Cell Service FAQs
April 18, 2017

1. What is the Utilities Commission's strategy for improving cell coverage in town?

Three principles have guided the UC's strategy for improving cell service in town. First, the town government should play a proactive role in resolving this problem. Second, any new infrastructure to be built must follow strict design limitations and be minimally obtrusive. Third, there is no "one size fits all" solution to our problem.

Previously, town governments *reacted* to initiatives by carriers or infrastructure developers. Unlike other cities and towns across the U.S., New Canaan had never developed its own preferences or land use regulations on wireless infrastructure thus leaving it up to carriers and developers to guess what designs would satisfy the town. The UC argued that a better approach would have the town becoming a leading participant, with the goal of improving coverage while exercising the maximum possible control over what kind of infrastructure is built and where it is placed.

To do this, the town had to gather its own data set on service gaps. Relying on the network coverage data produced by either carriers or developers can lead to poor choices since there is a clear conflict of interest. Carriers or developers may be tempted to produce coverage data that justifies their application for a new site.

In 2014, Centerline Solutions LLC of Golden, Colorado was hired to conduct a drive test of the town, which they completed that summer. The Centerline study (released in December 2014) revealed significant service deficits in the north part of town. It was clear that it would take more than one new cell site to make inroads towards resolving the problem.

The study also evaluated available parcels of municipal and private property as potential sites for new wireless infrastructure. Their report produced a short list of eligible town properties, including Irwin Park, the Nature Center and West School.

Each candidate site was evaluated on the basis of its location, its surrounding foliage and its elevation. The UC also recommended that the town should follow an RFP process to award a master lease agreement to a single wireless infrastructure developer. The selected firm will commit to building the kind of minimally obtrusive infrastructure that the town desires in areas where coverage is needed.

The strategy calls for deploying new infrastructure in two phases. Phase one consists of building two or three concealed macro sites capable of projecting coverage over a wide area of the north side. These sites will create a signal "overlay," bringing service to large areas where reception is either not available or very weak. Phase two involves adding microcell sites or outdoor distributed

antenna (ODAS) nodes to fill in remaining gaps and add capacity.

In 2015, the town retained Cityscape Consulting, an RF engineering and wireless planning firm, to help prepare an RFP inviting carriers or developers to apply for a master lease agreement giving the winner access to selected parcels of town property. Each location was chosen on the basis of its ability to host a concealed cell site that would substantially address northern coverage gaps.

The RFP was completed and proposals received from five bidders in 2016. Homeland Towers was awarded the most points and a master lease agreement was negotiated with them in the second half of 2016. Homeland then began to develop plans for building new wireless infrastructure according to the design limits developed by the UC.

2. Why is the Utilities Commission Recommending New Concealed Cell Sites for our town?

Many residents know that cell coverage is poor or non existent in different parts of town, particularly in the north. A total of five cell sites currently provide service in New Canaan but only one site is located north of Parade Hill Road. Carriers are aware of this problem and have proposed sites at two locations in the north, one at Puddin Hill Road and another at the Clark property on Smith Ridge. Neither site was completed for various reasons. Complicating matters, previous town administrations were unable to develop a coherent policy that clearly expressed the town's preferences when it came to the design and placement of cell sites. As a result, the northern half of town continues to deal with spotty and, in some cases, nonexistent coverage.

3. Why is it important to improve cellular service in town?

Poor cell coverage in town is more than just an inconvenience for our residents and visitors. Cell phones have become an essential communications and personal safety tool in the 21st century. According the FCC, last year, more than 75% of 911 calls were made using wireless phones.

Our lack of cell sites has made it difficult for our police, fire and EMS services to achieve the coverage they need to communicate with dispatch and medical direction services. Emergency service radio antennas and equipment are frequently co-located on commercial cell sites. When there is inadequate cell coverage, emergency services radio networks perform poorly and sometimes not at all.

In addition, our Emergency Service providers all make use of Mobile Technology Devices to aid in their emergency response. These devices provide important data about patient history for EMS, water sources for FD, or criminal history for PD. They rely solely on robust cell service to deliver the information to our responders in the field.

4. Why use municipal property and not private property?

There is a very limited amount of privately held land in New Canaan that could be utilized for wireless infrastructure. By contrast, the town owns several suitable properties, which means that multiple cell sites could be built simultaneously. Using different parcels allows multiple coverage gaps to be addressed at the same time and gives the town the maximum control over the design and precise placement of the facility. It also allows the town to insist that each new site meet its stringent standards and carry antennas for our emergency services networks, thus extending the reach and capacity of these networks.

5. Why can't the town pass an ordinance requiring that only DAS or microcell sites will be allowed? Wouldn't this eliminate the need for towers? What about all those other towns in the United States that have reportedly achieved better coverage without the need for towers?

It's been argued that all we need to do is pass an ordinance limiting wireless infrastructure to unobtrusive designs such as DAS (distributed antenna systems) or microcell sites (antennas mounted on telephone poles) and we will achieve better coverage without the need for a single new tower. As evidence, proponents of this argument point to examples such as Gross Pointe, Michigan, Wellesley, Massachusetts and various other towns. The UC would like to address a number of reasons why this solution is unworkable for New Canaan.

The UC actually investigated this option in the summer of 2015 and spoke with town planners at a number of these towns to understand their approach to improving wireless service. We concluded that this solution is not as simple as it sounds.

First, a word or two about DAS and microcell site technology.

DAS technology was first developed to provide cellular coverage in indoor spaces with heavy traffic such as shopping malls, train stations, airports, arenas and other entertainment venues. The architecture uses small antennas and the remote location of radio equipment to create a low visual impact on the surrounding area. Eventually, DAS technology was introduced in outdoor settings as well, often in urban centers where population density and traffic is high.

Typically, ODAS (outdoor DAS) antennas are placed on utility poles or street lights approximately 35 to 45 ft off the ground. With their low elevation and reduced power levels, a typical DAS node (consisting of the antenna and connected fiber optic backhaul) will only send a signal a fraction of a distance that a typical cell tower will. The distances covered by ODAS signals may be as short as 75 yards, depending on the height of the antenna, the surrounding terrain and the number of trees and buildings sitting in the path of the signals.

This means that, in order to cover a wide area – such as the northern half of New Canaan – a very large number of ODAS nodes will be required and each node will have to be connected by a fiber optic network linking the antenna back to the radio racks which can be stored in a central location up to 3 km away from the furthest antenna. All of this fiber optic connectivity is expensive to install. If it is trenched, the cost includes excavation, laying down a conduit and making road repairs. If it is strung on top of existing telephone poles the added weight must not exceed the pole's load bearing capacity or a replacement pole would have to be ordered.

Microcell Sites consist of cell antennas mounted on top of telephone or utility poles or even dedicated poles that are typically 35ft to 45 ft tall. Like ODAS nodes, the limited height of microcell sites considerably shortens the distance they can transmit their signals. Most often, microcell sites are typically deployed by carriers to add capacity to their networks rather than coverage. Verizon Wireless has built one microcell site in New Canaan on Cherry Street near the train station and is planning to install another on Ponus Ridge overlooking the Merritt Parkway. Both of these are high traffic areas with particularly high demand for data services.

So why is it that New Canaan cannot simply pass an ordinance and only allow ODAS and microcell technology in town instead of towers?

There are a number of reasons:

A) First, many of the towns referred to as examples of this approach differ significantly from the northern half of New Canaan both in terms of their topography and population density. The fact is, we have more challenging terrain in the north part of town including hills, valleys, ridgelines and changes in elevation. In addition, we have 4-acre zoning (read: "low population density") and some very large homes that, together with our terrain and trees, can deflect and degrade wireless signals.

B) The lower height and power of ODAS and microcell site antennas means that their radio signals will travel a shorter distance and therefore provide limited coverage. As a result, many more ODAS nodes or microcell sites would have to be built on rights of way throughout neighborhoods in the west, northwest, north, northeast and east parts of town. Based on the design model of Savannah, Georgia where Verizon developed a multi-carrier DAS system to provide reasonably seamless coverage, it would require 26 nodes to service 0.6 of a square mile on flat surface. Comparatively, by one estimate, it would take anywhere from 350 to 600 ODAS nodes to cover the current service gaps in town. Cityscape conservatively estimated the required investment to be $39 million. This figure covered only the support structures and fiber links, and did not include the actual operating electronics, transmitters/receivers, antennas, permits, surveying and design. Comprehensive coverage, leaving no gaps, might cost as much as $56 million.

C) Return on investment (ROI) for wireless infrastructure depends on the amount of traffic each site can serve. With our low population density in the northern half of town, the ROI for each node would be extremely low, thus making it unlikely that tower developers or carriers would make such an investment. Tower developer Crown Castle said as much when they conducted their own drive test of the town in 2012.

D) Even if the town itself decided to build such an infrastructure, carriers would be unlikely to invest the funds needed to employ it (including the cost of their radios, switching gear and backhaul links) since the traffic would not justify the expense.

E) While the town can unilaterally dictate to carriers or tower companies the design and aesthetics of the network or wireless infrastructure they can build here, carriers and developers can also choose to invest their capital elsewhere. In 2015, carriers and tower companies participated in discussions with Cityscape on why the town has poor service. The overwhelming reason offered was that there are other towns that also want improved service, so the service providers decided not to waste any time and resources where they are not wanted. This probably one of the primary reasons New Canaan must cope with such poor cell coverage today. In the past 15 years, only one cell site has been built in New Canaan. We cannot continue to afford this rate of progress.

F) The truth is, the town must find a solution that balances the needs of residents with those of the developers and carriers. Unilateral solutions offered by any of these parties are unworkable. Compromise is necessary. This means following a hybrid approach that allows for a limited number of carefully designed and placed concealed macro towers with height restrictions, deploying either neutral host antennas or restricting antennas to two shared aperture levels.

G) These concealed cell sites will provide the initial signal overlay needed to cover as wide an area as possible in as short a time as possible.

H) Remaining coverage gaps and capacity deficits in the north part of town can then be filled in using ODAS or microcell sites on a selected basis, as appropriate.

6. Why Not Do Nothing At All?

Given the difficult choices facing the town, it may be tempting to delay decisions indefinitely and avoid taking a stand. To do so, however, would leave these choices in the hands of the Connecticut Siting Council ("CSC") which has the full authority to override local zoning and land use laws and (if a local property owner is willing) permit the placement of cell towers on private land regardless of local objections. Because of their bias in favor of "co-location" of multiple carriers on a single tower, the CSC is predisposed in favor of tall and obtrusive cell towers. The UC wishes to conceal towers with a restricted height in wooded areas. The CSC would not be bothered with such esthetic concerns. The list of Connecticut towns where the CSC authorized tall cell towers over local objections is long and depressing.

Why don't carriers simply bypass town governments and go straight to the CSC for the necessary approvals?

In part because there is a lack of private property available for the placement of cell towers of any kind in New Canaan. This does not mean there is no private property available, however. The site proposed for Puddin Hill Road in 2013 was privately owned and remains a warning of what could land anywhere in town if a land owner is so inclined. One of the goals of this strategy is to pre-empt the need for ugly towers on private land in New Canaan.

Finally, further delay may carry a price that no one wants to bear. We have come close in the past to losing the lives of visitors and residents due to inadequate cell coverage in New Canaan. We all increasingly depend on our cell phones and reliable coverage and none more so than our first responders. We know that our old approach to solving this problem isn't working. We can delay no longer.

Site-Related Questions

7. Which sites are under consideration at this time and why?

The Centerline study, released in December of 2014, identified both existing coverage gaps in the northern half of town and a list of municipal properties which (based on their locations and elevations) offered possible locations for new concealed cell sites that could help fill in the gaps. As a first step, our goal is to achieve wide coverage as quickly as possible by overlaying cellular signals across a broad area.

Phase 1

Potential sites identified through the study included the Nature Center, West School, Irwin Park and the Transfer Station. Through a Town-sponsored and financed review, it was determined that a tower at the Transfer Station proposed by a cell carrier would not yield a fundamental improvement to service in our town, but would in fact provide the carrier with more robust service in surrounding communities.

A) Nature Center
This site is considered to be an alternative to the Irwin Park site. It is not an alternative to the West School site. Unfortunately, after reviewing the deed granting the property to the town in 1961, attorneys for Homeland Tower, the town and Cityscape concluded that there are too many restrictions to make it possible for the town to use the Nature Center to locate a concealed cell site. Copies of these legal opinions are included on the UC web page.

B) Irwin Park
The proposed Irwin Park site can address coverage gaps to the north, south, east and west of the park. A concealed cell site has been proposed for the southwest corner of the park where the elevation is lower than land near the house but higher than other parts of the park. The specific location is recommended because it is surrounded by native trees that will minimize the visual impact. Click here to see a visual impact analysis of the site prepared by Saratoga Associates.[insert link]

C) West School
A concealed cell site is proposed for town land located to the east of the Aquarion water tower approximately 580 ft from the nearest school building. This ground has the right elevation and location for a concealed cell site that can extend coverage towards the north, northwest, west, east and south. We have no alternative piece of municipal property for this location. Click here to see a visual impact analysis of the site prepared by Saratoga Associates.

D) Northeast New Canaan
A third concealed site is also needed for the northeast corner of town. Unfortunately, the town does not have any municipal property in this area and so the UC is looking for opportunities to place a site on private property.

Phase 2
Once the initial three "overlay sites" are established, the second phase of the project will involve locating microcell sites or ODAS facilities to provide additional coverage in hard-to-reach areas. Municipal rights of way will be used for locating new 35-45 ft. poles with single antennas, as needed.

8. What location and design criteria are being used?

Our goal is to address the greatest amount of coverage gaps in a way that has a minimal impact on New Canaan's view shed. We intend to avoid any use of obtrusive tall towers (towers taller than 130 feet), such as the design proposed for the town Transfer Station in 2013. No cell site developed on any of these town properties will be taller than 110 feet. The height of 110 feet was selected based on the general height of trees in the area. Physics dictates that wireless service using cell frequencies must have a near field unobstructed ability in the same aperture for the signal to properly develop or service is greatly hampered. This is a dimension that the town's own radio engineering analysis determined to be necessary in order

to best address the coverage gaps. In addition, each new site will be required to incorporate the most up to date concealed designs such as the latest versions of monopines.

Design and Engineering

9. What are the design parameters for these Phase 1 sites?

Sites built at either West School or Irwin Park must be limited to a maximum height of 110 ft. In addition, each site must incorporate the latest concepts in concealed designs to hide the presence of the cell site. Externally mounted antenna arrays are not acceptable unless they can be successfully sheltered within the branches of a monopine. (Please note: the so-called "tree cell tower" located at the Mobile Station on the Hutchinson Parkway is NOT an acceptable concealed design.)

In addition, the UC has stipulated its preference that each site placed on municipal property should incorporate a single, neutral host antenna. This approach involves one antenna that can be shared by multiple carriers, in contrast with a pole supporting separate antenna arrays for each carrier. The use of this technology will help limit the required height of the cell site and significantly reduce its obtrusiveness. Please note however, that carriers have expressed a long-standing preference for not sharing common antennas and that Homeland Towers and the town may not be able to unilaterally impose this condition on them. If a neutral host antenna cannot be deployed, the town will insist on the use of a "shared aperture" design, which means that carriers' antenna will be grouped at two levels on one concealed tower rather than each carrier occupying their own separate level. When combined with a concealed monopine, a shared aperture design acts to further reduce the visual impact of the site.

10. Why 110 ft.?

Generally speaking, the height of a cell tower is driven by the size of the area that needs to be covered. Radio signals travel by line-of-sight and therefore need to clear tree tops or other structures to achieve maximum range. Tree canopies are typically 65 ft to 75 ft high. An elevation of 110 ft. will maximize the propagation of the signal and achieve a wider coverage area.

11. How many carriers fit on a 110' pole?

Under federal law, the Town must allow all carriers the ability to provide service. The town cannot select which carriers are allowed to operate. This height gives us the full flexibility to provide the service without discriminating against any particular carrier. In addition, these sites can accommodate the town's emergency service antennas.

12. Why not place fewer carriers on a 90 ft. pole?

Federal law prohibits discrimination between carriers with regard to tower access. There are currently four wireless carriers serving New Canaan. A 90 ft. pole would not allow enough room for four carriers assuming all antennas are stacked and separate. Excluding one carrier in favor of the other three is to discriminate.

13. How big must the equipment pad be?

As landlord, the town can only limit the size of the equipment platform to what is actually needed. A standard footprint for the equipment pad is 75ft by 75ft, assuming it will include four carriers plus the town's own emergency services communications equipment. However, Homeland has assured the UC that a somewhat smaller footprint is also possible. The equipment pad at the Country Club site is smaller because that site was only designed to accommodate two carriers.

14. How do these designs compare to existing poles such as the one at the Country Club of New Canaan?

The cell site located at the Country Club is a 120 ft concealed monopole design that carries the antennas of two carriers (AT&T Wireless and T-Mobile). The concealed monopole design contains the antennas within the skin of the pole, thus providing a minimal profile. The drawback to this design is that each carrier can only deploy a portion of their available service due to the limited space. As more carriers use the monopole (or carriers wish to deploy their full service capabilities), the height must be extended in order to accommodate the additional separate sets of antennas that are stacked, one on top of the other. A shared aperture design expands the width rather than the height and allows antennas of different carriers to be grouped together at fewer than four levels.

RFP and Master Lease Agreement

15. Why did the town issue an RFP and what does the Master Lease agreement with Homeland Towers cover?

In order to provide the town with absolute control over the placement and design of future cell sites, the UC proposed that the town offer selected parcels of municipal property as potential locations for new infrastructure. By acting as landlord, the town can exercise considerable influence over the height, placement and appearance of concealed cell sites.

In March of 2016, the town released an RFP inviting bidders to apply for the right to enter into a master lease agreement (MLA) with the town granting access to selected parcels of municipal property for the purpose of building new concealed cell sites.

Bids were received by five companies and, based on a scoring system, the MLA was offered to Homeland Towers of Danbury. In August of 2016, the town concluded a master lease agreement with Homeland Towers that sets the terms and conditions for future concealed cell sites to be potentially located at Irwin Park, the Nature Center, West School and the Transfer Station. The Transfer Station site will not be offered until the town has an opportunity to review coverage requirements after the Norwalk Armory cell sites are activated.

16. Why use municipal property? Why not use private property instead?

Placing concealed cell sites on municipal property allows the town to exercise absolute control over the design and location of each site. Although these will always be subject to review by the CSC, the Council has proven unwilling to push design changes for sites proposed on municipal property (in contrast to those proposed on private property). Using municipal property would also allow multiple sites to be built, provide space for public safety antennas and provide a more comprehensive solution to the town's coverage problem.

By acting proactively now to solve this problem, the town may also avert the real risk that taller and more obtrusive towers will be placed on private property. A few years ago, a private property owner on Puddin Hill Rd. proposed to lease his land to Verizon for the placement of a 150 ft tall tower. Fortunately, this was avoided when the carrier withdrew its application. But there is still a very real possibility that a New Canaan property owner will one day act in a similar way. If this happens, given the power and authority of the CSC, there is little or nothing the town can do to prevent such an ugly, obtrusive tower from being approved and built at 150 ft or higher.

17. What is the Connecticut Siting Council and what is their role in approving cell sites?

The Connecticut Siting Council ("CSC") is a state agency responsible for reviewing and approving the placement of power stations, transmission wires and telecommunications facilities (including cell towers) across the state. *It has the authority to overrule local zoning and land use regulations in order to approve cell towers applied for by carriers or tower developers.* Because of its bias in favor of "co-location," or the placement of multiple carriers on a single tower, the CSC routinely approves applications to construct tall towers (+130 ft.). This approach can reduce the overall number of towers required to cover a given area, but it also drives up the required height of each tower, since each separate antenna array (typically one set for each carrier) must be separated by 10 vertical feet of spacing. The result of this policy is fewer, but taller and more obtrusive towers.

Health and Safety

18. Are cell sites safe for those living or working nearby?

Some people believe it is dangerous to live or work near active cell sites. There are two issues involved: the effects of radio energy on biological tissue and the impact of thermal energy (heat) generated by cell sites.

A) Radio Energy
Radio energy may be broken down into two types: ionizing and non-ionizing radiation. Ionizing radiation has the ability to split electrons away from molecules thus causing tissue damage. Examples of ionizing radiation include x-rays, gamma rays, alpha rays, beta rays, cosmic rays, CT scans and radon.

By contrast, non-ionizing radiation does not have the ability to modify the ions of an atom. Some examples of non-ionizing radiation source include: visible light, infrared light, microwave ovens, radio waves, thermal radiation, LED bulbs, remote controls, cordless phones, televisions, AM and FM radios and computer screens.

Some studies in Europe and elsewhere suggest that radio energy may harm animal or human tissue and cause cancer. In reality, scientists have not been able to duplicate the results of these studies and thus their credibility is doubtful. The FCC commissioned independent studies of the impact of radio frequency (RF) energy on living tissue and after a 16-year program, set the standards for safe levels of RF exposure that all carriers are required to follow. It also regularly monitors scientific literature on RF safety issues and has concluded that cell sites do not present a health hazard to either children or adults. The American Cancer Society and the WHO (World Health Organization) both agree with this finding. Click on the links to read their respective papers on this subject.

B) Thermal Energy
Thermal energy is the heat generated by radio frequencies, whether the transmitter is located on a cell tower or in a hand-held cell phone. According the EPA, thermal energy from radio frequency transmissions diminishes quickly over distance, so exposure from cell towers is usually very low.

It should also be remembered that cell phone handsets are dynamic devices that will adjust their power output up or down when they are required to interact with distant cell sites. The further the distance to the cell site, the greater the power output required from the phone, and the warmer it will become -- the range is usually between one-quarter watt to 1-watt. Anyone who has felt their cell phone becoming warmer while they hold it up to their head has experienced the battery making more power available to the electronics in the handsets. Adding cell sites to New Canaan will reduce the required energy output for cell phones in the covered area. With better coverage, your cell phones may no longer heat up to the same extent.

19. Are any locations off-limits for health and safety reasons

Federal law limits the ability of states and municipalities to regulate the location of cell phone towers and antennas based on their RF emissions. Specifically, section 704 of the Telecommunications Act of 1996 bars state and local governments from regulating the placement, construction, and modification of cell phone and other personal wireless service facilities on the basis of the environmental effects of RF emissions to the extent that such facilities comply with the FCC regulations concerning such emissions. Although Greenwich appears to have an ordinance restricting the placement of cell sites within 750 ft of a school, this limit is entirely arbitrary and is a violation of federal law. If challenged in court or before the Siting Council, it would be unenforceable.

The following language is copied from the FCC website:

ARE CELLULAR AND OTHER RADIO TOWERS LOCATED NEAR HOMES OR SCHOOLS SAFE FOR RESIDENTS AND STUDENTS? Radiofrequency emissions from antennas used for cellular and PCS transmissions result in exposure levels on the ground that are typically thousands of times below safety limits. These safety limits were adopted by the FCC based on the recommendations of expert organizations and endorsed by agencies of the Federal Government responsible for health and safety. Therefore, there is no reason to believe that such towers could constitute a potential health hazard to nearby residents or students.

20. What science or federal and state law is relevant to the safety of RF transmissions?

There is a vast body of information to be found on the internet asserting that radio energy is dangerous to humans. As stated above, none of the results these "studies" have been replicated using sound scientific methods – a fact that speaks to their credibility. When it comes to RF safety standards, it is the FCC that sets the rules for safe exposure -- not the State of Connecticut, and not the town of New Canaan.

Process and Timeline

21. What are the roles of the Town Council, P&Z, the UC and the Selectmen?

The Utilities Commission plays an advisory role for both the Board of Selectmen and the Town Council. The Planning and Zoning Commission is responsible for enacting and enforcing land use regulations in New Canaan. The Town Council is responsible for managing the use and disposition of municipal property. The First Selectman, subject to the approval of the Town Council, will sign and execute the Master Lease Agreement with Homeland Towers.

Once the Utilities Commission makes its recommendation to the Board of Selectmen and Town Council regarding specific cell sites, the applicant (Homeland Towers)

will submit their site plans to P&Z for a review (known as an "8-24 process"). If P&Z approves them, they are forwarded to the Town Council for a vote. If the Town Council approves, the First Selectman will be able to execute the Master Lease Agreement.

Once the agreement is signed, Homeland will begin marketing the sites to the various carriers that serve New Canaan. When the first carrier is "signed" as a tenant, Homeland and the carrier will jointly file an application with the Connecticut Siting Council seeking their approval.

22. Timing of UC recommendations

The Utilities Commission will hold a public information forum on Monday, April 24th at 7:30pm at the Town Hall Meeting Room. The issue will be taken up again at the next regularly scheduled UC meeting on Monday, May 1st.

23. Timing of local approvals

Following the completion of the public forum, the UC will take up the issue again at its next scheduled meeting, to be held on May 1st. Depending on if further work is needed to develop the plans or whether alternative solutions must be explored, the UC will vote on the proposal either in May or June at its regularly scheduled meeting.

24. Timing of state approvals

Once there is a signed Master Lease Agreement in place between Homeland and the Town, Homeland will secure a lease with a carrier interested in colocating on the facility. Once a lease is signed between Homeland and a carrier, Homeland will begin working on a technical report for filing with the Town of New Canaan and the Connecticut Siting Council.

There are many documents that will be included in the technical report, such as a health and safety report, visual report, NEPA/SHPO, FAA analysis, detailed site plans, carrier coverage plots justifying the need and height of the facility, etc. The First Selectman will then have the choice to either waive the municipal consultation period, which is a 90-day period after Homeland files the technical report with the Town, or chose to hold a public information meeting.

The purpose of this municipal consultation period is to provide information only, it is not an approval process. It should be noted that it is common for a First Selectman to waive this 90-day consultation period, especially when the sites are being located on municipal property and have already been "vetted" before the public and Town Boards during the leasing process.

Once the 90-day consultation period either passes or is waived, the application will

then be filed directly with the Connecticut Siting Council (CSC). The timeline for this process is as follows:

- The council will review the application for completeness and schedule a public hearing in the town.
- On the day of the public hearing, the applicants will conduct a balloon float, which includes floating a 3' diameter balloon to the proposed height of the facility. Members of the CSC will visit the site on the day of the hearing for a walk through.
- The council will then conduct an afternoon session with the applicants, who will have the opportunity for testimony on their application materials.
- A 7:00 p.m. session is also held for the public to make comments on the record.
- The CSC will not close the meeting but will leave it open for a continuation at the next scheduled CSC meeting, conducted at their offices in New Britain. If members of the public are not able to attend the hearing conducted in New Canaan, they will have the opportunity to attend a hearing in New Britain, or submit written comments.
- The CSC will then decide to close the hearing or keep it open. CSC will then proceed with a "straw vote."
- At the next meeting, the CSC takes a final vote to either deny or approve the application. If the application is approved, the CSC will issue a Decision and Order, requesting a Develoment and Management Plan (D&M) from the applicants, incorporating all the final designs and comments into a set of final site plans.
- Upon review of the D&M, CSC will issue an approval, which comes in the form of a Certificate of Environmental Compatibility. The CSC process takes approximately 8-10 months, from the initial filing to receiving an approval.

25. Timing to build and turn it on

Once CSC approval is received, Homeland Towers will prepare and file an application with the Town's building department. Once a building permit is issued, typically within 30 days, Homeland will then order the tower and make arrangements to start construction of the facility within 2-3 weeks. The construction of the facility takes approximately 90 days on average. This includes time to pour the tower foundation, erect the tower, bring utilities to the site, and install landscaping and fencing around the compound. A carrier will file for their own building permit and begin their own installation work approximately 3 months after Homeland has begun tower construction. A carrier will take approximately 46-60 days to complete the installation of their antennas and ground equipment, and another 30-45 days to integrate the site into their network. The total time from initial filing of the site with the CSC to the time that a carrier is operating on-air at the site is approximately 18 months.

Planning and Zoning Regulations

26. Why is the UC Proposing to Change New Canaan's zoning regulations that cover wireless infrastructure?

In 2016, the UC proposed that the Planning and Zoning Commission adopt a new set of regulations governing the design and placement of cellular infrastructure on either private or public property within the town. The new language was intended to replace the current Section 7.8 of the Planning and Zoning Regulations which was drafted in the late 'eighties.

UC proposed the new regulations because the current language does not express the town's preferences amongst the various types of wireless infrastructure currently available. This creates a number of challenges for the town:

A) Developers are left to guess what infrastructure is acceptable and what is unacceptable to the town. This discourages new investment since there is no consensus among town officials as to what they will support. The town needs to lay out a transparent path which uses the zoning permit process to encourage developers to build the kinds of infrastructure the town prefers and discourage them from proposing the types we find unacceptable. When a town offers a clear process with defined steps, it encourages private investment in two ways:
    a. It streamlines the approval process and eliminates any confusion over the town's preferences; and
    b. It de-politicizes the process and removes much uncertainty regarding outcomes.

B) The existing regulations are not current with Federal law including the Telecommunications Act of 1996 and the Middle Class Tax Relief Act of 2012. These are two important laws that affect the rights of local governments to regulate wireless infrastructure placed within their respective jurisdictions.

C) By leaving the town's preferences unstated, we leave the choice of what is acceptable or unacceptable for New Canaan up to the Connecticut Siting Council ("CSC"). The CSC has jurisdiction and wide discretion over the placement of cell towers on private and public property and is not bound by local regulations when considering an application to build a site.

    They are, however, required to take local preferences and regulations into account when making their decision on any given application. Specifically, Connecticut General Statutes §16-50x requires the Siting Council to "…consider any location preferences or criteria (1) provided to the Council pursuant to section 16-50gg, or (2) that may exist in the ***zoning regulations of said municipality***…

Following conversations with the Chairman of the Planning and Zoning Commission and Town Planner, the UC agreed to split the draft regulations into two documents: a shortened version of the regulations and a longer document containing "guidelines." The new draft of the regulations is intended to address those elements of wireless infrastructures that the town can regulate and which are not subject to the control of the CSC. These elements consist of wireless antennas mounted on existing structure (buildings, streetlights, water towers) that are not built for the express purpose of mounting antennas. By contrast, the CSC may rule on any application to build a tower of any size that is intended, as its primary purpose, to support antennas for wireless infrastructure.

The guidelines document will include definitions and other terms that do not need to be included in the regulations. Instead, the regulations will refer to the guidelines as necessary.

The UC hopes to submit a new draft of the proposed regulations and guidelines to Planning and Zoning before the end of April.

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