Telecommunications Tower Project

Woodgrove High School
36811 Allder School Road
Purcellville, VA 20132

Community Meeting
May 3, 2022
About Us

BRIDGING WIRELESS GAPS

With over 20 years of experience, Milestone Towers is a leading wireless developer known for creating innovative infrastructure solutions and managing towers to get optimal leasing results. Through public and private partnerships, we bridge the gap between wireless carriers, municipalities and property owners, investing our capital to deliver connectivity for communities.

50 Property Owner Partners
155+ Structure Colocations
2,600 New Build Opportunities
8,000 Powerline Colocations
OVERVIEW

• Master License Agreement signed on Aug 2020
• Public-private partnership
• Space reserved for LCPS and/or County (public safety) use

PROCESS (via Reg 6350):

• Site Proposal / Assessment
• LCPS Review
• Public Briefing
• LCPS Finance and Operations Committee (May)
• LCPS School Board (June)
• Town Land Use Process
• County Land Development Process
• Site License Agreement
• Site Development
Wireless Communications Improvement
Loudoun Co Public Safety Coverage: P25 Public Safety Radio System

2018 Coverage Needs Assessment - identified nine areas with deficient outdoor/indoor public safety radio communications

First responder agencies noted the Woodgrove Focus Area as second highest priority, with several documented occurrences of lost signal
  • The Woodgrove Focus Area also is a significant portion of the region within the County that represents the highest emergency call volume for Loudoun County Fire & Rescue

Prelim analysis - adding a public safety site at Woodgrove HS will:
  • Remedy known emergency communication deficiencies
  • Improve indoor radio communications for seven schools in the immediate area
  • Provide diversity and increase survivability of the overall public safety radio system
Countywide Coverage for Public Safety Radio System - EXISTING

Coverage Type | Percent
---|---
No coverage | 2.52
Heavy Building Coverage | 13.05
Light Building Coverage | 95.16
Portable Outdoor Coverage | 97.48

• Coverage percentages listed are for the Woodgrove Focus Area
Countywide Coverage for Public Safety Radio System + WOODGROVE

- Almost completely eliminates areas with no coverage
- Significantly increases heavy building penetration
LCPS is currently upgrading and migrating its radio communications to a new system.

During evaluation of existing system, the area surrounding Hillsboro was noted for deficient coverage and identified as a key area for improvement.

Preliminary propagation analysis indicates adding an additional site to the LCPS radio system at Woodgrove HS would remedy the known communication gap in Hillsboro and immediate surrounding area.
Proposed 3-site Design for LCPS System

• Green areas represent coverage for portable radios (handhelds)

• Red areas represent coverage for mobile radios (mounted in buses)

• The new LCPS radio system relies on the existing County tower sites & infrastructure, which provides limited ability to provide coverage in the Hillsboro area (yellow ellipse)
Proposed 4-site Design for LCPS System

- Green areas represent coverage for portable radios (handhelds)
- Red areas represent coverage for mobile radios (mounted in buses)
- The Woodgrove tower would provide LCPS with the ability to completely “fill-in” the coverage gap within the Hillsboro area
Cellular Coverage: AT&T + future carriers

The site will improve the capacity and coverage levels, including in-building coverage, in the area surrounding the proposed site.

It will also work with existing neighboring AT&T sites to handoff wireless signals which will improve service and reduce the number of dropped calls.
In addition to its commercial wireless network, AT&T has partnered with FirstNet to deploy a separate mobile network dedicated to first responders and schools

LCPS school safety and transportation personnel communicate via FirstNet and radio systems

- 600+ FirstNet Ready devices currently in use across the school district
Proposed Site

Proposed Tower Location
Site Location

PROPERTY
- Owner: Loudoun County Board of Supervisors.
- Zoning District: X (Transitional; Town of Purcellville)
- 220.95-acre property

SETBACKS
- 225’ -1030’ from closest property lines
- 324’ from closest road
- 480’ from closest residence
Site Facilities

- 3,175 sq ft equipment compound
- 10’ wide landscape buffer
- 8’ secured chain link fence
- 10’ wide access road
Tower Elevation

Lattice Tower

- 165’ self-support/lattice tower
- Public Safety 160’ & 150’ centerline
- AT&T is the first carrier at 140’ centerline, with space for 4 additional carriers
- County MW and LCPS equipment at 90 and 75’
TOWER EXAMPLES
COMPOUND EXAMPLES
Photo Simulations
PHOTO LOCATION & VISIBILITY
Thank You

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