

2016 Annual Report Status and Outlook

Antenna Advisory Board Town of Lewisboro

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Town of Lewisboro
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<http://www.lewisborogov.com/committees/antenna.html>

A. Purpose

The Lewisboro Antenna Advisory Board (AAB) is given specific duties and responsibilities by the Town's Antenna Ordinance, Local Law No. 1-1998, which amends Chapter 220 of the Code of the Town of Lewisboro. That ordinance created "An Antenna Advisory Board ... consisting of five members appointed by the Town Board to serve staggered five year terms to review ongoing advancements in antenna technology, zoning ordinance compliance with Federal Communications Commission rulings, and offer recommendations on applications to construct antennas and subsequent amendments to and enforcement of this Local Law."

The AAB reviews each cellular or PCS (Personal Communication Service) carrier's application as the Planning Board receives them. The AAB may suggest potential alternative sites (if available) to that proposed by the carrier, if the alternative is less obtrusive or provides revenue to the town. Thus, the AAB provides a service to the Town by taking a proactive role in shaping the future of wireless communications services in Lewisboro.

The AAB functions only in an advisory capacity – its goal being to help maximize service with minimum impact on the character of the community. It is in that role that we publish this report and propose a goal for cellular coverage in Lewisboro.

B. Audience

This report is intended to inform Lewisboro's Planning Board, Zoning Board of Appeals and Town Board (PB, ZBA, and TB, respectively), and, importantly, the residents of Lewisboro. It is also intended for the wireless carriers and associated companies that are contemplating business in the Town of Lewisboro.

C. AAB Responsibilities

The AAB has no power to contract for or to locate cellular towers. Its responsibility is to provide what we hope will be helpful advice to the Town's Boards, residents, and to wireless carriers. Actual construction of an antenna facility is a lengthy process. It requires the entity on whose property the facility will be located to come to an agreement with the wireless carriers that will be located at that facility. Applications to and approvals from the Lewisboro Planning Board and potentially the Zoning Board of Appeals may also need to be obtained. Its role being advisory, the AAB is not a part of this permitting process.

D. Wireless Service for Lewisboro – A Vision

The members of the Antenna Advisory Board have a simply stated goal for wireless service in Lewisboro. AAB's vision for service in Lewisboro is:

To achieve comprehensive town wide wireless coverage with minimum aesthetic impact, with revenue going, where possible, to the Town, School District, or other Lewisboro public entity.

The AAB realizes that reaching this goal may involve constructive compromise. In some cases, towers may need to be located on private property, with revenue going to a homeowner or commercial enterprise. There may also be a trade-off between the number of towers, and the height of the towers. Whether the prospect of fewer, higher towers is better or worse than that of

more numerous, but smaller, towers will depend on the particular circumstances and be a matter of judgment for the Town.

The members of the AAB also believe that cell coverage is not only an issue of personal convenience for mobile users, but also an important matter of public safety for all members of the community, whether they are cell phone users or not. It is our recommendation that antenna sites established in Lewisboro be designed to accommodate public safety communications facilities, as well as the commercial interests of the cellular/PCS carriers.

In order to minimize costs and the number of sites, cell tower equipment shelters usually contain transceivers from multiple carriers. AAB believes that public safety transmitters for police, fire, emergency, and evacuation services should share space with commercial providers so that additional towers need not be built. Private and public interests become one on this issue.

We believe that the Town's Boards and residents will do well to keep this simple goal of maximum coverage with minimal impact in mind as they consider the merits of individual applications.

E. Recent Developments

A number of recent developments should be noted.

- The permanent facility at the Town Park site owned and operated by American Tower (with Verizon as its primary tenant) has now been constructed and is operational. But other carriers are not yet operational on this facility.
- The facility at the Vista Fire Department, owned and operated by Homeland Towers, has been completed and is in use by its primary tenant, AT&T Wireless. Verizon has also co-located on this tower.
- A facility on Harriet Lane, 177 Waccabuc Road has been completed by Homeland Towers (with AT&T as the primary tenant).

F. Coverage

There are currently five operational cell facilities in Lewisboro. The first is in the Leon Levy Preserve (formerly known as the Bell property), near the intersection of Routes 35 and 123. A newer one is the NYS DOT tower at Exit 6A of I-684, which provides space for commercial carriers in addition to its primary purpose of emergency communications. Because it is on state property, it did not require Town approval. A third tower at the Vista Fire Department is operational. A fourth facility, a Verizon tower at a site adjacent to the Town Park has recently become operational. Harriet Lane is operational. These changes, together with additions in neighboring towns as well as technical advances, have substantially increased overall coverage for Lewisboro residents since the Town's Antenna Ordinance was adopted in 1998.

Nevertheless, coverage is not yet universal, and significant gaps still remain, especially since not all carriers operate on all the towers. Anticipated co-location of other wireless carrier companies on the Vista, Town Park, and Harriet Lane towers should significantly improve their service as well.

The map in Figure 1 shows the approximate locations of existing tower sites in Lewisboro (see also <http://goo.gl/maps/UpFo>).

1. South-Eastern Leg of Lewisboro

This includes the Vista and Lewisboro hamlets. The northern part of this area, on the Leon Levy Preserve, contains Lewisboro's first cell tower. The southern part of this area is covered by the new tower at the Vista Fire Department, initially only for AT&T, but with Verizon now operational and potentially other carriers in the future.

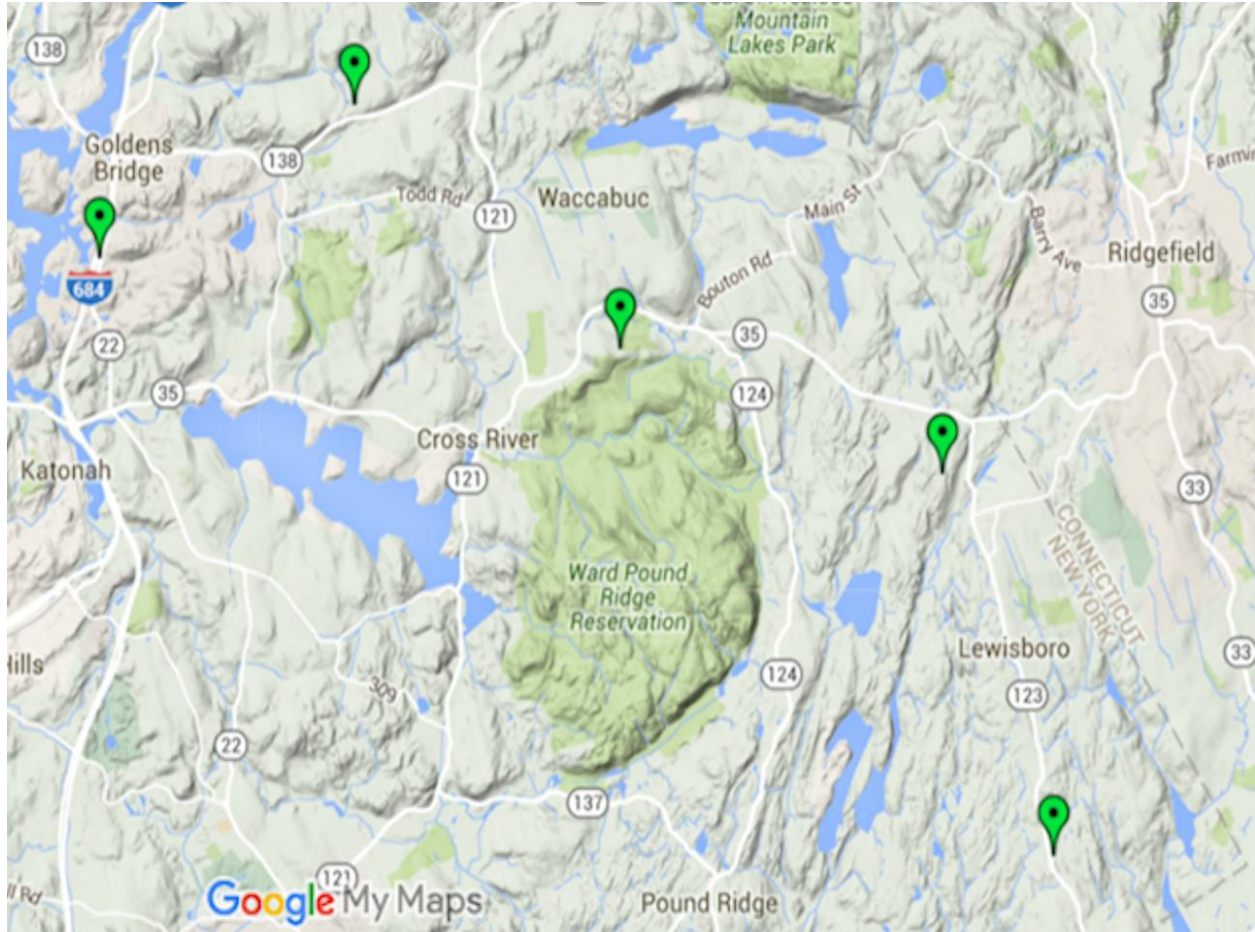


Figure 1: Tower sites in Lewisboro

Another cell site may be required in this leg to provide more comprehensive cellular coverage.

A new tower was recently put into service along Route 123 in Connecticut, at the edge of the New Canaan Country Club. This facility likely provides some coverage at the extreme southern end of Lewisboro.

2. Central Lewisboro

Central Lewisboro includes the hamlets of South Salem, Cross River, and Waccabuc. In the Cross River area, cellular coverage had been very poor, especially when deciduous trees have “leaved”, which further limits cellular/PCS communication. Another difficult area is the extreme northern edge of the Town, bordering the Town of North Salem. The topography of central

Lewisboro is problematic for cellular/PCS coverage. Some areas of Cross River near the reservoir are in the “shadow” of the Town Park site.

The new facility in the Town Park area provides much better coverage for Verizon customers. When other carriers co-locate on it, coverage in the immediate Cross River area should improve substantially for everyone.

The tower on Harriet Lane provides coverage in the eastern Goldens Bridge/northern Cross River area.

There may still be a minor “hole” in coverage in the area along Route 121 roughly from Route 138 south to Todd Road as a result of the topology of the terrain.

3. Western/Northern Central Leg of Lewisboro

This cellular/PCS coverage area includes Goldens Bridge and part of the central Lewisboro area. Wireless reception tends to be best along the I-684 corridor. The Goldens Bridge Metro-North station is located here, and contributes significantly to the volume of wireless calls, making capacity as well as coverage an issue in this part of Town. As one moves east, coverage drops off and is much more sporadic.

G. FCC regulations

There were no FCC NPRMs (Notices of Proposed Rulemaking) at this time affecting Lewisboro.

H. Industry Trends

1. Business Trends

Recent consolidations and acquisitions have resulted in a business environment in which there are two dominant nationwide carriers: Verizon and AT&T. Sprint and T-Mobile play distinctly minority roles, with some analysts questioning their long-term viability. In addition, smaller regional carriers exist, but as of this writing, none of them are involved in applications for service in Lewisboro. As these trends play out, they have opposite effects: fewer carriers imply the need for fewer antennas; greater volume requires more antennas. Current [and future] fixed network equipment (FNE) technology (e.g., the equipment in the shelter at the base of the tower) advances may mitigate the antenna quantity issue.

The use of mobile voice and especially data services continues to increase explosively. Text messaging (now being integrated into Next Generation 911), web browsing, smartphone applications, mobile shopping, video streaming and payments are all placing increasingly heavy demands on digital data services. And the number of mobile phone subscriptions in the U.S. now exceeds the population¹. These developments not only place extra demands on cellular capacity, but also lead to increased expectations of comprehensive coverage.

¹ Chetan Sharma Technology & Strategy Consulting, “US Mobile Data Market Update Q3 2015,” Nov. 2015, <http://www.slideshare.net/chetansharma/us-wireless-marketq32015updatenov2015chetansharmaconsulting>.

2. *Technology Advances*

Advances in technology also continue. Older 2G (second generation) and 2.5G wireless networks have already largely been replaced by 3G (third generation) networks, which provide higher speed data access. The next generation, 4G, is already being implemented, and some intermediate systems (e.g., HSPA+ and LTE technologies) being marketed as “4G” are being deployed in increasing areas within the U.S. Cable companies now offer phone and data services, and phone companies are offering television services. Adoption of the 4G-LTE technology is underway, including in our region. So-called Wi-Fi hot spots are becoming much more common in homes and businesses (e.g., the Lewisboro Library), and permit VoIP (Voice over-Internet Protocol) calls. Femtocells (small cellular base stations) can be used to provide localized coverage over broadband within a home or business.

Describing these and other advances in detail is beyond the scope of this report, but it is worth noting that the rapid pace of technological developments in the telecommunications industry suggests that significant changes in infrastructure requirements may well lie ahead.

3. *Regulatory Environment*

Another development of interest is the evolving trends in broadband access and, by extrapolation, *wireless* broadband access. Section 706 of the Telecommunications Act of 1996 requires the FCC to report annually on whether advanced telecommunications capability “is being deployed to all Americans in a reasonable and timely fashion,” and to take “immediate action” if it is not. Congress defined advanced telecommunications capability as “high-quality” capability that allow users to “originate and receive high-quality voice, data, graphics, and video” services.²

I. The Public Interest

The Antenna Advisory Board believes that a well-informed community will make the right decisions about the trade-offs that are part of achieving maximum coverage with minimum impact. We hope that publishing a report such as this, including a statement of direction will broaden public awareness of the issues, and encourage discussion about workable solutions. We encourage one and all to contact us by email, or by writing to The Antenna Advisory Board at the address above or by contacting members of the Town Board.

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²

FCC 2016 Broadband Progress Report <https://www.fcc.gov/reports-research/reports/broadband-progress-reports/2016-broadband-progress-report>