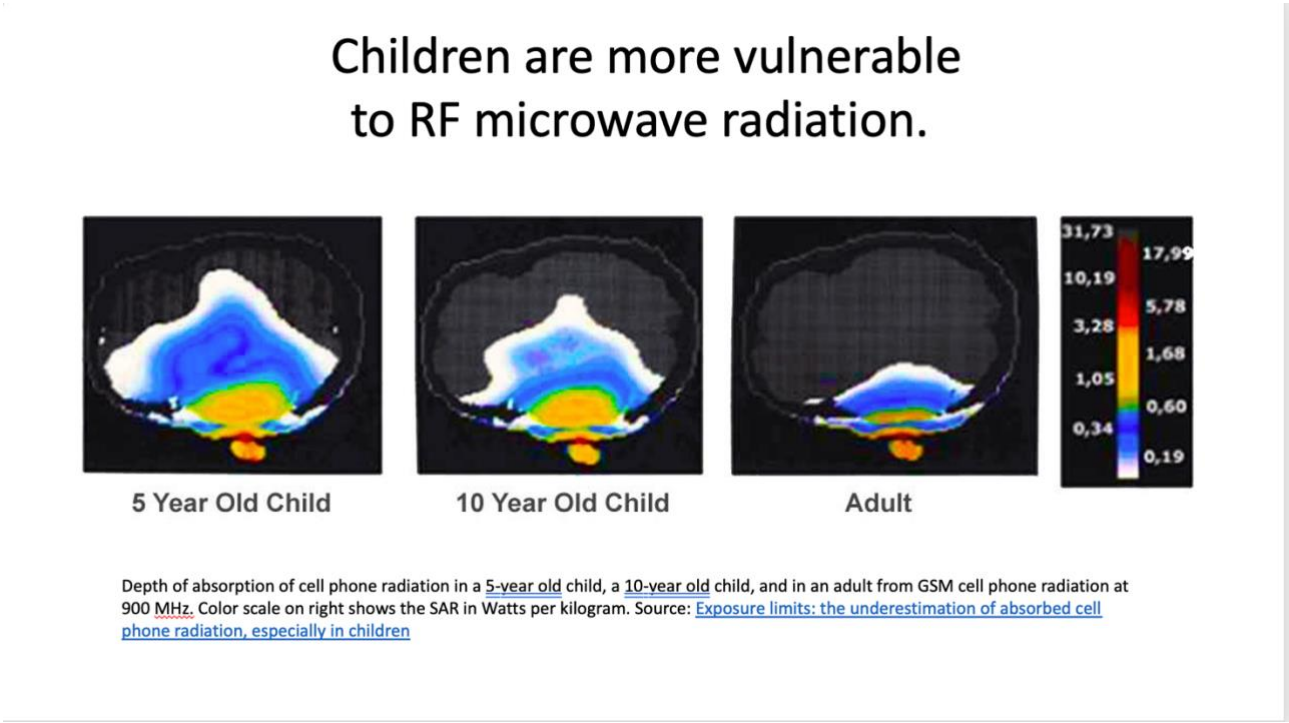
Symptoms experienced by people near cellular phone base stations; RF radiation affects the blood, heart and autonomic nervous system.313 Source: Santini, et al (France): Pathol Biol. 2002;50:S369-73.

- **Adverse Impacts on Children**

Children are particularly vulnerable and are adversely affected by RF radiation in their environment, homes and schools.[314] A special risk factor has been identified for children "due to their smaller body mass and rapid physical development, both of which magnify their vulnerability to known carcinogens, including radiation."[315] The American Academy of Pediatrics has pointed out that children are disproportionately affected by cell phone radiation due to their lower bone density and amount of fluid in the brain allowing for absorption of greater quantities of RF radiation than in adults.[316]

[313] Dr. Magda Havas, https://www.researchgate.net/figure/Symptoms-experienced-by-people-near-cellular-phone-base-stations-based-on-the-work-of_fig2_258313941.
[314] *Children and Wireless Radiation,* https://ehtrust.org/educate-yourself/children-and-wireless-faqs/.
[315] *Key Scientific Evidence and Public Health Policy Recommendations*, Supplement 2012, at 21, David O. Carpenter, MD, Director, Institute for Health and the Environment University at Albany, Cindy Sage, MA, Sage Associates, https://bioinitiative.org/wp-content/uploads/pdfs/sec24_2012_Key_Scientific_Studies.pdf.https://bioinitiative.org/.
[316] *Key Scientific Evidence and Public Health Policy Recommendations*, Supplement 2012, at 21, David O. Carpenter, MD, Director, Institute for Health and the Environment University at Albany, Cindy Sage, MA, Sage Associates, https://bioinitiative.org/wp-content/uploads/pdfs/sec24_2012_Key_Scientific_Studies.pdf.https://bioinitiative.org/.

Children absorb more RF radiation than adults, and fetuses are at even greater risk.[317] Children's "brain tissues are more absorbent, their skulls are thinner and their relative size is smaller."[318] RF radiation penetrates more deeply into the skulls of children compared to adults,[319] as shown below in cell phone usage.[320]



Source: Exposure limits: the underestimation of absorbed cell phone radiation, especially in children, Gandhi, Morgan, Augusto de Salles, Han, Heberman, Davis, October 14, 2011.[321]

Exposure to RF radiation "can result in degeneration of the protective myelin sheath that surrounds brain neurons" and "[d]igital dementia has been reported in school age children."[322] It also increases the risk of childhood leukemia.[323]

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[317] *Why children absorb more microwave radiation than adults: The consequences,* Morgan, Kesar and Davis, Journal of Microscopy and Ultrastructure, Vol. 2, Issue 4, December 2014, 197-204, https://www.sciencedirect.com/science/article/pii/S2213879X14000583.

318 Id.

[319] See, Dr. Melnick, London 5G Conference at 39:00, https://www.youtube.com/watch?v=zSx_yDzxvM8&t=2295s; https://ehtrust.org/research-on-childrens-vulnerability-to-cell-phone-radio-frequency-radiation/ and https://ehtrust.org/science/scientific-imaging-cell-phone-wi-fi-radiation-exposures-human-body/.

[320] *Exposure limits: the underestimation of absorbed cell phone radiation, especially in children,* Gandhi, Morgan, Augusto de Salles, Han, Heberman, Davis, October 14, 2011, https://pubmed.ncbi.nlm.nih.gov/21999884/.

[321] Id.

[322] *Why children absorb more microwave radiation than adults: The consequences,* Morgan, Kesar and Davis, Journal of Microscopy and Ultrastructure, Vol. 2, Issue 4, December 2014, 197-204, https://www.sciencedirect.com/science/article/pii/S2213879X14000583.

[323] *Key Scientific Evidence and Public Health Policy Recommendations*, 2007, at 19, David O. Carpenter, MD, Director, Institute for Health and the Environment University at Albany, Cindy Sage, MA, Sage Associates, https://bioinitiative.org/wp-content/uploads/pdfs/sec24_2007_Key_Scientific_Studies.pdf.

There are also neurological implications to RF radiation exposure for children.[324] Cell towers near schools and Wi-Fi in schools are potentially hazardous to children.[325]

- Elementary school children who were exposed to high levels of RF radiation generated from mobile phone base stations 200 meters from their schools "had a significantly higher risk of type 2 diabetes mellitus" than those exposed to lower RF radiation.[326]

- Adolescent school children who were exposed to high levels of RF radiation generated from mobile phone base stations within 200 meters from their schools had "delayed fine and gross motor skills, spatial working memory and attention" than those exposed to lower RF radiation.[327]

- A ten-year old child testified of his cardiac condition being caused by exposure to RF radiation in a library where he was being tutored.[328]

RF radiation "… has toxic effects in pregnancy, to the fetus and subsequent offspring … and is tied to developmental problems in later life, including attention deficit and hyperactivity."[329]

Children born of mothers who used cell phones during pregnancy developed more behavioral problems by school age than those whose mothers did not use cell phones during pregnancy, with the following results: "25% more emotional problems, 35% more hyperactivity 49% more conduct problems and 34% more peer problems."[330] A study involving 24,499 children found a 23% increase of emotional and behavioral difficulties.[331]

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[324] See generally, https://ehtrust.org/research-on-childrens-vulnerability-to-cell-phone-radio-frequency-radiation/; see also, https://ehtrust.org/cell-towers-and-cell-antennae/compilation-of-research-studies-on-cell-tower-radiation-and-health/.

[325] Dr. Magda Havas: WiFi in Schools is Safe. True or False?, https://www.youtube.com/watch?v=6v75sKAUFdc.

[326] *Association of Exposure to Radio-Frequency Electromagnetic Field Radiation (RF-EMFR) Generated by Mobile Phone Base Stations (MPBS) with Glycated Hemoglobin (HbA1c) and Risk of Type 2 Diabetes Mellitus*, Sultan Ayoub Meo et al, International Journal of Environmental Research and Public Health, 2015; https://www.researchgate.net/publication/283726472_Association_of_Exposure_to_Radio-Frequency_Electromagnetic_Field_Radiation_RF-EMFR_Generated_by_Mobile_Phone_Base_Stations_with_Glycated_Hemoglobin_HbA1c_and_Risk_of_Type_2_Diabetes_Mellitus.

[327] Meo, S. A., Almahmoud, M., Alsultan, Q., Alotaibi, N., Alnajashi, I., & Hajjar, W. M. (2018). *Mobile Phone Base Station Tower Settings Adjacent to School Buildings: Impact on Students' Cognitive Health*, American Journal of Men's Health; https://pubmed.ncbi.nlm.nih.gov/30526242/.

[328] Child With Heart Problems From Wireless: 5G Health Risks California SB 649 Hearing, https://www.youtube.com/watch?v=OgNLR9fQOX4&list=PLT6DbkXhTGoDakSqp1i_7milpwGx4xMFq.

[329] Letter by Dr. Beatrice Golomb, Professor of Medicine, UC San Diego School of Medicine, Aug. 22, 2017, https://mdsafetech.org/wp-content/uploads/2017/09/golomb-sb649-5g-letter-8-22-20171.pdf.

[330] *Key Scientific Evidence and Public Health Policy Recommendations*, Supplement 2012, at 8, David O. Carpenter, MD, Director, Institute for Health and the Environment University at Albany, Cindy Sage, MA, Sage Associates, https://bioinitiative.org/wp-content/uploads/pdfs/sec24_2012_Key_Scientific_Studies.pdf.

[331] Miller AB, Sears ME, Morgan LL, Davis DL, Hardell L, Oremus M, Soskolne CL. Risks to Health and Well-Being From Radio-Frequency Radiation Emitted by Cell Phones and Other Wireless Devices. Front Public Health. 2019 Aug 13;7:223.

- **"Why Tech Leaders Don't Let Their Kids Use Tech"**

Technology executives already appear to heed this caution. In an article, "*Why Tech Leaders Don't Let Their Kids Use Tech*,"[332] it's reported that technology executives restrict or forbid their children's use of the very technology that they are providing to the public, including "the makers of smartphones and tablets, of social media channels and game boxes." Reported examples have included technology "titans" such as former Apple's Steve Jobs and Bill and Melinda Gates have admitted to placing restrictions on their children's use of technology. Chris Anderson, former Wired magazine editor and CEO of 3D Robotics, said that his kids "accuse me and my wife of being fascists and overly concerned about tech, and they say that none of their friends have the same rules. That's because we have seen the dangers of technology firsthand. I've seen it in myself, I don't want to see that happen to my kids."[333]

If these 5G towers are placed anywhere near children or their schools, the hazards of wireless radiation on children and their neurological development should be examined thoroughly. Tech Safe Schools has a wealth of information on the scientific studies showing harm, and how to protect school children from wireless radiation,[334] and delineates schools' fiduciary responsibilities.[335]

- **Adverse Impacts on Birds, Bees and Trees**

RF radiation has adverse environmental impacts to flora and fauna – birds, bees and trees. [336] There is no federal agency setting safety limits for flora and fauna, nor is there any funded mandate to do so.[337]

RF radiation can affect wildlife's orientation, migration, food finding, reproduction, nest building, territorial defense, vitality, longevity and survival, [338] and has been associated with dramatic declines in wildlife. Trees next to cell towers have been consistently observed to become damaged and die.

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doi: 10.3389/fpubh.2019.00223. PMID: 31457001; PMCID: PMC6701402, also available at https://www.frontiersin.org/articles/10.3389/fpubh.2019.00223/full#B42.

[332] "Why Tech Leaders Don't Let Their Kids Use Tech," https://kidzu.co/health-wellbeing/why-tech-leaders-dont-let-their-kids-use-tech/.

[333] Id.

[334] https://www.techsafeschools.org/ (based in NY).

[335] https://www.techsafeschools.org/_files/ugd/2cea04_9edd62aa69d7475d87fc4ef20d56348a.pdf.

[336] Effects of non-ionizing electromagnetic fields on flora and fauna, part 1. Rising ambient EMF levels in the environment, Levitt, Lai and Manville, March 28, 2022, https://pubmed.ncbi.nlm.nih.gov/34047144/.

[337] EHT Letter to US National Park Service on 5G, Cell Towers and Impacts to Pollinators, Trees and Wildlife, Sep 15, 2020, https://ehtrust.org/eht-letter-to-us-national-park-service-on-5g-cell-towers-and-impacts-to-pollinators-trees-and-wildlife/.

[338] Id; see also, Johansson O, *The Stockholm Declaration about "Life EMC"*, Bee Culture Magazine 2022; May issue: 56-61 and Levitt BB, Lai HC, Manville AM. Effects of non-ionizing electromagnetic fields on flora and fauna, Part 3. Exposure standards, public policy, laws, and future directions. Rev Environ Health. 2021 Sep 27. Doi: 10.1515/reveh-2021-0083. Epub ahead of print. PMID: 34563106. https://pubmed.ncbi.nlm.nih.gov/34563106/

Artificial, man-made RF radiation has been recognized as a form of environmental pollution which can harm wildlife, including bats and birds, such as sparrows. Cell towers located in their habitats would be continuously irradiating 24/7, 365 days a year, without refuge from the cell towers, and wildlife could suffer long-term effects, such as: "reduction of their natural defenses, deterioration of their health, problems in reproduction and reduction of their useful territory through habitat deterioration."[339]

Toxic effects "have been observed in mammals such as bats, cervids, cetaceans, and pinnipeds among others, and on birds, insects, amphibians, reptiles, microbes and many species of flora." [340] Different habitats for wildlife, including aquatic environments, "rely on the Earth's natural geomagnetic fields for critical life-sustaining information," with which artificial, man-made RF radiation interferes. [341]

A study performed by placing two mobile phones under a beehive showed that when the phones were turned on, within 20-40 minutes, the bees began emitting "piping" calls and squeaks announcing their start of swarming which means they are about to abandon the hive. [342] Another study corroborated this study and found that the bees "stopped producing honey, egg production by the queen bee halved, and the size of the hive dramatically reduced."[343]

Another study examining how insects, including the Western honeybee, react to RF radiation exposure at frequencies from 2GHz to 120GHz, in simulations found increases in absorbed power of 3-370%.[344] Researchers concluded an urgent need to reduce exposure and that "[a]s 5G will increase radiation exposures and use new higher frequencies shown to be highly absorbed into insects, scientists are calling for a moratorium on 5G."[345]

In a 2021 landmark report on the effects of RF radiation on wildlife, insects, plants and trees, it was found that RF radiation intensities, even at very low levels, from cell towers have adverse biological

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[339] Electromagnetic pollution from phone masts. Effects on wildlife, Alfonso Balmori, August 2009, https://www.sciencedirect.com/science/article/abs/pii/S0928468009000030?via%3Dihub. See also, The incidence of electromagnetic pollution on wild mammals: A new "poison" with a slow effect on nature? Alfonso Balmori, November 2009.
Balmori, A. The incidence of electromagnetic pollution on wild mammals: A new "poison" with a slow effect on nature?. Environmentalist 30, 90–97 (2010). https://doi.org/10.1007/s10669-009-9248-y.

[340] Levitt BB, Lai HC, Manville AM. Effects of non-ionizing electromagnetic fields on flora and fauna, Part 2 impacts: how species interact with natural and man-made EMF. Rev Environ Health. 2021 Jul 8. doi: 10.1515/reveh-2021-0050. https://pubmed.ncbi.nlm.nih.gov/34243228/.

[341] Levitt BB, Lai HC, Manville AM. Effects of non-ionizing electromagnetic fields on flora and fauna, Part 2 impacts: how species interact with natural and man-made EMF. Rev Environ Health. 2021 Jul 8. doi: 10.1515/reveh-2021-0050. https://pubmed.ncbi.nlm.nih.gov/34243228/.

[342] *Why a mobile phone ring may make bees buzz off: Insects infuriated by handset signals*, Daily Mail, May 13 2011, https://www.dailymail.co.uk/sciencetech/article-1385907/Why-mobile-phone-ring-make-bees-buzz-Insects-infuriated-handset-signals.html; see also, "Cell Phones Caused Mysterious Worldwide Bee Deaths, Study Finds." Fox News, May 13, 2011, https://www.foxnews.com/tech/cell-phones-caused-mysterious-worldwide-bee-deaths-study-finds.

[343] *5G & Other Wireless Radiation Is Having A Detrimental Impact On Bees: Here's The Science*, Arjun Walia December 31, 2021, https://thepulse.one/2021/12/31/5g-other-wireless-radiation-is-destroying-bees/.

[344] Id.

[345] Id.

effects. Artificial RF radiation can disrupt the Earth's natural magnetic fields that birds, fish and other wildlife use to navigate and orient themselves.[346] The report is 150 pages with more than 1200 references, uncovering studies otherwise neglected on the subject.[347]

Moreover, with every new network, such as 4G or 5G, the signal structure becomes more complex than the previous network, yet no research has been done on "the biological effects of simultaneous exposure to multiple signals."[348]

Birds are particularly susceptible to RF radiation. Studies done in 1975 in the ranges of 1-10 KHz[349] and 10-16 GHz[350] showed that bird feathers (the hollow part) were receptors for RF radiation. A study of robins exposed to RF at a low range from 2KHz to 5MHz found that the birds were unable to use their electromagnetic compass for orientation.[351]

Birds are acutely sensitive to RF radiation due to their thin skulls, how their feathers can act as dielectric receptors of microwave radiation and the fact that many bird species use magnetic navigation.[352] For example, the birds' inability to discern impending storms via the earth's natural electromagnetic fields is finding a growing number of birds flying into the storms, rather than flying around them.[353] RF radiation is an emerging threat to wildlife orientation.[354]

The U.S. Department of the Interior (DOI) warned the NTIA against categorical exemptions of RF radiation emitted from cell towers on bird species.[355] DOI pointed to "mass mortality events" of impacts of birds with cell towers during peak migration seasons, estimated at 4 to 6.8 million bird deaths per year, and "documented nest and site abandonment, plumage deterioration, locomotion problems, reduced survivorship and death…"[356]

The disappearance of bird and insect species from an old growth rainforest, in New South Wales, Australia, from 2000 to 2015, corresponded with an increasing number of cell tower installations

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[346] https://www.santafenewmexican.com/news/local_news/report-says-wireless-radiation-said-by-telecom-companies-to-be-harmless-could-be-hurting-wildlife/article_1ae80fc0-7d5d-11ec-8c13-4f3411ea8ea1.html.
[347] Effects of non-ionizing electromagnetic fields on flora and fauna, part 1. Rising ambient EMF levels in the environment, Levitt, Lai and Manville, March 28, 2022, https://pubmed.ncbi.nlm.nih.gov/34047144/.
[348] https://ehtrust.org/wp-content/uploads/Mt-Nardi-Wildlife-Report-to-UNESCO-FINAL.pdf at 35.
[349] The properties of bird feathers as converse piezoelectric transducers and as receptors of microwave radiation. I. Bird feathers as converse piezoelectric transducers, Blanco and Sierra, 1975, https://pubmed.ncbi.nlm.nih.gov/1235241/.
[350] The properties of bird feathers as converse piezoelectric transducers and as receptors of microwave radiation. II. Bird feathers as dielectric receptors of microwave radiation, Blanco and Sierra, 1975, https://pubmed.ncbi.nlm.nih.gov/1242004/.
[351] Id.
[352] Birds and Balmori: For the Birds, June 14, 2022, https://safetechinternational.org/for-the-birds/?fbclid=IwAR2_d2mc_JYi45umgMvG0-0SdQG3rf4Jf3sTao61T-kVyGzjnXs3WE1Uo5M.
[353] Id.
[354] "Anthropogenic radiofrequency electromagnetic fields as an emerging threat to wildlife orientation," wildlife biologist, Dr. Balmori, at https://www.ncbi.nlm.nih.gov/pubmed/25747364.
[355] U.S. Dep't of Interior letter to NTIA, 2-7-14, https://www.ntia.doc.gov/files/ntia/us_doi_comments.pdf.
[356] Id at 5-6.

starting with "3G" to "4G" and then "5G."[357] After the installations, it was reported that 70-90% of the wildlife had disappeared, including 66 bird species and 22 species of migratory, threatened and endangered birds, with 86 bird species exhibiting unnatural behaviors.[358] In sharp contrast, when the towers were shut off for 2 days, there was a "resultant explosion of biology on the mountain."[359]

It has been shown that trees are damaged by RF radiation from mobile phone base stations, with damage starting on one side and then "extending to the whole tree over time."[360] Tree damage was found with chronic exposure to RF radiation.[361]

Conclusion – Recommendation for Disapproval and Moratorium

In summary, OTI has not provided any evidence of a gap in telecommunications service. There are privacy and security vulnerabilities, particularly the potential tracking of our children's locations, the devaluation of our property values, the adverse environmental and health impacts from wireless radiation, and even if all of these issues could be mitigated, the Link5G Cell Towers would still be eyesores and an aesthetic blight, out of character with our neighborhoods. Easily accessible to us is a superior alternative of fiber optics for speed, capacity, security and safety.

For the foregoing reasons, we strongly encourage your community board to disapprove the Link5G Cell Towers in your district and vote for a moratorium, similar to what CB8 in Manhattan has done.

Respectfully Submitted,

Odette J. Wilkens
President & General Counsel
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[357] Report for the United Nations Educational Scientific and Cultural Organization (UNESCO) And International Union for the Conservation of Nature (IUCN) Report detailing the exodus of species from the Mt. Nardi area of the Nightcap National Park World Heritage Area during a 15-year period (2000-2015), Ethno-botanist Mark Broomhall, https://ehtrust.org/wp-content/uploads/Mt-Nardi-Wildlife-Report-to-UNESCO-FINAL.pdf.

[358] Id. at 4.

[359] Id at 35.

[360] Radiofrequency radiation injures trees around mobile phone base stations, Aug. 24, 2016, https://pubmed.ncbi.nlm.nih.gov/27552133/.

[361] *Tree Damage from Chronic High Frequency Exposure*, https://ehtrust.org/wp-content/uploads/tree-health-radiation-Schorpp-2011-02-18.pdf.

EXHIBIT 1

May 5, 2023: Jumbo Tower on 2nd Avenue is activated, and the EMF warning buzzer sounds, both up close as well as 10 or 20 yards off.

As reported by an observer who took these photos.

ADDENDUM A

Photo from OTI's (formerly DoITT) presentation to NYC's Public Design Commission, 10-18-22, p. 40

ADDENDUM B
Photo from OTI's (formerly DoITT) presentation to NYC's Public Design Commission, 10-18-22, p.15

ADDENDUM C

OTI's Letter to Community Board 8 Manhattan

Hon. Manhattan Borough President Mark Levine
1 Centre Street, 19th Floor
New York, NY 10007

Manhattan Community Board District Manager Will Brightbill
505 Park Avenue, Suite 620
New York, NY 10022

Hon. Council Member Keith Powers
211 East 43rd Street, Suite 1205
New York, NY 10017

Hon. Council Member Julie Menin
444 East 75th Street, Unit 1B
New York, NY 10021

Madison Avenue Business Improvement District
29 East 61st Street, 3rd Floor
New York, New York 10065

November 16, 2022

Dear Community and Elected Officials:

We are pleased to share that the Office of Technology and Innovation (OTI, formerly DoITT) and our franchisee, CityBridge, are restarting the deployment of LinkNYC kiosks throughout New York City. As you know, Links are invaluable tools that provide free high-speed Wi-Fi, free nationwide calling, free charging ports for mobile devices, and 911 and 311 access to millions of people each year. We are proposing new sites throughout the five boroughs. This new proposed location is a critical component of the City's efforts to equitably expand Wi-Fi access across the City.

Below is a new site proposed for Manhattan Community Board 8. Because we want to bring Links to your area within a short timeframe, we ask that you provide any comments on this site as soon as possible and by January 16, 2023. If we do not receive feedback within 60 days, CityBridge will proceed with installation. Although the attached sites have

thus far met all of our siting criteria, it is possible that some of them will not be built, even if approved, due to technical factors.

Please see the locations of the sites below and on Open Data:

LinkNYC New Site Permit Applications (Data): https://data.cityofnewyork.us/SocialServices/LinkNYC-NewSite-Permit-Applications/xp25-gxux
LinkNYC New Site Permit Applications (Map): https://data.cityofnewyork.us/SocialServices/LinkNYC-New-Site-Permit-Applications-Map/tdt4-7qzu

#	Site ID	Street Address	Community District	Council District	Zone/Category	BID	Historic District/Landmark
1	MN-08-119916	1190 MADISON AVENUE	8	4	COMMERCIAL		
2	MN-08-119917	1050 5 AVENUE	8	4	RESIDENTIAL		Expanded Carnegie Hill Historic District
3	MN-08-119918	1000 5th AVENUE	8	4	PARKS		Expanded Carnegie Hill Historic District
4	MN-08-119925	46 EAST 91 STREET	8	4	COMMERCIAL		Expanded Carnegie Hill Historic District
5	MN-08-119930	1040 PARK AVENUE	8	4	RESIDENTIAL		Park Avenue Historic District
6	MN-08-119932	27 EAST 95th ST	8	4	COMMERCIAL		Individual Landmark Armory
7	MN-08-121861	24 EAST 63 STREET	8	4	COMMERCIAL	Madison Ave BID	Upper East Side Historic District
8	MN-08-121978	688 MADISON AVENUE	8	4	COMMERCIAL	Madison Ave BID	Upper East Side Historic District
9	MN-08-121988	30 EAST 64 STREET	8	4	COMMERCIAL	Madison Ave BID	Upper East Side Historic District
10	MN-08-GF0909	1105 PARK AVENUE	8	4	RESIDENTIAL		Park Avenue Historic District
11	MN-08-GF0910	1115 5 AVENUE	8	4	RESIDENTIAL		
12	MN-08-GF0911	1175 PARK AVENUE	8	4	RESIDENTIAL		Expanded Carnegie Hill Historic District
13	MN-08-GF0912	570 PARK AVENUE	8	4	RESIDENTIAL		Upper East Side Historic District

14	MN-08-GF0913	807 5 AVENUE	8	4	RESIDENTIAL		Upper East Side Historic District - Individual landmark Knickerbocker Club Building
15	MN-08-GF0919	1095 5 AVENUE	8	4	RESIDENTIAL		Expanded Carnegie Hill Historic District/ Individual Landmark Carnegie Mansion
16	MN-08-GF0925	1283 YORK AVENUE	8	5	RESIDENTIAL		
17	MN-08-GF0926	510 EAST 71ST STREET	8	5	RESIDENTIAL		
18	MN-08-GF0927	510 EAST 70TH STREET	8	5	COMMERCIAL		

If you have any questions or comments, please feel free to reach out to me. We look forward to working with you to make this new free service available to all New Yorkers.

Sincerely,

Leslie Brown
External Affairs Associate
New York City Office of Technology and Innovation

ADDENDUM D
MORATORIUM RESOLUTIONS BY COMMUNITY BOARD 8 MANHATTAN

Russell Squire
Chair

Will Brightbill
District Manager

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The City of New York
Community Board 8 Manhattan

December 21, 2022

Honorable Sarah Carroll, Chair
NYC Landmarks Preservation Commission
Municipal Building
One Center Street, 9th Floor
New York, New York 10007

RE: 5G Link NYC Kiosks in Historic Districts

Dear Chair Carroll,

At the Full Board meeting of Community Board 8 Manhattan held on December 15, 2022, the board unanimously approved the following resolution by a vote of 42 in favor, 2 opposed, 0 abstentions, and 0 not voting for cause.

WHEREAS New York City, through its Office of Technology and Innovation (OTI), has contracted with CityBridge to install and operate a citywide wireless communications network;

WHEREAS the Transportation Committee of Community Board 8 had an extensive hearing with public participation on the benefits and drawbacks of the proposed towers;

WHEREAS the Landmarks Committee of Community Board 8 had a subsequent hearing with public participation on the benefits and drawbacks of the proposed 5G towers;

WHEREAS the towers are to be placed on sidewalks in historic districts;

WHEREAS the towers are 32 feet high and, therefore, out of scale with the buildings in historic districts;

WHEREAS the modernist design of the towers is unrelated to the architectural characters of buildings in historic districts;

WHEREAS the towers can be placed ten feet from an individual landmark building or a building in a historic district, thereby detracting from the presence of the historic structure;

WHEREAS the screens on kiosks or towers conflict with the Special Madison Avenue Preservation District's design guidelines;

WHEREAS 5G transmission cables can be placed fully underground, connect directly to buildings, and have no visual impact on the streetscape;

WHEREAS each 5GTower proposed for installation within a historic district must first receive a Certificate of Appropriateness from the Landmarks Preservation Commission

WHEREAS 5G towers are not appropriate and contextual in historic districts and should not be approved by the Landmarks Preservation Commission in historic districts;

WHEREAS the Landmarks Committee of Community Board 8 has reviewed the resolution prepared by the Transportation Committee of Community board 8;

WHEREAS the Landmarks Committee of Community Board 8 supports the resolution prepared by the Transportation Committee;

THEREFORE, BE IT RESOLVED that the installation of Link 5G towers in historic districts in Community Board 8 is disapproved;

BE IT FURTHER RESOLVED, that a moratorium be placed on construction and planning of Link5G towers and devices in Community District 8 Manhattan.

Sincerely,

Russell Squire

Russell Squire
Chair

David Helpern and Jane Parshall

David Helpern and Jane Parshall
Co-Chairs, Landmarks Committee

cc: Honorable Eric Adams, Mayor of the City of New York
Honorable Carolyn Maloney, 12th Congressional District Representative
Honorable Mark Levine, Manhattan Borough President
Honorable Liz Krueger, NYS Senator, 28th Senatorial District
Honorable José M. Serrano, NYS Senator, 29th Senatorial District
Honorable Dan Quart, NYS Assembly Member, 73rd Assembly District
Honorable Rebecca Seawright, NYS Assembly Member 76th Assembly District
Honorable Julie Menin, NYC Council Member, 5th Council District
Honorable Keith Powers, NYC Council Member, 4th Council District

Russell Squire
620
Chair

Will Brightbill

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The City of New York
Community Board 8 Manhattan

December 20, 2022

Edward F. Pincar
Manhattan Borough Commissioner
Department of Transportation
59 Maiden Lane, 37th Floor
New York, NY 10038

Matthew C. Fraser
Chief Technology Officer
NYC Office of Technology & Innovation
2 MetroTech Center, P1
Brooklyn, NY 11201

RE: Disapproval of new Link5G Kiosks within CB8

Dear CTO Fraser and Commissioner Pincar,

At the Full Board meeting of Community Board 8 Manhattan held on December 14, 2022, the board approved the following resolution by a vote of 40 in favor, 2 opposed, 0 abstentions and 0 not voting for cause:

WHEREAS; New York City, through its Office of Technology and Innovation (OTI), has contracted with CityBridge to install and operate a citywide wireless communications network; and,

WHEREAS; CityBridge installed its LinkNYC network as the initial deployment of the citywide wireless communications network intended to replace outdated public pay phones; and

WHEREAS; LinkNYC provided free wireless internet connectivity using towers placed on sidewalks throughout NYC, many of which include electronic display screens; and

WHEREAS; Community Board 8 and constituents of its district have reported adverse impacts resulting from existing LinkNYC infrastructure, including visual impacts, inappropriate usage, impacts on sidewalk clearances, and rat infestation; and

WHEREAS; CityBridge is now in the process of upgrading its LinkNYC network to Link5G to accommodate technological upgrades that have recently become commonplace in cellular communications; and

WHEREAS; Link5G infrastructure is a 32’ tall tower that is installed on sidewalks in the public right-of-way; and

WHEREAS; Link5G towers in commercial districts include electronic screens similar to those found on LinkNYC kiosks that display advertising and public information; and

WHEREAS; the design of the Link5G towers has been approved by the Public Design Commission; and

WHEREAS; Link5G must adhere to siting requirements determined by NYC Department of City Planning, and must obtain Landmarks Preservation Commission approval if sited in historic districts; and

WHEREAS; CityBridge and OTI have proposed 18 sites across Community District 8;

WHEREAS; CityBridge and OTI have stated that the siting of proposed Link5G towers in Community District 8 are based on gaps in coverage and locations where excess demand for the network exists as determined by commercial cellular carriers; and

WHEREAS; 15 of the 18 sites proposed are in or near either the Upper East Side Historic District or the Carnegie Hill Historic District, where renowned architecture and iconic streetscapes would be interfered with if Link5G structures were installed; and

WHEREAS; locations proposed along Madison Avenue would be in conflict with strict guidelines for illuminated storefronts and signage, and would be in conflict with the Special Madison Avenue Preservation District’s design standards that specifically prohibit illuminated advertising; and

WHEREAS; residents of Community District 8 have strongly objected to the design and the visual impacts that Link5G towers would have on streetscapes, both with and without screens; and

WHEREAS; there are widespread concerns that 5G towers will be constructed at distances considered too close to adjacent buildings, as has already occurred in front of 520 East 90th Street, and

WHEREAS; 10’ of distance from a tower to a residence that is permitted is extremely insufficient and should be revisited as a policy; and

WHEREAS; Neither CityBridge nor the cellular network providers that Link5G service is intended to supplement have provided any evidence that dropped calls and limited capacity are present at the proposed Link5G locations;

WHEREAS; the proposed sites for Link5G don’t include any locations in areas known to be potential digital deserts within Community District 8; and

WHEREAS; OTI and CityBridge have not provided detailed plans regarding the full build-out of Link5G, both within Community District 8 and in areas north of 96th Street and in the outer Boroughs; and

WHEREAS; there is a desire for any telecommunications infrastructure to be buried underground both for reliability purposes and to minimize visual impacts; and

WHEREAS; there have been questions raised by some residents as to whether sufficient research has been performed to fully assuage concerns that the radiation emitted by 5G infrastructure won't have any long-term impacts on public health or the environment, including young children, seniors, people with medical implant devices, pets, plants, and parks;

WHEREAS; the community-at-large has expressed their views that Link5G is unnecessary and unwanted in Community District 8 at present and until many of the issues identified have been resolved;

WHEREAS; New York City is in control of this process through its contract with the provider;

THEREFORE BE IT RESOLVED, that Community Board 8 Manhattan disapproves the proposal as presented to install Link 5G towers in Community District 8; and

BE IT FURTHER RESOLVED, that a moratorium be placed on construction and planning of Link5G poles and devices in Community District 8 Manhattan.

Please advise us of any action taken on this matter.

Sincerely,

Russell Squire

Russell Squire
Chair

Craig Lader and Charles Warren

Craig Lader and Charles Warren
Co-Chairs, Transportation Committee

cc: Honorable Eric Adams, Mayor of the City of New York
Honorable Carolyn Maloney, 12th Congressional District Representative
Honorable Mark Levine, Manhattan Borough President
Honorable Liz Krueger, NYS Senator, 28th Senatorial District
Honorable José M. Serrano, NYS Senator, 29th Senatorial District
Honorable Edward Gibbs, NYS Assembly Member, 68th Assembly District
Honorable Dan Quart, NYS Assembly Member, 73rd Assembly District
Honorable Rebecca Seawright, NYS Assembly Member 76th Assembly District
Honorable Keith Powers, NYC Council Member, 4th Council District
Honorable Julie Menin, NYC Council Member, 5th Council District

ADDENDUM E

“Take action to remove 5G Antenna from 520 E 90th St. “

“Photo taken from living room, APT 3D facing North from E90th ST. The cylinder is less than 10ft from the building…”

(Citing no “information about the use, range or strength of the signal to make our own health related conclusions,” “quality of life” issue, “invasive to our living space,” and reduction of property value.)

See @Gracie5GRemoval for full text.

ADDENDUM F

Letter from Dr. Kent Chamberlin
to
Community Board 9 Manhattan, January 6, 2023

[on next page]

University of New Hampshire

College of Engineering and Physical Sciences
Department of Electrical and Computer Engineering

Kingsbury Hall
33 Academic Way
Durham, NH 03824-2619

V: 603.862.1357
F: 603.862.1832
TTY: 7.1.1 (Relay NH)

www.ceps.unh.edu/ece ece.dept@unh.edu

January 6, 2023

Manhattan Community Board No. 9
Hon. Barry Weinberg, Chair
Eutha Prince, District Manager
3291/3295 Broadway
New York, New York 10027

Dear Community Board Members:

I am writing you as a former member of the New Hampshire State Commission that was tasked with exploring the Environmental and Health Effects of Evolving Wireless and 5G Technology. This Commission was formed through bipartisan legislation and was supported by the governor. The Commission was comprised of unbiased experts in fields relating to health and radiation and were highly qualified to evaluate the issue in a fair and in-depth manner. The Commission submitted its final report in November 2020, with a key finding being that exposure to wireless communication radiation is harmful to the health of humans and the environment. Those findings apply to all forms of wireless radiation, which include all generations of cellphone radiation.

My purpose in writing is to alert you to the dangers of siting a cell tower near to where people, particularly young people, live, work or recreate. I provide relevant details about the New Hampshire Commission's findings on this issue in a presentation I gave to the Lenox, MA Board of Health. Please know that the International Association of Fire Fighters (IAFF) in 2004 adopted a position statement still in effect today forbidding wireless communication facilities on or near fire stations as firefighters were being injured by the radiation. Many of the firefighters exposed to the wireless radiation could not remember where they were going during emergencies, nor how to administer CPR. As Dr. Gunnar Heuser indicates at the EMF Medical Conference, functional MRIs showed damage to the gray matter of their brains from the radiofrequency radiation exposure.

Scientists, physicians, environmental and public health physicians, epidemiologists, pediatricians along with engineers such as myself have been calling for state and local governments to be proactive in protecting your citizens against radiation exposure. I realize that providing such protection may seem challenging. However, initiatives such as the New Hampshire Commission and the successful lawsuit brought about by the Environmental Health Trust and others are exposing the dubious claims by the FCC that wireless radiation is harmless. Given the mounting evidence regarding the clear harm of radiation, it is only a matter of time before meaningful protective regulations are put in place.

While telecom companies currently have the upper hand in that they seem to be able to force communities to accept whatever tower sites they mandate, there are actions that those

communities can take to delay or stop installations where people will be excessively exposed. For example, citizens in York, Maine have delayed the installation of antennas positioned close to a neighborhood. The Board of Health in Pittsfield, Massachusetts issued a cease-and-desist order against Version regarding a cell tower that was causing illness in a surrounding neighborhood. There are many other examples where citizens and administrators have worked together to protect people against cell tower radiation. Those examples can be used to strengthen your ordinances to help protect against inappropriate cell tower siting.

I am currently working with my state legislators to pass legislation that would provide protections against excessive radiation exposure. The original legislation called for a 1,640-foot setback for all new cell towers; this setback is one of the recommendations made by the New Hampshire Commission, and the rationale for picking that distance is explained here. The legislation is currently being revised so that it can be acted on in the next legislative session.

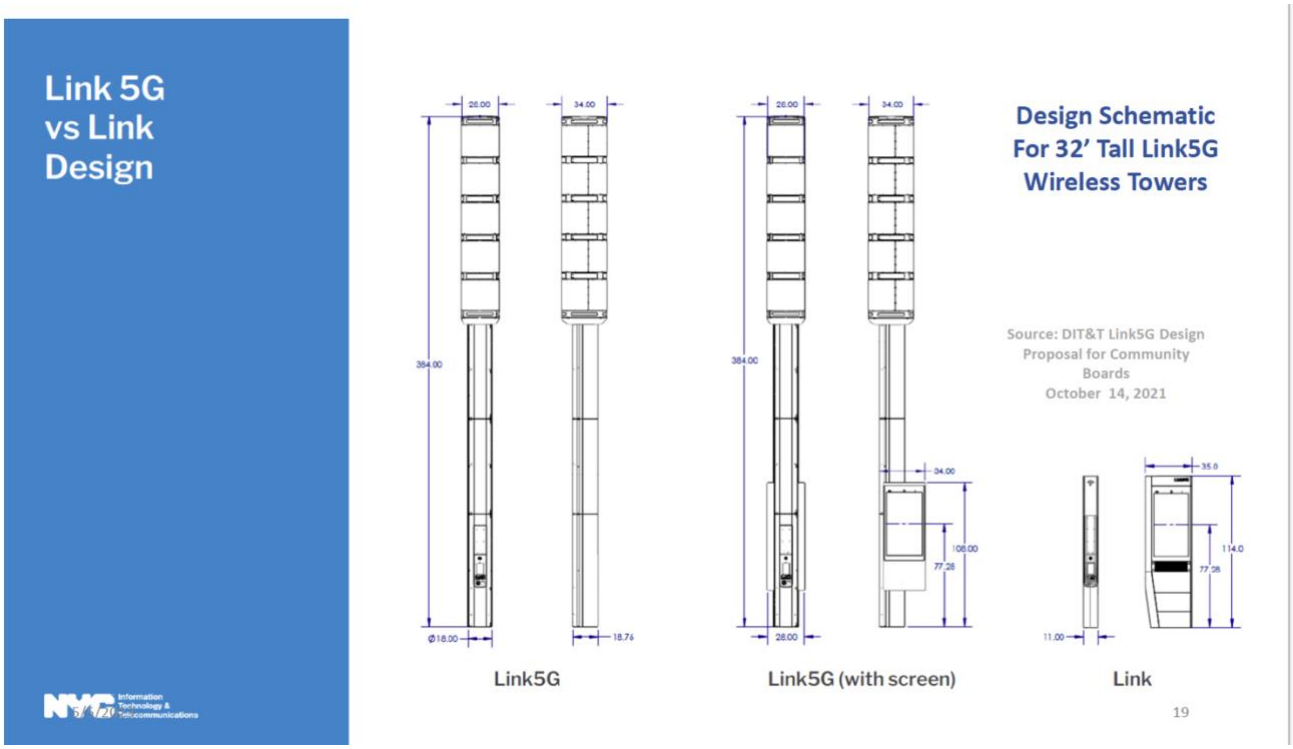
Wireless radiation dangers are real, and they can be significant in their impact on human health and the environment. I encourage you to do whatever is within your power to protect your constituents against it.

Sincerely,

Kent Chamberlin, PhD
Professor & Chair Emeritus
Fulbright Distinguished Chair

ADDENDUM G

COMPARISON OF LINK5G CELL TOWERS AND LINKNYC KIOSKS



Source: DOITT Link 5G Design Proposal for Community Boards, Oct 14, 2021

I hereby protest the erecting of a 5G Tower on Juno Street, Forest Hills, by PS144 Q children's playground and school.

No one in the community was asked their opinion. This is not fair to the community. Moreover, PS144Q is an historic elementary school. The argument that the neighborhood needs a 5G tower because there is a gap in service is baseless. Also, there are no tall buildings except for the elementary school, in this area. Considering that the city wants to limit cell phone use by students in schools, this tower will not serve any purpose. The community does not need a charging station since it will attract vagrants. Young childrens' safety will be put at risk. There should be legislation enacted to prevent installation of such 5G towers near schools and playgrounds.

Long-term effects on the community's health is not taken into account. OTI's argument that it will enhance internet access is based on the providers' marketing propaganda. We do not know the real intention of the companies' future uses of this tower. There is absolutely no transparency. I do not want OTI to make me live under an umbrella of electromagnetic waves. I am also strongly advocating on behalf of the childrens' future health. We all need to live an environment free of the harmful risk from this tower.

The community is extremely concerned and wants this tower removed immediately.
Bernard Otalora

Brooke Holm
[redacted]
Brooklyn, NY 11249
[redacted]

May 01, 2025

New York City Council
City Hall
New York, NY 10007

Dear Council Members,
I am writing to express my opposition to the installation of 5G cell towers in residential neighborhoods across New York City.

While I recognize the benefits of improved wireless infrastructure, I am concerned about the potential health risks associated with prolonged exposure to high-frequency radiofrequency radiation. These 5G towers are often placed close to homes, schools, and community spaces - areas where families, children, and vulnerable populations spend the majority of their time. The long-term biological effects of 5G radiation have not yet been fully studied or understood. Many scientists and public health experts have called for more research before widespread deployment, particularly in densely populated urban areas. Until conclusive, independent studies can demonstrate that these towers are safe for continuous exposure, I believe it is premature and irresponsible to install them so close to where people live and gather.I urge the Council to apply the precautionary principle and pause further installations in residential zones until we have definitive data on safety. Public health must come before technological convenience.

Thank you for your attention to this important matter.

Sincerely,

Brooke Holm

Testimony of CWA District One re: Intro 1122
Committee on Technology
Tuesday April 29, 2025

Communications Workers of America District 1 represents 145,000 workers in 200 CWA local unions in New York, New Jersey, New England, and eastern Canada. CWA members work in telecommunications, health care, higher education, manufacturing, broadcast and cable television, commercial printing and newspapers, state, local, and country government. District 1 represents 65,000 members in New York State..

We thank Chair Gutiérrez for prioritizing the expansion of high-speed broadband in homes throughout New York City and introducing legislation requiring the Department of Information Technology and Telecommunications to develop a plan to connect New Yorkers.

While CWA District 1 appreciates and has long championed the goals of Intro 1122, which would bring affordable, high-speed broadband to all New Yorkers, we ask the committee to consider important language that would protect the broadband workforce and ensure that public dollars are used to support good jobs in the telecommunications industry. CWA has long fought to ensure that public investment in broadband goes hand in hand with high-road labor standards. Without strict labor standards and requirements, we risk replicating the current telecommunications workforce trends, namely low-road subcontracting and wage stagnation, that results in shoddy work and safety hazards for workers and the public. Additionally, it is critical that publicly subsidized broadband networks utilize the most future-proof and durable technology available. Fiber-optic technology fits that bill and should be required for the projects created through the home internet expansion plan.

Specifically, we ask for the following amendments to be made to Intro 1122:

- The process for evaluating internet service providers should include labor standards, including (a) information relating to whether the construction workforce will be directly employed or subcontracted; (b) the anticipated size of the workforce required to carry out the proposed work; (c) a description of plans to maximize use of local or regional workforce; and (d) a description of the expected workforce safety standards and training to ensure the project is completed at a high standard
- Any projects created through the home internet expansion plan should be subject to prevailing wage standards.
- Any projects created through the home internet expansion plan should utilize fiber-optic technology.
- At least one member of the internet advisory board should have a demonstrated history of representing the interests of telecommunications workers in New York City.
- Reporting requirements should be expanded to include the mechanisms by which the department will evaluate internet service providers and award funds; and the entities that will receive funds from the department. All reporting should be made publicly available.

Once again, we thank Chair Gutiérrez for her work to ensure high quality access to broadband for all New Yorkers, and we look forward to working with the committee to ensure good jobs in the telecommunications industry.

Eric Perlmutter
[redacted]
Brooklyn, NY 11222

[redacted]
[redacted]
04/29/25

Dear Members of the NYC Council Tech Cmte,

I am writing to express my strong opposition to the installation of a 5G tower on my street. I, along with many of my neighbors, am deeply concerned about the potential risks this technology poses to our health, safety, and quality of life.

Despite assurances from telecom providers, the scientific community remains divided on the long-term health impacts of constant exposure to high-frequency radio waves emitted by 5G infrastructure. Placing this technology in close proximity to homes, schools, and playgrounds is not only reckless, but it disregards the precautionary principle that should guide decisions affecting public health.

Moreover, the placement of such a tower in a residential area shows a lack of transparency and community input. Residents were not properly notified or consulted, and the decision appears to have been made without adequate public oversight or consideration of alternatives. This is unacceptable and undermines trust in the very institutions meant to represent and protect us.

Beyond the health and procedural issues, the visual and environmental intrusion of a 5G tower degrades the character of our neighborhood and could negatively impact property values. Our community deserves better than to be used as a testing ground for controversial infrastructure with unclear long-term effects.

I urge the board to take immediate steps to halt this project, re-evaluate the necessity and location of the tower, and prioritize community engagement moving forward. A full and open public hearing must be held before any further action is taken.

Thank you for your attention to this serious matter. I expect the board to advocate on behalf of the residents it serves and ensure our voices are heard.

Sincerely,
Eric Perlmutter

A 5G tower was installed on Juno Street by Public School 144 on Thursday, April 24, 2025.
I do not want this 5G tower installed in our beautiful tree-lined neighborhood.
It stands out like an eyesore.
And the tower was installed prior to the meeting that was scheduled for Tuesday, April 29, 2025, to discuss the towers.
I also do not think that tower should be by a public school for grades PreK to 5.
Joan Mullins

Please find the linsk about my practice with EMF 4-5G for over 20 years.
The EMF 4-5G exposure risk studies require a high level clinical medical integration I provide.
I am a NYC IBEW licensed expert and have testified in EMF cases in Chelsea in the Harman Case where I dismissed amateur non engineers, non licensed and lacking the required knowledge that terrorized a family when there was no risk present.
I recived my Diploam from RCA Institute and and Sarnoff Electroincs and Communication, NYC licensed and experience through IBEW 1430 Larchmont/Armonk.

Another case in Princeton NJ wherein I forced Verizon to make changes with an installation after 2 depositions they agreed. I consider myself as the legal standard for this practice. Always ask anyone for their credentials and ask are you a court expert have you ever been recognized as an expert? You know for such these are critical technical, clinical and legal matters of the highest order.
Do not be deceived by local EMF meter readers with elaborate websites and misleading references. People do not know what they are getting.

My integrations in oncology, immunology and toxicology are vital for risk exposure.

Kind regards,
Josef

Signed certified under penalty of law

Dr. Josef Dumanov Esq. IBEW

My older informative site www.SpectralAnalyticalSciences
Clinical Environmental Epidemiologist
Toxins Mold Radon Lead Asbestos Carcinogens
www.SafeHealthyHomeInspection.com

electraEMFhealth.com NYC Tristate

Since 2003 the fully licensed for NYC NY NJ CT DE State IBEW Electronics and Communications Engineer EMF EMR RF 4-5-6G court certified expert has been available for your technical, health and possible legal matters for NY NJ CT and PA.
Donations for subClinical Research support LINK at end of page.
Thank you for your kind consideration.

Julie Mardin
Testimony to the New York City Council Committee on Technology
April 29, 2025

In regards to T2025-3320 and current bills to help connect all New Yorkers to the Internet

Thank you for this opportunity to speak today. I am a lifelong New Yorker, and have been volunteering with a grassroots group called New Yorkers 4 Wired Tech. As the name implies we believe wired technology is far superior to wireless, for health, privacy and for speed, so I am appreciative that these bills are trying to diversify NYers options, and focusing in on cable franchises as well.

But there is another asset that seems to have fallen into the memory hole. In the 1990s and 2000s it was Verizon which took up the task of transforming New York's copper phone lines to fiber optic. They obtained many concessions and the ability to charge extra fees on their regular phone customers for years in order to do so, and yet what we ended up with is a partially built out system, which basically became the backhaul for their private cell phone services. I need to thank Bruce Kushnick and the Irregulators, a group of technology and consumer advocates, for shining a light on this period of history.*

I will admit I was attached to my old copper landline, It was the only thing that worked during 9/11, and during Sandy, while everyone else was huddling around WiFi hotspots. But I was one of the lucky ones who got fiber to the premises. Especially lucky, as I had heard from other NYers that they were being forced to go directly to wireless. So this is where the true digital inequity lies.

Those neighborhoods that did not get fiber to the premises, but only to the corners, are the ones not getting proper service today. And so if we could focus on having that last mile to the premises finished, then I think a lot would be accomplished. If Verizon cannot do it, or will not do it, then let a smaller local company finish the job. I think this is one of the most important and meaningful tasks before our tech officials today.

And there is still that question of the infrastructure that Verizon did build out. Since it was built with Title II public utility status, does it not belong to the public? I hope that these bills, especially 1122, can get to the bottom of that.

Thank you very much for trying to bring more diversity, true equity and affordable options for NYers.

* For more background from Bruce Kushnick of the Irregulators, please read the Book of Broken Promises. A summary and a link for the free download can be found here:

https://www.huffpost.com/entry/free-copy-the-book-of-broken-promises-400-billion_b_590906b3e4b084f59b49fdbd

An excerpt:

"The current plan has been in place for years; shut off the copper wires, claiming that they are unprofitable (which is not true), and push the retail consumer and business customers onto wireless service. And there are no longer any serious deployments of fiber to the home. The reasons are simple: a) it eliminates the unions required to fix and repair the retail wires b) there is no upgrade of the wires, and c) they can also charge customers per gigabit vs a wired broadband service, which is mostly still 'unlimited'.

And, you can mislead customers that these wireless services are a substitute for the fiber-to-the-home service customers paid $4000-$7000 per household to have by now.

The Book of Broken Promises goes into all of the other financial shenanigans mentioned previously. It also covers how the FCC previously killed off most competition for wireline services, including the independent ISPs, among lots of other topics."

A 5G tower was installed on Juno Street by Public School 144 on Thursday, April 24, 2025.
I do not want this 5G tower installed in our beautiful tree-lined neighborhood.
It stands out like an eyesore.
And the tower was installed prior to the meeting that was scheduled for Tuesday, April 29, 2025, to discuss the towers.
I also do not think that tower should be by a public school for grades PreK to 5.
Kathleen Mullins

Statement of Lauren Bond
Manhattan, New York
Committee on Technology Hearing
June 7, 2023

I am Lauren Bond, I lived West side midtown 14 yrs, 4th district.

Feb. 21, 2020, nine "5G" cell towers began operating on the rooftop 325 W. 37th St, 40 and 90 feet from my windows. I had a safe place to live before cell towers were installed, changing my life overnight.

With concern regarding the Giant 5G tower installations:
I know of 2 buildings in Manhattan, East Village and Manhattan Plaza, with tenants suffering constant exposure to emf from small 5g cell towers, whether from the roofs on their buildings, or nearby. These people are living in their bathrooms, sleeping on their floors, closets, in their cars, seeking a way to escape the painful exposure. Please know, along with immediate emf from local towers, radiation from more distant small 5g towers increase the total emf levels of exposure people are receiving.

My own experience,
On Feb. 21, 2020, nine "5G" cell towers began operating outside my apartment windows on the roof of the building across to my apartment. Six towers were approx.40 feet, and three were within 90 feet distance from my windows, in contrast to the proposed 10 feet distance Giant 5G Towers are to be installed by buildings throughout New York City.

During these first two weeks of these 9 small cell towers operating, I experienced severe symptoms, which my doctor confirmed:

• Constant tinnitus	• Burning skin	
• Shortness of breath	• Palpitations	
• Increased pain in eyes, limiting visual function • Insomnia • Severe migraines	• Vertical disturbances through cranium and occipital region simultaneous with horizontal intercranial disturbances extending through the ear canal and sharp stabbing pains extending into all 4 extremities	

Chronology

The injuries started on Feb 21, 2020. My injuries from my contemporaneous notes at the time:
- 2/21/20 Very loud tinnitus began immediately and has continued to present.
- 2/25/20 Began waking after only 3 hours. Unable to return to sleep each night.

On 3/1/20 at 2 AM, I am wakened from a deep sleep gasping for breath.Something heavy is rhythmically pressing on my chest. My heart is racing. I am now sharply alert and not knowing why.

I am seemingly paralyzed. Then, a strong, fiery energy core feeling 6 inches in diameter, enters with a sharp, searing stab through the top of my head. It is excruciating. I observe it surging through the center of my brain. Next it begins searing outward through my ear canals with long-burning razor-like piercing through my head. My brain feels sectioned in 4 quadrants. I remain flattened and pinned on the mattress despite efforts to move and run out of the room. I want to move and can't.

I am horrified, this fiery surge is now continuing to course through my neck to the heart. How far is this going? The fiery searing energy core is so large, charges through and around my heart at once, as though no vessel is there, and now to my arms and hands. It continues straight down the core of my torso. It is extending through my legs. I am fully engulfed in burning, piercing energy.

It isn't over. It now flows up through my body in reverse, and surges down through my body again. This wave descends and ascends through me in the same sequence through my entire body as it had begun, in large, repeated surges. Still, as much as I try, I can't move.

This lasted a half hour. The pain is so much, I can't return to sleep after it stops. It feels unsafe to sleep. My skin is burning. My ears are ringing and burning. I don't know what happened, nor the source of this and how to protect myself, and when it might happen again. I am awake for the rest of the night and unable move. I am very weak.

The following days, burning skin and ringing in my ears are constant, and increase when I am inside the apartment. The intensity of energy present in the apartment is like being inside a fire and incredibly challenging to concentrate on any matter or to sleep.

Now eyes burn with increased intensity and does not abate with more applications of eyedrops. Focusing is more painful. Concentration is strenuous. There is heavy pressure on my heart.

The only changes in this building's vicinity are the cell towers. I identify the company and research the purposes of these cell towers across from me; pursue the owner of that building; and, inquire with my apartment manager in getting information. After multiple tries, we get no response from the owner. I continue researching.

Opening the door to the apartment and walking in, I'm met with a wave of constant sense of fire to the skin, heavy pressure on the heart, rapid heart rate, and an electrical burning and pressure through the brain, and shortness of breath. This was not present in the hall. Each time stepping into apartment, immediate burning, sharp needles, strong pressure on the heart, difficult concentration ensues. Stepping out into the hall, it stops. Being inside the apartment, my condition worsened and I could not continue living in my apartment. The severe damage to my central nervous system and pain continued to increase. My apartment was not safe.

The following days I'm extremely concerned being inside the apartment and stay out. I arrange bedding on the bathroom floor, very nervous to sleep in the bedroom any more. Trying for a couple of nights, the wave is present there, and I was still waking after 3 hours. Reading on ways to deflect, I gather all items that I have, setting them in

the bedroom to secure relief from the constant wave penetrating the apartment and trying sleeping in the bed once more. I'm looking into what to purchase as it is affordable, none of it is, and how to work with the open air HVAC units under my windows. Learning more on this radiation, I discover there is no protection that can be designed to prevent its passage as these HVAC units must remain open.

- 3/5/20 After 3 hours sleep, again, I am awakened gasping for breath. The full event repeats exactly as it occurred 3/1/20 for one half hour. I was truly hoping that night March 1st, was a one-off. It is clear this is a schedule. I am not in any way, prepared for this and have yet a place to go. I need more time. I'm harmed and weaker. I cannot live through a third night of this. I'm seriously injured now, and I don't know that I could survive one more event with this. After spending days researching ways to address or accommodate this environment I'm finding none. I've been continuing contact with the building management with these concerns and seeking a safe room however temporary. They have nothing.
- 3/10/20 Contacts inquiring about cell towers and protections and recourse of safety for New York City residents:

1/ Emailed Mayor DeBlasio, no phone number available. Received case # email.
2/ Called Speaker Corey Johnson's office; referred me to DOITT
3/ Left message: Commissioner Bret Sikoff, DOITT. No response was ever given
4/ Left message: Asst Commissioner for Franchise Andrew Manshel. Responded after one week. Explained DOITT expressly for city properties, not residential.
5/ Spoke with DOITT Imani Charles, explained DOITT information from City Council ofc inaccurate, as it involves city properties, not residential. Recommends 311.
6/ Emailed Manhattan Borough office. Left message. No response was ever given.
7/ Called 311. They refer to DOITT although I explain DOITT states city properties only, not residential. Manager at 311 viewed resources and suggested:
a/ Dept of Bldg, special investigation unit 212-825 2413 for permits and zoning/ No response was ever given.
b/ NYS Pub Serv Commission 800-342-3377 m-f 8:30-4/ No response was ever given.
c/ Community Board #4 212 736 4536:
Delores Rubin, Dist. Mgr, Manhattan Community Board. No response was ever given.
Jesse Bodine Manhattan Community Board. jbodine@cb.nyc.gov 1st Wed @ 6:30, 3rd Wed 10 am Emailed/ No response was ever given. Left phone messages. No response.

- 4/21/2020

Called ADA DOJ ofc, 800-514-0301 directed to HUD Regional NYC ofc
LM HUD Regional NYC ofc 212 264-8000 Spoke a few times with staff and their suggestions toward housing issues. No recommendations regarding cell towers.

- 4/23/2020

1/ Sen Hoylman 212 633-8052 left message/emailed.
2/ Mayor's ofc disability Housing Coordinator Arthur Jacobs 212 788 8948 LM or email: ajacobs2@……
3/ Speaker Johnson 212-564-7757....Left message.
4/ Assembly. Gottfried 212-807-7900 ....Left message.

It is pandemic lockdown and I have no safe place to live.

Aftermath

March 11, within 2 wks of the initial occurrence, I secured temporary housing with a friend.

My sleep is restored. Yet injuries remain. I'm physically weaker, collapsing every day, a sensation of being neurologically sliced and burned. Migraines easily triggered, with nausea and constant painful sensitivity to light.

Passing rooftop cell towers is painful. I walk blocks around to avoid. My ear canal intensifies with sharp energy moving through my head. tinnitus gets louder My heart races, and feels pushed in, creating a sense of suffocation. Skin feels like burning brush of thin metal bristles.

Migraines with nausea are more easily triggered. Heightened sensitivity to light and tolerance heat also triggers migraines and nausea.

I continue to have a burning sensation 24/7 from my eyes through to the back of my head, and throbbing across to the lower back of my skull. There is constant painful, sharp pressure around the eyes limiting visual function.

Swift, painful intolerance of heat to the skin from lamps or furnace, within several feet distance, creates immediate palpitations, and sense of suffocation. There is constant sharpness at the crown of my skull. My brain now feels divided in 4 quadrants, along with the all-consuming electric pain, burning across my head through my ear canal.

My heart feels heavy pressure from the outside and sharpness internally. My heart has a sharp heartbeat and heavy ache. I'm physically weaker, collapsing every day. My body is heavier. I must lay down every hour. Over one year, organs are showing swift hormonal imbalance and challenge in function: kidneys, digestion, intestines, extremely dry skin.

What has now changed since 2/21/20 is that encountering a set of cell towers on buildings of any street, the painful hum penetrates my entire body. My ear canal intensifies with the sharp energy moving through my head. My heart races, and feels pushed in, creating a sense of suffocation. It feels as though there are hot, thin metal bristles pressing into my skin one inch deep, uniformly my entire body. This exposure continues to be strong and painful for many hours.

All of these areas are in deeper, constant pain now. I feel neurologically burned through my eyes and nervous system, living with this sensation of being neurologically sliced and burned, and experiencing weakened vitality.

Walking by cell towers before 2/21/20 did not produce these effects. There are some buildings having 6 or more cell towers, that beams a laser-sharp effect I feel immediately pressure to the heart and sharpness in the diaphragm, seemingly slicing through my body front to back. It hurts deeply for days after this exposure. Avoiding these towers requires several blocks added distance. Some areas there are multiple rooftops heavily-packed with cell towers.

Now I live West side, District . Towers going up everywhere, every corner on my block. Walking 10th Avenue/Amsterdam many towers there.

I know 2 buildings of residents living in agony unable to lead normal lives.

There is no provision nor protection for individuals' rights and safety concerning cell towers or emf waves. And, these towers, small or large, are not safe. I was injured and also lost my home. Just like that.

Our City is installing Link5G cell towers only feet from homes and schools. Pentagon developed weaponry with 5G immobilizing people. I was immobilized. Years of studies. Now you know what can happen, cell towers shouldn't be used.

Wired broadband is safe, more reliable and adaptable than wifi, cheaper. City needs hearings on health effects of cell towers before a new pandemic -- disabling injury from "5G" cell towers, and increased homelessness.

Telecom companies are removing copper landlines, which the public has paid for. Copper landlines provided telephone communication access through the Blackout in 2003, Hurricane Sandy 2012. Removing copper landlines there is no communication access, no reaching 911. When there is no electricity, there is no way to power cell phones. Are we looking at this?

5G is promising to bridge the "digital divide." My 3G phone was working wonderfully for years. Then, "upgrades" in New York City, the phone no longer functions. I researched for an affordable 4G phone, and having it only 9 months during lockdown, the upgrades then to 5G rendered my phone unusable. The smartphones are greater cost, along with the monthly rates to operate. I no longer have a cell phone. Companies and services now requiring cell phone communications are not accessible. I'm unable to make calls while I am out. A cell phone was a source of coordinating to meet friends and also a source of safety.

Thank you for the opportunity of this hearing for our New York City.

Respectfully,

Lauren Bond

https://www.forbes.com/sites/michaelpeck/2021/03/02/the-pentagon-fears-that-deadly-microwave-weapons-are-undetectable/?sh=ccfac5bcc3f1

First of all, I would like to address the lack of transparency in the implementation of OTI's decision to indiscriminately install 5G towers throughout New York City. It is unconscionable that no say was given to the residents as to the need and placement of these towers in their districts. The one-size-fits-all approach does not apply in a city so large and diverse. It is only an easy way out of not doing the assessment of pinpointing the areas where these towers are actually needed. Such a method leads to wasteful use of tax payers' money that could be used to address other problems. The fact that the name(s) of the telecom provider(s) cannot be disclosed to the public also adds suspicion as to how this agreement was drawn up. Why was carte blanche given to them to decide where to place these towers without requiring justification?

Now, I will address the decision by this/these provider(s) to install 5G towers near schools, playgrounds, and in residential areas. These towers emit high radiation, which has been proven to cause many illnesses, such as cancer, heart problems, etc. The provider(s) claim that 5G is safe and are basing this on older studies that were done before 5G technology existed. Recent studies refute this and even go as far as substantiating that the emissions from these towers are especially harmful to children. Why then are they being erected near schools, playgrounds where they play, and residential areas where they live? (Not to mention that this is contrary to the Mayor's directive to ban cell phones from the classroom by the beginning of the upcoming school year.)

Additionally, there is evidence that the neighborhoods, where some of these towers have been installed, have drawn a problematic element, such as homeless encampments, vandalism, etc. This is especially alarming as it poses security risks for residents and passersby alike.

Lastly, these 5G behemoths look so out of place in residential areas due to their towering size and metal composition. They belong primarily in commercial settings.

Maria Luisa Otalora

Michele Birnbaum
[redacted]
New York, New York 10028
[redacted]

New York City Council Hearing – Committee on Technology
April 29, 2025 10:00 A. M.

Chair Gutierrez and Council Members:

I write to you as a private citizen concerned about the effects of 5 G network installations in our communities and as a Consulting Party for the Park Avenue and upper east side corridor and as a founder and President of HISTORIC PARK AVENUE ® which filed the RFE to have Park Avenue from East 79th to East 86th Street included in the Historic District.

As an active preservationist, I have been appalled by the decision-making process with-regard-to the installation of 32 Foot 5 G Towers in our city with complete disregard for the negative impact their installation has on the aesthetics of our historic districts, landmarks, neighborhood character and sense of time and place.

The procurement of these services, resulting in the City signing contracts with CityBridge and EBI, have not gone through the RFE process and have not allowed input from the community prior to signing.

The agreement to install kiosks and 5 G towers where there is a dearth wireless service in an effort to bridge the digital divide is a breach of the public trust, as this need has not been met, with the kiosks and towers being installed in vast numbers in-order-to promote vast profits while ignoring the actual needs of a community. The technology that is being used will be obsolete within a few years, and the health impact will be seen to be profound. There is already much evidence that the effects of wireless hurt many, and yet, without research and scrutiny, the City of New York felt comfortable signing long-term contracts permitting installation of these networks without significant safety requirements and vigilant oversight.

The Bills before you are primarily concerned with maximum connectivity at the least cost, but dealing with those issues before studying the impact on the health of those routinely exposed will just serve to expose more and more people without any understanding or concern for the ultimate impact.

This is no way to bridge the digital divide. The safe long-term way to connectivity is through safe, wired installation.

The existing contracts, signed, sealed and delivered without a legal bidding process and the appropriate scrutiny, indicate the cavalier attitude the City has to the health and well-being of its citizens and all who walk our streets.

Please re-examine the wireless mandate and the mission of CityBridge and EBI. Is it to provide a needed service which it guarantees to be safe and effective, or is it to secretly bilk our coffers?

Michele Birnbaum

New York City Council Committee on Technology

Honorable Jennifer Gutiérrez, Chair

Oversight and Legislation: Evaluating the City's Plan to Connect all New Yorkers to Internet

April 29, 2025

Testimony of Nell Eckersley, New York City Alliance for Digital Equity (NYCADE)

Good morning, Council Members. My name is Nell Eckersley and I am submitting this testimony today representing the **New York City Alliance for Digital Equity (NYCADE)**. **NYCADE is an umbrella group of individuals, organizations, and coalitions from across New York City working on digital equity and access issues**. Our **vision** is **to ensure every individual and community in New York City has the resources and opportunities to thrive in a digitally-connected world, breaking down barriers to access and fostering a future where digital equity is a reality for all**. Our **mission** is **to champion comprehensive digital inclusivity by uniting coalitions, organizations, and individuals dedicated to equitable access to digital tools, high-speed internet, and digital literacy education resources**. We empower our members through advocacy, education, and collaboration. We understand that this

Committee is considering Int. 1122-2024, a Local Law to amend the administrative code of the city of New York in relation to a plan for expanding home access to broadband internet.

NYCADE **strongly supports the intention of this bill** to develop and publish a plan to make universal, affordable, and equitable internet available in homes throughout the city. We recognize this important effort as building upon the groundwork of the **New York City Internet Master Plan** published in January 2020. This earlier plan also aimed to make the internet affordable and inclusive for City residents and presented a vision for universal connectivity. It recognized that millions of New Yorkers lacked home or mobile broadband and that affordability was a major barrier. The Master Plan laid out a vision for the City's role in shaping broadband infrastructure and service towards universal access. Council Member Gutiérrez has also expressed the desire to "resurrect the Internet Master Plan".

As you move forward with Int. 1122-2024, we urge the Council to ensure that this new plan is **explicitly connected to and mutually reinforcing with the existing ConnectALL New York State Digital Equity Plan**.

The ConnectALL initiative, led by the New York State Empire State Development ConnectALL Office, is a comprehensive statewide effort. Its mission is to build New York State's digital infrastructure to connect all New Yorkers to internet service and ensure they can benefit from being online. This plan is grounded in a theory of change that aligns with the vision of ending the digital divide and ensuring universal access to high-speed, reliable, and affordable broadband. Aligning the City's plan with ConnectALL is key to ConnectALL's overarching strategy. ConnectALL has convened representatives from State

agencies since 2020 to develop strategy and identify partners. They also worked closely with the New York City Office of Technology and Innovation (OTI) to develop recommendations, incorporating insights from City agencies serving covered populations. Furthermore, ConnectALL partnered with **Digital Equity Coalitions (DECs)** and community groups across the state and in every Borough of New York City to host listening sessions, demonstrating a commitment to incorporating local needs. These listening sessions helped solidify regional partnerships and gather baseline data. The ConnectALL plan also includes a Digital Equity Asset Inventory, a searchable database of programs and organizations. This inventory represents a baseline capacity for New York and includes benchmarks for growth.

Connecting the City's plan to this statewide strategy will be crucial for several reasons. Firstly, it will allow for the alignment of efforts towards a common goal of digital equity across the state. Secondly, it will leverage potential state and federal funding opportunities available through programs like the Broadband Equity, Access, and Deployment (BEAD) Program. ConnectALL has already developed a Five-Year Action Plan for the BEAD program. Coordinating with the state plan can ensure that the City's initiatives are strategically positioned to capitalize on these funding streams. Finally, it will ensure a consistent and equitable approach to digital equity for all New Yorkers, regardless of where they reside. The ConnectALL plan itself reviewed existing county and municipal plans, suggesting a framework for integrating local initiatives.

Int. 1122-2024 takes an important step towards addressing digital equity by mandating a plan to make **universal, affordable, and equitable internet available in**

homes. The bill explicitly mentions the need to **prioritize access for areas that do not have at least 1 affordable home internet service option**, which aligns with the affordability concerns addressed by ConnectALL and the earlier Internet Master Plan. The requirement for the department to **solicit public input through public hearings and comments from stakeholders and the public** mirrors the extensive stakeholder engagement undertaken by ConnectALL.

Furthermore, NYCADE respectfully requests that any plan developed under Int. 1122, and indeed any discussion or allocation of internet funding by the City, **explicitly incorporates all the elements defined under digital inclusion**. The ConnectALL plan also reflects this holistic approach in its broad strategies. These elements are:

1. **Affordable, robust broadband internet service:** Int. 1122 specifically mentions "affordable" and "low-cost" home internet. The ConnectALL plan also addresses affordability through strategies like increasing awareness and adoption of internet affordability programs, including the Affordable Connectivity Program (ACP). However, the City's plan should consider a range of affordability solutions and explore sustainable models beyond existing federal subsidies, aligning with ConnectALL's broader goal of ensuring affordable broadband. The importance of "reliable broadband" is also noted in ConnectALL's mission and the comments received during its development.
2. **Internet-enabled devices that meet the needs of the user:** The ConnectALL plan includes an "Accessible Device & Device Support Strategy". The City's plan

should include provisions for device access and support, potentially coordinating with statewide efforts and exploring device refurbishment programs as suggested in the ConnectALL feedback.

3. **Access to digital literacy training:** The ConnectALL plan has a dedicated "Digital Literacy Strategy" and recognizes its critical role. The City's plan should build upon existing digital literacy assets, such as libraries and community-based organizations, and ensure coordination with any statewide digital literacy initiatives under ConnectALL. Several public comments on the ConnectALL plan emphasized the importance of digital literacy training and support. The City of New York already has a "**Neighborhood Tech Help**" initiative, demonstrating the need for such support.

4. **Quality technical support:** The need for technical support is evident in the ConnectALL plan, particularly regarding device support and assisting individuals with online portals. The City's plan should consider providing quality technical support, potentially by investing in digital navigator programs and supporting existing community-based support networks, aligning with suggestions made during the ConnectALL public comment period.

5. **Applications and online content designed to enable and encourage self-sufficiency, participation, and collaboration:** ConnectALL aims to improve civic and social engagement through digital access. The City's plan should prioritize the accessibility and usability of online city services and resources, ensuring they meet

the diverse needs of all residents, including those with disabilities and language barriers, echoing concerns raised during ConnectALL's development.

Finally, Int. 1122-2024 proposes the creation of an **internet advisory board**. To ensure the plan is truly effective and reflects the needs of all New Yorkers, NYCADE respectfully requests that this board includes **representation from organizations actively working on digital equity in New York City**, including the New York City Alliance for Digital Equity, as well as other community-based practitioners with direct experience in addressing the digital divide. Their expertise and on-the-ground knowledge will be invaluable in reviewing plans and making recommendations for policy related to internet access and infrastructure needs in the city. ConnectALL also emphasizes the importance of supporting existing organizations with community trust.

By explicitly connecting the City's plan to the ConnectALL New York State Digital Equity Plan, by ensuring that all discussions and initiatives related to internet funding encompass these five essential elements of digital inclusion, and by including experienced digital equity advocates on the internet advisory board, the City Council can create a truly effective and sustainable framework for achieving universal, affordable, and equitable internet access for all New Yorkers. This coordinated and comprehensive approach will maximize the impact of both city and state efforts and ensure that no one is left behind in the digital age.

Thank you for your time and consideration of our testimony. We look forward to working with the Committee on Technology to advance digital equity in New York City.

Written Testimony of Samantha Wolner
[redacted]
Hearing of New York City Council Committee on Technology
April 29, 2025 at 10am

My name is Samantha Wolner. I am a lifelong resident of Forest Hills, Queens, and I have worked in scientific publishing for over a decade. I write to you with a dual purpose: 1) to support digital accessibility; and 2) to support said accessibility with wired technology in an effort to prioritize health, safety, and sustainability with proper advisement, due diligence, and community support. These twin goals are easily achievable simultaneously. I write this in response to the recent installation of a Link5G tower on Juno Street and 69th Avenue in front of P.S. 144 in Forest Hills, which is not wanted or needed by members of this community.

I. This Committee has the power to prevent the unregulated widespread installation of wireless infrastructure.

Given the significant health risks posed by the growing number of wireless infrastructure, the installation of wireless infrastructure should not be done in a laissez-faire, unrestricted manner in the obscurity of this unregulated landscape. I strongly urge the Committee on Technology to consider the health and sustainability implications of installing 5G towers and related infrastructure throughout New York City, and to a) develop a multi-pronged method to approve future wireless installations in the city; b) develop compliance guidelines for any active wireless installations; and c) implement an enforcement mechanism for such compliance guidelines, such as a civil penalty, on any wireless infrastructure operators and/or installers.

Although some regulatory agencies consider non-ionizing wireless radiation "safe," the World Health Organization has classified it as a Class 2B possible carcinogen, and its effects on biological systems have been well documented. However, the United States Federal Communications Commission (FCC) has not updated or changed its regulations since 1996 in spite of the ongoing advancement and research into the adverse health effects of short-term and/or long-term exposure to wireless technologies. Since 1996, when dial-up internet was still the norm, wireless radiation has increased substantially and will likely continue to increase in the near future. Link 5G towers and small cell towers continue to be installed on top of and in close proximity to both schools and residences. The scientific evidence points toward irreversible adverse health effects, and my hope is that this governmental body will exercise its power and judgment to mitigate those negative effects.

II. The recent scientific research demonstrates the dangers that the increasingly powerful wireless infrastructure has on the human population subjected to its radiation.

As early as 2003, exposure to radio frequency electromagnetic fields was shown to damage the permeability of the blood-brain barrier, as published in *Environmental Health Perspectives*[1], shown below:

[1] Sanford, L.G., et al. 2003. Nerve cell damage in mammalian brain after exposure to microwaves from GSM mobile phones. *Environmental Health Perspectives* 111:881-883. https://doi.org/10.1289/ehp.6039

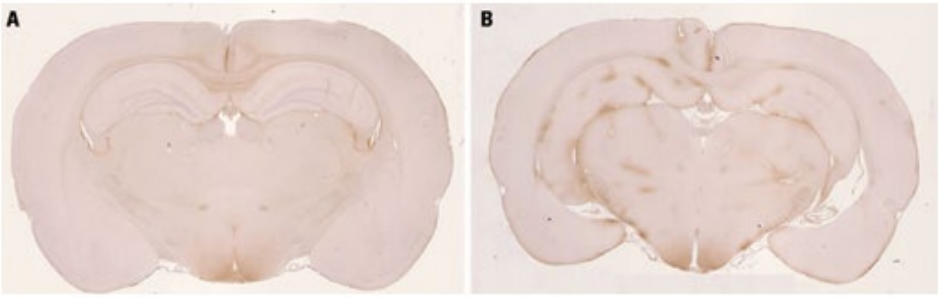


Figure 1. Cross-section of central parts of the brain of (*A*) an unexposed control rat and (*B*) an RF EMF-exposed rat, both stained for albumin, which appears brown. In (*A*), albumin is visible in the central inferior parts of the brain (the hypothalamus), which is a normal feature. In (*B*), albumin is visible in multiple small foci representing leakage from many vessels. Magnification, about ×3.

In 2024, it was demonstrated that electromagnetic radiation caused necrosis in embryonic cells and decreased embryonic viability. The following two figures are from this study, published in *Zygote*[2]:

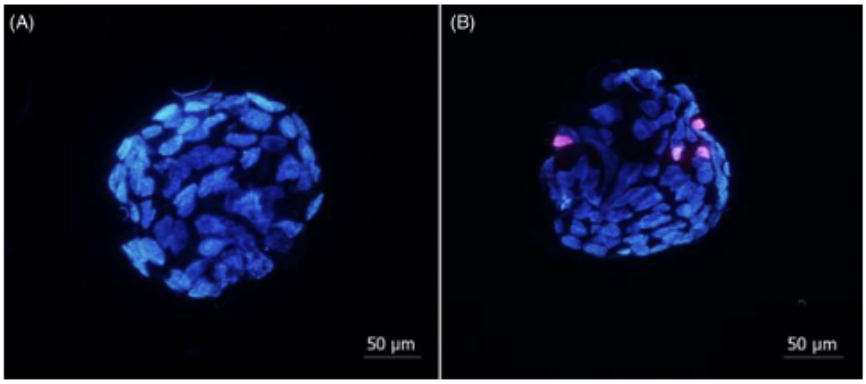


Figure 1. Cell viability evaluation using Hoechst and propidium iodide (PI) staining. (A) Control group, all cells are viable, as indicated by the dark blue colour. (B) Experimental group, necrotic cells are shown in red, whilst live cells are represented by the dark blue colour.

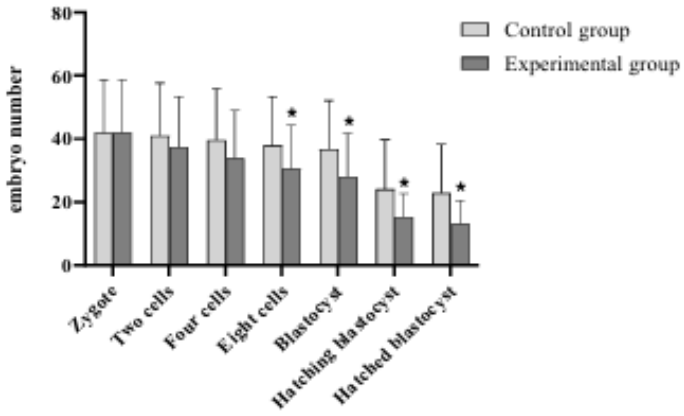


Figure 6. Fewer embryos were observed in the experimental group compared with the controls at the 8-cell, blastocyst, hatching, and hatched stages ($P < 0.05$).

[2] Seify, M. et al. 2024. Detrimental effects of electromagnetic radiation emitted from cell phone on embryo morphokinetics and blastocyst viability in mice. *Zygote* 32:149-153. https://doi.org/10.1017/S0967199424000042

Additionally, a 2020 study published in the *Journal of Chemical Neuroanatomy*[3] showed DNA damage in brain cells after exposure to electromagnetic radiation:

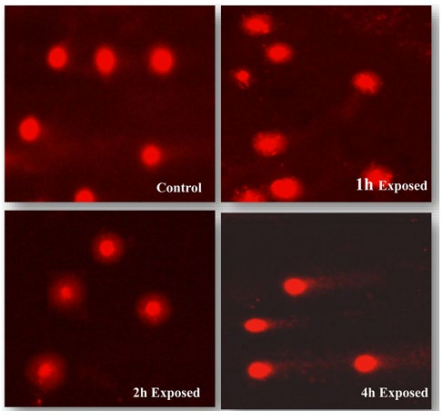


Fig. 6. Micrograph of control showing damage DNA in brain cells. Slide shows ethidium bromide stained nuclei after EMR and analyzed using florescence microscopy (Magnification 10 X) DNA migration was analyzed by image analysis.

Studies on wireless radiation exposure in honeybees published in 2022[4] and 2025[5] discovered the following biological effects: a significant decrease in the survival rate of honeybee larvae; a significant increase in the mortality of honeybee queens; changes in metabolism, neurotransmitter function, and gene/protein expression; an increase in the permeability of the blood-brain barrier; and damage to stomach cells, all of this ultimately contributing to what scientists call colony collapse disorder.

In a 2022 study of electromagnetic radiation exposure in fruit flies[6], it was reported that electromagnetic radiation induced genomic instability, behavioral abnormalities, genotoxic effects, and tumor progression and invasion. Studies involving rats have shown that electromagnetic radiation induces oxidative stress, inflammation[7], nerve cell damage[8], apoptosis—-otherwise known as cell death[9]—and mitochondrial dysfunction in DNA[10]. These studies represent just a mere fraction of the scientific literature on this topic and provide clear evidence that electromagnetic radiation negatively impacts biological systems and ecologies.

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[3] Sharma, S. and S. Shukla. 2020. Effect of electromagnetic radiation on redox status, acetylcholine esterase activity and cellular damage contributing to the diminution of the brain working memory in rats. *Journal of Chemical Neuroanatomy* 106. https://doi.org/10.1016/j.jchemneu.2020.101784

[4] Li, Y. et al. 2022. Extremely low-frequency electromagnetic field impairs the development of honeybee (*Apis cerana*). *Animals* 12. https://doi.org/10.3390/ani12182420

[5] Singh, G. and A. Rana. 2025. Honeybees and colony collapse disorder: Understanding key drivers and economic implications. *Proceedings of the Indian National Science Academy*. https://doi.org/10.1007/s43538-025-00399-x

[6] Cappucci, U. et al. 2022. WiFi related radiofrequency electromagnetic fields promote transposable element dysregulation and genomic instability in *Drosophila melanogaster*. *Cells* 11. https://doi.org/10.3390/cells11244036

[7] Megha, K. et al. 2015. Low intensity microwave radiation induced oxidative stress, inflammatory response and DNA damage in rat brain. *NeuroToxicology* 51:158-165. https://doi.org/10.1016/j.neuro.2015.10.009

[8] Sanford, L.G., et al. 2003.

[9] Panagopoulos, D.J. et al. 2007. Cell death induced by GSM 900-MHz and DCS 1800-MHz mobile telephony radiation. *Mutation Research/Genetic Toxicology and Environmental Mutagenesis* 626:69-78. https://doi.org/10.1016/j.mrgentox.2006.08.008

[10] Megha, K. et al. 2015.

3. Digital accessibility must be sought and obtained using methods that have been approved by this Committee, and that will not put the very same individuals who would otherwise benefit from digital accessibility initiatives at risk for serious adverse health effects.

Digital accessibility should be implemented in a healthy way. For example, such accessibility can be implemented with wired technology, which is far more sustainable and, most importantly, would significantly reduce or even avoid the use of electromagnetic radiation.

4. This Committee could facilitate the implementation of appropriate oversights to protect and to enrich the lives of New Yorkers.

I reiterate my request for this Committee to a) develop a multi-pronged method to approve future wireless installations in the city; b) develop compliance guidelines for any active wireless installations; and c) implement an enforcement mechanism for such compliance guidelines, such as a civil penalty, on any wireless infrastructure operators and/or installers. The Link5G towers in particular have been erected with little to no community outreach or feedback facilitated by the Office of Technology and Innovation and have been appearing on our streets without consideration for the potential negative impact on property values and long-term effects of exposure on health. If this trend continues, all New Yorkers will find themselves living in colliding and compounding fields of radiation whose levels will be so high in certain locations that adverse health effects will no doubt similarly rise in frequency.

Respectfully,
Samantha Wolner
[redacted]

April 28, 2025

Dear New York City Council,

I am writing as a concerned resident of the Greenpoint-Williamsburg area of Brooklyn against the installation of 5G Small Cell antenna towers and specifically against the one installed right outside my building at direct height with my bedroom window at 56 Norman Avenue. Many of the towers in the Greenpoint-Williamsburg area placed very close to windows of apartments (as the outside my window is), near pre-schools and parks, affecting a densely populated area.

There is evidence that radiation from these systems, emanating from a constant location in close proximity to residences, is incredibly dangerous and can cause cancers, neurological effects and other illnesses. Pregnant women and young children are at an even greater risk from these systems. Exposure to radiation from this technology has a cumulative impact, as they are "emitting radiation 24/7 daily" into densely crowded areas *WHERE PEOPLE LIVE AND SLEEP.* The one outside of my building at Norman and Guernsey has a level 3 (out of 5) radiation danger warning signs on it. It is positioned precariously on a light pole that sways precariously in high winds.

The lack of transparency about health and environmental issues by the corporations installing this technology, along with the government agencies supporting them, is putting the public at a great health risk. I highly recommend reaching out to Theodora Scarato, the Executive Director of the Environmental Health Trust https://ehtrust.org who has been working on educating the public on the health dangers of 5G.

Many communities in NY and across the 50 states have demanded moratoriums and removal of the 5G Small Cell antenna towers, citing health and environmental concerns, impacts on historic preservation landmarks and property values. Why are we blanketing the community with them??

As far as I can find, there were no community discussions on the placement of the 5G Cell antenna system outside of my building. There is a group of us who live around this tower that have been reaching out to our Assembly representatives to become better informed about these and to educate themselves about the dangers of this technology and share this information with all their constituents. You don't need to just roll over because some corporation or this government wants to use our streets and citizens as guinea pigs in this experiment (and, I'm guessing, give the opportunity for some entity to make some money in the process), only to find out 10-15 years that we all have cancer from sleeping next to this ticking time bomb.

My final request is the removal of this 5G Small Cell antenna system outside of my building at 56 Norman and to not put up anymore in the Greenpoint-Williamsburg neighborhoods.

Sincerely,

Summer McCorkle
[redacted]
Brooklyn NY 11222

Wednesday, April 30th 2025

To Whom It May Concern,

I am the mother of two children who attend The School at Columbia University, and I am writing to formally submit my testimony in opposition to the 5G tower that was recently installed just steps away from the school's main entrance.

The installation took place last summer. According to both the City and Verizon, the tower has not yet been activated, and safety testing is still ongoing. This particular 5G tower is omni-directional, designed to provide wide-area coverage. In conversations with Verizon representatives, I was informed that standing beneath the tower poses no health risk; however, standing in front of it does. A warning label is affixed to the base of the tower, advising people to "stay back," but no specific distance is given. Given the tower's close proximity and eye-level alignment with high-traffic areas of the school, I am deeply concerned about the potential long-term radiation exposure to students, including my own children.

Verizon has stated that the tower's purpose is to improve mobile streaming capabilities for pedestrians passing by. I was told this quite plainly by a company representative. From my continued discussions with them, it is clear the tower was not installed to serve the local residents or the school community. In fact, there is already a LinkNYC kiosk located at the corner of 110th and Broadway, suggesting that pedestrian connectivity needs are already being met. If this tower is serving no clearly defined need, yet carries potential health risks—particularly to children—it raises serious questions about its placement.

Having listened to the Committee of Technology hearing and public testimonies on 4/29/25, I understand that most neighborhoods are not experiencing a shortage of mobile data coverage or internet access. Furthermore, none of the non-profit organizations serving our communities have indicated a demand for increased wireless infrastructure based on the needs of the communities they assist.

This prompts a critical question: whom does this tower near The School at Columbia University truly serve? The surrounding properties are comprised of multimillion-dollar homes and high-end rentals—residents who already have reliable internet access. The school itself is not experiencing connectivity issues. Meanwhile, the children, who spend up to eight hours per day on-site, are placed directly in harm's way—unnecessarily and without their parents' informed consent.

To be clear, I fully support expanding infrastructure to underserved communities that genuinely lack access. That is both just and necessary. However, placing 5G towers in neighborhoods that do not require them—particularly in such close proximity to a school—is not only wasteful, but potentially hazardous. I respectfully urge that this tower be relocated to a location where it can provide meaningful benefit without placing children at risk.

I appeal to each of you not only as policymakers, but as individuals—many of you parents, aunts, uncles, or guardians yourselves—to ask a simple but profound question: If given a choice, would you willingly place something potentially harmful near your own children or loved ones?
The answer, I believe, would be a resounding "no."

Attached to this letter is a brief summary of what other cities, towns in the United States and municipalities around the world are doing to mitigate exposure to radiation, especially for vulnerable populations. This information is readily available to the public and I encourage you to review it with care. I implore you to consider the well-being of the children at The School at Columbia University, who are learning, playing, and growing in this environment five days a week. Please do not allow them to become test subjects in an ongoing experiment on the health impacts of radiation exposure.

I am calling for transparency, open dialogue, and greater public input on the future of 5G infrastructure in our communities. I urge you to support measures that allow for the reconsideration and relocation of towers already installed near schools.

Please be the change-makers our children learn about in the classroom. Support legislation that fosters further research into wireless technologies and their effects. Let us lead the way as a city that both embraces technological advancement and upholds public health, especially the health of the next generation.

With sincere gratitude for your time and consideration,

Victoria Susnjar
[redacted]

U.S. States with Cell Tower Restrictions Near Schools

Weston Elementary School, Ripon, California (2019):
Incident: Four students were diagnosed with cancer, leading parents to question the proximity of a cell tower on school grounds.
Action Taken: Sprint deactivated and planned to relocate the tower, despite asserting its compliance with safety standards.

Washington Elementary School, Wyandotte, Michigan (2023):
Incident: Community members protested the installation of T-Mobile 5G equipment on school property, citing health concerns.

Trinity Elementary School, Williamson County, Tennessee (2023):
Incident: A 5G cell tower was erected approximately 587 feet from the school, leading to community apprehension about potential health dangers.
Tennessee Conservative Community Response: Hundreds signed a petition requesting the tower's relocation to a distance of at least 1,500 feet from the school.

Massachusetts: Shelburne imposes a 3,000-foot setback for schools and 1,500 feet for homes. Towns like Pittsfield and Shrewsbury have halted or removed cell towers due to health concerns near schools.

Bar Harbor, Maine: Establishes a 1,500-foot setback for schools.

California: Calabasas; Requires a 1,000-foot setback for Tier 2 wireless facilities from schools, homes, and parks.Encinitas; Prohibits antennas within 500 feet of residential dwellings, daycare facilities, or schools.

Colorado: Boulder County has restricted 5G installations, including around schools, through zoning codes.

Tarrytown, New York:
Situation: Residents protested against a cell tower near a public housing complex and playground.
Outcome: The cell tower was removed, showcasing the effectiveness of public opposition.

Copake, New York:
Establishes a 1,500-foot fall zone from homes, schools, churches, or other buildings containing dwelling units.

Some municipalities (e.g., Scarsdale, Baldwin, and parts of Long Island) have rejected or restricted towers near schools.

🌐 International Countries That Have Banned or Restricted Cell Towers Near Schools

France
Policy Type: National precautionary approach
Details: Banned Wi-Fi in preschools. Official guidance limits RF exposure in schools and encourages wired connections.

Belgium
Policy Type: Regional bans and radiation limits
Details: Brussels halted 5G rollout in 2020 due to radiation concerns. Some regions restrict tower placement near schools.

India
Policy Type: Judicial + local bans
Details: Supreme Court rulings led to tower removals in some areas. Rajasthan banned towers within 500 meters of schools and hospitals.

Switzerland
Policy Type: Federal and canton-level pause
Details: Cantons like Geneva temporarily halted 5G rollouts near sensitive areas, including schools, pending further safety evaluations.

Italy
Policy Type: Municipal restrictions
Details: Several local governments (e.g., in Rome suburbs) limited placement of mobile towers near schools and hospitals.

Spain
Policy Type: Local ordinances
Details: Some towns (e.g., Segovia, Valladolid) removed towers near schools after community protests.

Israel
Policy Type: Government health recommendations
Details: Ministry of Health urges minimizing EMF exposure for children; some schools voluntarily removed nearby antennas.

Australia
Policy Type: Local council decisions
Details: In parts of Melbourne and Sydney, cell tower approvals near schools have been paused or denied based on community feedback.

Germany
Policy Type: Regional guidelines
Details: Certain German states recommend placing towers away from schools as part of a precautionary strategy.

Argentina
Policy Type: Provincial legislation
Details: Some provinces (e.g., Mendoza) passed laws restricting mobile phone towers within a certain radius of schools and kindergartens.

Good morning, everyone,

I am angry at how the city has yet again ignored the complaints and opposition of the community's residents. This time, they are choosing to listen to a paid contract with a wireless provider over those who live in the communities, claiming that there is a service gap and that placing these unwanted towers will help bridge the supposed divide.

I am a resident of Forest Hills, in the quieter part of the neighborhood. A 5-minute walk from the subway transports you to tree-lined streets and Tudor-style homes, giving you the feeling you aren't in New York City anymore.

I attended my community board's committee meeting in October, where OTI gave a presentation. During this presentation, OTI could not correctly describe the block that the undisclosed provider chose. They made statements that multi-story buildings would surround the tower. They shared that the provider with the paid contract claimed a need for increased 5G service but could not provide any evidence or research to support it. They even went so far as to justify placing it near a school with stories of High schoolers streaming YouTube videos. But in the chat, the block's residents made it clear that the only multi-story building surrounding the tower is an elementary school. Across from it, there are only single-family homes. Most importantly, the residents and the Community Board repeatedly told OTI that there were no reported complaints about a gap in service in the area.

I'm angry because the city believes it has devised a plan to solve a problem that doesn't affect every community in New York City. However, they don't consider the issues affecting all communities because they don't ensure the technology is safe. This plan only follows the money while depreciating our property values and harming our health.

No one wants to buy a home across the street from a radiation tower, but the city tells us every year that our property is worth an amount that no buyer is willing to pay so long as that tower exists. Thanks to an algorithm used to determine property value, the city directly increases the property taxes that residents have to pay.

They refuse to substantiate their claims that the technology is safe because they haven't been able to provide a report that supports their claims. Meanwhile, plenty of research and studies have been conducted, with the end result stating that 5G towers should be placed at a minimum of 500 meters from any school, hospital, or residential community.

So when residents become severely ill as a result of massive amounts of non-stop wireless radiation exposure and become saddled with equally massive medical bills, the

city will once again not be aiding its constituents but saddling them with more burdens and equity gaps.

In addition to emitting astronomical amounts of wireless radiation 24/7, this tower has a Wi-Fi hotspot, charging ports, and a free payphone. None of it is warranted in our community. But time will bring back that unsavory element that residents worked hard to remove from our streets. Families will avoid coming to the playground if they feel their children aren't safe while playing there.

None of us has anything to gain from this tower. There isn't financial relief for us residents; it will only cost us more financial grief in the form of wasted tax dollars, increased police patrols, loss of property value, and medical bills. This city initiative poses more threats to the residents than benefits. I am tired, angry, and thoroughly frustrated that time and time again, the city continues to drain our wallets while claiming to provide aid in various forms, all the while not listening to us.

So, please listen to your angry residents. Thank you.

The 5G Tower on Juno Street, Forest Hills, should be removed because:

The argument that the community needs it because there is a gap in service is baseless. People do not need free Internet access, they never asked for it. PS 144 does not have any need for it.

Contrary to what was said there are no tall buildings on this street. Who is this tower going to help, the birds!

The siting of the tower does not take into account the risks young children of PS144 will be exposed to daily.

Since it is also a charging station it will attract people who do not belong around an elementary school.

The company that is behind these 5G tower is not going to tell you about the health risks they cause , cancer to cite only one.

Would you want a 5G Tower to be installed by your children's school? I doubt it.

No one in our community needs this tower, children do not need it. The tower must go.

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: 4/29/25

(PLEASE PRINT)

Name: Samantha Wright, Associate Commissioner, External Partnerships

Address: _____

I represent: OTI

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: Neelesh Shah, Asst. Commissioner, Technology

Address: 1 Centre St 10th

I represent: DCAS-IT

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: 4/29/25

(PLEASE PRINT)

Name: Chantal Serpas, Deputy Commissioner, Legal Matters

Address: _____

I represent: OTI

Address: _____

Please complete this card and return to the Sergeant-at-Arms

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: 4/29/25

(PLEASE PRINT)

Name: Brett Stoff, Exec Director, Friends of Broadway

Address: _____

I represent: DTI

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☑ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: [illegible]

Address: _____

I represent: The Grant Community Institute

Address: [illegible]

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

2

I intend to appear and speak on Int. No. _____ Res. No. _____

☒ in favor ☐ in opposition

Date: 29 APRIL 25

(PLEASE PRINT)

Name: NOEL HIDALGO

Address: [redacted] BK, NY

I represent: BETANYC / FCNY

Address: 121 6TH AVE, MANHATTAN

Please complete this card and return to the Sergeant-at-Arms

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. 1122 Res. No. _____

☐ in favor ☐ in opposition

Date: 4/29/25

(PLEASE PRINT)

Name: ALEX SPYROPOULOS

Address: _____

I represent: TECH:NYC

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

4

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: 4/29

(PLEASE PRINT)

Name: Michael Santorelli

Address: Jackson Heights

I represent: ACLP at New York Law School

Address: 185 W. Broadway

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. 1122 Res. No. 2024

☒ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: Ash Wolfson

Address: 665 Central Ave

I represent: NYC Mesh

Address: _____

Please complete this card and return to the Sergeant-at-Arms

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

6

I intend to appear and speak on Int. No. _____ Res. No. _____

☒ in favor ☐ in opposition

Date: 4/29/2025

(PLEASE PRINT)

Name: Keziah Sullivan Donna Kavanaugh

Address: [redacted] Bronx NY 1468

I represent: _____

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. 1324, 1453, 1483 Res. No. _____

☐ in favor ☒ in opposition

Date: _____

(PLEASE PRINT)

Name: OLETTE WILKINS

Address [redacted] Forest Hills, NY 11375

I represent: WIRED BROADBAND, INC.

Address: PO Box 750401 FOREST HILLS, NY 11375

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. 0483 Res. No. _____

☐ in favor ☒ in opposition

Date: _____

(PLEASE PRINT)

Name: Susan Peters

Address: [redacted]

I represent: New Yorkers For Wired Tech

Address: _____

Please complete this card and return to the Sergeant-at-Arms

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card 9

I intend to appear and speak on Int. No. ______ Res. No. ______

☐ in favor ☐ in opposition

Date: ______

(PLEASE PRINT)

Name: OTALORA

Address: [redacted]

I represent: Forest Hills

Address: ______

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card 10

I intend to appear and speak on Int. No. ______ Res. No. ______

☑ in favor ☐ in opposition

Date: ______

(PLEASE PRINT)

Name: Jose L Rodriguez

Address: [redacted] NYC NY 10023

I represent: Caribbean Preparedness and Response

Address: ______

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card 11

I intend to appear and speak on Int. No. 1122 Res. No. ______

☒ in favor ☐ in opposition

Date: ______

(PLEASE PRINT)

Name: JULIE MARDIN

Address: [redacted]

I represent: ______

Address: ______

Please complete this card and return to the Sergeant-at-Arms

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card | 12

I intend to appear and speak on Int. No. _____ Res. No. _____

☒ in favor ☐ in opposition

Date: 4/30/25

(PLEASE PRINT)

Name: ANDREW RASIEJ

Address: [redacted]

I represent: CIVIC HALL

Address: 124 EAST 14TH ST

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card | [redacted]

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: JAMES FORD

Address: [redacted] NY, NY

I represent: WE THE PEOPLE TRUTH-today MEDIA

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card | [redacted]

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☒ in opposition

Date: April 29, 2025

(PLEASE PRINT)

Name: Sharon Brown

Address: [redacted] Jamaica NY 11436

I represent: Rose of Sharon Enterprises

Address: [redacted] BRUN NY 11238

Please complete this card and return to the Sergeant-at-Arms