

DOCKET NO. 500 – Arx Wireless Infrastructure, LLC application } Connecticut
for a Certificate of Environmental Compatibility and Public Need }
for the construction, maintenance, and operation of a } Siting
telecommunications facility located at 1061-1063 Boston Post }
Road, Milford, Connecticut. } Council

September 23, 2021

Opinion

On March 30, 2021, Arx Wireless Infrastructure, LLC, (the Applicant), applied to the Connecticut Siting Council (Council) for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a wireless telecommunications facility at 1061-1063 Boston Post Road, Milford, Connecticut. The purpose of the proposed facility is to replace Cellco Partnership d/b/a Verizon Wireless' (Cellco) and New Cingular Wireless PCS, LLC's (AT&T) existing facilities located on the roof of the Howard Johnson Hotel (Hotel) which is to be demolished as part of a redevelopment project. Cellco and AT&T are intervenors to the proceeding. The City of Milford (City) is a party to the proceeding.

The United States Congress recognized a nationwide need for high quality wireless services through the adoption of the Federal Telecommunications Act of 1996 and directed the Federal Communications Commission (FCC) to establish a market structure for system development and develop technical standards for network operations. The FCC preempts state or local regulation on matters that are exclusively within the jurisdiction and authority of the FCC, including, but not limited to, network operations and radio frequency emissions. Preservation of state or local authority extends only to placement, construction and modifications of telecommunications facilities based on matters not directly regulated by the FCC, such as environmental impacts. The Council's statutory charge is to balance the need for development of proposed wireless telecommunications facilities with the need to protect the environment.

Arx constructs and owns tower facilities throughout the United States. Arx would construct, maintain and own the proposed facility and would be the Certificate Holder. AT&T and Cellco are licensed by the FCC to provide personal wireless communications service throughout the state and would lease space on the proposed tower for their telecommunications equipment.

Cellco currently deploys its wireless service within the 700 MHz and the 2100 MHz frequency bands from its existing wireless telecommunication facility on the roof of the Hotel located at 1052 Boston Post Road. Cellco's existing facility consists of a 40-foot flagpole and associated equipment with antennas at the 76-foot and 82-foot levels.

AT&T currently deploys its wireless service within the 700 MHz, 850 MHz, 1900 MHz, 2100 MHz and 2300 MHz frequency bands from its existing wireless telecommunication facility attached to the Hotel building. AT&T's existing facility consists of antennas and associated equipment at the 58-foot level.

The Hotel has been shut down for about a year and the existing building is marked for demolition as part of a redevelopment project that stalled in 2019. The timeline for demolition of the Hotel building remains unknown to date. The height of the new Hotel building planned for the redevelopment project would not satisfy the carriers coverage objectives.

Demolition of the Hotel would require Cellco and AT&T to decommission their existing facilities. Decommissioning the existing facilities at the Hotel would cause a service disruption and loss of coverage

and wireless service impacting commuters and residents within the vicinity of the Interstate-95 (I-95) corridor, Route 1/Boston Post Road, New Haven Road, Cherry Street and the nearby residential neighborhoods.

AT&T's drive tests and propagation modeling indicate that a decommissioning of its existing facility would result in a coverage gap of about 19.6 miles of roadway and 1.69 square miles of residential area. Cellco would also have a total coverage gap of about 2.25 miles along state roads. Cellco's propagation plots indicate that the proposed facility would make it possible to deploy three additional frequencies (850 MHz, 1900 MHz and 3550 MHz) and replace its existing coverage footprint.

For Cellco, the proposed site would provide a coverage footprint of about 7.6 square miles in the 700 MHz frequency band, 4.5 square miles in the 1900 MHz frequency band and 2.3 square miles in the 2100 MHz frequency band.

AT&T's proposed equipment installation would provide 5G service over all its frequency bands while Cellco's proposed equipment installation would provide 5G service over its 850 MHz and 2100 MHz frequency bands. The carriers would utilize each of their respective frequency bands for both voice and data.

For AT&T, the proposed facility would replace AT&T's existing coverage and provide FirstNet Services. These services are provided through a federal program to establish emergency communications to areas with deficient wireless service. FirstNet gives emergency responders on AT&T's 700 MHz 4G LTE network first priority to ensure emergency communications are not interrupted.

AT&T's and Cellco's search for a replacement facility was centered on the existing facilities at the Hotel. No suitable existing structures could meet the respective coverage objectives within the search area, thus the carriers proceeded to work with Arx to search for properties suitable for tower development.

Arx investigated 9 potential sites for tower development and 8 of these were ultimately rejected due to the property owners not being interested in a lease agreement or the inability of the potential site locations to satisfy the carriers coverage objectives. Arx subsequently entered into a lease with the owner of 1061-1063 Boston Post Road.

The City suggested Arx explore 4 alternative sites: 1052 Boston Post Road; 1212 Boston Post Road; 1201 Boston Post Road; and 10 Leighton Road. A tower facility would be required to meet the coverage objectives at any of the four suggested sites. Each site was rejected due to lack of property owner interest in a lease agreement.

During the proceeding, AT&T and Cellco also considered various alternatives to the proposed site suggested by the Council and the City such as rooftop facilities, stealth flagpoles, small cell deployments and multi-site solutions none of which were viable due to reasons that include, but are not limited to deficient coverage, difficulty providing backup power, antenna mounting and height, and higher radio frequency emissions than the proposed facility.

Although many sites were examined and many landowners were not interested in a lease agreement for a wireless facility, the Council has no authority to compel a parcel owner to sell or lease property, or portions thereof, for the purpose of siting a facility.

The proposed tower location consists of a 115-foot monopole located on a 2.5 acre dual zoned (commercial and residential) developed parcel with two existing commercial buildings and a parking lot. The monopole would be located within a 60-foot by 60-foot fenced equipment compound and would be designed to accommodate the equipment of four wireless carriers as well as municipal emergency services antennas and equipment. Neither the City nor any emergency response entity has expressed an interest in co-locating emergency services antennas on the tower. The proposed facility would be located within a 75-foot by 75-foot lease area situated in the southernmost (residentially zoned) portion of the host parcel.

During the proceedings, Arx proposed a potential alternate tower location approximately 100 feet to the northwest in the northern (commercially zoned) portion of the host parcel that would provide a greater distance to residential properties to the south. The alternate tower location would consist of a 115-foot monopole within a 150-foot by 25-foot fenced equipment compound and situated within a 160-foot by 35-foot lease area. Both the proposed and alternate location are on mostly level ground with an elevation of about 32-feet above mean sea level. The tower at the alternate location would require a caisson foundation in contrast to the pad and pier foundation to be used at the proposed location.

Access to both tower locations would be via the existing 25-foot wide paved driveway from Boston Post Road extending in a southeast direction through the existing paved parking area.

Cellco proposes to install twelve panel antennas and nine remote radio heads on a low-profile platform antenna mount at a centerline height of 112 feet above ground level (agl). AT&T would install nine panel antennas and 12 remote radio heads on a low-profile platform antenna mount at a centerline height of 100 feet agl.

In the event an outage of commercial power occurs at the proposed site, AT&T would rely on a proposed 15-kilowatt diesel-fueled emergency backup generator with a 54-gallon base tank which would provide approximately 90 hours of runtime at 75% electrical load. Similarly, Cellco would rely on a proposed 30-kilowatt diesel-fueled emergency backup generator with a 210-gallon base tank which would provide approximately 120 hours of run time at 75% electrical load, before it requires refueling. Natural gas is available on Boston Post Road and can be brought to the site to power natural gas-fueled generators. The carriers did not elect to use natural gas-fueled generators at the site due to the cost of piping the fuel to the facility. The Council will order Arx to explore the feasibility of a natural gas connection for the emergency backup generators and provide a cost comparison between natural-gas fueled and diesel-fueled emergency backup generation, in the Development and Management (D&M) Plan.

The carriers would each also be equipped with a battery backup system to provide uninterrupted power and avoid a “reboot” condition. The battery backup systems alone would provide about four to eight hours of backup power for AT&T and Cellco and would provide nearly 8 hours of backup power.

There are approximately 68 residential structures within 1,000 feet of the proposed tower site. The nearest property boundary from the base of the proposed tower is approximately 80 feet to the south of the proposed facility location and approximately 22 feet to the west of the alternate facility location. The nearest residence is located approximately 170 feet south of the tower at the proposed facility location and 275 feet south of the tower at the alternate facility location.

Arx would design a yield point at the 61-foot level of the tower at the proposed site location and the 95-foot level of the tower at the alternate site location to ensure the tower setback radius remains within the boundaries of the host parcel. This would allow the tower to collapse upon itself rather than fall over lengthwise onto adjacent property in the unlikely event of a structure failure.

ARX does not anticipate the need for blasting to construct the site. Development of the proposed site location would require about 128 cubic yards of cut and 136 cubic yards of stone and concrete fill for the compound base. The alternate site location would require an additional 36 cubic yards of material to be removed and replaced with concrete as a result of the caisson foundation. At either location, the proposed facility would be constructed in compliance with the *2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control*

The nearest wetland is located approximately 1,320 feet south of the proposed facility location and 1,420.16 feet south of the alternate facility location. Development of the proposed project would not adversely impact wetlands or watercourses. No trees with a diameter of six inches or greater at breast height would be removed at the proposed site location however the alternate site location would require the removal of one existing tree with a diameter of six inches or greater at breast height.

Neither the proposed site location nor the alternate site location are within a flood zone, an aquifer protection area, or in an area with mapped prime farmland soils. Operation of the facility would comply with DEEP Noise Control Standards.

The proposed site is located within a DEEP Natural Diversity Database buffer area. A DEEP NDDDB review recommended that construction work should occur between April 1st to October 30th when the Eastern Box Turtle (*Terrapene c. carolina*) are active. One federally-listed Threatened Species and State Endangered Species, the northern long-eared bat (NLEB), is known to occur in the vicinity of the proposed site. However, the proposed site is not located within 150 feet of a known NLEB maternity roost tree or within 0.25-mile of a known hibernaculum. After consultation the U.S. Fish and Wildlife Service (USFWS) determined that the proposed facility would not have an impact on the NLEB.

The site is approximately 1.9 miles from the nearest Important Bird Area as designated by the National Audubon Society. The proposed facility will comply with the USFWS guidelines for minimizing the potential for telecommunications towers to impact bird species.

The proposed facility would not have an adverse effect on sites listed on or eligible for listing on the National Register of Historic Places (NRHP).

There are no Connecticut blue-blazed or other hiking trails located within two miles of the proposed site. In addition, there are no state or locally-designated scenic roads located within two miles of the proposed site.

No public schools or commercial child day care facilities are located within 250 feet of the proposed site.

The Applicant prepared a visual impact assessment of both sites within a two-mile radius study area utilizing computer modeling, a crane test, a balloon float and field reconnaissance. These analyses were used to generate photo-simulations and a viewshed analysis of the proposed towers. Based on the assessment the proposed tower would be visible year-round from approximately 74 acres or about 0.09 % of the study area and seasonally visible from approximately 90 acres or about 1.1 % of the study area. Most areas from which the facility would be visible are within approximately 0.5 miles of the site. The alternate tower site would have the same visibility characteristics as the original however the northward shift of the tower reduces visibility at the southeastern end of Home Acres Avenue.

Arx determined that a stealth monopine facility at either the proposed or alternate location would be more visible above the existing tree line due to the lack of existing pine trees and the low heights of the existing

commercial buildings to the northwest. Arx would install and maintain landscaping along the fence of the compound.

After considering the record in this matter, the Council finds a need for a new tower to replace the wireless service provided by the existing telecommunications facilities that will be removed when the Hotel is demolished. Additionally, after reviewing several potential alternate sites on nearby properties, the Council finds that there is no viable alternative site for a telecommunications facility to provide wireless services to this area.

According to a methodology prescribed by the FCC Office of Engineering and Technology Bulletin No. 65E, Edition 97-01 (August 1997), the cumulative worst-case maximum power density from the radio frequency emissions from the operation of AT&T's and Celco's proposed antennas to be installed on the tower have been calculated to amount to 22.0 % of the FCC's General Public/Uncontrolled Maximum Permissible Exposure, as measured at the base of the tower. This is conservatively based on all antennas of a given sector pointing down to the ground and emitting maximum power. This percentage is well below federal standards established for the frequencies used by wireless companies. If federal standards change, the Council will require that the tower be brought into compliance with such standards. The Council will require that the power densities be recalculated in the event other carriers add antennas to the tower. The Telecommunications Act of 1996 prohibits any state or local agency from regulating telecommunications towers on the basis of the environmental effects of radio frequency emissions to the extent that such towers and equipment comply with FCC's regulations concerning such emissions. Regarding potential harm to wildlife from radio emission; this, like the matter of potential hazard to human health, is a matter of federal jurisdiction. The Council's role is to ensure that the tower meets federal permissible exposure limits.

Based on the record in this proceeding, the Council finds that the effects associated with the construction, operation, and maintenance of the telecommunications facility at the proposed site in the proposed location or the alternate location, including effects on the natural environment, ecological balance, public health and safety, scenic, historic, and recreational values, agriculture, forests and parks, air and water purity, and fish, aquaculture and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with policies of the State concerning such effects, and are not sufficient reason to deny this application. Therefore, the Council will issue a Certificate for the construction, maintenance, and operation of a 115-foot galvanized steel monopole telecommunications facility at the proposed site located at 1061-1063 Boston Post Road, Milford, Connecticut.