

APPENDIX A

LAND USE - FORT A.P. HILL APPROACH FAN MAP & JOINT LAND USE STUDY (JLUS)



7.0 Spotsylvania County

7.1 Community Profile

Spotsylvania County is approximately equidistant from Richmond and Washington, D.C. and is one of the fastest growing counties in Virginia. The County's location along Interstate 95 (I-95), proximity to major urban centers and a high quality of life contribute to the area's growth and popularity. Based on U.S. Census Bureau data, the county experienced a growth rate of 113% between 1990 and 2010 and by 2010 maintained a population of 122,397. Population estimates as of July 1, 2012 are 125,684.¹ The Weldon Cooper Center for Public Service's population projections suggest that the County will add 101,520 residents or grow by 83 percent between 2010 and 2030. This projection assumes an average growth rate of approximately 3 percent per year, similar to a historic rate of approximately 3 percent between 2000 and 2010.²

A large portion of the county's growth is located along the I-95 and U.S. Route 1 corridors and although suburban style development has increased in the past decade, the county's 407 square miles are primarily rural and agricultural with rolling hills and forests. Fort A.P. Hill is located southeast of Spotsylvania County. Even though the county does not share a border with the installation, aviation operations associated with training do impact Spotsylvania County.

7.2 Current Tools and Programs

7.2.1 Comprehensive Plan and Future Land Use

The Spotsylvania County Comprehensive Plan, adopted in 2013, includes a Future Land Use Map to guide land development. The plan outlines several objectives, including:

- Plan for the orderly development of the County.
- Promote a diverse and vibrant economic base.
- Maximize the use of existing infrastructure and public facilities to ensure the most efficient operation of facilities and the provision of services.
- Accommodate projected residential growth in a manner that is fiscally responsible.
- Strive for safe and affordable housing for people of all ages.
- Ensure land use policies recognize and accommodate anticipated population increases.
- Encourage a community service sector and a commercial base that meets the needs of the citizens and businesses in Spotsylvania County.

¹ Spotsylvania County, Virginia, Comprehensive Plan, Adopted November 2013, Chapter 1: Introduction and Vision.

² Spotsylvania County, Virginia, Comprehensive Plan, Adopted November 2013, Chapter 1: Introduction and Vision.

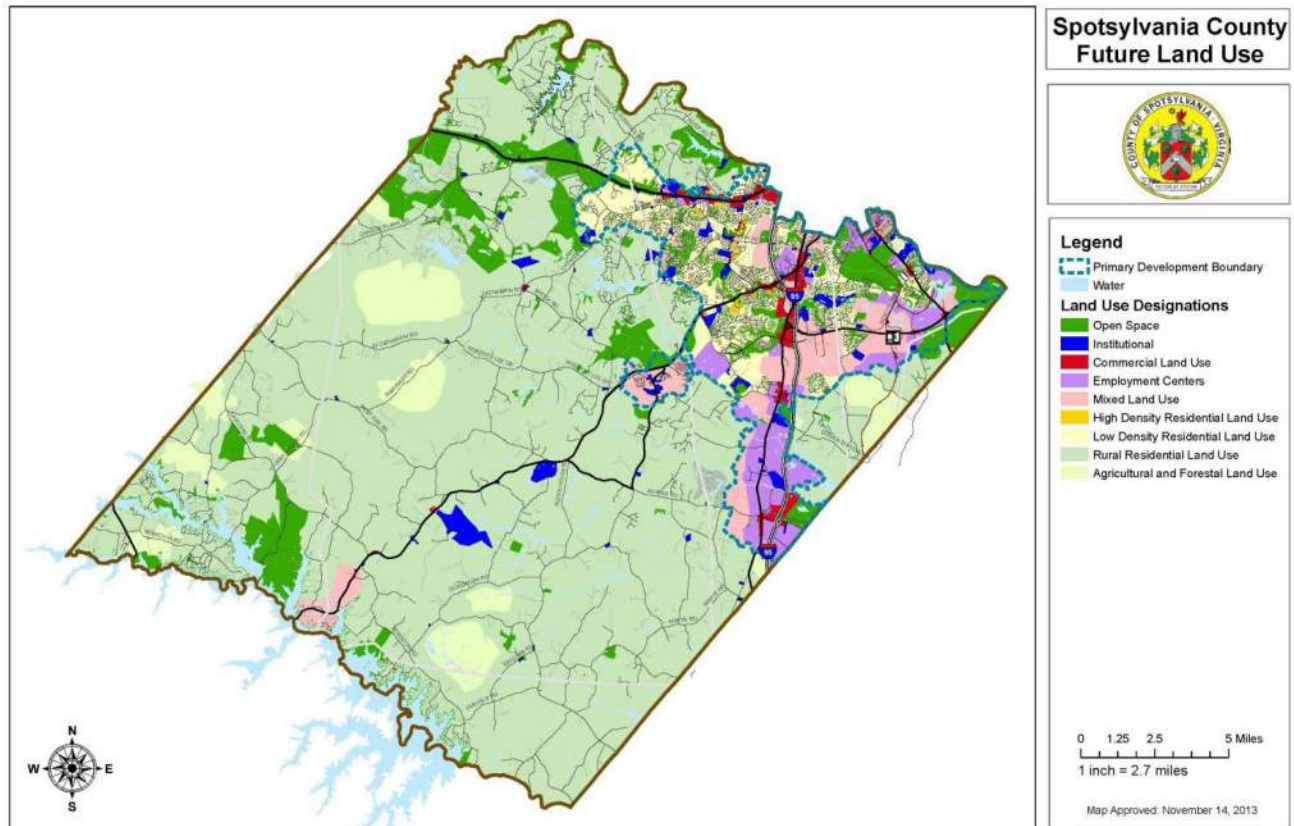


Figure 7.1 Spotsylvania County Future Land Use Map
Source: Spotsylvania County Comprehensive Plan, 2013

Spotsylvania County has a primary development boundary, which defines a public water and sewer service area, that aligns with the county’s growth strategy. Spotsylvania’s growth areas are concentrated around the City of Fredericksburg and along I-95. The primary development boundary is intended to contain development within the primary development district and preserve rural and agricultural lands.

The land in Spotsylvania that is two to three miles from Fort A.P. Hill falls both within and outside of the primary development boundary. Some of this area is under the Fort A.P. Hill Tier I and Tier II approach fans (see Chapter 8 for operational descriptions of Fort A.P. Hill); therefore, the future land use plan recommends a policy to “provide Fort A.P. Hill an opportunity to comment on rezoning proposals within the Fort A.P. Hill Approach Fan”³ and recommends that rezoning proposals including residential development include “proffered commitments to noise attenuation, real estate disclosures, and/or other measures recommended by Fort A.P. Hill.”⁴

³ Spotsylvania County, Virginia, Comprehensive Plan, Adopted November 2013, Amended February 22, 2011, Chapter 2: Future Land Use Element.

⁴ *ibid.*

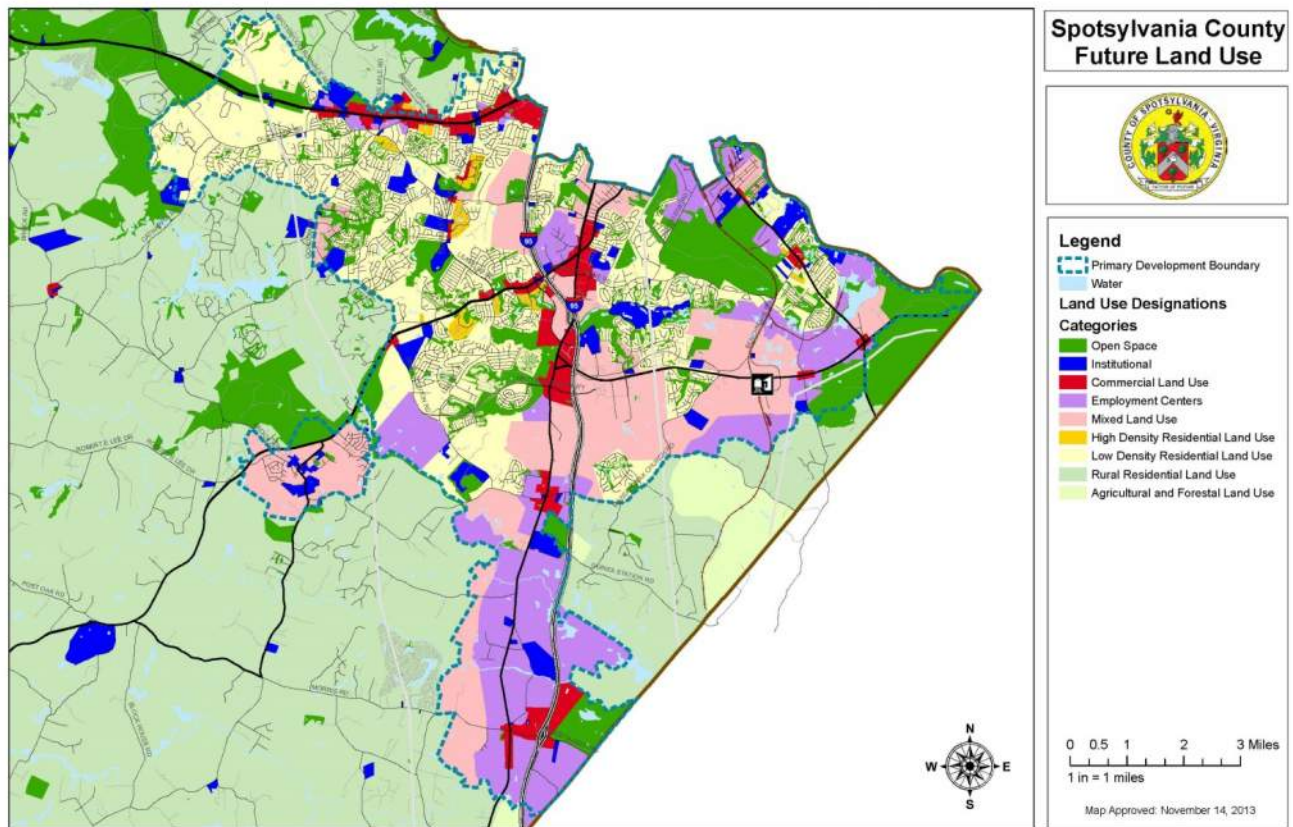


Figure 7.2 Northeast Focus Area - Spotsylvania County Future Land Use Map
Source: Spotsylvania County Comprehensive Plan, 2013

The land closest to Fort A.P. Hill lies outside of the Primary Development Boundary and is designated as rural residential, open space, and agricultural and forestal land uses. The rural residential district is intended to conserve rural character while also accommodating large lot residential and cluster developments. The open space land use includes conserved lands and park and recreation facilities. The agricultural and forestal land use includes active agricultural land. Land within the primary development boundary, located in the northeastern portion of Spotsylvania County, is intended to be developed in a series of mixed-use communities and include significant employment centers. The county is actively encouraging a mix of residential, commercial, and office development, including a transit-oriented development within this district. Generally, northeast of these areas is a significant concentration of suburban residential developments. The future land use plan outlined in the Comprehensive Plan calls for mixed-use and employment center land uses in the portion of the primary development district that is closest to Fort A.P. Hill. According to the Comprehensive Plan, the mixed land use category is defined as permitting “traditional neighborhood; higher density residential; commercial uses (retail and office); light industrial; educational facilities; recreation facilities and compatible public and other civic facilities.”⁵ The employment center category includes office, industrial and commercial land uses.

⁵ ibid.

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7.2.2 Zoning

The county land closest to Fort A.P. Hill is currently zoned for mixed use (MU), commercial (C-3), industrial (I-1 and I-2), and rural (RU) land uses (See Figure 7.3). The MU district allows for a mix of uses in a compact, walkable community. The C-3 district permits general commerce activity. The I-1 district permits light industrial uses and the I-2 district permits medium and heavy industrial uses. The RU district permits agriculture, single-family detached (one dwelling unit per three acres), wildlife sanctuaries, public uses, parks, places of worship, and schools. Zoning within the primary development district, including those areas within the installation’s approach fan, is likely to change over the next several years to align with the future land use plan.

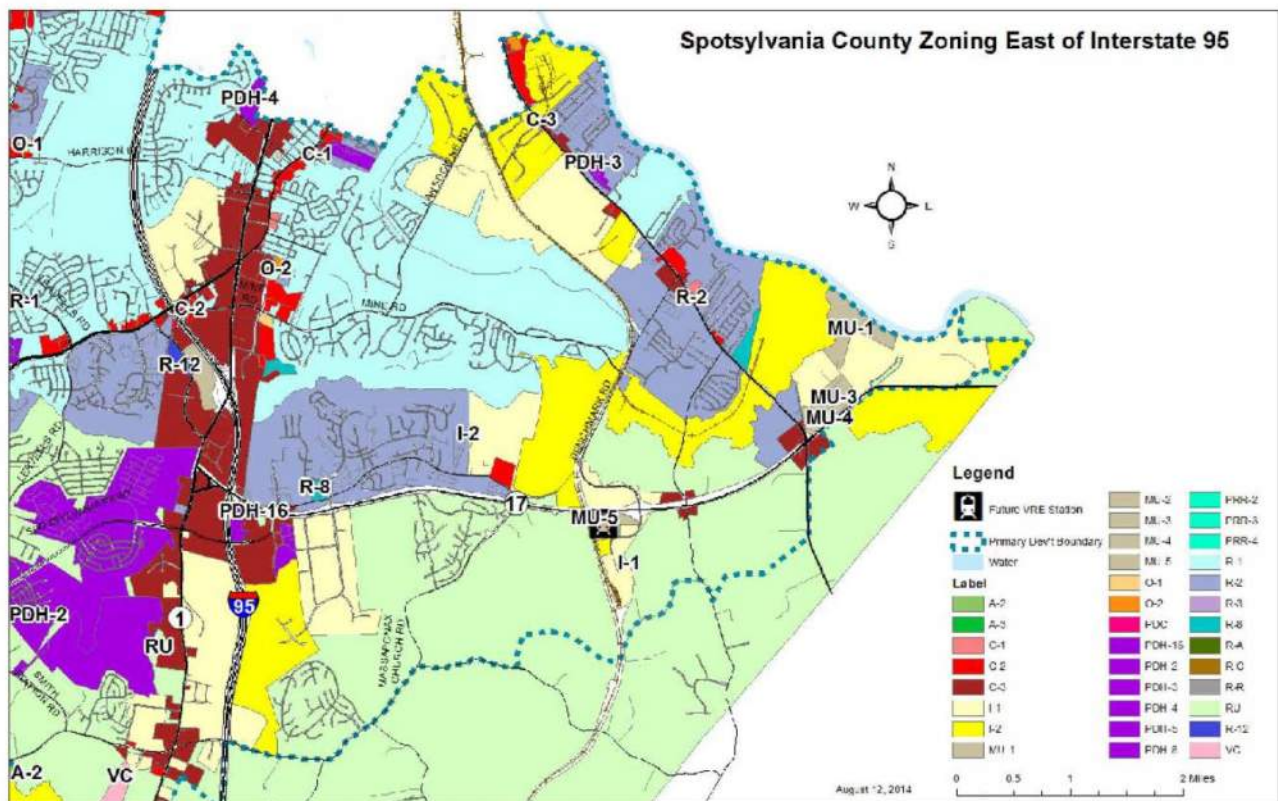


Figure 7.3 Northeast Focus Area - Spotsylvania County Zoning
Source: Spotsylvania County, August 2014

7.2.3 Infrastructure Plans

Spotsylvania County has several infrastructure plans near Fort A.P. Hill to encourage growth within its primary settlement district. The county has already extended water and sewer service along Route 2 and U.S. Route 17 to the undeveloped land within the primary development boundary. At this time, the county does not plan to extend water and sewer infrastructure further toward Fort A.P. Hill due to topography constraints which would require cost-prohibitive pumping.⁶

⁶ Interview with Spotsylvania County, October 23, 2012.

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Several transportation projects are underway or planned to alleviate congestion and extend transit as identified in the 2040 Long Range Transportation Plan (LRTP) prepared by FAMPO and GWRC. Two projects on the LRTP short-list of critical transportation projects are in Spotsylvania County near Fort A.P. Hill: widening Route 2 from the Spotsylvania-Fredericksburg border to the intersection with U.S. Route 17 and widening U.S. Route 17 from I-95 to the Spotsylvania-Caroline County border. The Route 2 widening project is unfunded and listed for funding in the 2036-2040 cycle. The U.S. Route 17 widening project is unfunded and listed for funding in the 2026-2030 cycle.

In addition to the roadway expansions, new transit service is coming to Spotsylvania County. The Virginia Railway Express is constructing a new station within the Crossroads Station development south of Route 17. This station will be completed in 2015 and will fall under the Tier I approach fan.

7.3 Challenges and Opportunities

7.3.1 Challenges

- **Aircraft Noise.** A wide range of aviation training occurs at Fort A.P. Hill, including fixed wing and rotary aircraft operations. The Assault Landing Zone (ALZ) facility, which is located in the northwestern portion of the installation, has two associated approach (take-off and landing) fans that correspond to approximate noise zones and altitudes of fixed wing aircraft that use the ALZ (See Chapter 8.0, Fort A. P. Hill). Approaches to the ALZ can range from 300 to 1,000 feet above ground level and the majority of takeoffs and landings occur to the northwest of the ALZ, over Spotsylvania County. Once in flight, aircraft often follow racetrack patterns that extend slightly into Spotsylvania County. The fans were developed by the installation in absence of official noise contours since the number of flights is not high enough to warrant contours. The inner-most fan (closest to the installation) represents altitudes less than 1,700 feet above ground level (AGL) and noise levels approaching 80 dBA. The outer fan represents altitudes between 1,700 and 3,500 feet AGL and noise levels below 80 dBA. While average noise levels in the fan areas are anticipated to be below typical airfields, there is a potential for individual overflights to generate undesirable noise levels on current and future development. Aviation noise complaints have been documented in and around the fan areas of Spotsylvania County. In addition, rotary aircraft routes exist around the perimeter of the installation and are in close proximity to the county boundary.
- **Aircraft Training Routes Overlap with County Investment Priorities** Spotsylvania County has identified growth areas and infrastructure investment priorities along the U.S. Route 17 and Route 2 corridors that are located in relatively close proximity to training areas on Fort A.P. Hill. This area of the county has been the recipient of utility and roadway infrastructure improvements geared toward supporting higher density mixed use development and recent re-zonings in the area have been consistent with the county's growth goals for the area. The northern approach fan for the ALZ covers a portion of the county's growth area as shown in Figure 7.4.
- **Fort A.P. Hill Night-time Operations Require Dark Skies.** Fort A.P. Hill conducts night-time training operations that utilize night vision equipment. The success of night-time operational activities is dependent upon dark conditions that are affected by ambient light levels. Night vision training occurs at the Laser Range near U.S. Route 17 and at the ALZ and Drop Zone. As Spotsylvania County grows, the installation is concerned that new development within the county's growth area may generate night-time illumination that will compromise the installation's ability to implement its night-time training operations.

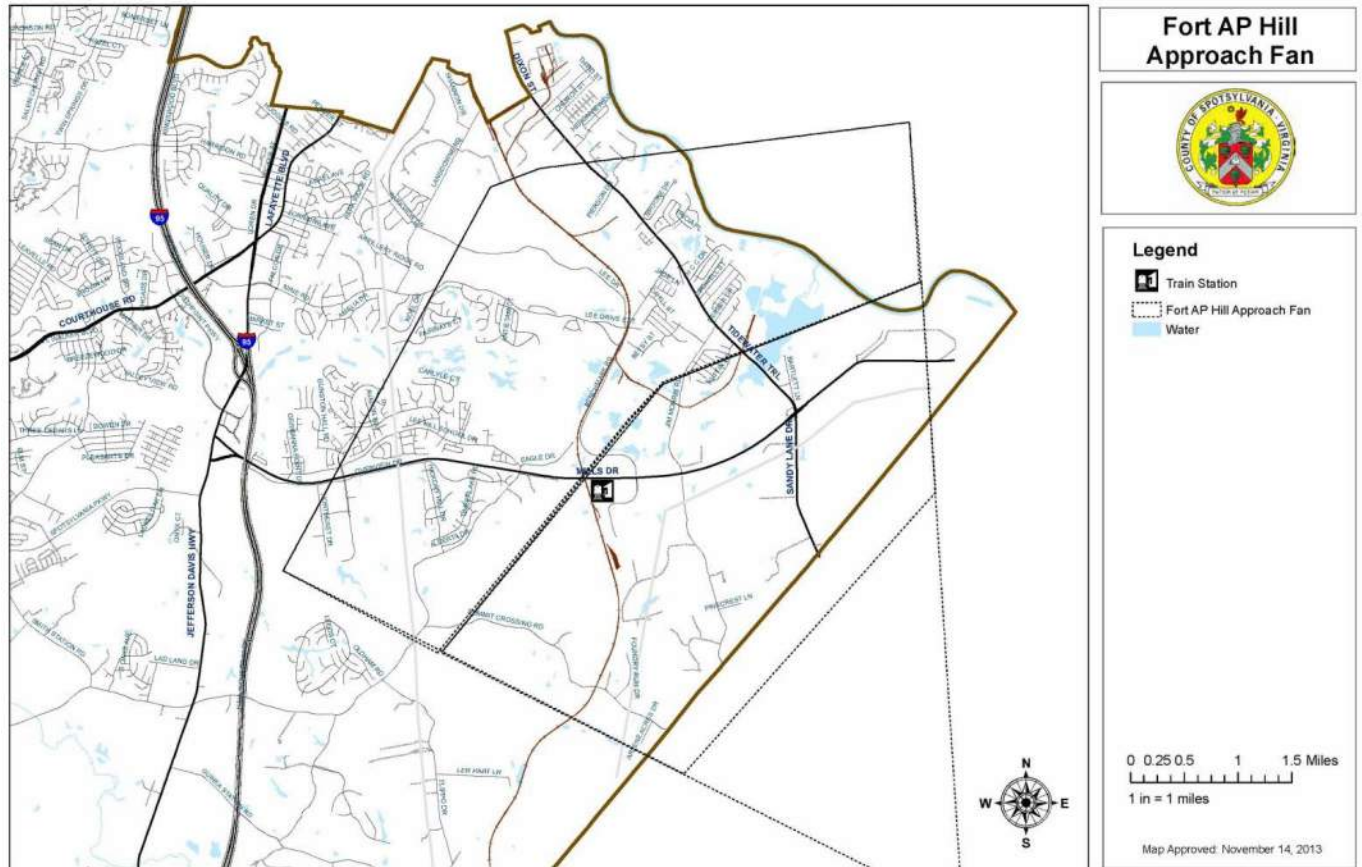


Figure 7.4 Fort A.P. Hill Approach Fan
Source: Spotsylvania County Comprehensive Plan, 2013, Appendix

7.3.2 Opportunities

- Integration of the Fort A.P. Hill Operational Area Into Planning Policy.** Spotsylvania County has already recognized the installation’s operations in its future plans by recognizing and including the installation’s Approach Fans in the county’s Comprehensive Plan. The fans are part of a larger operational area (see Chapter 8.0, Fort A.P. Hill) in which Fort A.P. Hill conducts training.
- Coordinated Development Reviews.** Spotsylvania County and Fort A.P. Hill have established effective procedures for communication. For example, the county provides the installation an opportunity to comment on proposed re-zonings within the approach fans. Continued open dialogue will help develop mutually beneficial outcomes for the county and the installation.
- Reduce Noise Impacts.** Proffered commitments to noise attenuation, real estate disclosures, and/or other measures recommended by Fort A.P. Hill as part of rezoning applications could help mitigate against future noise complaints in the county’s growth area. The installation has expressed concerns about increased residential density in Spotsylvania County that could lead to an increase in noise complaints and pressure to modify training operations. The county has had success in obtaining lighting controls and sound attenuation for recent rezoning applications and is actively working with the installation on these issues to minimize the impacts of development on its mission.

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- **Develop a Dark Skies Ordinance.** Adoption of a county-wide dark skies ordinance would put in place lighting controls and requirements on new development county-wide and would help alleviate the installation's concerns about increased light pollution. Fort A.P. Hill should work with the county to ensure adequate lighting requirements and standards are captured in the ordinance.

7.4 Recommendations

Based on feedback received from Spotsylvania County, this section establishes a set of recommended actions for the county to consider that could strengthen coordination between the county and the installation. The recommendations are organized into the categories described below.

- **Coordination** – to facilitate coordination between Spotsylvania County and Fort A.P. Hill.
- **Communication** – to improve the dissemination of locality and military operational information.
- **Economic Development** – to foster economic development opportunities in Spotsylvania County.
- **Utilities** – to evaluate opportunities for improved broadband services around Fort A.P. Hill.
- **Community Development/Planning** – to reduce noise and vibration impacts on residents.

Each recommendation includes action steps, a timeframe, rough order magnitude of costs and staffing requirements.

- **Timeframe.** Identifies when the proposed recommendation should be initiated using one of three timeframe categories:
 - **Immediate (highest priority)** Now
 - **Short-term (high priority)** Less than one year
 - **Mid-term (moderate priority)** Between one and four years
 - **Long-term (lower priority)** More than four years
- **Order of Magnitude Cost.** Provides a high level, Rough Order-of-Magnitude (ROM) cost impact for local jurisdictions and the installation to implement the strategy. Costs do not consider efforts undertaken by other parties beyond the JLUS partners.
 - **\$** = < \$100,000
 - **\$\$** = \$100,000 - \$300,000
 - **\$\$\$** = > \$300,000
- **Potential Staffing Requirements.** Provides an estimate of the potential required staff involvement and staff time of local jurisdictions and/or Fort A.P. Hill to implement the recommendation. Staffing requirements do not include efforts conducted by other parties.
 - **L** = minimum
 - **M** = moderate
 - **H** = high

Table 7.1 Spotsylvania County JLUS Recommendations

Recommendation		Action Steps	Timeframe	Cost	Staffing	
Coordination	1.1	<p>Through an executed MOU, work with the other JLUS partners to establish the Fort A.P. Hill Executive Steering Committee (ESC) including local elected officials and the Fort A.P. Hill Garrison Commander to discuss community, installation and other compatibility issues on a regular scheduled basis and to coordinate and collaborate on the following:</p> <ul style="list-style-type: none"> • Capital improvement and infrastructure planning • Comprehensive plan and other planning document updates • Long range planning for newly proposed missions and on-base facilities, recognizing mission-related operational security requirements exist • Environmental studies related to air and water quality impacts • Pursuit of joint funding for studies <p>The ESC should include a Working Committee at the planning director level that will form subcommittees as necessary to explore specific issues and opportunities.</p>	<ul style="list-style-type: none"> • Agree upon key communication procedures contained in the draft MOU and identify primary internal points of contact to produce and receive notices. • Identify appropriate secondary partners for participation in the MOU. • Sign the MOU. • Define issues to review and information to share. • Exchange information about upcoming infrastructure studies and plans. • Modify planning processes to include opportunity for installation/community input early on - before development of alternatives and as part of benefits/impacts review. • Involve utilities and public works personnel in discussions. • Explore ways to include the installation in any sub committees that are formed for plan updates (i.e. transportation, utilities, etc.). • Fort A.P. Hill to hold regular meetings/briefings with locality representatives during plan/project developments. 	Immediate	-	-
	1.2	<p>Continue to solicit input from Fort A.P. Hill as part of a technical review process on development related submittals and text amendments within the Fort A.P. Hill influence area.</p>	<ul style="list-style-type: none"> • Formalize Fort A.P. Hill as a technical review committee member or similar status and define consultation procedures to obtain installation input • Seek input from the installation on all development related proposals and text amendments and consider the input in decision-making processes. • Fort A.P. Hill provides written input on development related proposals and text amendments. 	Short-term	\$	M
Communication	2.1	<p>Issue Fire Warning Orders (through Caroline Alert and other media and social network venues) of training activities that are non-routine and have the potential to be louder than normal, as well as controlled burn activities, including the proposed time and duration of aviation and ordnance operations.</p>	<ul style="list-style-type: none"> • Fort A.P. Hill Public Affairs Officer (PAO) to define multiple media and social network outlets for alerts, including ESC and Installation Command Council (ICC). • Develop template for alerts defining information elements. • Localities to include warnings on websites and social media venues. • Seek feedback on effectiveness of alerts from localities and public (during surveys or other planning processes). 	Short-term	\$	M

Recommendation		Action Steps	Timeframe	Cost	Staffing	
	2.2	Re-structure and expand the ICC to include local businesses, residents, installation employees, non-profits, etc., to serve as a citizen group designed to promote positive community and installation relations and to help organize and sponsor events and activities and support economic development.	<ul style="list-style-type: none"> • ESC to evaluate ICC membership and redefine membership to accomplish intent of strategy. • Hold ICC meeting. • Establish leadership and purpose of ICC and carry out activities. 	Mid-term	\$	L
	2.3	Update locality websites to recognize the installation, its mission, its location, links to the installation web page, contact information for key personnel, and fire warning orders. Update installation website to include more information about operations, training, noise impacts and complaint procedures, avoidance areas and key points of contact.	<ul style="list-style-type: none"> • Update community websites with links to Fort A.P. Hill key personnel contact information, fire warning orders, and noise reporting procedures. • Update installation website with locality links, fire warning orders, property claims process, noise impacts and complaint procedures and contacts, and avoidance areas. 	Mid-term	\$\$	M
Economic Development	3.1	Support Fort A.P. Hill’s pursuit of establishing Washington-Baltimore-Northern Virginia General Schedule (GS) pay grades for all personnel stationed at the installation.	<ul style="list-style-type: none"> • Fort A.P. Hill to pursue pay grade issue with the U.S. Office of Management and Budget. • Localities to write letters of support. 	Short-term	\$	M
	3.2	Using manning/training personnel data from the installation updated on a bi-annual basis, pursue commercial and retail uses off base that support on base employees and local visitors, tourists and residents.	<ul style="list-style-type: none"> • Fort A.P. Hill to establish a recurring data collection process to document training personnel numbers of partner groups and rotational units. • Provide data to ESC on bi-annual basis. 	Short-term	\$	M
Utilities	4.1	Coordinate extension of broadband / telecommunication services to better serve the communities around the installation.	<ul style="list-style-type: none"> • Develop a ESC subcommittee to focus on broadband issues and to coordinate services. 	Long-term	\$\$	M
Community Development / Planning	5.1	Support real estate disclosure for prospective buyers or renters as part of real estate transactions for properties within the influence area and as part of subdivision plats.	<ul style="list-style-type: none"> • ESC to work with Fredericksburg Area Association of Realtors (FAAR) to develop a basic disclosure statement for the influence area and an amended point of sale document that includes disclosure. • Support FAAR in their pursuit of enabling legislation for noise disclosure. • Consider incorporating a statement on subdivision plats regarding proximity to installation and potential for noise. 	Mid-term	\$\$	M
	5.2	Encourage sound attenuation for new construction of residences, schools, hospitals, nursing homes, churches and other buildings with public gathering spaces.	<ul style="list-style-type: none"> • Utilize the proffer system or special use permit requirements to achieve higher sound attenuation standards. • Consider the development of model sound attenuation standards for new construction. • Incorporate attenuation practices into standard subdivision and plan review processes. 	Mid-term	\$\$	M




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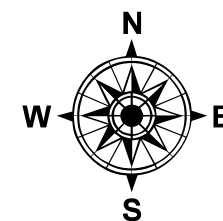
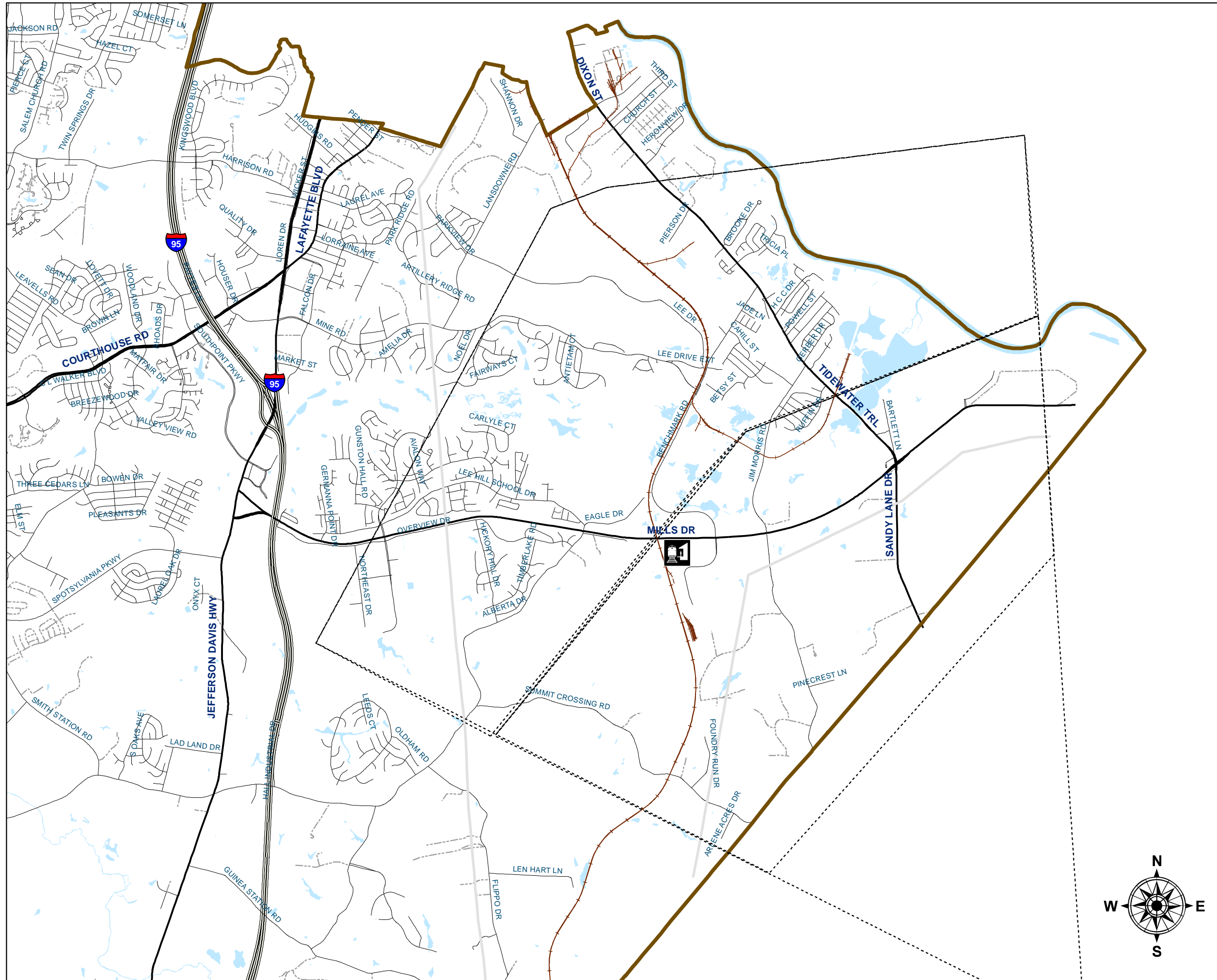
Recommendation		Action Steps	Timeframe	Cost	Staffing
5.3	Consider developing a model 'Dark Skies' Ordinance that sets forth specific requirements for lighting. Consider applying the ordinance county and town-wide for all six JLUS communities. Incorporate input from Fort A.P. Hill.	<ul style="list-style-type: none"> Localities to develop dark skies ordinance (using input from the installation). Incorporate lighting best practices into standard subdivision and plan review processes. Provide information to utility providers regarding requirements. 	Mid-term	\$\$	M
5.4	Develop a voluntary sound attenuation and lighting retrofit program for existing noise sensitive uses and high-demand lighting uses (such as sports complexes). Investigate federal or state funds to offset potential retrofit costs.	<ul style="list-style-type: none"> ESC to jointly conduct a feasibility study for a residential sound and lighting retrofit program. Identify potential retrofit candidates. Research funding sources. 	Long-term	\$\$	M

Fort AP Hill Approach Fan

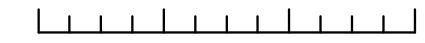


Legend

-  Train Station
-  Fort AP Hill Approach Fan
-  Water



0 0.25 0.5 1 1.5 Miles



1 in = 1 miles

Map Approved: November 14, 2013;
Again on December 14, 2021