

Telecommunications Plan

INTENT

The intent of the Telecommunications Plan is to ensure the adequate provision of telecommunications infrastructure in the County that will support economic growth and public safety, and provide other essential communications services for the County in a manner that is compatible with adjacent and nearby land uses.

The Telecommunications Plan provides a framework for evaluating telecommunications proposals under the County's development review process, including provisional use permits, special use permits, and public projects, pursuant to Virginia Code Section 15.2-2232. The Plan is primarily intended to facilitate proposals for locating towers and other telecommunications facilities used for personal and public safety telecommunications services. In addition, the Plan encourages the creation of modern telecommunications infrastructure to serve County residents and businesses.

The Telecommunications Plan primarily focuses on establishing and implementing policies and strategies for mobile and land-based telecommunications equipment and facilities providing communications for personal mobile telephones, radios for commercial dispatching and public safety uses, and paging services. The Telecommunications Plan support documentation describes in more detail the character and extent of these telecommunications facilities. These facilities are characterized by relatively low power transmitters which are not known to cause environmental or health hazards nor cause interference with other transmissions when operated in accordance with federal regulations. The principal features of these facilities are: whip, panel, and parabolic (dish) antennas mounted on poles, towers or other tall structures; and unmanned equipment buildings. Telecommunication tower sites may be as small as a 50- by 50-foot area of land located on public property or on land leased by a telecommunications company or public agency from a private property owner. These sites may contain a single telecommunications tower or a group of towers generally ranging in height from 50 feet to 250 feet, but may be taller in some instances.

The County's telecommunication operations are generally planned for 40,000-square foot sites, measuring 200 by 200 feet. Each site will contain at least one telecommunications tower ranging in height from 120 feet to 300 feet, an equipment building, emergency power generator, and propane gas tank. Additional towers and associated equipment, which can be accommodated within the 40,000-square foot area, may be added by the County or by private telecommunications services over time.

A telecommunications facility site may accommodate several users simultaneously. While the top of a structure is the optimum location for antennas, they can be attached along the sides of a structure down to the point where surrounding terrain or buildings obstruct the transmission of signals. The height and design of a structure that supports antennas are the prime determinants of a site's capacity for antennas. Available area for equipment buildings, normally located at the base of a tower, may also be a factor in determining a site's capacity to handle additional facilities.

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Notwithstanding the above, less prevalent but higher powered facilities, such as broadcast stations, cable TV providers, point-to-point microwave relay, and radar facilities are also intended to be included in the County's telecommunications policies.

The Telecommunications Plan presented herein recognizes the need to minimize the number of telecommunications facility sites, while acknowledging the need for effective telecommunications operations to meet the County's economic development goals. Demand for personal and public safety wireless telecommunications is increasing in the County, while appropriate locations for such facilities are becoming increasingly more difficult to find. Hence, the sharing of facilities is desirable and beneficial to minimize the proliferation of towers in the County, to promote the efficient use of land, to minimize incompatibility between land uses, to minimize interference with the County's public safety telecommunications system, and to ensure coordination of the various systems.

The components of the Telecommunications Plan are:

- Intent Goals, Policies, and Action Strategies
- Existing and Approved Telecommunications Facilities (Table 1)
- Existing and Approved Telecommunications Facilities (Figure 1)
- Potential New Telecommunications Facility Sites (Table 2)
- Telecommunications Facility Requirement Areas (Figure 2)

GOAL 1: To identify sufficient telecommunications facility locations so as to ensure a broad range of communications services, while promoting the sharing of facilities and the efficient use of land, minimizing the proliferation of towers in the County, and assuring compatibility with adjacent and nearby land uses.

GOAL 2: To encourage the development of modern communications infrastructure in the County and the compatible integration of such technologies into new and existing commercial and residential communities to promote economic development and improve public safety.

GOAL 3: To comply with the spirit and intent of the Telecommunications Act of 1996 and the rules and regulations of the Federal Communications Commission so as to encourage competition between existing and new communications services and to promote a broad range of low-cost communications capabilities for County residents and businesses.

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TELE-POLICY 1: PLAN FOR APPROPRIATE COMMUNICATIONS CAPABILITIES THROUGHOUT THE COUNTY. LOCATE SUCH FACILITIES IN ORDER TO PROVIDE THE BROADEST POSSIBLE ACCESS TO ADVANCED COMMUNICATIONS SERVICES AND TO MINIMIZE THE NUMBER OF TOWERS NEEDED TO SUPPORT SUCH FACILITIES.

ACTION STRATEGIES:

1. Encourage the placement of antennas on existing structures (including, but not limited to, water tanks, existing towers, utility poles, building rooftops, and other tall structures) on both public and private properties. Consider such antennas and associated equipment which comply with the location, height, and other requirements of the Zoning Ordinance to be consistent with the Comprehensive Plan.
2. Encourage antennas to be placed on existing utility poles, camera standards, and sign structures and such structures that may be enlarged to accommodate antennas in public rights-of-way. Consider such locations to be consistent with the Comprehensive Plan, if allowed by the approving authority.
3. At the time of a development application review for a building or buildings over 60 feet in height, seek or apply conditions to allow antennas on the roofs of buildings and provide space within the buildings or building lots for the associated telecommunications equipment.
4. Encourage shared-use (collocation) of new telecommunications facilities through the following means:
 - Seek a letter of agreement from an applicant to allow at least two other telecommunications providers to use a proposed tower and site at fair market value;
 - Amend the Zoning Ordinance to require commitments for sharing of a new tower and site as a condition of a provisional use permit; and
 - Require commitments for sharing of a new tower and site as a condition of a special use permit.
5. Require the submission of a technical and operational analysis stating why existing towers, buildings, other suitable structures, or public properties within two miles of the proposed tower in the rural areas, and one mile in the Development Area cannot be used for new telecommunications facilities.
6. Maintain an inventory of all existing and proposed telecommunications facilities and their locations in the County, including cable TV, telephone, wireless services, and other such telecommunications services. Use this information to plan new

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telecommunications infrastructure that will serve the residents and businesses in the County.

7. Ensure that new structures do not block the pathways of the County government's or private microwave links. If new structures must be located within these pathways, ensure that the microwave signals are not degraded.

TELE-POLICY 2: LOCATE NEW TELECOMMUNICATIONS FACILITIES IN A MANNER WHICH ENSURES COMPATIBILITY WITH ADJACENT AND NEARBY USES.

ACTION STRATEGIES:

1. Use the following hierarchy/order of preference criteria when locating potential new telecommunications equipment and towers in the County:

Priority/ Order of Preference	Type of Activity	Location	Method of Permitting Public Activity	Method of Permitting Private Activity	Setback from Residential Structures
1	collocate antennas on existing structures, towers, or planned towers	in-County or out-of-County	456 determination or per jurisdictional procedures	use by right in all zoning districts in Prince William County	N/A
2	replacement or enlargement of a tower if it is taller than existing and less than 199'	Countywide	456 determination	provisional use permit or special use permit	N/A
3	replacement or enlargement of a tower if it is taller than existing and exceeds 199'	Countywide	456 determination	special use permit	N/A
4	tower over 50'	public facility sites	456 determination	456 determination	2 to 1
5	tower up to 199'	areas planned and/or zoned industrial	456 determination	provisional use permit	2 to 1
6	tower over 199'	areas planned and/or zoned industrial	456 determination	special use permit	2 to 1
7	tower up to 199'	utility rights-of-way in nonresidential areas	456 determination	456 determination	2 to 1

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Priority/ Order of Preference	Type of Activity	Location	Method of Permitting Public Activity	Method of Permitting Private Activity	Setback from Residential Structures
8	tower up to 199'	areas planned and/or zoned for employment and commercial	456 determination	provisional use permit	2 to 1
9	tower over 199'	areas planned and/or zoned for employment or commercial	456 determination	special use permit	2 to 1
10	tower over 50'	areas planned and/or zoned for residential, but not used for residential	456 determination and 456 hearing	special use permit	2 to 1
11	tower over 50'	areas zoned residential and used for residential	456 determination and 456 hearing	special use permit	2 to 1

2. Encourage telecommunications towers, particularly lattice-frame telecommunications towers in areas planned or zoned for nonresidential uses, especially industrial areas, when such facilities comply with the requirements of the Zoning Ordinance. Discourage monopoles in such areas to ensure that adequate capacity exists on each new tower for several telecommunications providers. If a telecommunications tower is proposed in a residential area, encourage the use of monopoles, utility poles, or other similar structures less than 100 feet tall.

3. Prohibit towers in historic districts, and ensure that telecommunications towers do not unduly impact important views from the Manassas National Battlefield Park, Prince William Forest Park, Designated Cultural Resources (DCR) sites, or views at County gateways and gateway corridors, as suggested by Policy-1, Action Strategy-14 of the Economic Development Plan and Strategy-7, Objective-1 of the Strategic Plan.

4. Measure setbacks of new telecommunications towers (not including replacement towers) from the ultimate rights-of-way reflected in the Thoroughfare Plan. Encourage a one-to-one setback of towers from parkways and a 200-foot setback from other streets.

5. Encourage a two-to-one setback (two feet for every foot in height of the tower) of telecommunications towers from adjoining dwellings.

6. At a minimum, utilize the standards of the Zoning Ordinance to mitigate the visual impact of new telecommunications towers and associated equipment, including

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equipment buildings or permanent buildings, that may adversely impact adjacent and nearby developments. Allow alternatives to the street and dwelling setbacks cited in AS-4 and AS-5 above for privately-owned telecommunications towers and with regards to the unique constraints and demands of the County's public safety radio system with consideration of mitigating measures, such as mature vegetation, topography, line of sight studies, and sighting facilities behind existing buildings.

To a lesser extent, encourage the following mitigating measures for new towers:

- Selecting the lowest tower height feasible;
- Providing tower lights that are shielded to prevent glare;
- Limiting hours of flashing strobe lights to the extent permitted by Federal Aviation Administration standards;
- Siting towers in wooded areas;
- Locating towers at the lowest possible point along ridge lines;
- Landscaping at the base of the facility;
- Engineering requirements for a particular site;
- Minimizing the size and extent of appurtenant facilities, such as equipment buildings; and
- Using muted earth-tone colors.

TELE-POLICY 3: LOCATE TELECOMMUNICATIONS FACILITIES TO MINIMIZE INTERFERENCE AMONG VARIOUS SERVICE PROVIDERS AND TO PROTECT THE HEALTH, SAFETY, WELFARE, AND CONVENIENCE OF THE COUNTY'S CITIZENS.

ACTION STRATEGIES:

1. Discourage new telecommunications towers or other tall structures from being located in the transmission pathways of the County government's telecommunications network. Ensure that a proposal for any structure over 60 feet in height is reviewed by the County's telecommunications engineers. In addition, amend the Zoning Ordinance for new towers subject to a provisional use permit to allow for review of the proposal by the County's telecommunications engineers.

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2. Ensure that radio frequency exposure to the public from antennas, individually and cumulatively, will be maintained in accordance with Federal standards and the standards of the Institute of Electrical and Electronic Engineers, Inc. (IEEE). Require a tower proposal to provide the relevant engineering data that indicates it is in compliance with federal standards, including latitude, longitude, datum reference, ground elevation, antenna heights above ground, transmitting frequencies, effective radiated power, and direction of radiation.
3. Amend the Zoning Ordinance to require the timely removal of telecommunications towers and equipment when they are no longer needed.
4. Develop and implement a modern, wireless telecommunications system to enhance the County public safety agencies' ability to improve the protection of the health, safety, and welfare of citizens.
5. Ensure that proposals for large, heavy-density or below-ground buildings be reviewed by the County's telecommunications engineers to determine if such buildings will block effective two-way public safety radio communications to and from the buildings and to require mitigation of any deficiencies.

TELE-POLICY 4: ALLOW TELECOMMUNICATIONS FACILITIES ON PUBLIC PROPERTY AND WITHIN THE FACILITY REQUIREMENT AREAS DELINEATED ON FIGURE 2. PROMOTE SHARING OF TELECOMMUNICATIONS FACILITIES AMONG PUBLIC AND PRIVATE ENTITIES.

ACTION STRATEGIES:

1. Establish telecommunications facilities on public properties and public safety facilities when the following parameters can be met:
 - the use and character of public properties and adjacent properties is not adversely impacted;
 - the proposed telecommunications facilities are consistent with other elements of the Comprehensive Plan and the Zoning Ordinance; and
 - appropriate approvals and agreements are reached with the public agencies, boards, or authorities.
2. Encourage new telecommunications facilities to be built through public/private partnerships when the telecommunications service needs of both parties can be met by one facility.
3. Discourage the use of public properties for a single telecommunications provider, unless it has been demonstrated by the single provider and the public agency that joint use of the property is not desirable or feasible.

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4. Establish a consistent policy for locating telecommunications facilities on public facility sites throughout the County and develop agreements that will allow leasing of such facilities to private telecommunications services at fair market value.
5. Plan for appropriate communications capabilities in all government facilities, including schools, libraries, and public telecommuting centers.
6. Encourage the use of the County's public safety radio towers for both publicly- and privately-owned telecommunications services.

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Table 1 Existing and Approved Telecommunications Facilities

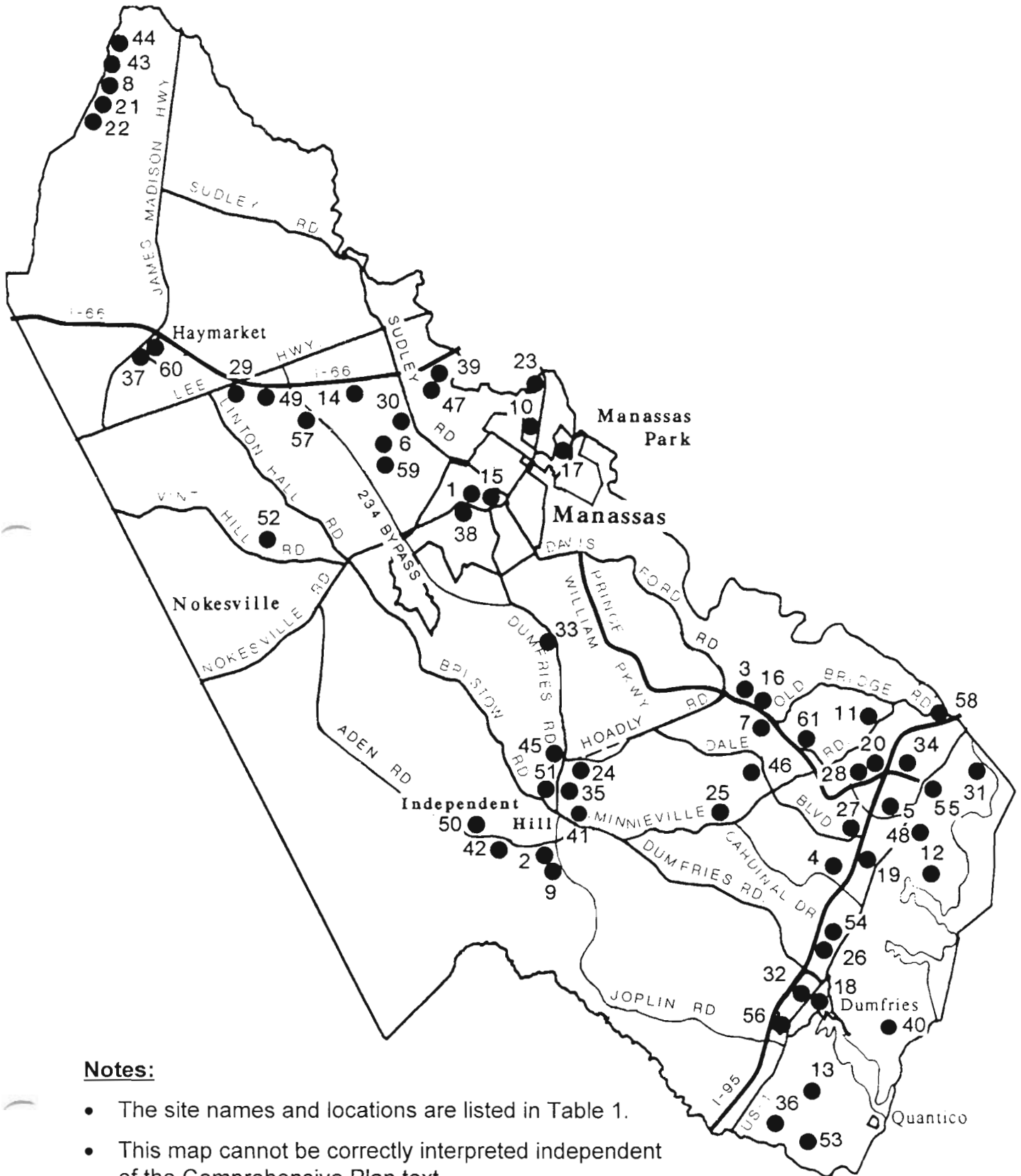
<u>Site Number</u>	<u>Site Name</u>	<u>Address</u>	<u>Structure Height</u>
1	Manassas Tower	9300 Lee Avenue	199
2	Independent Hill II Tower	14530 Aden Road	230
3	McCoart Tower	1 County Complex Court	199
4	Garfield/Ferlazzo Tower	15950 Cardinal Drive	199
5	Potomac Hospital Roof	2300 Opitz Boulevard	90
6	Sudley North Monopole	7651 Ashton Avenue	55
7	Ridgewood Monopole	4349 Ridgewood Center Drive	40
8	USTS Metromedia Tower	2105 Ridge Road	230
9	WNVT-TV Tower	14800 Joplin Road	650
10	Maplewood Tank	8450 Maplewood Drive	134
11	Tackett's Mill Tank	2294 Davis Ford Road	172
12	H.L. Mooney Tank	1851 Rippon Boulevard	110
13	Nob Hill Tank	18330 Nob Hill Drive	92
14	Bethlehem Tank	7501 Bethlehem Road	148
15	Manassas Tank	9490 Quarry Street	150
16	Hoadly/McCoart Tank	4321 Asdee Lane	191
17	Cellular One/ Manassas Park Tower	9104 Industry Drive	251
18	Cellular One/Dumfries Tower	229 Canal Road	300
19	Cellular One/NVCC Tower	15200 Neabsco Mills Road	199
20	Franklin Associates Tower	2311 Horner Road	300
21	Motorola/Bull Run Mountain Tower	2404 Lookout Road	235
22	NW Tower/Bull Run Mountain	2406 Lookout Road	160
23	APC/Manassas Tower	7226 Centreville Road	150
24	Motorola/Woodbine Tower	13621 Independence Drive	480
25	NOVEC Tower	14500 Minnieville Road	160
26	Newman/Dumfries Tower	16787 Interstate Drive	150
27	Days Inn Roof	14619 Potomac Mills Road	120
28	Franklin II Tower	2311 Horner Road	195
29	Bell Atlantic/Gainesville Tower	1530 Wellington Road	180
30	Sudley Building Roof	7900 Sudley Road	Unknown
31	Harry Diamond Lab Tower	14013 Dawson Beach Road	250
32	Bell Atlantic/Dumfries Monopole	17541 Graham Street	167
33	Cellular One/Lake Jackson Monopole	11210 Dumfries Road	150
34	Nottaway Tank	13690 Nottaway Road	111

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<u>Site Number</u>	<u>Site Name</u>	<u>Address</u>	<u>Structure Height</u>
35	AT&T/Independent Hill Tower	13889 Dumfries Road	190
36	Quantico Towers	Quantico	200
37	Jones Communications Tower	Haymarket	200
38	Norfolk Southern Corp. Tower	9431 Stonewall Road	130
39	Transco Gas Tower	10201 Balls Ford Road	120
40	CSX Railroad Tower	Cherry Hill Road	246
41	FAA Tower	Dumfries Road	176
42	Intelstat Tower	Aden Road	200
43	Washington Gas Tower	Bull Run Mountain	120
44	NOVEC Tower	Bull Run Mountain	150
45	GTE Tower	13634 Dumfries Road	163
46	Jones Communications Tower	4391 Dale Boulevard	300
47	NOVEC Tower	10323 Lomand Drive	170
48	Virginia Power Monopole	1901 Reddy Drive	105
49	NOVEC Tower	5399 Wellington Road	100
50	NOVEC Tower	14451 Aden Road	160
51	State Police Tower	14422 Dumfries Road	
52	AT&T Tower	13010 Vint Hill Road	200
53	Jones Communications/ Quantico Tank	Quantico Marine Base	117
54	Homan/Nextel Tower	16815 Interstate Drive	190
55	AT&T/Woodard Monopole	14115 Jefferson Davis Hwy	150
56	AT&T/Triangle Baptist Tower	4345 Inn Street	195
57	AT&T/Randolf Ridge Tower	2301 Randolf Ridge Road	180
58	Bell Atlantic/Occoquan Monopole	I-95/Route 123 Interchange	150
59	Community Wireless Tower	8329 Bethlehem Road	199
60	Bell Atlantic/Haymarket Monopole	15175 Washington Street	150
61	Bell Atlantic/Westwinds Antennas	3820 Prince William Parkway	199

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Figure 1 Existing and Approved Telecommunications Facilities



Notes:

- The site names and locations are listed in Table 1.
- This map cannot be correctly interpreted independent of the Comprehensive Plan text.

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FACILITIES REQUIREMENT AREAS

Existing telecommunications sites, shown on Figure 1, are encouraged to be used for new telecommunications facilities and are considered part of the Telecommunications Facilities Requirement Areas. However, existing water tank sites shown on Figure 1 shall no longer be shown as approved locations for telecommunications facilities, or considered part of the Telecommunications Facilities Requirement Areas, if the existing or any replacement water tank is removed from such site. New telecommunications facilities proposed at existing facilities may be considered to be consistent with the Comprehensive Plan, depending on the Planning Director's determination of the need for public review, pursuant to Section 15.2-2232 of the Virginia Code. Public review and comment will take place for the County's public safety radio system.

Public safety sites, school sites, the sites listed below, and other public properties may also be considered for telecommunications facilities. Telecommunications facilities located at these sites may also be determined to be consistent with the Comprehensive Plan, pursuant to Tele-Policy 4, and may be allowed on a case-by-case basis by the public agency or party responsible for the particular site.

The County-operated telecommunications facilities will be designed and structurally engineered to support loading capacities of known and projected public and private telecommunications facilities. Private common carrier providers of telecommunications services are encouraged to review these planned telecommunications facilities for their potential shared-use prior to the design and engineering of the facility by the County.

EXISTING COUNTY TELECOMMUNICATIONS FACILITIES

Manassas Tower (Existing Facilities Map Site #1)

The existing 180-foot tall tower is proposed to be replaced or increased in height up to 199 feet. The equipment building could be increased to 40- by 60-feet.

Independent Hill II (Existing Facilities Map Site #2)

An existing 230-foot tall (AGL) telecommunications tower is proposed to be increased in height between 230 and 320 feet (AGL). The equipment building could be increased in size from a 10- by 15-foot unit to a 40- by 60-foot unit.

McCoart Tower (Existing Facilities Map Site #3)

The existing 199-foot tower is proposed to be replaced or increased in height to 260 to 300 feet. The equipment building could be increased to 40- by 60-feet.

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Garfield/Ferlazzo (Existing Facilities Map Site #4)

An existing 199-foot tall (AGL) telecommunications tower is proposed to be increased in height between 260 and 300 feet (AGL). The equipment building could be increased in size from a 10- by 15-foot unit to a 40- by 60-foot unit.

POTENTIAL COUNTY AND/OR PRIVATE TELECOMMUNICATIONS FACILITIES

Old Carolina Road at Carver Road (Facilities Requirement Area #2)

A 200- by 200-foot area is proposed that could contain a 260- to 300-foot tall (AGL) self-supporting telecommunications tower, a 40- by 60-foot equipment building, an emergency power generator, and a propane gas tank.

Green Valley Water Tank Vicinity (Facilities Requirement Area #21)

A 200- by 200-foot area is proposed that could contain a 260- to 300-foot tall (AGL) self-supporting telecommunications tower, a 40- by 60-foot equipment building, an emergency power generator, and a propane gas tank.

H.L. Mooney Plant (Existing Facilities Area #12)

A 260- to 300-foot tall (AGL) self-supporting telecommunications tower is proposed, as well as a 40- by 60-foot equipment building, an emergency power generator, and a propane gas tank.

Sudley North (Facilities Requirement Area #22)

A 200- by 200-foot area is proposed that could contain a 260- to 300-foot tall (AGL) self-supporting telecommunications tower, a 40- by 60-foot equipment building, an emergency power generator, and a propane gas tank.

Cherry Hill (Facilities Requirement Area #12)

A 200- by 200-foot area is proposed that could contain a 260- to 300-foot tall (AGL) self-supporting telecommunications tower, a 40- by 60-foot equipment building, an emergency power generator, and a propane gas tank.

Bull Run Mountain (Facilities Requirement Area #27)

A 120- to 160-foot tall (AGL) self-supporting telecommunications tower is proposed, as well as a 20- by 45-foot equipment building, an emergency power generator, and a propane gas tank.

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Bull Run Mountain (Facilities Requirement Area #28)

A 120- to 160-foot tall (AGL) self-supporting telecommunications tower is proposed, as well as a 20- by 45-foot equipment building, an emergency power generator, and a propane gas tank.

Route 15 North (Facilities Requirement Area #29)

A 200- by 200-foot area is proposed that could contain a 260- to 300-foot tall (AGL) self-supporting telecommunications tower, a 20- by 60-foot equipment building, an emergency power generator, and a propane gas tank.

Old Antioch School Site (Facilities Requirement Area #30)

A 200- by 200-foot area is proposed that could contain a 260- to 300-foot tall (AGL) self-supporting telecommunications tower, a 20- by 60-foot equipment building, an emergency power generator, and a propane gas tank.

Locust Shade Park (Facilities Requirement Area #19)

A 200- by 200-foot area is proposed that could contain a 260- to 300-foot tall (AGL) self-supporting telecommunications tower, a 20- by 60-foot equipment building, an emergency power generator, and a propane gas tank.

C Street/Triangle (Facilities Requirement Area #32)

A 200- by 200-foot area is proposed that could contain a 260- to 300-foot tall (AGL) self-supporting telecommunications tower, a 20- by 45-foot equipment building, an emergency power generator, and a propane gas tank.

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Figure 2 Telecommunications Facilities Requirement Areas



Notes:

- The site names and locations are listed in Table 2.
- This map cannot be correctly interpreted independent of the Comprehensive Plan text.
- The existing and approved telecommunications facilities shown on Figure 1 are also part of the Facilities Requirement Areas Map