TOWN OF BEDFORD

WIRELESS TELECOMMUNICATION INFRASTRUCTURE ANALYSIS



OVERVIEW

Smartphones and smart wireless devices are a fixture of every-day life for millions of people. In 2021, the number of unique mobile internet users globally was 4.32 billion with over 90% using a wireless device to connect. Consumers using these devices expect fast and uninterrupted network connections to the internet, maps, files, videos, news, music, along with the myriad of available applications. For these devices to function optimally a lot of bandwidth is required. To facilitate the device demands, antennas mounted on towers or other elevated infrastructure is necessary.

Functionality is best when the signal transmits directly from the antenna to the consumer's wireless device(s) without obstruction from buildings, trees and/or ridgelines. Macro cell wireless facilities provide the greatest flexibility and coverages for wireless service providers. Without obstructions these facilities can generally cover a two-mile geographic radius in more densely populated areas and about a four-mile radius in suburban and rural areas. Small wireless facilities can be utilized in more populated areas to provide additional services where capacity overloads may be an issue or in areas with viewshed sensitivities. These small wireless facilities typically have approximately a quarter mile service radius.

Coverage gaps result from having facilities with a lot of obstructions, too few antennas within a particular service area or in areas where network capacity overloads occur. Capacity overloads are when the number of wireless subscribers using their devices simultaneously exceeds the performance capability of the wireless facility. In this scenario, additional antenna infrastructure is necessary to densify capacity in that area.

Understanding, evaluating and planning for a well-designed wireless system begins with identifying all existing towers and base stations.

WIRELESS INFRASTRUCTURE INVENTORY

The existing wireless facilities in Bedford have been assessed, mapped and analyzed in order to map their coverages to uncover areas with gaps in services. From that analysis the number of new wireless facilities anticipated in the Town over the next ten years can be estimated.

The Bedford Study Area is defined as the Bedford jurisdictional boundary and a one-mile perimeter surrounding the Town. As of January 1, 2023 there are a total of 37 facilities verified within the Bedford Study Area. The facilities consist of 27 towers and 10 base stations. Of these towers and base stations, 15 are outside of the Town within the one-mile perimeter, two are approved but not constructed yet and three are inquiries.

Within the Bedford jurisdictional boundary there are specifically 23 sites consisting of 11 existing towers, two approved but not built towers, three tower inquiries and seven existing base stations. There are 13 sites that are used for public safety purposes, two that are public safety and macro cells, 19 sites located on public property and 20 sites that are non-concealed.

Bedford is the only community in the NWC Study Area with a small wireless facility deployment plan. These sites are all inquiries and if constructed as anticipated will be as concealed short utility poles on public properties along the Saw Mill River Parkway corridor. There is one approved but not built monopole on Town-owned property on the west side of the Saw Mill River Parkway which once constructed will host future macro cell antennas along with public safety equipment. A second approved but not built monopine tower is to be located in the eastern part of the Town.

The following *Table B1* summarizes the total number of sites and identifies the inventory by structure type, antenna type, location and design. The inventory of facilities are further depicted on corresponding maps as follows: *Figure B1* Structure Type, *Figure B2* All Antenna Type, *Figure B3* PWSF Antenna Type, *Figure B4* Location and *Figure B5* Design Type.

Greater site detail including facility picture, location map, ownership, providers, type of facility along with any other pertinent individual site information can be found in the Bedford Wireless Inventory Catalog in *Appendix B1*.

BEDFORD STUDY ARE	A	INSIDE JURISDICTION ONE-MILE PERIM		PERIMETE	:R				
	TOTAL 37	Existing	Approved Not Built	Proposed Under Review	Inquiry	Existing	Approved Not Built	Proposed Under Review	Inquiry
STRUCTURE TYPE									
Towers	27	11	2	0	3	10	0	1	0
Base Stations	10	7	0	0	0	2	1	0	0
ANTENNA TYPE									
Macro Wireless	15	5	1	0	0	8	1	1	0
Small Wireless	3	0	0	0	3	0	0	0	0
Public Safety/Macro	5	0	2	0	0	3	0	0	0
Public Safety	13	12	0	0	0	1	0	0	0
Other	1	1	0	0	0	0	0	0	0
LOCATION									
Private Property	9	1	1	0	0	6	0	1	0
Public Property	24	15	1	0	3	4	1	0	0
Utility Easement	1	1	0	0	0	0	0	0	0
ROW	3	1	0	0	0	2	0	0	0
DESIGN TYPE									
Concealed	7	0	0	0	3	2	1	1	0
Semi-Concealed	4	1	1	0	0	2	0	0	0
Non-Concealed	26	19	0	0	0	7	0	0	0

Table B1: Inventory by Structure Type

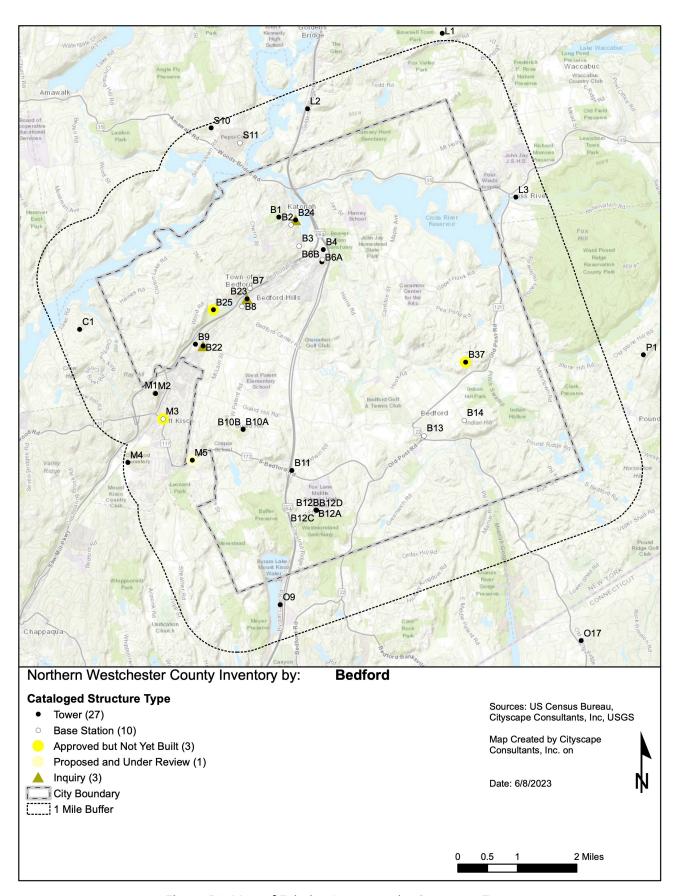


Figure B1: Map of Existing Inventory by Structure Type

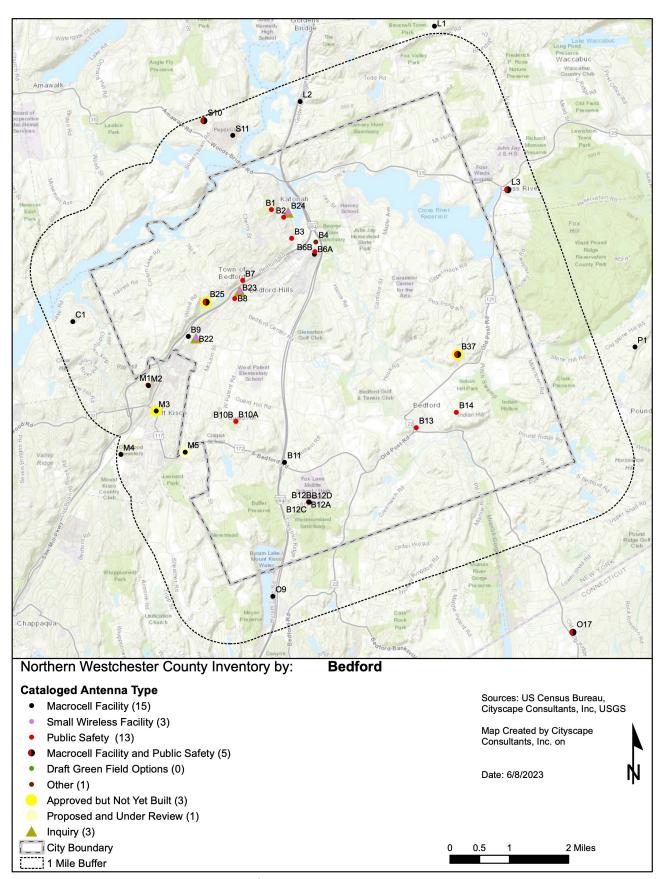


Figure B2: Map of Existing Inventory by All Antenna Type

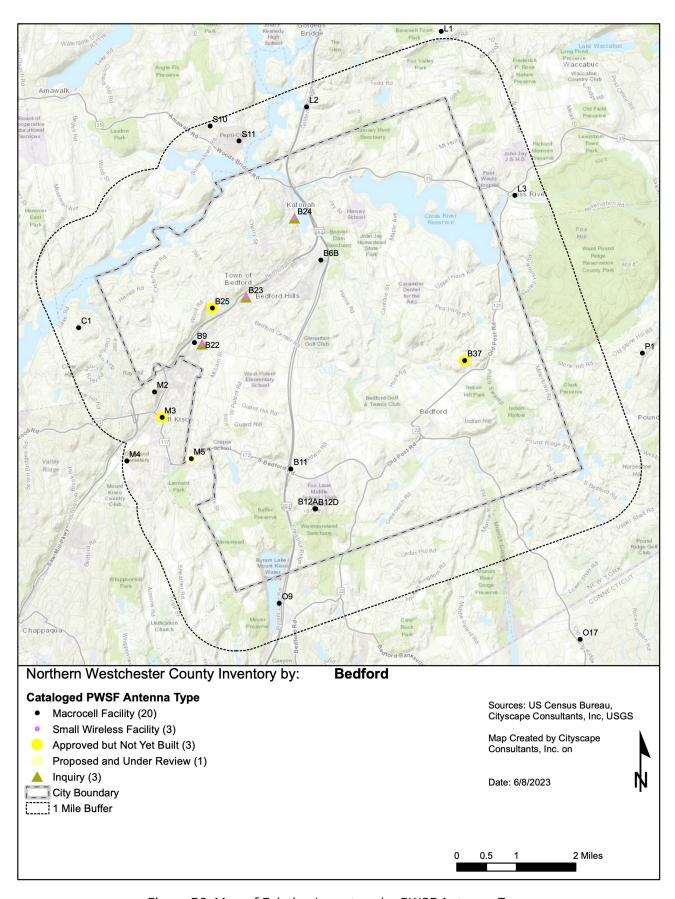


Figure B3: Map of Existing Inventory by PWSF Antenna Type

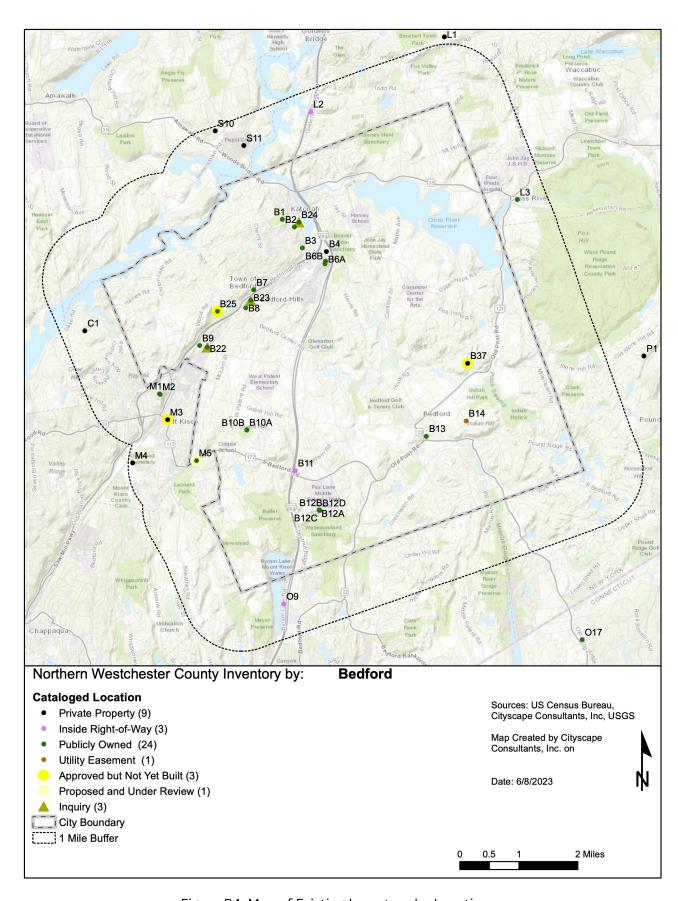


Figure B4: Map of Existing Inventory by Location

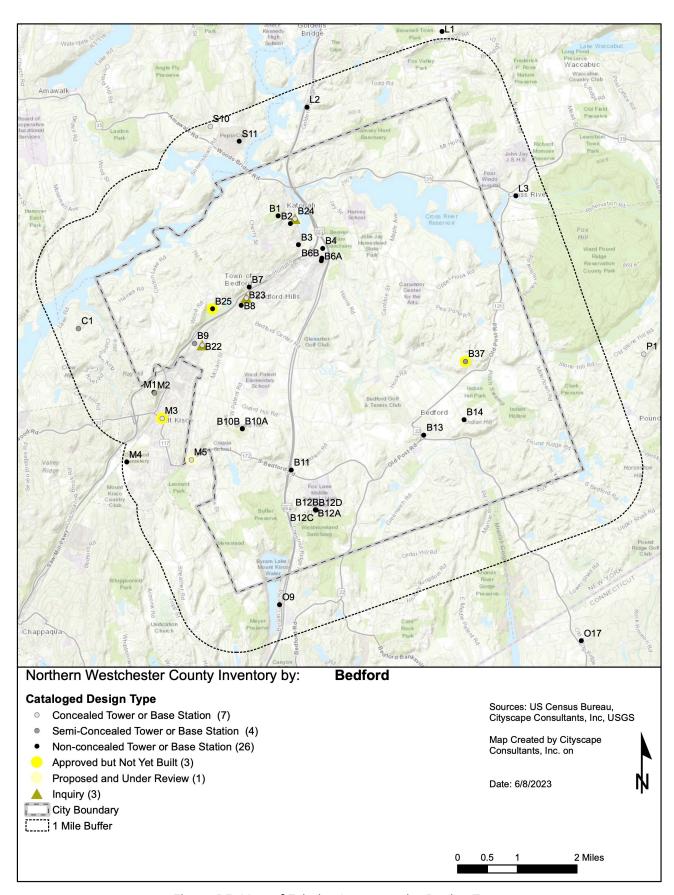


Figure B5: Map of Existing Inventory by Design Type

PROPAGATION MAPPING AND SIGNAL STRENGTH

Propagation mapping is a tool used to simulate antenna signal strength. Signal strength is a term used to describe the level and operability of a wireless device. The stronger the signal between the elevated antenna and the wireless handset device the more likely the device and all the built-in features will work as expected. As a wireless device approaches the outer edge of the antenna's service area, the signal strength becomes more prone to degradation, particularly as usage in the area increases or environmental conditions worsen.

A reduced signal causes unsatisfactory service, results in slow download or upload speeds and can cause dropped calls. Other factors affecting signal strength are any natural or man-made obstructions such as location of buildings, type of building materials, vegetation, humidity or weather that comes between the antenna and devices. The use of devices indoors or outdoors is also a factor when determining signal strength. Consider this much like a light bulb in a lamp; the further away you are from the lamp, the dimmer the light becomes. Any obstructions in between you and the lamp dims or obscures the light, just like signal strength.

The following propagation map provided in *Figure B6* illustrates simulated predicted coverage from the existing and approved but not built personal wireless service facility (PWSF) sites for wireless service providers operating in the Town. The map is generated using mid-band frequency spectrum (1700-2400 MHz) assuming maximum operating power from each of the towers or base stations. This simulated propagation considers a generic antenna model similar to those used by wireless service providers and assumes each provider is located at the highest mounting height on each facility represented.

The gradation of colors from yellow to blue represents the signal strength emanating from each personal wireless service facility. The geographic areas in yellow identify superior outdoor and indoor signal strength, green equates to areas with average in vehicle signal strength and shades of blue symbolize acceptable or poor outdoor signal strength. Areas with no shades show marginal, spotty or no signal. A quick reference of the shades and descriptions are as follows in *Table B2*.

SIGNAL STRENGTH COLOR	dBm	SIGNAL STRENGTH DESCRIPTION
Yellow	> -75	In Building
Green	-95	In Vehicle
Blue	-105	Outdoor
Gray or White		Marginal or No Service

Table B2: Signal Strength Description

This modeling assumption gives an estimation of the wireless coverages in the Town if each service provider was located on each facility. It is noted that not all service providers are on every tower or base station but the goal is to maximize the existing infrastructure already in place to accommodate other providers.

There are 18 existing towers and base stations within Bedford's jurisdictional boundary, but only five of these facilities have antennas used for commercial wireless communication purposes. These five sites are identified as B6B, B9, B11, B12A and B12D. Sites B6B and B9 are located parallel to the Saw Mill River Parkway. Site B11 is in the I-684 right-of-way, Sites B12A and B12D, which are on the same property also serve the I-684 corridor. As depicted in *Figure B6*, the land areas around these antenna locations are shown in yellow and green indicating good indoor and outdoor wireless service.

Properties outside of these major transportation networks have blue or no colors indicating limited or no wireless coverage. The lack of elevated antennas to receive and send the radio signals in those blue or no color geographic areas is the cause for little to no wireless services.

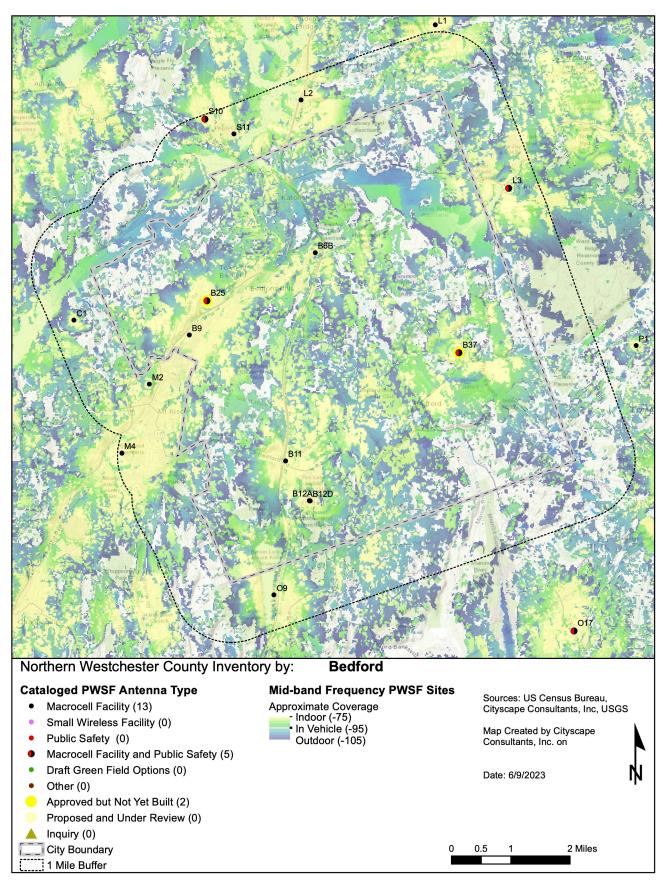


Figure B6: Simulated Coverage Map from PWSF Sites in Mid-band Frequency

POPULATION DENSITY AND LAND CLASSIFICATION

Population density is a variable affecting wireless networks. Wireless service providers want to deploy as close to their subscriber base as possible which is why residential areas, employment centers, recreational facilities and along major highways/thoroughfares are ideal locations for infrastructure. Examining population density is a key component in determining where there is likely to be the greater demand of wireless networks.

Figure B7 is a map of population density by US Census Block Group with an existing and approved but not built macro and small wireless facilities overlay. This visual representation clearly indicates the pattern and potential need throughout the Town. The darkest shades of brown represent US Census Block Groups with over 3,000 people per square mile and are the highest population densities in the Town. This indicates the areas with the most potential wireless network consumers.

Figure B8 is the Town's Land Classification map also with the existing and approved but not built wireless facilities as an overlay.

When comparing *Figure B6* (propagation map) to *Figure B7* (population density map) and *Figure B8* (land classification map) the notable wireless facility deployment pattern indicates the existing and approved but not yet built facilities are mostly parallel the major transportation corridors inside the Town.



Sites 12A, B, C, D

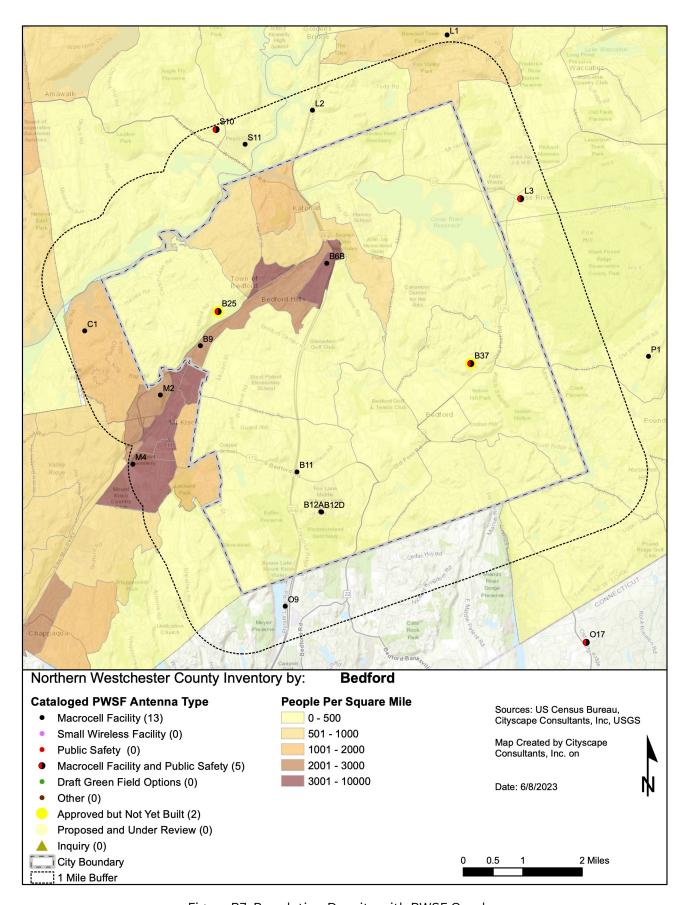


Figure B7: Population Density with PWSF Overlay

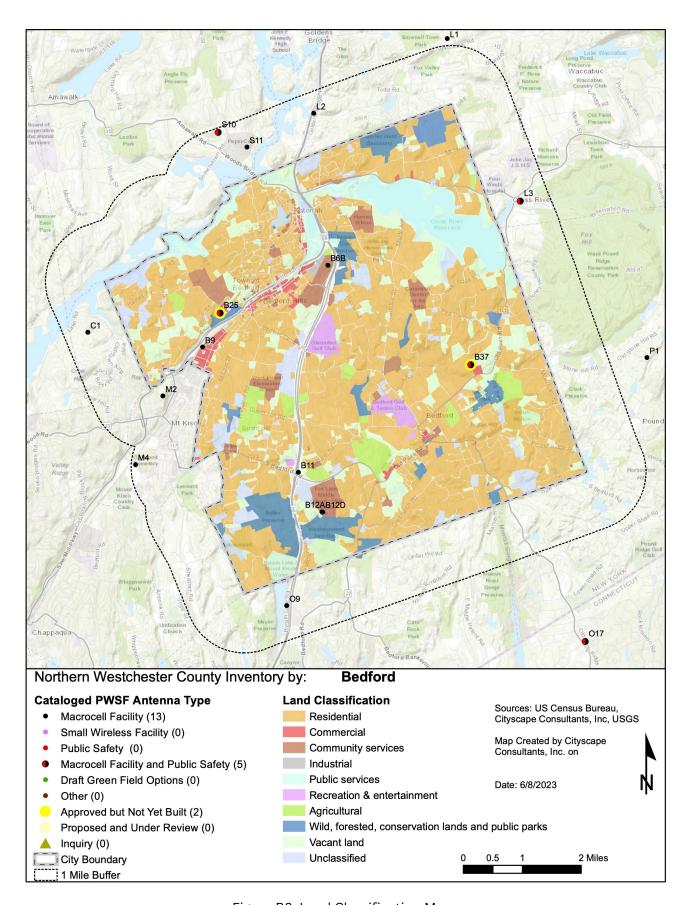


Figure B8: Land Classification Map

WIRELESS NETWORK DENSIFICATION

Modern and advancing technologies continue to transform how the wireless industry builds out their networks. Each wireless service provider is in a different stage of fifth generation (5G) deployment and use different technologies and spectrum to compete in the 5G race. In the evolution of wireless communications, some smartphones still use 4G technologies but they are rapidly transitioning to 5G wireless networks. Both platforms incorporate broadband technology enabling all the Smartphone applications like global positioning services (i.e. Google Maps, Waze Navigation); public safety, medical and banking services; weather, educational, music, games, on-line reading and countless other on demand services. These applications require significant amounts of information to be sent and received within the same radio signal boundary. Network densification is often needed within the coverage area to improve network capacity.

Network capacity is the amount of wireless traffic that a service provider's network can handle at any given time within a specific location. Capacity takes into account the amount of bandwidth being used simultaneously by way of voice calls, and data usage. In order to estimate network capacity, consideration and analysis of the distinct characteristics of the community is studied and portrayed.

Network densification means wireless service providers need to add more capacity to their networks to handle all the usage and network speeds subscribers expect. There are several ways to add capacity to a network. One is providers buying more spectrum, two is making spectrum more efficient and third adding more wireless facilities to areas in need. Commercial wireless providers are pursuing all three methodologies to prepare for and meet network speeds and improvements.

The following *Figure B9* theorizes geographic areas needing network coverage and capacity densification. Red and orange shaded areas are vicinities where the existing number of towers and base stations are proportionally insufficient to the number of existing households. Yellow and green shaded areas do not need immediate densification, provided existing PWSFs inside these colorings can accommodate collocations for other service providers. If collocation options are not available at the existing sites in the yellow and green shaded areas, then a new PWSF will be necessary to accommodate additional antennas. Any area void of yellow, green, orange or red colorings represents places in the Town with immediate need of personal wireless service facilities.

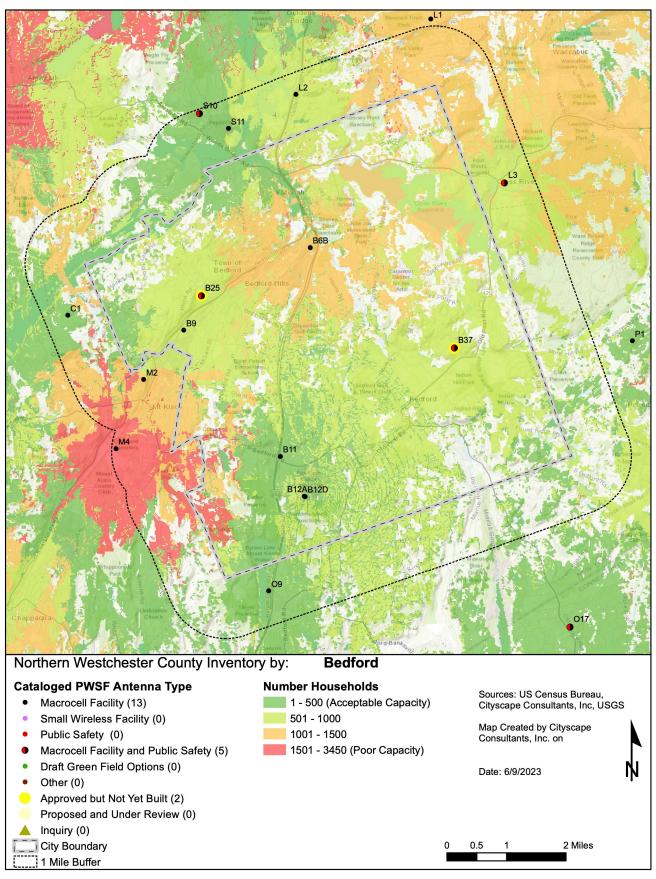


Figure B9: Heat Map Approximating Network Capacity Areas of Concern

POTENTIAL SOLUTIONS

Long Term Evolution (LTE) is a 4G wireless communication standard used by commercial wireless service providers offering high-volume data and faster internet speeds with minimal delay or latency. Transitioning to LTE modeling requires a slight change in the propagation model. Residential indoor service tends to require a minimum of -95 dBm RSRP (LTE Reference Signal Received Power) which contains a 5 dB margin added to ensure reliable indoor services. The typical minimum service level for in vehicle is -90 to -105 dBm, which makes for reliable text, call and data sessions, and the minimum usable outdoor LTE coverage level is -115 dBm.

The following Figures are representations of simulated LTE coverage assuming all service providers are on each facility since this is the best possible collocation scenario. Each of these figures uses the following RSRP signal level shown in *Table B3*.

SIGNAL STRENGTH COLOR	dBm	SIGNAL STRENGTH DESCRIPTION
Yellow	> -90	In Building
Green	-90 to -105	In Vehicle
Blue	-105 to -115	Outdoor

Table B3: LTE Signal Strength Description

The following maps provide an in depth look at specific underserved areas and offer potential solutions to fill-in these gaps. Suggested new macro cell towers or base stations are represented as new tower (NT) followed by a number. Small wireless facilities may provide a feasible solution closer to residential areas or those areas with viewshed concerns. Small wireless facilities on New York State Electric and Gas (NYSEG) poles or new poles in the ROW are identified as new pole (NP) followed by a number.

In order to improve the poor or no wireless coverage areas in the many residential areas of Bedford it is anticipated to take a minimum of eight macro cell facilities, either towers or base stations, ranging in height between 55' and 130'. Also suggested are approximately 34 small cell wireless facilities on 50' utility poles.

Some of the maps have overlapping sites; for example, potential site B-NP4 appears on two of the following maps, in these instances, a proposed site will only be listed in the narrative for the first map and not in subsequent map description narratives.

BEDFORD OVERVIEW

The following *Figure B10* provides a closer look at the LTE coverage predictions from all the existing personal wireless facilities in the Bedford Study Area. The areas outlined in blue illustrate very poor to non-existent wireless coverage and the areas in greatest need of wireless infrastructure.

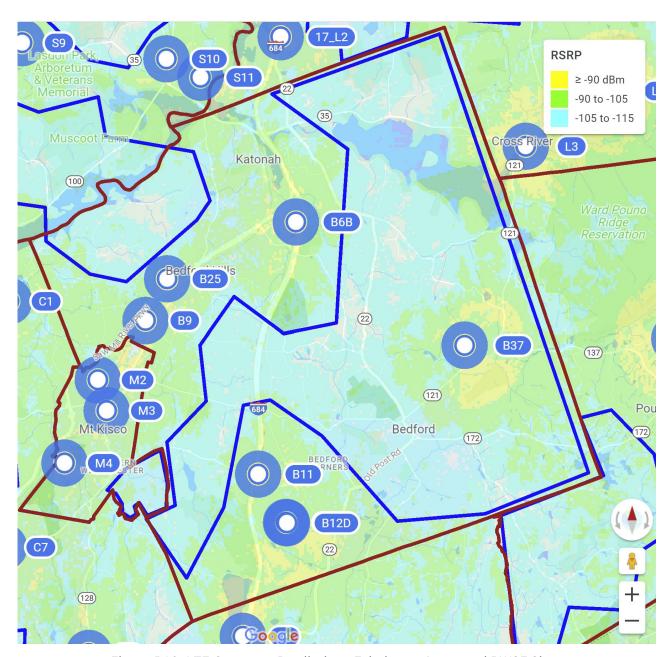


Figure B10: LTE Coverage Predictions Existing or Approved PWSF Sites

NORTHWEST BEDFORD

The following *Figure B11* shows simulated coverages from the existing macro cell towers at Site B6B, and Site B9 and an approved but not built macro Site B25. One suggested new 100' macro cell identified as B-NT1 is shown for consideration in the vicinity of I-684 and Bedford Center Road. This site would fill in the coverage gap along Bedford Center Road and improve network capacity in the areas with coverage and along the Interstate. Site B-NT4 is another macro cell suggested facility along Saw Mill River Parkway to improve hand off between Sites B25 and B6B.

An additional eight small wireless facilities on existing NYSEG utility poles or new 50' poles in the same vicinity are suggested as B-NP1, B-NP2, B-NP3, B-NP4, B-NP5, B-NP13, B-NP14, B-NP15, B-NP33. The potential Sites B-NP1, B-NP2, B-NP3 and B-NP33 if constructed would bring outdoor coverage to the existing gap areas in the northwest corner of the Town along with a portion of Haines Road. Sites B-NP4 and B-NP5 would add outdoor coverage west of Cherry Street and Sites B-NP13, B-NP14 and B-NP15 would improve network services in the more populated areas of the Katonah Community. Sites B-NP28, B-N29 fill in service between Saw Mill River Parkway and I-684.

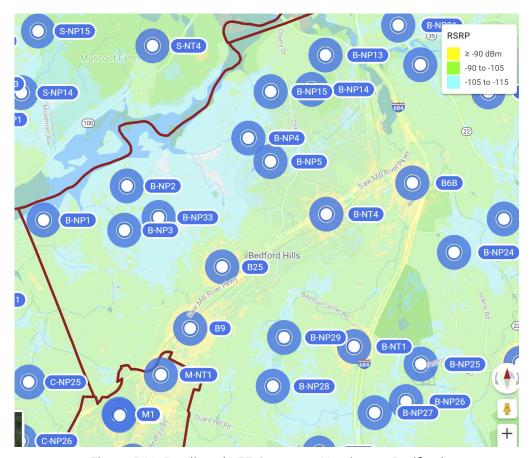


Figure B11: Predicted LTE Coverage Northwest Bedford

NORTHEAST BEDFORD

The northeast portion of the Town is represented in *Figure B12* and shows predicted coverages utilizing a potential 110' macro cell facility in the vicinity of B27 and an approximate 120' macro cell at the suggested Site B-NT3 location. A potential 120' macro cell facility in Lewisboro in the area of Site L-NT5 just outside the boundary of Bedford would improve network coverages along the I-684 corridor in both Towns.

Additionally, 17 small wireless facilities are suggested on existing NYSEG utility poles or new poles in the same vicinity as follows:

B-NP16, B-NP17, B-NP18, B-NP19, B-NP20, B-NP21, B-NP22, B-NP23, B-NP24, B-NP30, B-NP31, B-NP32

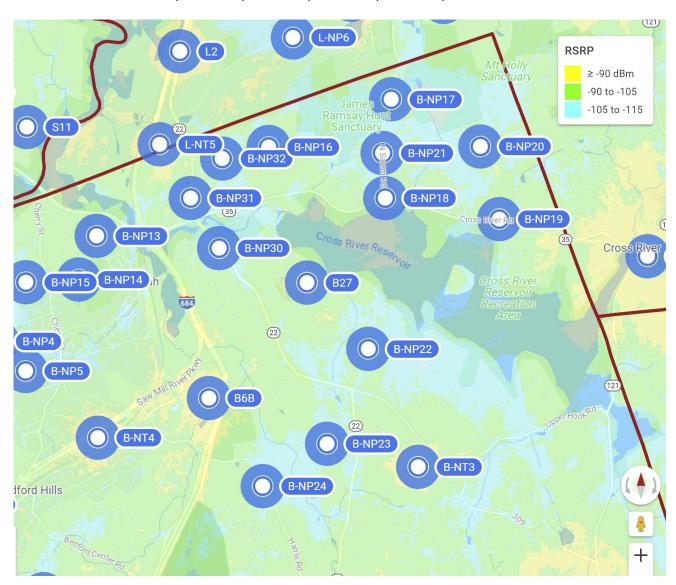
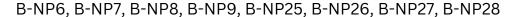


Figure B12: Predicted LTE Coverage Northeast Bedford

SOUTHWEST BEDFORD

To accommodate the gaps in services east and west of the I-684 corridor, new facilities are needed in these areas. In addition to existing B11, B12A and B12D, one 55' macro cell is suggested in the vicinity of B38, one 110' macro cell in the area of B29, and one 120' macro cell around B-NT2.

Additionally, eight small wireless facilities are proposed on 50' NYSEG poles or new similar size poles in the same area as shown on the map in *Figure B13* as follows:



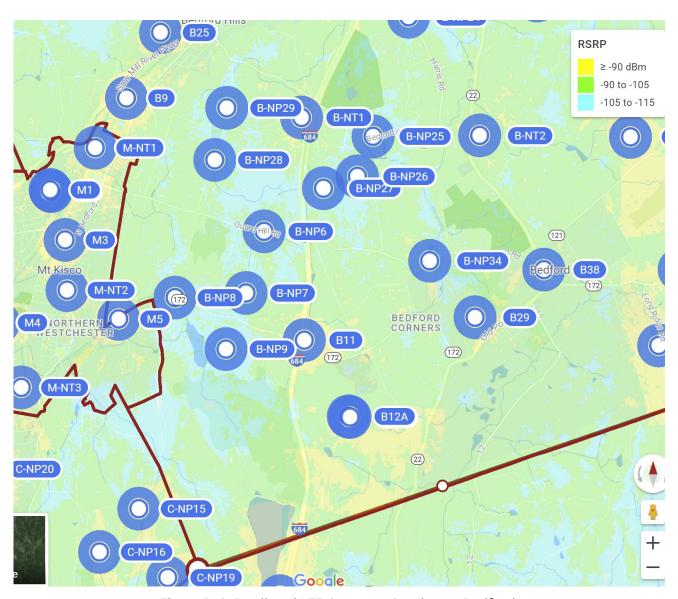


Figure B13: Predicted LTE Coverage Southwest Bedford

*B-NP29 shown on this map is referenced as a new pole in NW Bedford Figure B12

SOUTHEAST BEDFORD

The following *Figure B14* analyzes a gap in services in the southeast corner of Bedford. Currently, there are no wireless facilities in this part of Town resulting in poor coverage areas. Macro cell approved but not yet built Site B37 and an 80' macro cell in the vicinity of B26 would add coverage along Long Ridge Road. Three small wireless facilities B-NP10, B-NP 11 and B-NP12 mounted on exiting NYSEG utility poles or new 50' poles in the same area are suggested to bring coverage along Pound Ridge Road.

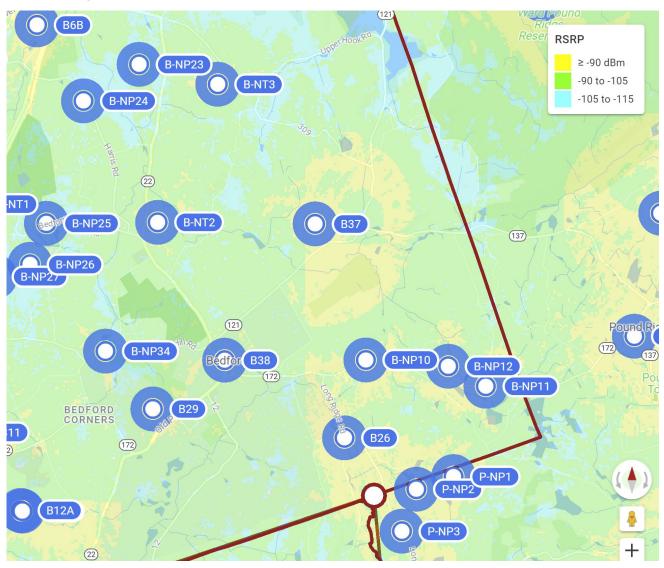


Figure B14: Predicted LTE Coverage Southeast Bedford

The following Table B4 provides a summary of all the suggested macro fill in sites for the Town.

MACRO CELL SUGGESTED SITES			
SITE NAME	FACILITY HEIGHT (FEET)		
B-NT1	100'		
B-NT2	120'		
B-NT3	120'		
B-NT4	120'		
B38 (Rooftop)	55'		
B26	80'		
B27	110'		
B29	110'		

Table B4: Suggested Macro Fill-In Sites



SMALL CELL SUGGESTED SITES				
SITE NAME	LATITUDE	LONGITUDE	HEIGHT	
B-NP1	41.24118	-73.7434	50'	
B-NP2	41.42584	-73.7280	50'	
B-NP3	41.23979	-73.7285	50'	
B-NP4	41.25238	-73.7056	50'	
B-NP5	41.24917	-73.7015	50'	
B-NP6	41.20933	-73.6925	50'	
B-NP7	41.20145	-73.6956	50'	
B-NP8	41.24118	-73.7434	50'	
B-NP9	41.19427	-73.6991	50'	
B-NP10	41.20445	-73.6206	50'	
B-NP11	41.20118	-73.6007	50'	
B-NP12	41.20367	-73.6070	50'	
B-NP13	41.26373	-73.6913	50'	
B-NP14	41.25903	-73.6939	50'	
B-NP15	41.25874	-73.7014	50'	
B-NP16	41.27330	-73.666	50'	
B-NP17	41.27845	-73.6491	50'	
B-NP18	41.26780	-73.6500	50'	
B-NP19	41.26554	-73.6336	50'	
B-NP20	41.27336	-73.6363	50'	
B-NP21	41.27266	-73.6503	50'	
B-NP22	41.25156	-73.6524	50'	
B-NP23	41.24133	-73.6583	50'	
B-NP24	41.23677	-73.6675	50'	
B-NP25	41.22148	-73.6737	50'	
B-NP26	41.21636	-73.6764	50'	
B-NP27	41.21484	-73.6822	50'	
B-NP28	41.21846	-73.7010	50'	
B-NP29	41.22512	-73.6989	50'	
B-NP30	41.26241	-73.6738	50'	
B-NP31	41.26781	-73.6778	50'	
B-NP32	41.27206	-73.6733	50'	
B-NP33	41.24153	-73.7222	50'	
B-NP34	41.20556	-73.6639	50'	

Table B5: Suggested Small Wireless Fill-In Sites

COMMUNITY SURVEY AND ZONING

In order to facilitate effective regulations that takes community input into consideration, the Town promoted a Wireless Telecommunications Infrastructure Survey (Survey) to engage the townspeople. The main objective was to solicit information regarding thoughts, concerns and preferences as it relates to wireless infrastructure facilities.

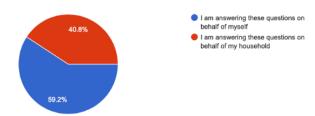
The Survey solicited opinions and experiences regarding the importance of the current state of wireless connectivity and aesthetics of the infrastructure in the Town. The Bedford survey opened on February 16, 2022 and closed on March 23, 2022 and during that time 655 people participated in the poll. The responses are very similar to those collected for the larger study area.

Those who participated in the survey indicated that wireless connectively and quality of service is very important to them and that coverage at home, work and while travelling around town is generally poor or inconsistent. The majority support the use of public property for future sites and prefer concealed base stations, towers, and small wireless facilities over non-concealed and semi-concealed infrastructure.

The most notable observations from the survey and compared to the entire NWC study area are shown in *Table B6* with the entire collection of responses and comments provided in *Appendix B2*.



Thank you for taking the time to complete this poll. Please tell us a little about yourself.



RESPONSES	BEDFORD	NWC
PARTICIPANTS	655	4002
Average Number of Devices	6	6
Use of Devices		
Personal Recreation/LeisureEmployment Related	96.00% 75.70%	85.84% 63.33%
Wireless Coverage at Residence		
Excellent or AcceptablePoor or Inconsistent	41.50% 57.20%	43.03% 55.91%
Wireless Coverage at Work		
Excellent or AcceptablePoor or Inconsistent	30.40% 38.40%	35.37% 32.60%
Wireless Coverage Traveling Around Town		
Excellent or AcceptablePoor or Inconsistent	27.70% 71.90%	37.18% 61.88%
Would Rely More on Device if Network was Better	71.90%	01.00%
Entirely Agree	62.90%	61.90%
Quality of Wireless Service Is Important to Me Entirely Agree	86.30%	87.64%
What is Most Important to You		
Excellent ConnectivityGood Connectivity and Minimal Visual Impact	52.20% 42.10%	56.24% 38.71%
Prefer Taller Tower Supporting Multiple Collocations	41.30%	44.64%
Non-Concealed Tower Preference - Monopole	59.60%	62.09%
Concealed Tower Preference - Flag Pole	68.70%	70.11%
Rooftop Preference - Concealed	80.20%	78.65%
Small Wireless Facility Preference - Concealed	90.60%	89.99%
Locational Preference in Town - Anywhere	62.50%	60.88%
Support Use of Public Property for Revenue and Aesthetics - Yes	47.70%	52.18%

Table B6: Summary of Notable Survey Responses

Overall, additional macro and small wireless facilities are needed throughout the Town to provide initial coverages in areas where no service is currently available and in other areas where the ratio of subscribers exceeds the number of wireless facilities. Based on survey responses, the community supports and desires additional wireless infrastructure to improve the wireless network.

The Town's Code § 125-85.2 Wireless Telecommunications Facilities was revised in 2018 and is thorough, promotes collocation as a first priority for new infrastructure, use of public property and designs that have the least-adverse visual effect on the environment and its character, existing vegetation and on the residents in the area. The Definitions section should be revised to align with the Code of Federal Regulation.

APPENDIX B1

WIRELESS INFRASTRUCTURE INVENTORY

Site B1		Bedford
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Lattice	
ANTENNA TYPE:	Public Safety	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:	Katonah Fire District	
FACILITY SITE NAME:	Wildwood Tower Site - Katonah Memorial Park	
SERVICE PROVIDERS:		
FCC ASR:		
HEIGHT:	50'	
LOCATION:	Public Property	
LATITUDE/LONGITUDE:	41.257227 N, -73.68902 W	В0
PARCEL ID:	04901500010010000000	V
ZONING:	R-1/2A	
NOTES:	Lattice tower painted green and equipment is part of the existing emergency radio service network.	





Site B2	65 Bedford Road	Bedford
STRUCTURE TYPE:	Base Station	
FACILITY TYPE:	Roof	
ANTENNA TYPE:	Public Safety	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:	Katonah Fire District	
FACILITY SITE NAME:		
SERVICE PROVIDERS:		
FCC ASR:		
HEIGHT:	30'	
LOCATION:	Public Property	
LATITUDE/LONGITUDE:	41.2553 N, -73.68509 W	
PARCEL ID:	04901900020470000000	Kato Fili Dist
ZONING:	R-1/4A	
NOTES:	Rooftop antenna used for public safety.	
		AND THE RESERVE





Site B3	160 Bedford Road	Bedford
STRUCTURE TYPE:	Base Station	
FACILITY TYPE:	Roof	
ANTENNA TYPE:	Public Safety	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:	Volunteer Ambulance Corps	S KATOMAH-BEDFA
FACILITY SITE NAME:		
SERVICE PROVIDERS:		*
FCC ASR:		4
HEIGHT:		
LOCATION:	Public Property	o.notoni.
LATITUDE/LONGITUDE:	41.2501378 N, -73.682510 W	na and
PARCEL ID:	06000700020400000000	and the same
ZONING:	СВ	Surise A.

Existing emergency radio service site.





Site B4	281 Rt 17 Bypass	Bedford
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Monopole	
ANTENNA TYPE:	Other	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:		
FACILITY SITE NAME:	Landscape Company by Peckham Industries	
SERVICE PROVIDERS:		
FCC ASR:		
HEIGHT:		
LOCATION:	Private Property	
LATITUDE/LONGITUDE:	41.249230 N, -73.6746945 W	
PARCEL ID:	06000800010020000000	T
ZONING:	R-4A	
NOTES:	Abandoned monopole tower found during the assessment process. Previous Sprint site NY06XC418	





Site B6A	250 Harris Road	Bedford
STRUCTURE TYPE:	Base Station	
FACILITY TYPE:	Water Tank	
ANTENNA TYPE:	Public Safety	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:	State of New York	
FACILITY SITE NAME:	Taconic Correctional Facility	
SERVICE PROVIDERS:		
FCC ASR:		
HEIGHT:		
LOCATION:	Public Property	
LATITUDE/LONGITUDE:	41.246834 N, -73.675075 W	Mark
PARCEL ID:	06001200010010000000	
ZONING:	R-4A	W.S.

This site is part of the existing emergency radio service network.





Site B6B	250 Harris Road	Bedford
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Lattice	
ANTENNA TYPE:	Macro Cell	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:	Crown Castle International - 863933	
FACILITY SITE NAME:	MNYT 005 Taconic Correcti - NYS D.O.C.S	
SERVICE PROVIDERS:	AT&T, T-Mobile, Verizon, MTA	
FCC ASR:		3-3-
HEIGHT:	180'	**
LOCATION:	Public Property	
LATITUDE/LONGITUDE:	41.246253 N, -73.675220 W	III Bird
PARCEL ID:	06001200010010000000	
ZONING:	R-4A	
NOTES:	Lattice tower at Taconic Correctional facility with four commercial wireless service providers.	





Site B7	307 Bedford Road	Bedford
STRUCTURE TYPE:	Base Station	100
FACILITY TYPE:	Roof	
ANTENNA TYPE:	Public Safety	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:	Town of Bedford	
FACILITY SITE NAME:	Police Department	A COLON
SERVICE PROVIDERS:		
FCC ASR:		
HEIGHT:		
LOCATION:	Public Property	
LATITUDE/LONGITUDE:	41.239977 N, -73.698543 W	TR
PARCEL ID:	06001400010050000000	/sit
ZONING:	СВ	Moral Rd

Existing emergency radio service site.





Site B8	332 Bedford Road	Bedford
STRUCTURE TYPE:	Base Station	
FACILITY TYPE:	Roof	
ANTENNA TYPE:	Public Safety	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:	Bedford Hill Fire District	
FACILITY SITE NAME:	Bedford Hills Fire District	
SERVICE PROVIDERS:		
FCC ASR:		
HEIGHT:		4.8
LOCATION:	Public Property	
LATITUDE/LONGITUDE:	41.235588 N, -73.701147 W	1177
PARCEL ID:	06001400050820000000	
ZONING:	СВ	
NOTES:	Existing emergency radio service site.	





Site B9	5 Green Lane	Bedford
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Monopole	
ANTENNA TYPE:	Macro Cell	
DESIGN TYPE:	Semi-Concealed	
FACILITY OWNER/ID:	Crown Castle International/ 878862	
FACILITY SITE NAME:	Green Lane Wells	a san a san a san a san
SERVICE PROVIDERS:	T-Mobile, Verizon	
FCC ASR:		
HEIGHT:	146'	in the state of th
LOCATION:	Public Property	
LATITUDE/LONGITUDE:	41.2263822 N, -73.716326 W	13
PARCEL ID:	07100800020470000000	
ZONING:	LI	Allem,
NOTES:	Monopole that is painted brown with three commercial wireless services providers.	





Site B10A	Guard Hill Preserve	Bedford
STRUCTURE TYPE:	Tower	tos:
FACILITY TYPE:	Lattice	
ANTENNA TYPE:	Public Safety	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:	Westchester County	
FACILITY SITE NAME:	Guard Hill	
SERVICE PROVIDERS:		
FCC ASR:		
HEIGHT:		
LOCATION:	Public Property	
LATITUDE/LONGITUDE:	41.205554 N, -73.701177 W	
PARCEL ID:	08300500020010000000	
ZONING:	R-4A	砂点
NOTES:	Lattice tower to be replaced with one 140' tower	210





Site B10B	Guard Hill Preserve	Bedford
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Guyed	
ANTENNA TYPE:	Public Safety	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:	NY State DOT	
FACILITY SITE NAME:	Guard Hill	
SERVICE PROVIDERS:		
FCC ASR:		
HEIGHT:		
LOCATION:	Public Property	
LATITUDE/LONGITUDE:	41.205494 N, -73.701189 W	
PARCEL ID:	08300500020010000000	
ZONING:	R-4A	

Guyed tower with emergency radio service equipment.

NOTES:





Site B11	RT 684 & RT 172	Bedford
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Monopole	
ANTENNA TYPE:	Macro Cell	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:	Crown Castle International - 863934	
FACILITY SITE NAME:	Park & Ride at Rt. 684 MNYT 006	
SERVICE PROVIDERS:	AT&T, T-Mobile, Verizon	
FCC ASR:		
HEIGHT:	150'	
LOCATION:	Inside Right-of-Way	
LATITUDE/LONGITUDE:	41.195412 N, -73.701190 W	
PARCEL ID:	PIN	Kato
ZONING:	R-4A	
NOTES:	Monopole tower in New York Department of Transportation right-of-way.	





Site B12A	632 S. Bedford Road	Bedford
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Guyed	
ANTENNA TYPE:	Macro Cell	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:		
FACILITY SITE NAME:	230 Bedford Fox Lane - Fox Lane Campus	
SERVICE PROVIDERS:	Verizon	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
FCC ASR:		
HEIGHT:	50'	
LOCATION:	Public Property	
LATITUDE/LONGITUDE:	41.185664 N, -73.677913 W	
PARCEL ID:	08302000010010000000	
ZONING:	R-4A	
NOTES:	Guyed tower that is one of four towers at this location used by one commercial wireless service provider.	





Site B12B	632 S. Bedford Road	Bedford
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Guyed	
ANTENNA TYPE:	Public Safety	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:		
FACILITY SITE NAME:	Fox Lane Campus	
SERVICE PROVIDERS:		
FCC ASR:		
HEIGHT:		
LOCATION:	Public Property	
LATITUDE/LONGITUDE:	41.185637 N, -73.677833 W	
PARCEL ID:	08302000010010000000	
ZONING:	R-4A	
NOTES:	Existing emergency radio service site. Bedford Central School District owns land.	





Site B12C	632 S. Bedford Road
STRUCTURE TYPE:	Tower
FACILITY TYPE:	Guyed
ANTENNA TYPE:	Public Safety
DESIGN TYPE:	Non-Concealed
FACILITY OWNER/ID:	Westchester County
FACILITY SITE NAME:	Fox Lane Campus
SERVICE PROVIDERS:	
FCC ASR:	
HEIGHT:	
LOCATION:	Public Property
LATITUDE/LONGITUDE:	41.185610 N, -73.677769 W
PARCEL ID:	08302000010010000000
ZONING:	R-4A

Existing emergency radio service site. Bedford Central School District owns land.



Bedford



Bedford

Site B12D	632 S. Bedford Road
STRUCTURE TYPE:	Tower
FACILITY TYPE:	Guyed
ANTENNA TYPE:	Macro Cell
DESIGN TYPE:	Non-Concealed
FACILITY OWNER/ID:	Site #150
FACILITY SITE NAME:	5550 - Fox Lane Campus
SERVICE PROVIDERS:	AT&T
FCC ASR:	
HEIGHT:	50'
LOCATION:	Public Property
LATITUDE/LONGITUDE:	41.185579 N, -73.677659 W
PARCEL ID:	08302000010010000000
ZONING:	R-4A
NOTES:	Guyed tower that is one of four towers at this location used by one commercial wireless service provider.





Site B13	34 Village Green	Bedford
STRUCTURE TYPE:	Base Station	
FACILITY TYPE:	Roof	
ANTENNA TYPE:	Public Safety	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:		
FACILITY SITE NAME:		
SERVICE PROVIDERS:		
FCC ASR:		
HEIGHT:		
LOCATION:	Public Property	
LATITUDE/LONGITUDE:	41.203565 N, -73.642750 W	Set to
PARCEL ID:		
ZONING:	NB	
NOTES:		A SECONDARY COME





Site B14	Indian Hill Road	Bedford
STRUCTURE TYPE:	Base Station	
FACILITY TYPE:	Utility Pole	_
ANTENNA TYPE:	Public Safety	
DESIGN TYPE:	Non-Concealed	_
FACILITY OWNER/ID:	Town of Bedford Police Dept.	
FACILITY SITE NAME:	Indian Hill	
SERVICE PROVIDERS:		
FCC ASR:		
HEIGHT:		
LOCATION:	Utility Easement	
LATITUDE/LONGITUDE:	41.207245 N, -73.629744 W	
PARCEL ID:		
ZONING:	R-4A	4
NOTES:	Existing emergency radio service site in right-of-way.	
		A SHEW TO SHEW





Site B22	709 Bedford Road	Bedford
STRUCTURE TYPE:	Tower	
FACILITY TYPE:		
ANTENNA TYPE:	Small Wireless Facility	
DESIGN TYPE:	Concealed	
FACILITY OWNER/ID:		
FACILITY SITE NAME:	Green Lane Microcell	
SERVICE PROVIDERS:		"1"1
FCC ASR:		
HEIGHT:	45'	
LOCATION:	Public Property	
LATITUDE/LONGITUDE:	41.226019 N, -73.713678 W	
PARCEL ID:		38
ZONING:	RB	

Inquiry

NOTES:





Site B23	60 Adams Street	Bedford
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Utility Pole	
ANTENNA TYPE:	Small Wireless Facility	
DESIGN TYPE:	Concealed	
FACILITY OWNER/ID:		
FACILITY SITE NAME:	Post Office Microcell	
SERVICE PROVIDERS:		
FCC ASR:		
HEIGHT:	45'	
LOCATION:	Public Property	and a state of the
LATITUDE/LONGITUDE:	41.237378 N, -73.699525 W	
PARCEL ID:		
ZONING:	СВ	
NOTES:	Inquiry	





Site B24	Katonah Avenue	Bedford
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Utility Pole	
ANTENNA TYPE:	Small Wireless Facility	
DESIGN TYPE:	Concealed	
FACILITY OWNER/ID:		
FACILITY SITE NAME:	Katonah Small Cell	
SERVICE PROVIDERS:		
FCC ASR:		
HEIGHT:	45'	
LOCATION:	Public Property	U.S.
LATITUDE/LONGITUDE:	41.256505 N, -73.683559 W	ford Ro

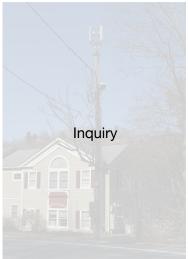
СВ

Inquiry

PARCEL ID:

ZONING:

NOTES:





Site B25	Haines Road	Bedford
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Monopole	
ANTENNA TYPE:	Macro and Public Safety	
DESIGN TYPE:	Non-Concealed	E
FACILITY OWNER/ID:	Homeland Towers	
FACILITY SITE NAME:	Sewer Treatment Plant	
SERVICE PROVIDERS:		
FCC ASR:		
HEIGHT:	150'	12 July 19 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
LOCATION:	Public Property	
LATITUDE/LONGITUDE:	41.234777 N, -73.710424 W	
PARCEL ID:		A
ZONING:	EL	
NOTES:	Approved But Not Built	7 1





Bedford

STRUCTURE TYPE: Tower

FACILITY TYPE: Monopine

ANTENNA TYPE: Macro Cell & Public Safety

DESIGN TYPE: Semi-Concealed

FACILITY OWNER/ID:

FACILITY SITE NAME:

SERVICE PROVIDERS:

FCC ASR:

HEIGHT: 130'

LOCATION: Private Property

LATITUDE/LONGITUDE: 41.2214102 N, -73.629070 W

PARCEL ID:

ZONING:

ZONING:

NOTES:

NOTES: Approved But Not Built





Site M1	Emory Street	Mount Kisco
STRUCTURE TYPE:	Base Station	
FACILITY TYPE:	Water Tank	
ANTENNA TYPE:	Public Safety	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:	Westchester County Mountain Ave	
FACILITY SITE NAME:	Mount Kisco - Mountain Ave	
SERVICE PROVIDERS:		
FCC ASR:		
HEIGHT:	50'	
LOCATION:	Public Property	
LATITUDE/LONGITUDE:	41.214632 N, -73.729549 W	· c.
PARCEL ID:	06905600040070000000	

CD - Conservation Development District

Antenna mounted on the water thank are part of

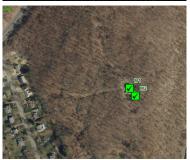
the existing emergency radio service network.





Site M2	1 Mountain Ave	Mount Kisco
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Monopole	
ANTENNA TYPE:	Macro Cell	
DESIGN TYPE:	Semi-Concealed	
FACILITY OWNER/ID:	Crown Castle International - 843210	
FACILITY SITE NAME:	Mount Kisco	
SERVICE PROVIDERS:	AT&T, T-Mobile, Verizon, MTA	
FCC ASR:		
HEIGHT:	109'	
LOCATION:	Public Property	
LATITUDE/LONGITUDE:	41.214463 N, -73.729374 W	
PARCEL ID:	06905600040070000000	
ZONING:	CD - Conservation Development District	
NOTES:	Painted brown in an attempt to conceal somewhat however, doesn't meet the definition of concealed.	





Mount Kisco

STRUCTURE TYPE:	Base Station	
FACILITY TYPE:	Roof	
ANTENNA TYPE:	Macro Cell	
DESIGN TYPE:	Concealed	
FACILITY OWNER/ID:	Verizon - VZCO-SC	
FACILITY SITE NAME:	Mt. Kisco	
SERVICE PROVIDERS:	Verizon	
FCC ASR:		1
HEIGHT:	98'	
LOCATION:	Private Property	1
LATITUDE/LONGITUDE:	41.208237 N, -73.726963 W	
PARCEL ID:	06908100020030000000	
ZONING:	CB-1 - Central Business District-1	

Approved Not Built

45 East Main Street

Site M3

NOTES:





Site M4	304 Lexington Avenue	Mount Kisco
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Monopole	
ANTENNA TYPE:	Macro Cell	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:	Crown Castle International - 806584	
FACILITY SITE NAME:	South Mount Kisco - Oakwood Cemetery	
SERVICE PROVIDERS:	AT&T, T-Mobile, Sprint, Verizon	
FCC ASR:		<i>2010</i> 0000000000000000000000000000000000
HEIGHT:	125'	
LOCATION:	Private Property	
LATITUDE/LONGITUDE:	41.197662 N; -73.738491 W	M4
PARCEL ID:	08003900010010000000	
ZONING:	PD - Preservation District; also in PWSF - Personal Wireless Service Facility Overlay District	
NOTES:		

Site M5		Mount Kisco
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Monopine	
ANTENNA TYPE:	Macro Cell	
DESIGN TYPE:	Concealed	Proposed
FACILITY OWNER/ID:	Village Town of Mount Kisco	Under Review
FACILITY SITE NAME:		AN DESCRIPTION
SERVICE PROVIDERS:		
FCC ASR:		
HEIGHT:	120'	
LOCATION:	Public Property	S Beeting Class
LATITUDE/LONGITUDE:	41.197687 N; -73.721950 W	M5
PARCEL ID:		?
ZONING:		Of the projects
NOTES:	Proposed Under Review	18/1/2 1/2

Site C1	Croton Lake Road	New Castle
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Monopole	
ANTENNA TYPE:	Macro Cell	
DESIGN TYPE:	Semi-Concealed	
FACILITY OWNER/ID:	SBA	
FACILITY SITE NAME:	Somers 2	
SERVICE PROVIDERS:	AT&T, T-Mobile, Verizon	
FCC ASR:	1271315	
HEIGHT:	154'	
LOCATION:	Private Property	- J
LATITUDE/LONGITUDE:	41.230258 N, -73.753698 W	O7 /\\
PARCEL ID:	07100500010010000000	V Strong
ZONING:		
NOTES:	A monopole tower painted brown and green located outside the Town's jurisdictional boundary.	

Site S10	121 Route 100	Somers
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Monopine	
ANTENNA TYPE:	Macro and Public Safety	
DESIGN TYPE:	Concealed	
FACILITY OWNER/ID:	InSite Towers, LLC- NY576	
FACILITY SITE NAME:	Somers - Amato	
SERVICE PROVIDERS:	AT&T, T-Mobile, Verizon	
FCC ASR:	1278926	
HEIGHT:	140'	
LOCATION:	Private Property	
LATITUDE/LONGITUDE:	41.2791607 N, -73.710618 W	S10
PARCEL ID:	38.17-1-5	100
ZONING:	R80	E T
NOTES:	Need to have providers conceal antennas better.	

Site S11	1 Pepsi Way	Somers
STRUCTURE TYPE:	Base Station	
FACILITY TYPE:	Roof	
ANTENNA TYPE:	Macro Cell	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:	Pepsi Headquarters - 339472	
FACILITY SITE NAME:	Pepsi	
SERVICE PROVIDERS:	T-Mobile, Verizon	
FCC ASR:		
HEIGHT:	65'	
LOCATION:	Private Property	1
LATITUDE/LONGITUDE:	41.275456 N, -73.701304 W	190
PARCEL ID:	38.18-1-1	
ZONING:	CRO Corporate Research/Office District	
NOTES:		The same of the





Site L1	117 Waccabuc Road	Lewisboro
STRUCTURE TYPE:	Tower	4
FACILITY TYPE:	Monopole	and the second
ANTENNA TYPE:	Macro Cell	7,45,78
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:	Homeland Towers, NY486	
FACILITY SITE NAME:	Goldens Bridge - Waccabuc-L	
SERVICE PROVIDERS:	AT&T, Verizon, T-Mobile	
FCC ASR:		
HEIGHT:	150'	
LOCATION:	Private Property	1
LATITUDE/LONGITUDE:	41.301699 N, -73.635623 W	
PARCEL ID:	3100400010140000000	
ZONING:	R-2A	
NOTES:		
		The state of the s





Site L2	204 Route 22	Lewisboro
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Monopole	
ANTENNA TYPE:	Macro Cell	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:	Crown Castle International, 805003	
FACILITY SITE NAME:	Lewisboro - Goldens Bridge	
SERVICE PROVIDERS:	AT&T, MTA, T-Mobile, Verizon	
FCC ASR:		
HEIGHT:	150'	
LOCATION:	Inside Right-of-Way	
LATITUDE/LONGITUDE:	41.283584 N, -73.679342 W	
PARCEL ID:		
ZONING:	R-4A	
NOTES:	NYS State	





Site L3	779 Route 35	Lewisboro
STRUCTURE TYPE:	Tower	45 3
FACILITY TYPE:	Monopole	
ANTENNA TYPE:	Macro and Public Safety	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:	Homeland Towers	
FACILITY SITE NAME:	Katonah - Lewisboro Volunteer Ambulance Corp	
SERVICE PROVIDERS:	AT&T, Verizon	
FCC ASR:	1310704	
HEIGHT:	170'	
LOCATION:	Public Property	Gross River
LATITUDE/LONGITUDE:	41.261525 N, -73.612357 W	RIVER
PARCEL ID:	05300600010470000000	
ZONING:	R-1/2A	
NOTES:	At the time of the assessment the tower was under construction.	





Site P1	29 Adams Lane	Pound Ridge
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Monopine	
ANTENNA TYPE:	Macro Cell	
DESIGN TYPE:	Concealed	
FACILITY OWNER/ID:	American Tower Corporation - 413118	
FACILITY SITE NAME:	Pound Ridge Relo	
SERVICE PROVIDERS:	AT&T, T-Mobile, Verizon	
FCC ASR:		
HEIGHT:	150'	
LOCATION:	Private Property	
LATITUDE/LONGITUDE:	41.222740 N, -73.571712 W	100
PARCEL ID:		To V
ZONING:		
NOTES:		





Site O9		Other
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Monopole	
ANTENNA TYPE:	Macro Cell	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:	863935	
FACILITY SITE NAME:		
SERVICE PROVIDERS:	AT&T, T-Mobile, Verizon	
FCC ASR:		
HEIGHT:	147'	
LOCATION:	Inside Right-of-Way	
LATITUDE/LONGITUDE:	41.162652 N, -73.689721 W	
PARCEL ID:		
ZONING:		
NOTES:	Need to verify providers	
		772

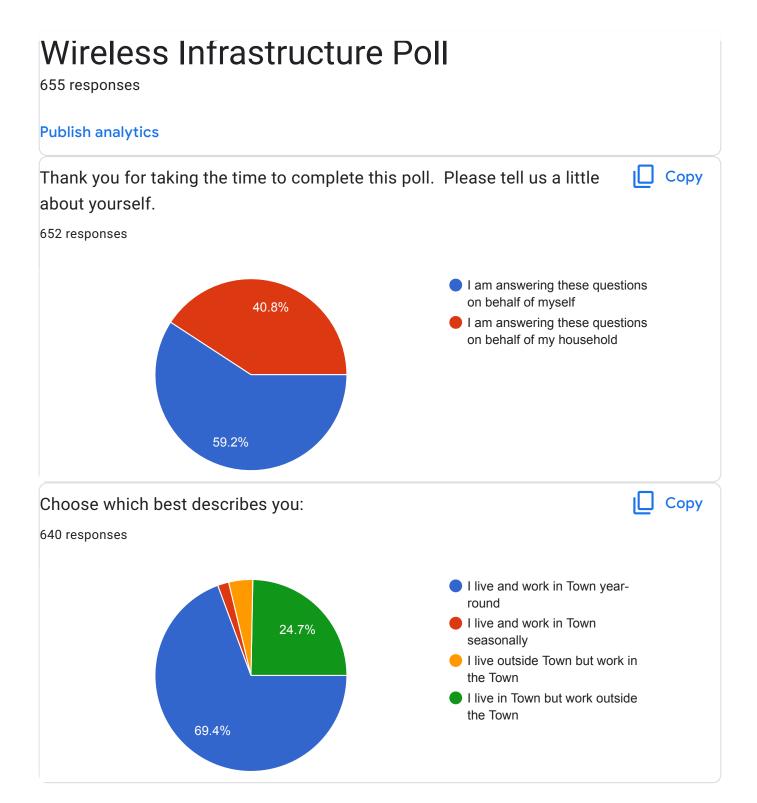


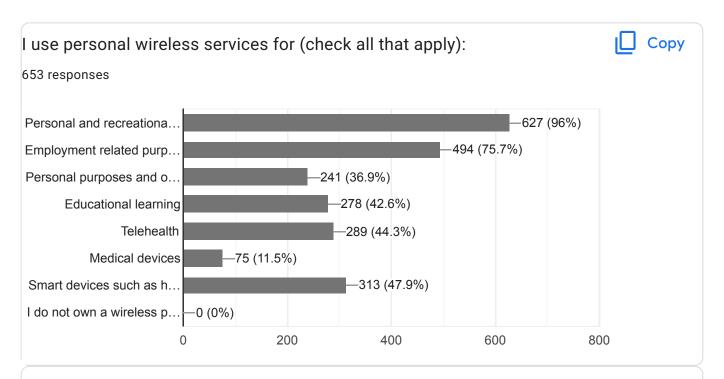


Site O17	366 Old Long Ridge Rd, CT	Other
STRUCTURE TYPE:	Tower	
FACILITY TYPE:	Lattice	
ANTENNA TYPE:	Macro and Public Safety	
DESIGN TYPE:	Non-Concealed	
FACILITY OWNER/ID:		
FACILITY SITE NAME:	Fire Department	
SERVICE PROVIDERS:	AT&T, T-Mobile, Verizon	
FCC ASR:		
HEIGHT:	125'	
LOCATION:	Public Property	
LATITUDE/LONGITUDE:	41.153129 N, -73.592712 W	
PARCEL ID:		
ZONING:		Leng-Ridge
NOTES:		

APPENDIX B2

WIRELESS INFRASTRUCTURE SURVEY RESULTS





Please identify the street on which you live.

635 responses

Croton Lake Road

Old Post Road

Pound Ridge Road

Hickory Lane

Cherry Street

Pound Ridge Rd

Allison Road

Cantitoe St

Jefferson Lane

The Farms Road

Old Village Lane	
Indian Hill Road	
Millertown	
Old Post Rd	
Allison Rd	
Harris Rd	
Guard Hill Road	
Lily pond lane	
The Farms Rd	
Rock Hill Rd	
Holmes Lane	
Cottage Terrace	
Mount Holly Road	
Haines Road	
Hook Road	
Court Road	
Davids Way	
Cherry	
Harris road	
Greenwich rd	

Long Ridge Rd	
Quarry Lane	
The farms road	
Allison road	
Cherry st	
Upland Rd N	
Lakeside Dr	
Woodland Rd	
Cliffside lane	
Peters lane	
Old post rd	
Indian Hill Road	
Appleby drive	
Aspetong Road	
Paddock Lane	
Cartway Lane East	
Appleby Dr	
Whitlockville Road	
Aspetong	

Brook Farm Road	
Pea Pond Road	
Katonah Crossing Court	
West Circle	
Little Town Lane	
Huntville Rd	
Appleby Drive	
Cantitoe Street	
Middle Patent Rd	
Lawrence Avenue	
Colonel Thomas Lane	
Pound ridge road	
Black Brook Road	
Meadow Lane	
Locksley Lane	
Pound ridge rd	
Broad Brook Road	
38 LILY POND LANE	
paddock lane	

Brundage Ridge Road
Greenwich Road
Twin Lakes
Greenwich Rd
Druid Place
Hopp Ground Lane
Main Street
Succabone Road
Nottingham
Greenwich Road
Oak Rd
Oliver Road
Cross river road
Holly Branch Road
Oak Road
Route 35
Cherry St
Terrace Heights
Cantitoe

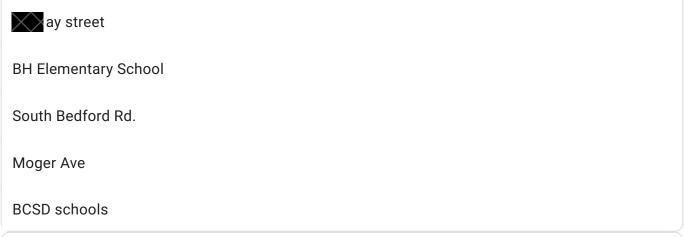
Ferris lane
Lakeside Drive
Nottingham Road
Lake Marie Lane
Allison Road
Wildwood Road, Katonah
quarry
Schildbach
Ridge Street
Cartway Lane West
Crescent Terrace Bedford Hills
Stone Bridge Lane
Quarry lane
384 more responses are hidden
If you work in Town at a fixed location other than your place of residence, then please identify the street on which you work.
119 responses
Village Green
N/A
Bedford Rd

NA NA	
Bedford Road	
Village green	
Court Road	
Home	
N/a	
Old Post Rd	
Main St	
Cantitoe	
Main Street	
Bedford Road & Mianus River Road, Bedford Village	
Croton Lake Rd	
Court	
Bedford Rd Katonah	
Na	
Katonah Avenue	
172	
Outside KES & KVK while waiting for my kids	
Katonah Ave.	

Bedford rd	
382 cantitoe	
Depot plaza	
Sorry home	
Old Post Road/Route 22	
Railroad Avenue	
i used to work in the village and the lack service impaired my work	
Route 22/Pound Ridge Road	
-	
Katonah ave	
Cedar Hill Rd	
Main St. Village Green	
iam retired and live here	
Village Green, Bedford Village	
Bedford Road, Bedford Hills	
Cross River Road	
VILLAGE GREEN	
Home	
Old Post Road	

Edgemont road Canitoe Parkway Edgemont road Retired 23 Pleasant st The Farms Road Pound Ridge Road , Rte 22, Rte 172 Katonah Avenue Twin Lakes DR Huntville Guards hill rd South Bedford Road Pound Ridge Road **Bedford Center Road** Jay Street High Street Old Post Road **Bedford Road**

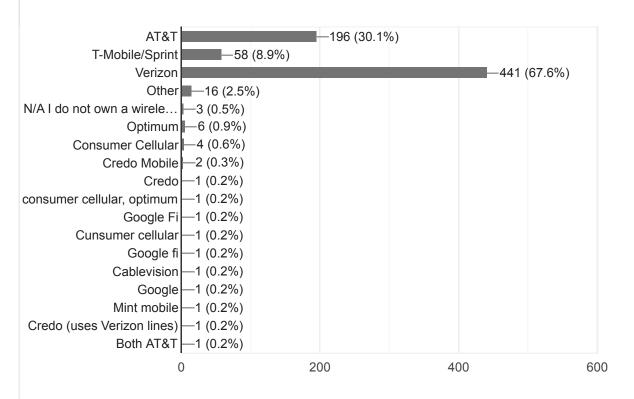
Green Lane	
Parkway katonah	
spruce pond lane	
Sabbitt rd	
I am mobile	
n/a	
Church Street	
Babbitt Road	
Adams St	
Old Post	
Katonah Ave	
Bedford Green	
Cantitoe	
Place of Residence	
Pound Ridge Rd	
Valley Road	
The Parkway	
No	
Cliffside lane	



My Wireless Service Provider is (if you have multiple wireless providers then please mark all that apply):



652 responses



How many wireless devices are used in your household? (Devices would include but not be limited to; wireless phones, laptops, tablets, watches, computers NOT using your home internet provider. Do not include items like garage door openers or smart home items.)

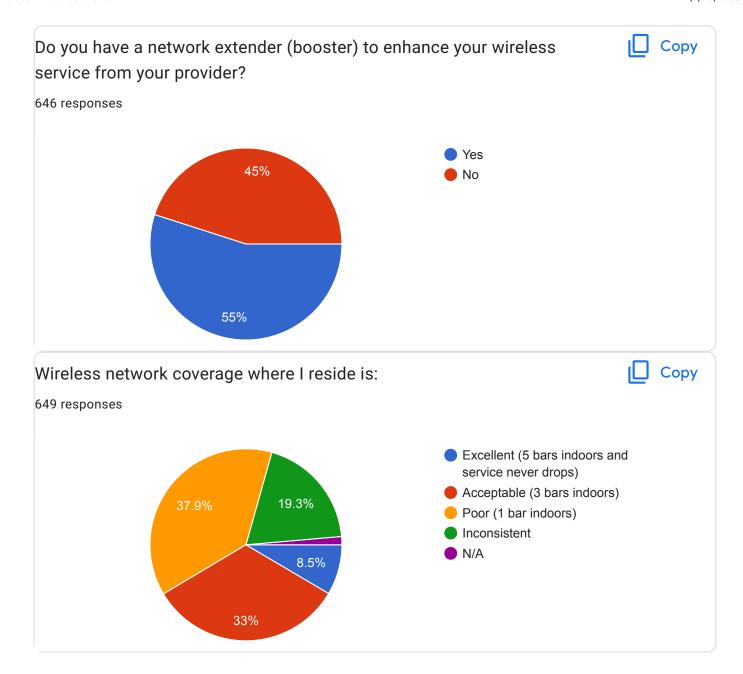
641 responses

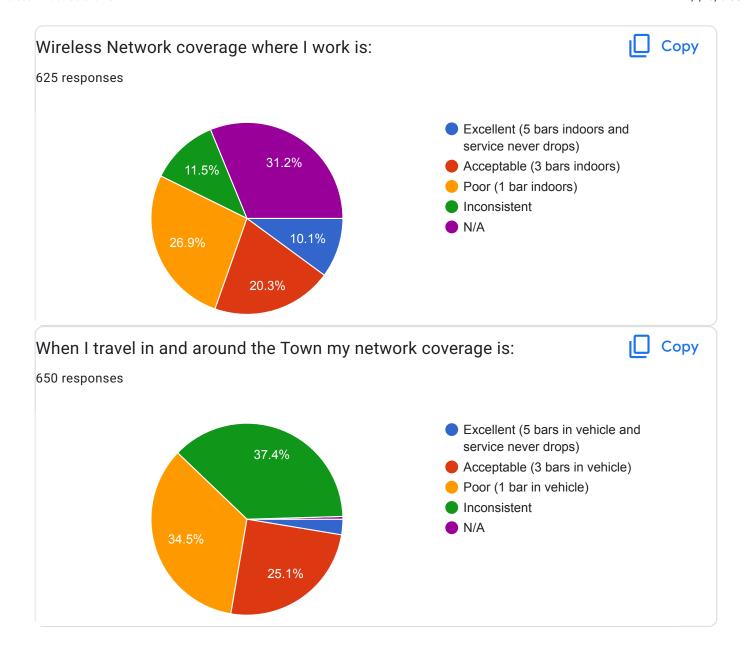
4	
5	
2	
6	
8	
3	
10	
7	
9	
12	
15	
11	
1	
13	
20	
Four	
Six	
Three	
15	

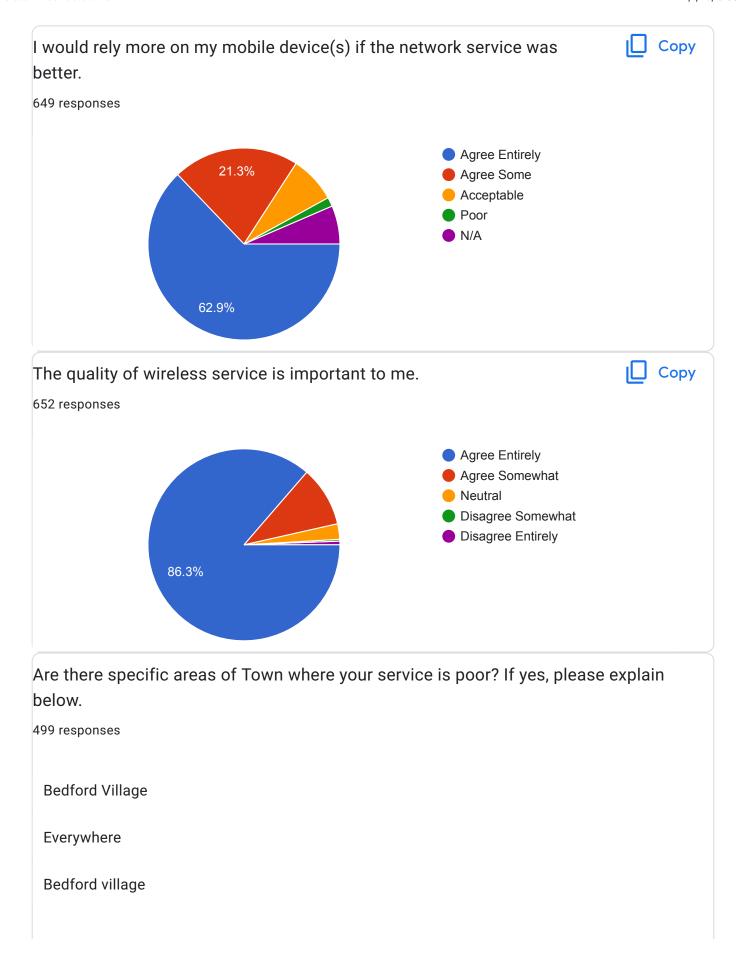
Two
14
one
Five
seven
5+
2 apple iPhone 13
Phone, laptop
+10
I would use 10+, but we ha zero phone coverage.
0
8-10 devices
A lot
15
At least 5
Desk top, four lap tops, 4 iPads, two iPhones
2
12+

six
4-5
Don't understand the question. We have 3 cellular devices but > 100 wifi devices
At least 6
20+
4 regularly
Alot
10+
three
Nine
None
7-9
Over 15. Children all have devices too
At least 15
Four
nine
Wireless phones, laptop,tablet, watches

four
laptop, i phone, internet
Seven
17
30
16
40
Office = 75 (25-30 people plus guests), Home=6 (South Salem)
Work cell phone, personal cell phone, tablet and laptop.
Computer, mobile phone, security system,
Zero
Three (3)
5-8
2!
6-10
6, unless my children are visiting between 6 and 15
4
five







My home
All of Bedford Village
village
Bedford Village
Everywhere
Village
The village
Route 35
No
The corner of Allison and Garlen. Always a dead zone
Bedford Village Green
Bedford Village, Court Rd, Seminary.
It drops depending on which hamletl am in Bedford Village is poor.
Bedford Village is horrible. I drive thru there to get to my job, and the children have friends there. There is absolutely no service whatsoever. Also near Fox Lane campus the service is lacking.
Pretty much everywhere
Service is nonexistent in Bedford Village. It is extremely frustrating when I am at the elementary school or the park and cannot use my phone. There are dead spots throughout Bedford so I cannot maintain a phone call while driving for more than 5 mins at a time.
My home

Bedford Village. Harris road in bedford hills. Route 35 from Katonah towards Cross River Bedford center road Yes ...home, so so in village Route 35 is the dead zone On any major roads it is poor My street/home gets horrible service and all of Bedford village! Sections of rt 22 and Bedford Village (not BH) In Bedford Village, near the library. 137 and 121, my son's car broke down, NO SEVICE, if anyone had an accident there and was bleeding, anyone who saw the accident would have to drive away for a minute or so before they could call it in. Terrible. Bedford village is very bad and the surrounding area. Bedford hills (church street) has surprisingly low service. 1-2 bars at my house. If I didn't have the network extender, I'd have no service at home. It's also bad at Hunting Ridge mall My house! Most places Bedford Village and Bedford Center Road Yes! What comes to mind is that I can't reliably stay on or answer a call without it possibly being dropped when driving to or from home and my kids' schools (John Jay). Most problematic is 121, Bedford Center Rd, Bedford Village area, Upper Hook, 35 from Katonah to John Jay. And my street is terrible.

Bedford center road near Buxton road; Pound Ridge Road; Loop Road (nonexistent service) Rte 35 by the water plant / cherry st by oak road / Harris road btwn Bedford village and Katonah Katonah, Bedford, Bedford hills 4 miles radius Too many to list. In the village of Bedford Main Street katonah Town park, and around hunting ridge mall area 172, west patent road Downtown (I've actually been locked out of my Tesla bc I couldn't connect to wirelessly unlock!) and around the schools, up 35 - it's really bad. I can't rely on being productive beyond the range of my home wifi Village green, long ridge rd, Miller's mill Sadly, my house! We rely on Optimum internet for all calls and internet. Bedford village. Bedford Village has no service at all, Katonah is poor service as well Bedford Village, Harris Road, In and around the village is particularly bad Throughout Bedford Village, on West Patent, Springhurst, Rte 172 in Bedford Hills All over terrible Yes

My home! Zero coverage here. Also parts of BV. Post storm coverage is also a major issue.
Bedford village park, JJMS/JJHS
Pretty much it's poor in everywhere.
Yes, in my neighborhood
Many places
Very poor at my house.
Bedford village town center
Yes- our neighborhood has 2 dead zones on Allison rd . Always drop calls at 22&35, and many other places on 22
I sometimes have no service at my house
Top of mind: Rt 35 heading into Cross River from Katonah, sections of Bedford Center Road, 172 between West Patent and 684, 121 between Bedford Village and Cross River
Bves school area
At home, on Meadow Brook rd and in Bedford downtown.
St Patrick's area and fox lane campus.
Village
Route 22 St. Patrick
Village Green
NA
In the village
Bedford village. Girdle ridge rd occasionally in katonah, Whitlockville rd , rt 35

Corner 121 and 137 total dead spot

From the Mobil station to pound ridge border on long ridge road. Also not good from Mobil to fox lane high school/ .

Anywhere on route 22, Bedford rd

Any road leading from Bedford Hills into Bedford Village

Driving through Bedford Village, on a section of !Bedfors Center are, section of 684 near fox lane, by Caremount medical

172, downtown Bedford, route 22

ALL of the village, parts of Katonah. Especially 35 east of 22

Most of Bedford village where I live.

The village itself, Pound Ridge Rd, Guard Hill area DANGEROUSLY BAD

Driving through bedford village. Long ridge rd.

On 22 between the Bedford golf club and 35

My house gets zero service

Route 172, within the town of bedford, Katonah section of bedford

THE VILLAGE GREEN

Shopping center and village green area.

Bedford

Along Bedford center road.

Along 121 going toward cross river.

Pound ridge road.

In Bedford village.

Parts of Harris rd.

Pea pond rd

Rt 35 going to cross river.

Stone hill rd.

Millertown rd

Croton lake rd.

Long ridge road, pea pond rd, Bedford village, Harris rd

Bedford village, by the new grocery store decicos, by the shell gas station, Mount kisco in town is also terrible by train

Intersection of 172 and Long Ridge, Cartway Lane East

Easternmost area of Katonah

Bedford Village - everywhere.

Bedford Village and surrounding area

In the village, area around Mobil station, Long Ridge Rd, Pinebrook Rd and surrounding neighborhood, Beford Center Rd is spotty as is Harris Rd

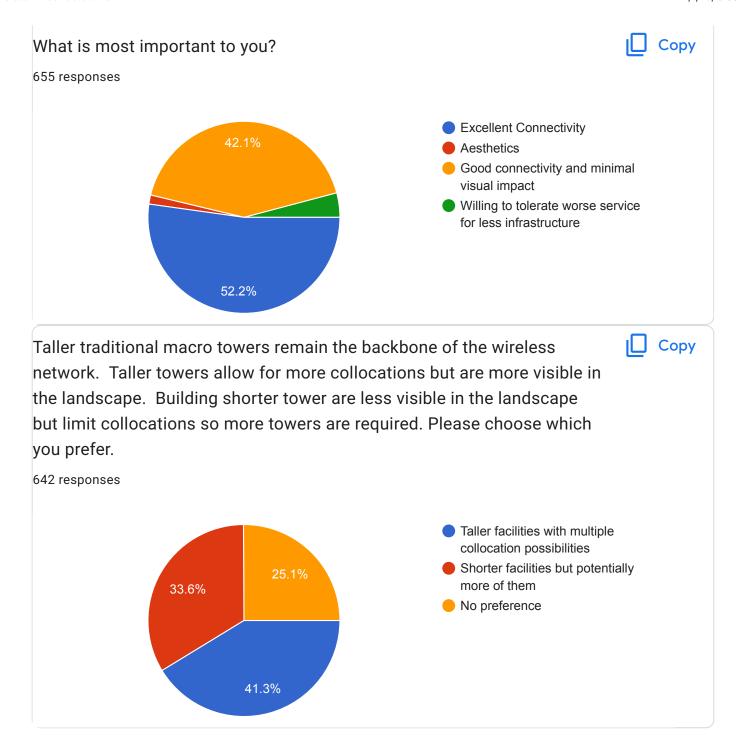
On Cherry Street, near/around KES

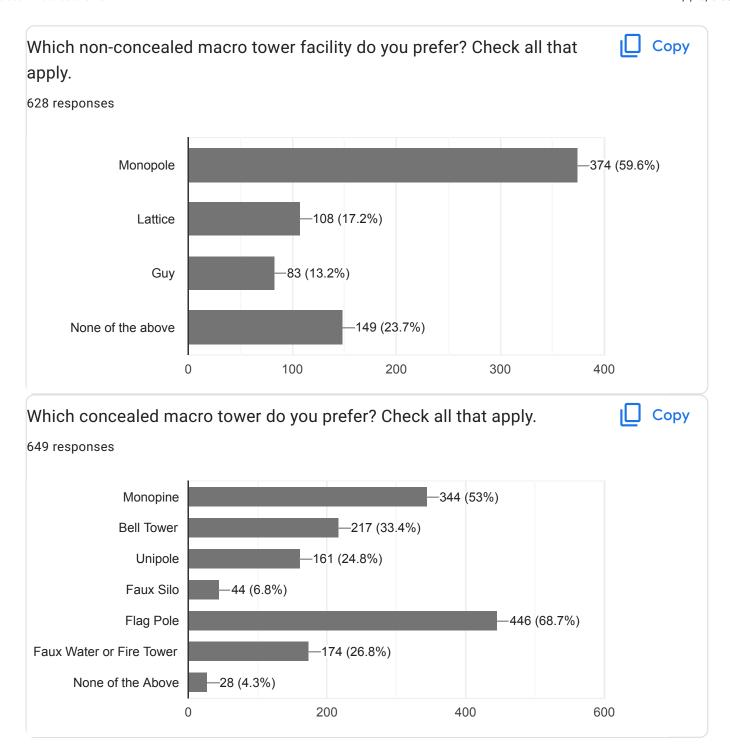
In the village and my home

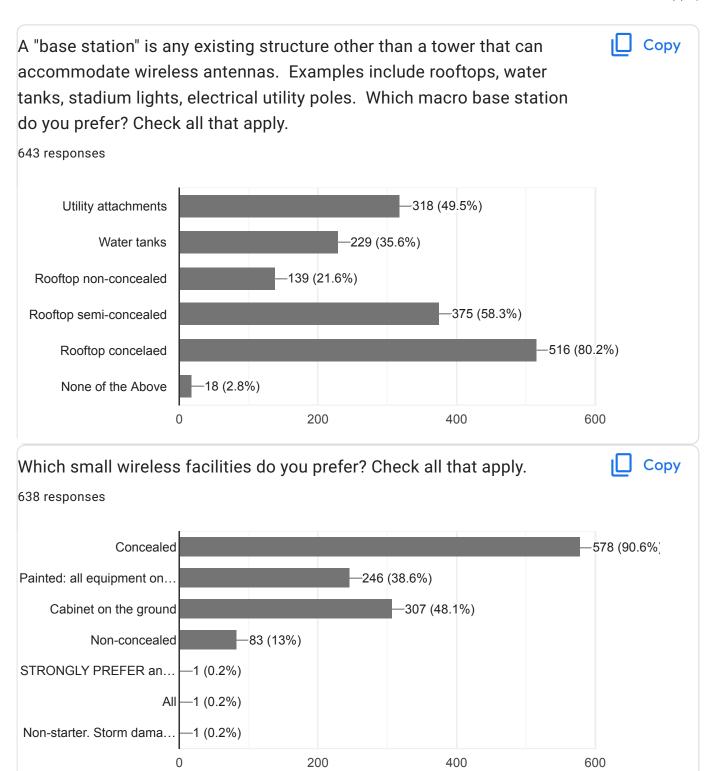
The village green has no service!!! All along 22 from Armonk to goldens bridge has no service. 172 from 22 to 684 has no service. 172 from the village green to Scott's corners has no service.

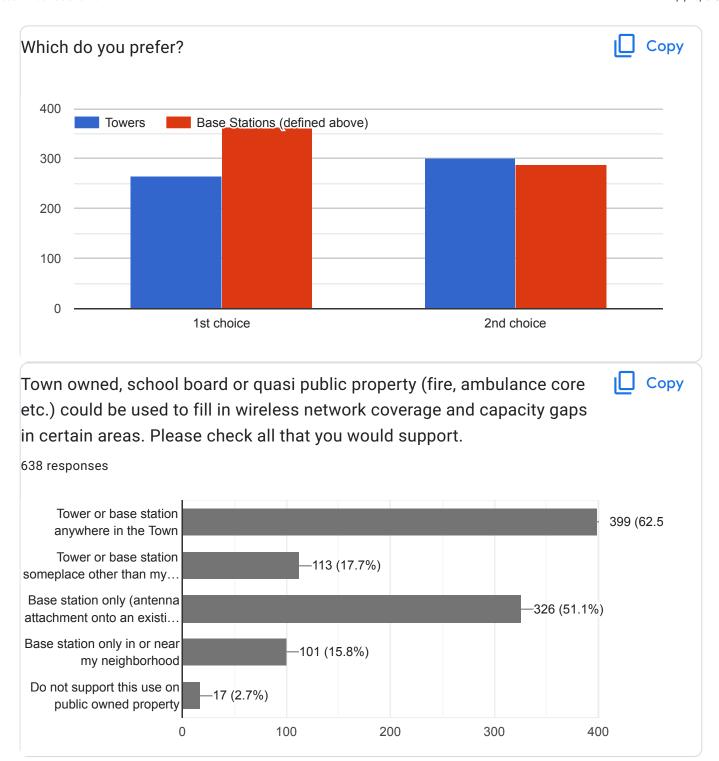
367 more responses are hidden

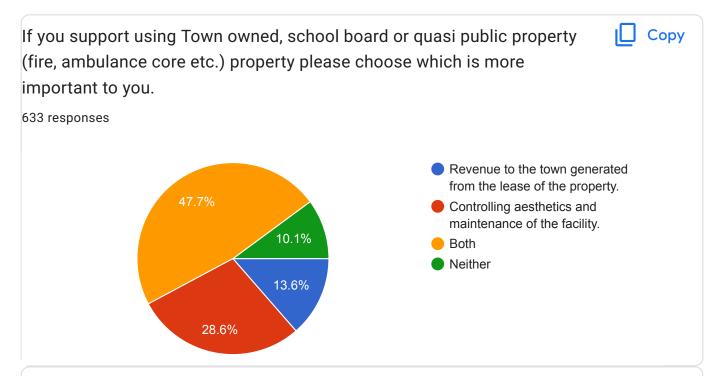
Aesthetics and Location



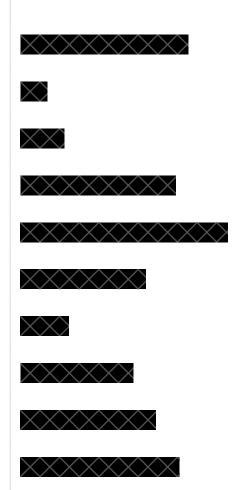








Name or email address *email will not be used for anything other than this poll 655 responses





- old post rd E Middle Patent Rd paddock lane Indian Hill Road X Cartway Lane East Allison Rd. Guard Hill Road aspetong Road Huntville Road Brook Farm Road xeminary rd Cantitoe Jefferson Lane, Bedford, NY 10506 Bisbee lane
- Clark Rd
- Old Post RD
- X Little Town Lane

Pine Brook Rd

Middle Patent Rd. Bedford, NY 10506



Middle Patent Road, Bedford

Sarles St

- Oliver rd
- X Lily Pond Lane, Katonah

mblehrer@optonline.net

- Mianus Bluff Drive, Bedford
- bedford center rd
- Pea Pond Road
- X Brundage Ridge Road 10607
- Old Post Road, Bedford, NY
- X Twin Lakes Drive
- Mount Holly Road, Katonah
- X Little Town Lane
- Babbitt Road
- N Salem Rd, Katonah, NY, 10536
- Meadow Ln, Katonah, NY 10536
- Old Post Road, Mt. Kisco, NY 10549
- Sunset Drive, Bedford Hills.
- Turtlepond Lane, Bedford, NY
- Druid Place

Dwight lane Bedford hills
Park Ave
X Twin Lakes DR
narrows rd bedford hills NY
South Road
Neer Ridge Road
Barrett Rd Katonah, NY 10536
Nound Ridge Rd
Hook Rd., Bedford, NY 10506
Anderson rd katonah
Mt. Holly Court
xaddle ridge road (taxes are Bedford)
Appleby Dr
Hook road
cedar rd, katonah
Haines Rd
Indian ill Rd
Pine Road, Bedford Hills, NY 10507
Hopp Ground Lane





75 more responses are hidden

Comments or suggestions

170 responses

Get it over with already!

this is taking way too long and Bedford is falling further and further behind.

The lack of adequate cell phone coverage is a major cause for ongoing concern in this Town. I really hope we can come to a resolution soon.

Use town-owned land as the first choice.

Thanks for gathering this data. More than anything this is a safety concern. For years I've been worried about when my daughter starts to drive because I know that I won't reliably be able to reach her. It's also been incredibly problematic to lose power and try to find out when school is canceled or to notify my colleagues that my Wi-Fi is not working because we have no power. Finally, having had some serious health issues over the years, I've worried about whether emergency medical personnel would be able to get to me during a crisis, and I have often missed long-awaited calls from providers given the huge dead zones around town, which is where I spend much of my time. Anything I can do to advocate for improved service, I'm happy to do. Thank you for your efforts.

None

We need cell service throughout town

All for better coverage as long as it is hidden

I don't think we should be investing in old technology, especially when it's big and ugly. The newer 5G units are smaller and more easily concealed. There's no reason we can't have aesthetics AND function!

Thank you for undertaking this! My cell service is so unreliable in much of this area, and during

the recent power outages it became a serious problem when we had no way to make calls from home.

This is a huge problem

Cell signal strength is often weak in hilly sections of town.

Think this is a great idea to help steer this discussion. Thank you!

this has been going on too long - a decision for everyones safety should be made asap

I would like wireless service

Please provide proper 5g coverage throughout the village and surrounding areas. the lack of service is a safety hazard

All information re this project should I be readily available and easy to access. Transparency is key.

SAFETY MUST COME FIRST!

I would never have moved here had I known there wasn't cell coverage. I have a medically fragile child and when the power goes out we are literally cut off from the "world." If there were an emergency we cannot call for help.

I recall hearing that in Africa they use balloons instead of towers for cell coverage.

Green space is Bedford's gem ... it must be protected at all costs!!! Utilize private property that has been leased to cell companies or existing poles, water towers, etc owned by the town.

NEVER destroy a park or other, already minimal, green space.

We contributed more money than we could afford to join our neighbors and hire Gunnerson who proposed a distributed system which would work better with the complicated geography of Bedford. Why is Cityscapes now being paid to do the same thing, having tried to force huge towers on us as the only solution — until now?

We MUCH prefer a distributed system which would not disadvantage any part of town by despoiling it with a huge tower. Concealed are best, but honestly even the unconcealed small poles are bearable to us.

Protect our parks and green space. Use town sites like water tanks, firehouse, existing poles and sites where land owners are willing to lease sites to cell companies. Don't ruin our limited public green space.

You spelled "corps" wrong. It's not "core" for an ambulance corps.

Better cell service please! It's 2022!

I really hope that the town gets cell service soon. It's a problem when we have had to call 911 during emergency and can't get through.

Would love a tower under any circumstances

I would love better cell service in town and support all options to make that possible!

We need better wireless. How about a tower or base station behind the new firehouse in Bedford Village.

This problem has worsened in our town over the past 5 years. Thanks for your willingness to examine & address this issue.

A great idea is to make the tower look like a flag pole & give us better service!

The town has failed the average person in Bedford. We've been bullied by NIMBYSM and a landed mega wealthy class that doesn't need to worry about daily concerns. At best these groups have made perfect the enemy of the good and we are forced to endure daily safety risks. The town and wireless committee have also delayed any meaningful statements or progress.

Thank you for assembling this survey. This issue is a PUBLIC SAFETY issue that has dragged on for years (decades) longer than necessary. Please do whatever is possible (and potentially unpopular) quickly. We are out of time.

One time I could not get my car to start and had no way to call BVES to let them know I would be late for pick up. The school didn't hear from me which is not normal and called my husband which sent my family into a panic where they call the hospitals and police to ask if there were any accidents. It's crazy that in 2022 I can't make a phone call anywhere in bedford. I understand wanting to keep the looks of bedford as they have always been but this has gotten out if control from a safety perspective. Perhaps use the new fire dept to hide a base?

I like the "Bell Tower" design but not with a cross on it. That shouldn't even be a selection in this survey. They should have photoshopped out the cross.

Thanks!

Please just get us cell service in my neighborhood!!

many short poles, much better coverage

From a conversation -It sounded like the new owner of the playhouse building could be willing to have base station on the roof.

No one will every be happy. But putting an unsightly tower will make people unhappy and negatively effect the beauty of the town. Why would you if there is a better option?

Reception options should include 2 bars. That's what we have in our home.

Thanks for your consideration of this. Wireless access is a very important issue.

Get us better and more cell service. we need connectivity

I truly believe that there are appropriate solutions to provide service in every area of town, we just need people to be reasonable and help find solutions, not issues. As a firefighter in town, this is important for our mapping and data to help us get info while responding to emergencies.

We need this so badly. It is currently unsafe to drive the roads, especially the dirt roads, of Bedford without cell service. I have no idea why people fight against this. Having cell service could only increase property value in this town.

We've lived here for over 20 years, and we're STILL arguing about cell tower placement—yet there are telephone polls ever 50 yards and no one bats an eye. Please get this done ✓

I am against any clearing of trees or proximity to a residence or visibility from a residential area to accommodate a tower. Prefer small hidden poles or base stations.

The time has come to join this century. The medical community, emergency services and the town's own document for emergency preparedness have all spoken. Cell service is necessary, lives depend on it. Even power equipment like tractors need cell service for updates in the field in this day and age. Let the majority have what they've been screaming for a long time.

I've had 2 car accidents occur on my street where the injured car drivers had to walk to my house to call the police because they had no cell service. This is dangerous and unacceptable with today's technologies.

Please, no more cell towers in Bedford.

I am against expanding wireless in our area, PERIOD! So obviously I am biased as re these questions. 5G has been shown to be harmful and we have absolutely no idea how being around all of these frequencies on an ongoing, continual basis will affect us over the long term. We as a species do not think ahead of our own "what we want, want it now" mentality. Humans seem to think that if we don't see something with our eyes it can't hurt us and does not affect us. This clearly is NOT true when thought about for any period of time, but the powers that be will insist that everything is just hunky-dory even when it may not be, especially where short-term convenience and profit-making are concerned. I know I am in the minority, but still want my voice to be heard.

WE MUST IMPROVE THE CELL CONNECTIVITY IN THIS COMMUNITY. IT IS NOT SAFE ANYMORE.

Just expand coverage. The NIMBY tower stuff is ridiculous.

Weird that you would add a Christian symbol in this poll but not a Star of David or crescent and star. Maybe just leave that one out next time:). Thanks for all the work you guys are putting into this. Can't please everyone!

Thank you for doing this. Cell service is important and it's not been good here.

Consistent cell service is important for business and emergency/safety purposes.

We need cell coverage To be updated asap

We are blind to ugly telephone poles and their wires. Let's get over ourselves and focus on the benefits of modern technology!

Gunnerson made a presentation about using smaller telephone pole type "towers" in a kind of network - especially to fill in gaps between areas with stronger signals

Service can be improved with micro stations. Towers are an awful idea

For emergency purpose, I would strongly recommend cell phone service throughout town. There have been many instances where driving at night I've had to make calls or check GPS but there is absolutely no signal throughout town.

No service at all from my home on Barry Ct all the way to the MS/HS campus in Cross River. This is not acceptable from a safety standpoint. Service all around Katonah is awful. This is unsafe for those of us who have kids and need to stay in touch as they become more independent. I can't even imagine what is one to do if one has an accident or an emergency on one of these roads? Cannot reach anyone! How are we still living like this in 2022??!!

Bedford definitely needs to address the spotty service around town, especially for emergency services. We need to get into the 21st Century.

Enabling cell coverage is in the public interest, it provides safety, drives economic activity, enables communication and therefore community. The complete lack of political will to permit this critical infrastructure to be built is wholly unacceptable. I have never been to any other populated place that has the same lack of coverage as our town. It is a complete joke. The town's leadership on this issue has been to let aesthetic concerns from fringe minorities keep the vast majority of us without acceptable coverage. The Planning Board is not serving the public interest and they should resign to make way for one that does.

LACK OF COVERAGE IN BEDFORD VILLAGE IS A MAJOR CONCERN FOR SAFETY

While I understand the initial shock of living near a cell tower, it has become a safety issue to not have service when many technologies have upgraded. For example, I thought I could get a hard-wired telephone that would have a consistent dial tone in case of a power outage (as we know that is common in our glorious, heavily wooded Bedford) but that technology has phased out and is not longer offered as a solution. We are completely reliant on cell phones today and feel unsafe in the event of an emergency when we would need to reach first responders in a timely fashion. We are young and looking to grow a family in Bedford, we have modern work scenarios where we work from home, we have become reliant on cell phone service -- and while we were aware of this issue when we moved here, we were unaware of the lack of solutions that could compensate for this. I am in full agreement and in full support of a cell phone tower or base station for a safer, more modern community to live in.

It would be good to know if these solutions would dismiss the litigation Verizon initiated against the Town.

Some of the choices aren't adequate, like second to last question.

Some of these questions are unclear or do not offer 'none of the above' response

We all live with devices. What kind of external health factors will affect the community having a tower or base so close to homes?

I'm against any towers or bases near my house.

I also support placement on churches and other non-profits to provide some financial support to these vital institutions

If placed on quasi public property it should be minimally used. ie. a firehouse that is not occupied routinely for hours at a time. Not a school. Placement as far away from residences is really important. Thank you.

I'm so tired of cell service being held hostage by a few vocal residents who can't bear towers around them.

No homeowner should have to see the towers. Figure out how to gain coverage without a tower or wait until the technology improves.

Service has gotten worse.

We need to have better cell service in the area, for many reasons - but the safety of people is the most important.

Thanks for doing this. Been dealing with poor service since we moved here.

Please put a cell tower in anywhere! It is a safety issue that phones don't work when power goes out.

Old post rd and 172, we finally have traffic lights, but how many accidents have we had in the past 20years? This intersection has from none to one bar signal; the only one who could call 911 is a clerk from a shell station. Then Our Town of Bedford, with one bar signal to none (is a center). Then example, amazon drivers look for phone services to scan packages, delay texts with confirmations, missed phone calls, and then who knows one-day emergency alert. We need to improve our living standards, especially since we live in the suburbs and we are used to losing power example, August 4th, 2020, days weeks without power, (Bedford Town 8 days) and our cell phones were the only way to get anything from the outside world.

Thanks for asking

Poorly constructed survey.

Hurry up and get more towers! Thanks!

We have evolved all public safety and commerce to become "wireless". Not just a convenience but a mandatory necessity. Let the new firehouse have cell equipment and they can get revenue to offset operations cost.

Thank you for doing this. I learned! I like the idea of concealed wherever possible whether it be base or tower. I understand that there is no perfect place. Connectivity everywhere in town is most important to me. My son had his bus stop in Bedford Village for a few years and there was no way for me to be contacted/or contact the school when I would wait for his bus in the afternoon. It was incredibly worrisome at times. Thank you again for your efforts!

Please don't put up ugly towers in our beautiful landscape

Internet access and wireless communications is simply a mandatory requirement - period!

We need improved service ASAP....stop the studies and let's get some poles up!!!!

American Legion great location for a tower

I am tired of hearing about studies and want action now! Get it done, we are in the middle of the 21st Century!

How can you have a functioning town (bedford village) with no cell service?? This needs to be fixed!

50' poles in along the roadside to blend in.

Thank you for working on this!

Frequent power outages make better cell reception a priority.

Thanks for doing this!

Let's get some cell service!!

Public safety is very important and argument about property devaluation is total bs.

This survey is well intentioned but subpar. Gives no context, and asking questions without providing context really makes no sense. We are sadly extremely familiar with this, and disagree with this out of context (but presumed well intentioned) questionnaire.

How about satellite?

Bedford needs cell coverage !!!

70 more responses are hidden

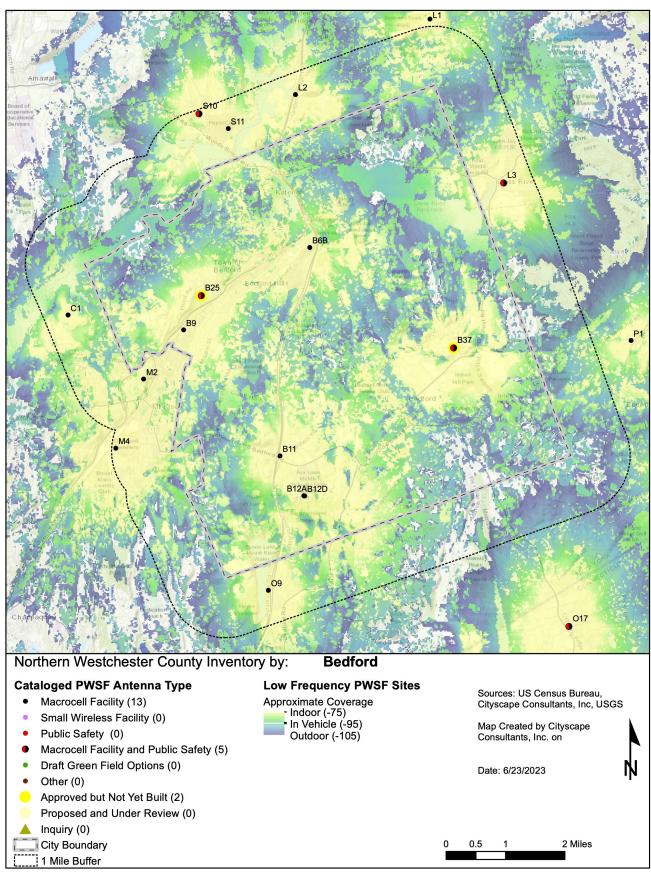
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APPENDIX B3

LOW-BAND FREQUENCY SIMULATED COVERAGE MAP



Simulated Coverage Map from PWSF Sites in Low-band Frequency