



Date of Council Meeting: September 8, 2015

Information Memo

**TOWN OF LEESBURG
TOWN COUNCIL MEETING**

Subject: Approval Process for Telecommunication Antennas in the Town

Staff Contact: Barbara Notar, Town Attorney
Chris Murphy, Zoning Administrator

Council Action Requested: None.

Staff Recommendation: None.

Commission Recommendation: Not applicable.

Fiscal Impact: Not evaluated.

Work Plan Impact: Not applicable.

Executive Summary: The Town Council has requested information regarding the approval process for telecommunication antennas in the Town.

Background: Antennas to transmit wireless communications are governed by the Telecommunications Act of 1996 (47 U.S.C.) which are federal regulations that comprehensively encourage the deployment of telecommunications services. The Act allows localities to govern site decisions through their zoning ordinances, but the Act prohibits localities from adopting regulations that prohibit or have the effect of outright prohibiting wireless services, or that unreasonably discriminate against providers. The Act requires localities to act on applications for approval of wireless facilities within a reasonable period of time, and if the locality denies a request, the denial must be in writing, and supported by substantial evidence. Most important for the Town, the Act allows localities to prohibit wireless facilities within certain zoning districts, and to allow wireless facilities through a special exception.

Zoning Ordinance Section 9.3.26, Telecommunications Facilities, governs the application process and the site selection process for telecommunication facilities within the Town.

Currently, the Town recognizes four types of wireless telecommunications facilities:

- Antennas
- Monopole/Power Mount Facilities
- Transmission Tower (lattice type)
- Temporary Mobile Land-Based Telecom Testing Facility

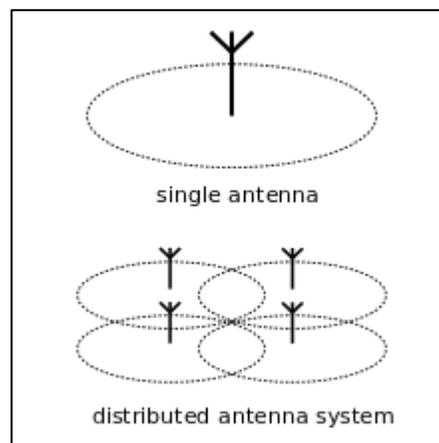
In accordance with the 1996 Telecommunications Act, the Zoning Ordinance provides for applicable use standards for each facility type referenced above. Each of these facility types provided for in the Zoning Ordinance are either co-located on existing structures, (antennas and Power Mount) or built as freestanding purpose-built facilities (Monopole, Transmission Tower, and Temporary Mobile Land-Based Telecom Testing Facility). Current zoning regulations do not provide for installation of telecommunications facilities on things that are not considered “structures” such as utility poles, parking lot light poles, signs, etc.

Recently, because of the widespread use of smart phones, telecommunications carriers are attempting to provide greater bandwidth in more locations in order to meet ever increasing voice and data demands of their customers. In order to meet these demands, telecom carriers have begun to deploy DAS or Distributed Antenna Systems.

Distributed Antenna Systems or DAS is a new technological solution for coverage enhancement of cellular systems applications for inside building coverage (iDAS), or outside areas (oDAS), such as stadiums and campuses. Town staff has been approached by consultants representing specific telecommunications carriers who wish to install outside, or oDAS at various locations within the Town.

DAS is best described as a series of smaller antennas distributed around a particular site to enhance coverage instead of relying on the main cellular communication system made up of the series of monopole and tower locations.

In an outdoor application of DAS, (oDAS) a series of antenna (and their associated equipment boxes) would be installed throughout a particular property. In recent discussions with telecommunications representatives, staff has been told that carriers wish to install oDAS antenna on light poles in parking lots at places such as the Outlet Mall, Leesburg Plaza Shopping Center, etc.



Some examples of what oDAS antennas look like are provided below:



However, because the Zoning Ordinance's Telecommunications Facilities regulations only provide for applications co-located on structures or on purpose-built structures, an oDAS installed on parking lot light poles is not a permissible telecommunications facility in Leesburg.

Some important questions about oDAS systems and their proposed applications in Leesburg have not yet been answered clearly by telecommunications representatives. From a land use standpoint, and from an aesthetic standpoint, staff feels it is important to have definitive answers to the following questions, at a minimum:

1. How much equipment is required per pole, either on the pole itself and/or ground mounted; what effect will this have on the use of the parking facility; will parking spaces be eliminated/used up for ground mounted equipment, etc.?
2. In the instance of the Outlet Mall application, how many antenna locations will be required for that oDAS?
3. If one carrier installs their oDAS on the light poles at one location, can other carriers use that same system (co-locate), or must each carrier build its own oDAS

network at each site? If that is the case, what will that look like, what affect will that have on the use of the property?

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In the right side photograph provided above we see what appears to be a single antenna with a single ground-mounted equipment box.

In the photograph provided here, we see an instance where there are two oDAS antenna on a single pole. In the next photograph, there are multiple equipment boxes on a single pole. Do these photographs represent what would be required to provide service for multiple carriers in a single location? If the current technology requires that each individual telecommunications carrier develops its own individual DAS at a single location there could be negative impacts on the Outlet Mall property from a land-use perspective and/or aesthetics perspective.



The Telecommunications Act of 1996 stipulates that a locality cannot unreasonably discriminate between telecommunications providers using the same technology. Therefore, if you allow one carrier to develop an oDAS at the Outlet Mall, you must also allow every other carrier to develop their own separate oDAS at the Outlet Mall.

Considering the major carriers (Verizon, AT&T, T-Mobile, Sprint) there exists the potential for parking lots to become a forest of telecommunications equipment if these systems cannot otherwise be consolidated and shared between carriers.