



This chapter provides recommendations to address each of the seven topics identified and discussed in Chapter 3. It concludes with an implementation strategy for these recommendations, which will be critical for achieving long-term compatibility between the base’s mission and the communities that surround it.

4.1 LAND USE

Regulating the extent, type, and intensity of land use in the base’s safety zones requires balancing the community’s land use and development policies with the base’s mission requirements. As discussed in **Chapters 2 and 3**, much of the land around Joint Base Andrews (JBA) is already developed with a range of land uses and densities. The majority of this development predates AICUZ guidelines. However, Prince George’s County currently has an opportunity to promote compatible future development that accommodates both the base’s interests and the community’s concerns.

The strategies in this section are intended to balance the following safety considerations and economic goals:

- ❖ **The risk of aircraft crashes.**
- ❖ **The desire to minimize the potential effects of a crash on life and property.**
- ❖ **Consideration of existing development.** Most of the area's residential neighborhoods, commercial centers, and employment centers were built prior to the establishment of the safety zones. Much of this development would prove both difficult and expensive to relocate or change to other uses.
- ❖ **Economic and local community vitality.** All partners in the development of this JLUS agree that development around Joint Base Andrews should be of high quality. Land use controls that stifle the potential for quality development or that attract blighting uses will dampen efforts to improve the economic vitality of the area.
- ❖ **Regulatory limitations.** The primary regulatory control available to the county is the zoning code that defines permitted land uses in different zoning districts as well as the density and intensity of development. The main concern in airfield safety zones is avoiding or reducing concentrations of people. Zoning regulations cannot directly regulate the number of people on a parcel of land at one time. Consequently, limiting concentrations of people in the safety zones must be done indirectly through the zoning code.
- ❖ **Cost of land and property or easement acquisition, relocation, or compensation.** Unlike the land and property acquisition and relocation programs around many civilian airports, such as at Baltimore-Washington International Thurgood Marshall Airport (BWI), no programs are specifically targeted to land around Joint Base Andrews, and special funding would need to be obtained for such programs.

The AICUZ guidelines tend to emphasize the development of low intensity industrial uses in a base's safety zones. This strategy typically works well for bases that are located in undeveloped or rural areas. However, Joint Base Andrews is located adjacent to the Capital Beltway (I-95/495) and is surrounded by major transportation routes and extensive suburban development. Most of the communities that surround the base developed before the AICUZ guidelines were established in 1974. It is not feasible to recommend industrial uses in such close proximity to well-established residential neighborhoods. Nor is it feasible to force these neighborhoods to convert to industrial land uses. Additionally, the county seeks to promote new high-quality economic development in specific locations near the Capital Beltway, which would not be permitted if the AICUZ guidelines were followed closely.

As a result, the strict application of the AICUZ guidelines to the area surrounding Joint Base Andrews is not practical or appropriate. While these guidelines have been used as the starting point for the recommendations listed below, this JLUS does not strictly follow them or argue that the county should seek to implement them without modification to suit local conditions and concerns.

Land Use Policy and Strategies

Policy

Promote compatible land uses in areas surrounding Joint Base Andrews.

Strategies

General

❖ **Establish a “Military Installation Overlay Zone” as a new zoning overlay district.**

The county should enact a new overlay zoning district that covers the base’s safety zones, AICUZ noise contours, and other areas impacted by noise and height. This overlay zone would prohibit certain uses that regularly attract high densities of people, such as schools, theatres, and community centers, and limit the density of people that can congregate in the allowed commercial and employment uses.

Land use analysis of safety zones areas concluded that there is very little commercial zoning in these zones and that the vast majority of non-residential zoning consists of industrially-zoned properties. These industrial zones generally promote compatible low-density development. To address the goal of minimizing concentrations of people in non-residential development, the JLUS recommends limiting the number of parking spaces allowed for a given use—which ultimately limits the size of the building, therefore limiting the number of customers and employees on site. The vast majority of existing development currently meets this criteria since most industrial development generates fewer employees and visitors than commercial uses. See **Appendix 13** for more details.

Additional recommended overlay zone regulations are discussed in the noise and height sections below.

Clear Zone

❖ **Remove all buildings and structures from the Clear Zone (CZ).** The 2007 AICUZ study states that accident potential on or adjacent to the base runways or within the CZ is so high that land use restrictions should limit all development in this zone. According to the AICUZ report, Air Force policy regarding privately-held land in CZs is to request that Congress authorize and appropriate funds for the military or other federal agencies to use to purchase the real property interests in this area to prevent incompatible land uses.

The cost to achieve this strategy will be relatively high. The appraised value of properties in the CZ was approximately \$12.7 million as of January 2009.¹ Acquisition costs should be borne by the federal government. In addition to JBA and Prince George’s County, the National Park Service may have an interest in the CZ since it abuts Suitland Parkway, which it owns. All properties within the Clear Zone should be acquired by the federal government within ten years. The purchasing entity shall be responsible for developing a strategy to ensure that these CZ properties are properly maintained, including appropriate pruning/trimming of vegetation to comply with maximum heights permitted under the Military Installation Overlay Zone requirements.

¹ See **Appendix 5** for a table of these properties.

- ❖ **Consider the possibility of a moratorium on new development while Clear Zone properties are being acquired.** To avoid new development on properties in this zone while funds are being secured for Clear Zone property acquisition, a short-term moratorium on all new development in the north CZ should be enacted. This moratorium would allow time for an acquisition program to be established and for government purchase of properties to begin. The moratorium would prevent vacant parcels from being developed and would limit building permits for large renovation/addition projects on existing developed properties.
- ❖ **Relocate businesses from the Clear Zone.** Businesses currently located within the CZ should be moved to nearby locations wherever possible so as to retain jobs in the area. These moves should be accomplished with government assistance. Land swaps have been used at some bases to facilitate relocations.
- ❖ **Obtain federal funding for Clear Zone property acquisition and business relocation.** The base and county should work together to investigate and pursue funding sources for CZ property acquisition and subsequent business relocation. A request should be made for a congressional appropriation and applications should be made for additional monies from relevant federal programs.
- ❖ **Identify the safety zones on future land use maps used in county plans, studies, and reports.** Future land use maps should designate the AICUZ safety zones as a means of highlighting the significance of these areas and the necessity of treating them differently than surrounding areas due to unique safety risks.

APZ I and APZ II

- ❖ **Prohibit specific land uses in APZ I and APZ II to minimize public safety risks.** APZ I and APZ II are specially-designated zones that statistically have a higher potential for aircraft accidents than other nearby areas. The heightened risk of an aircraft crash warrants regulations that minimize the number of people at a given time within a particular safety zone and that proscribe uses involving hazardous materials.

In order to reduce the number of people regularly congregating within the APZ I and APZ II areas, the following land uses should be prohibited within these safety zones:

- ⊗ Hospitals, doctor's offices, and medical clinics
- ⊗ Emergency/first response services (fire stations, ambulance)
- ⊗ Government services (libraries, post offices, offices)
- ⊗ Churches
- ⊗ Nursing or care homes
- ⊗ Schools (private and public)
- ⊗ Daycare centers (for children and/or adults)
- ⊗ Housing for the elderly
- ⊗ Hotels
- ⊗ Multifamily dwellings
- ⊗ Bowling alleys
- ⊗ Clubs or private lodges
- ⊗ Theatres (indoor or outdoor)
- ⊗ Indoor rifle or pistol ranges
- ⊗ Mobile home parks

- ⊗ Restaurants (permitted in APZ II)
- ⊗ Catering uses with banquet facilities
- ⊗ Funeral parlors
- ⊗ Other similar uses that invite/allow regular congregations of people

The following land uses should be prohibited in APZ I and APZ II because they involve the storage or use of explosive, flammable, or toxic materials:

- ⊗ Storage of explosive, flammable, or toxic materials in outdoor above-ground storage tanks.
- ⊗ Petroleum refining or related industries.
- ⊗ Chemical manufacturing.
- ⊗ Manufacturing of rubber or plastic products.
- ⊗ Gas stations and fuel depots.
- ⊗ Other similar uses containing hazardous materials.

❖ **Limit the density of non-residential uses in APZ I and APZ II.**

A density limitation will restrict the number of people that can congregate on a particular property at a given time, thus minimizing injuries in the event of an aircraft accident. A density requirement should be placed on all permitted commercial uses (including retail and office) and industrial development. In APZ I, this density requirement is based on a 35 person (maximum) per acre density that will be regulated through applying a parking limitation on all new development in the APZ I area. The density requirement for APZ II should be 50 people (maximum) per acre. The density limitation should be calculated by limiting the number of parking spaces allowed for a given use, which ultimately limits the size of the building and therefore restricts the number of customers and employees on a site.

However, any density regulation should allow existing uses and permitted densities to remain as nonconforming uses.

Please see **Appendix 13** for additional explanation of safety zone risks and detail about how to calculate proposed performance standards.

❖ **Establish a notification requirement at real estate sale and lease execution.**

This requirement should notify a prospective buyer or renter that the property is in the proximity of Joint Base Andrews. Sample language to serve as a basis for a notification requirement is provided in **Appendix 6**. This language is already used elsewhere in Prince George's County's Aviation Policy Areas and for new subdivisions and site plans in noise-affected areas around Joint Base Andrews.² The notice should not specify that the property is in a safety zone, however, as such a reference might unnecessarily create an impression of imminent danger and stigmatize all land in safety zones, potentially resulting in long-term area disinvestment. It might also wrongly imply that non-safety zone property around Joint Base Andrews has no risk of an accident. The real estate notification requirement should apply to properties within the proposed Military Installation Overlay Zone.

² Aviation Policy Areas are defined areas adjacent to general aviation airports such as Washington Executive Airport and College Park Airport.

❖ **Formalize the development review process between Joint Base Andrews and the county.**

Prince George's County currently refers development projects within the base vicinity to the base for advisory review. However, personnel changes in county government and base administration have resulted in inconsistent referrals and transmittal of base comments. The county and the base should establish a formal referral system whereby designated personnel on both sides are responsible for coordinating the review of proposed development projects within the new Military Installation Overlay Zone.

APZ I

❖ **Do not allow additional residential development in APZ I.**

As noted above, all residential uses in APZ I are considered incompatible with the AICUZ guidelines. Under current zoning, there are almost no opportunities for new residential development in APZ I north or south of the base. The residentially-zoned land in these areas is mostly developed, and the future land use maps propose no additional residential land use. Proposed rezoning of non-residential land to residential zoning districts should not be approved.

❖ **Work towards rezoning residential land to employment zoning districts in the long term.**

Over time some areas in APZ I have changed from residential uses that are inconsistent with the AICUZ guidelines to industrial uses that are consistent. One such area in Subregion 5 is along Poplar Hill Lane and Delano Road. The county has supported these changes, provided they comprise contiguous properties, ideally in full blocks, so that intact residential neighborhoods are not broken up by small, piecemeal rezonings. The possibility of streamlining the approval process for these groups of properties should be investigated.

❖ **Discourage additional commercial retail zoning in APZ I.**

Although retail uses should not be prohibited in APZ I, due to safety risks they should be subject to density limitations that prevent the construction of large stores that regularly attract large numbers of people (see above). However, rezoning residential or industrial land to commercial retail districts is strongly discouraged.

APZ II

❖ **Allow existing residential development to remain.**

Many of the residential areas in APZ II, especially those north of the base, developed before the AICUZ program and should not be disturbed because they are stable, well-established neighborhoods. Residential zoning should continue in these areas.

❖ **Do not allow increased permitted residential density in APZ II.**

Under current zoning, limited opportunities exist for new residential development in APZ II north or south of the base. All undeveloped residential land is zoned as Rural Residential (R-R), which is compatible with AICUZ land use guidelines.^{3,4} Proposed rezoning to higher density residential zones should not be approved.

³ The only provision of the district that appears incompatible is the permissibility of multifamily dwellings/apartments, though it is unclear how these could be developed under the Rural Residential (R-R) density limit of 2.17 dwelling units per acre.

⁴ Some developed parcels, however, have not been built out to the density permitted by existing regulations. It is possible that new development could occur on these parcels, which provides a density increase over existing development but complies with the residential zoning district density standards.

4.2 NOISE

The strategies in this section are intended to balance noise impacts of mission-related aircraft operations at Joint Base Andrews with the health, safety, and welfare of existing and future residents and workers in the base vicinity, and with Prince George's County development goals and objectives. Historically, base noise has not been a significant issue for the resident and working population, who appear to recognize that noise is an inevitable consequence of living or working near the base (**See Chapter 3**). These strategies are aimed at achieving compatibility with AICUZ land use guidelines for noise zones, closing the minor gaps in development review procedures, and ensuring that the public is well-informed regarding base-area noise impacts.

Policy

Reduce public exposure to loud and potentially harmful aircraft noises.

Strategies:

Public Awareness

- ❖ **Create an aggressive public awareness and outreach program that emphasizes aircraft noise as an integral part of living or working near an Air Force base.**
 - ⊗ *Develop informational materials* that can be widely disseminated to the public, realtors, and other interested parties, and which use easy-to-understand graphics to explain noise issues.
 - ⊗ *Publicize appropriate contacts for residents or businesses to register noise complaints.* Inform the public that noise complaints can be registered with the Prince George's County Health Department and the Public Affairs Office at Joint Base Andrews.
 - ⊗ *Establish a notification requirement at sale and lease execution for property in the vicinity of Joint Base Andrews.* Add a requirement to the real estate practices section (Section 2-162.01) of the Prince George's County Code that mandates all contracts for the sale or lease of properties within the Military Installation Overlay Zone be subject to the section's real estate disclosure requirements. The notification requirement should be established as early in the process as possible, perhaps when a real estate agent enters into a contract with a buyer. If notification comes late in the process, such as at a contract settlement, a buyer may not have the ability to reconsider a decision.

Future AICUZ Reports

- ❖ **Seek compatibility with future military operations.**

As AICUZ noise contour lines change over time to reflect new technologies and operations, future Joint Base Andrews AICUZ reports should be monitored for changes in the noise contour lines. If a change occurs, the Military Installation Overlay Zone boundary should be modified to reflect these changes (**See Strategy 4**). Therefore, all land use recommendations related to noise levels need to be flexible to account for potential changes.

Compatible Land Use

- ❖ **Promote compatible development in the 75 dB and above noise zones.**

The 2007 AICUZ noise contours differ from the 1998 noise contours due to advancements in noise monitoring technology and operations changes. These changes primarily impact the Melwood and Westphalia areas (**See Map 3-7**).

- ☉ *Support rezoning residential land in the 75 dB and above noise zones to non-residential districts as opportunities arise.* Potential rezoning areas are shown on master and sector plan future land use maps. Opportunities may arise in sectional map amendments or zoning map amendments. However, single-parcel rezonings are discouraged.⁵
- ☉ *Investigate the feasibility of creating a program to assist property owners of older residential homes without noise attenuation with relocation costs (when their property is redeveloped to a nonresidential use as part of the implementation of the JLUS land use recommendations).*
- ☉ *Discourage the location of noise-sensitive institutional uses in the AICUZ noise zones.* Only two institutional uses are currently located in the 75 dB and above noise zones: the rear of the Clinton Bible Baptist Church property on Woodyard Road north of Dowerhouse Road and the Forestville Fire Station. Additional institutional uses should not be permitted.
- ☉ *Designate a district within which development projects are automatically referred to Joint Base Andrews for review and comment.* This district should include all properties in the new Military Installation Overlay Zone as well as properties along the perimeter of the overlay zone. Additionally, a formal procedure for referral and comment should be established and regularly followed.

Noise Attenuation

❖ Ensure noise attenuation for development in all noise zones greater than 65 dB.

- ☉ *Continue to require that all new development in noise zones greater than 65 dB incorporate noise level reduction (NLR) measures.*

As discussed in **Chapter 3** and **Appendix 6**, Prince George’s County has special development review procedures for projects in areas affected by noise. NLR measures may be required for projects reviewed by the Prince George’s County Planning Department, including lots in new subdivisions, projects requiring detailed site plans (DSPs), and any special exceptions. Required NLR measures may be noted on a project site plan and made a requirement for a building permit. This review and requirement of NLR measures should continue.

However, this process has a deficiency: projects on older parcels and lots in older subdivisions may receive building permits from DER without being reviewed by the Prince George’s County Planning Department, which means that these projects will not be required to incorporate NLR if the property is located in a noise-affected area.⁶ While such cases are likely to be rare, the situation could be

⁵ The *Approved Subregion 5 Master Plan and Sectional Map Amendment* (2009) states this policy: “Over time some areas in the APZ I have changed from residential uses that are inconsistent to industrial uses that are consistent. One such area is along Poplar Hill Lane and Delano Road. The county has supported these changes provided they comprise contiguous properties, ideally in full blocks, so that intact residential neighborhoods are not broken up by small, piecemeal rezonings.” (p. 37).

⁶ Additional difficulties are created by lots in newer subdivisions which were reviewed prior to the most recent change in AICUZ noise contours. Although these properties may have been required to incorporate NLR measures, the degree of required NLR may no longer be sufficient under the new noise contours.

remedied by adding NLR requirements to the county's zoning ordinance, thus ensuring that all new development in noise-affected areas will contain attenuation measures. Please see the last strategy in this section for additional details.

☛ *Investigate funding options to retrofit existing homes with NLR, giving priority to those in the 80 dB and above noise zones.*

As noted above, retrofitting homes with NLR can be achieved. Like many civilian airports, Baltimore-Washington International Thurgood Marshall Airport (BWI) airport has a homeowners' assistance program that uses federal and state noise mitigation funds. Average retrofit costs range from \$45,000 to \$55,000 per house.⁷ The federal funds used at civilian airports such as BWI come from the Federal Aviation Administration's Part 150 program (**See Appendix 12**). This program currently does not apply to military airfields; however, this policy should be reconsidered at the federal level or efforts should be made to develop a separate federal funding source for properties affected by noise from Joint Base Andrews. Under the Part 150 program, a civilian airport develops a noise compatibility program (NCP), which may include operational measures to reduce noise exposure and land use changes to reduce the number of incompatible uses within the airport's noise contours. An NCP may also incorporate NLR requirements as a remedial measure. Once the airport's NCP is approved by the FAA, it becomes eligible to apply for federal noise mitigation funds to implement the provisions of its NCP. These funds are awarded through a competitive process.

The base and Prince George's County should support the creation of a program similar to the Part 150 program that would provide funds for retrofitting homes in the vicinity of military airfields.

☛ *Add noise standards and reduction requirements to the zoning code.*

These are necessary so that NLR measures will apply to new development that applies directly for a building permit without going through the subdivision process (see the first strategy above). As part of these requirements, consideration should be given to the following:

- Requiring NLR in an area larger (farther out) than the current 65 dB noise line to allow for the possibility of noise-affected areas expanding due to new technologies or changes in base operations, as they have in the past.
- Requiring NLR from 5 dB to 10 dB higher than the relevant noise contour in the latest AICUZ study, to allow for the possibility of noise-affected area expansion. For example, in an area in the 65 to 69 dB noise zone, required noise reduction measures should equal those in today's 70 dB to 75 dB zone.

⁷ Personal communication with Randy Dickenson of the Maryland Aviation Administration on April 21, 2009. The additional cost to incorporate NLR into new construction is less than the cost to retrofit. Retrofitting manufactured homes is not considered practical.

4.3 HEIGHT OF STRUCTURES

As explained in **Chapter 3**, natural and man-made objects have the potential to interfere with aircraft operations. Tall buildings, structures, and trees become navigational hazards for aircraft when they rise beyond “imaginary surfaces” into the airspace where aircraft operate. Currently, there are no problems with buildings or vegetation intruding beyond the base’s imaginary surfaces. The JLUS recommendations below use regulatory procedures and public outreach activities to ensure that all future development remains below the base’s imaginary surfaces.

Policy

Do not allow building/vegetation heights to interfere with aircraft operations.

Strategies

❖ **Add a maximum height requirement to the Prince George’s County zoning code that applies to designated areas within the new overlay zone around JBA.**

Maximum height requirements should be added to the zoning code, possibly as a component of the Military Installation Overlay Zone. The zoning text would specify the following:

- ☉ The height limit applies to buildings, structures, and vegetation.
- ☉ The maximum height involves three considerations: the above-ground building height, identified imaginary surfaces (which are based on runway threshold height), and the natural grade of the property. (Re-grading of a site may require special review.)
- ☉ The height of a building would be measured to the top of the building. Under the current zoning code, building height is measured differently based on roof type. The definition of “height of structure” is currently to the top of the structure, so no change to the current regulations would be needed.
- ☉ The maximum permitted height for any development in this overlay zone area will be the height specified on a map accompanying the overlay zone text. (**Map 4–1** provides a model for this building height map.) However, the height restriction will not affect previously-approved projects with height limitations and will not impair the ability of a government board to impose maximum height restrictions below the overlay’s permitted heights as a condition for ensuring compatible development.

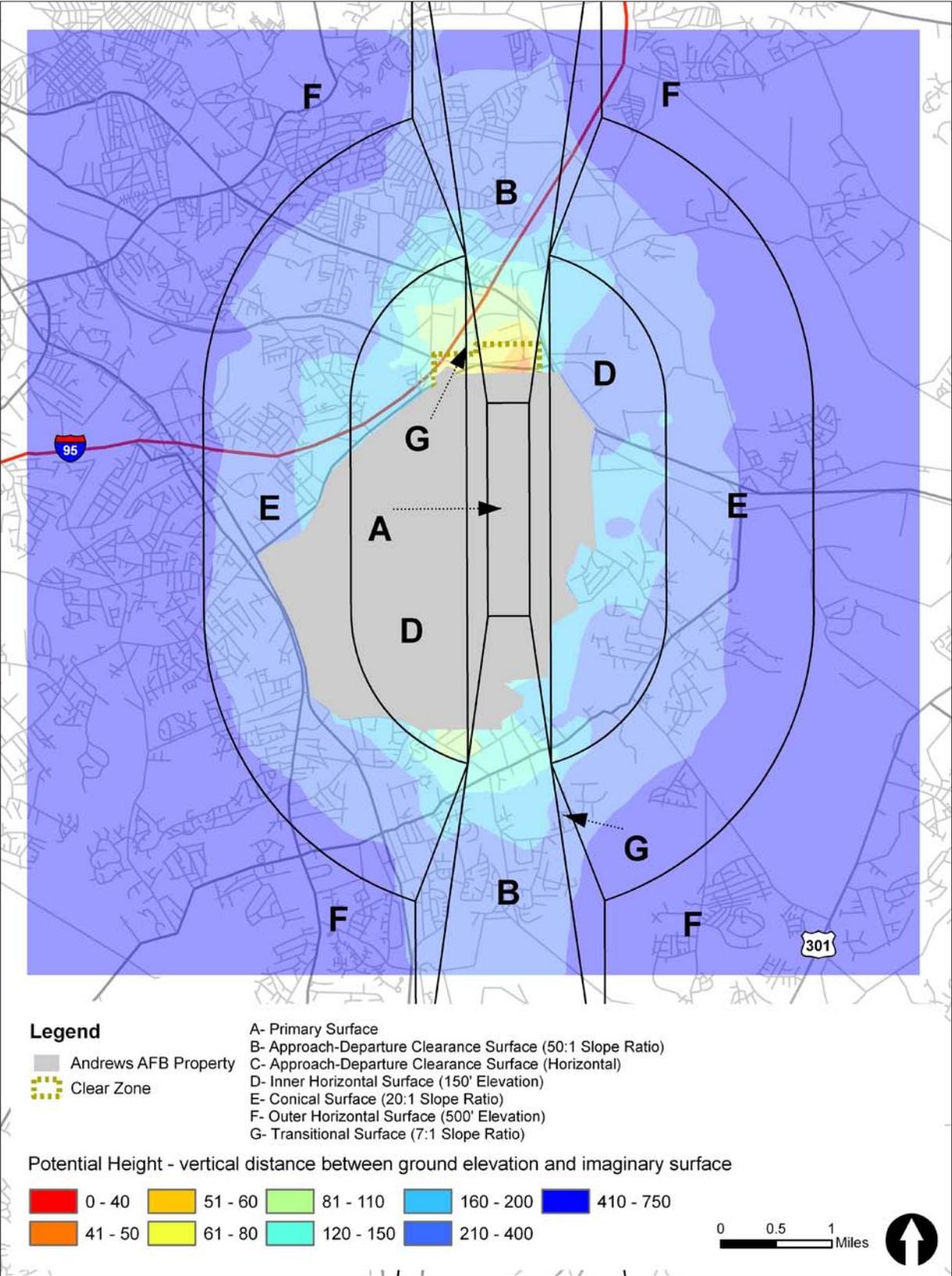
❖ **Refer to federal and state aviation regulations in the county zoning code.**

For the area around Joint Base Andrews, a reference should be included in the zoning code to Federal Aviation Regulations, Part 77 or the Code of Maryland, COMAR 11.03.05, Obstructions to Air Navigation. This reference would clarify the source of state and federal laws relating to airspace protections from intrusive buildings, structures, or vegetation.

The following language currently applies in the county’s Aviation Policy Areas (see earlier footnote):

Except as necessary and incidental to airport operations, no building, structure, or natural feature shall be constructed, altered, maintained, or allowed to grow so as to project or otherwise penetrate the airspace surfaces defined by Federal Aviation

Map 4-1: Potential Building Heights



Source: ERM.

Regulations, Part 77, or the Code of Maryland, COMAR 11.03.05, Obstructions to Air Navigation. (Sec. 27-548.42).

Similar language could be incorporated for the proposed Military Installation Overlay Zone area.

❖ **Increase public awareness of the height issue around Joint Base Andrews.**

As part of a broader public awareness and outreach program about base-community encroachment issues, publicize the height issue and explain what the public, builders, developers, and others need to understand about their responsibilities and requirements as residents or workers in the Joint Base Andrews vicinity.

❖ **Require consideration of building heights by M-NCPPC and Joint Base Andrews when reviewing proposed development projects near the base.**

M-NCPPC and Joint Base Andrews staff responsible for reviewing proposed development projects in the base's vicinity should consider building heights and identify any potential conflicts with the base's protected airspace.

4.4 TRANSPORTATION

The availability of a safe and efficient transportation network is a critical issue for Joint Base Andrews’ long-term viability. **Chapter 3** profiles the current condition of transportation infrastructure around the base and indicates that significant improvements to this infrastructure are possible. Reducing traffic congestion on roads and intersections around the base, providing a range of transportation options for people traveling to and from the base, and integrating community concerns about transportation improvements into base-area projects will help protect the base’s mission and reinforce community support for its continued presence.

Policy

Provide efficient and safe transportation connections to and around the base.

Strategies

Roadway Network

❖ Work cooperatively to support important road projects near Joint Base Andrews.

Prince George’s County’s Department of Public Works and Transportation (DPW&T), the Transportation Section of M-NCPPC, and the Maryland State Highway Administration (SHA) should work together to make improvements to the roadways in the Joint Base Andrews vicinity. Important projects include:

High-Priority
Realignment of Dower House Road and associated improvements at the Pearl Harbor Gate
Upgrading the Suitland Parkway/MD 4 (Pennsylvania Avenue) intersection
Signalization and road capacity improvements along Allentown Road to enhance base access at the Main Gate
Virginia Gate access realignment and alternatives study to examine improvements along Old Alexandria Ferry Road
Longer-Term
Intersection improvements along MD 4 at Dower House Road and MD 223
Widening of MD 223 to four lanes
Upgrading MD 4 and MD 5 (Branch Avenue) to freeway condition
Improvements to the Allentown Road (MD 337) exit from the I-95/495 inner loop to reduce queuing delays

❖ Seek grant funding to supplement state and local funds for roadway projects.

Grant funding provided by the BRAC Revitalization Zone may be used to support road projects. The BRAC zone is currently designated on the west side of the base and includes the Branch Avenue Metro station, Allentown Road, and Suitland Road. BRAC monies could assist in funding high-priority roadway projects identified above, as BRAC-related traffic impacts are expected in the short term.

❖ Continue to work with members of the Westphalia development team to ensure Westphalia development coordinates with necessary road improvements.

The proposed Westphalia Town Center contains a significant amount of residential and commercial development. This development will require extensive transportation improvements, including improvements to intersections on MD 4 (Pennsylvania Avenue) near the base. Proper staging, timing, and review of planned roadways are necessary.

Transit

❖ **Work with JBA and WMATA to improve transit service to the base area.**

As discussed in **Chapter 3**, the base is served by transit, but this service is limited. JBA has been working with WMATA to explore the possibility of improving existing headways and creating a new bus stop at the West Gate along Allentown Road for pedestrian access to the base. The county should be involved in these discussions.

❖ **Support light rail/bus rapid transit extension with access to JBA.**

The county should build on the findings from the Southern Maryland Transit Corridor Study to facilitate the extension of light rail/bus rapid transit with access to Joint Base Andrews. The establishment of a transit corridor along MD 5 (Branch Avenue) with a possible transit stop near the Virginia Gate would greatly improve access to the base and reduce area vehicle trips.

❖ **Support longer-term mass transit extension plans, such as the Green and Purple Lines, to serve the base and surrounding community.** High demand exists for mass transit access serving JBA and surrounding areas. Two Metrorail projects, the Purple Line and the Green Line, could potentially serve the study area in the long term.

Pedestrian and Bicycle Access

❖ **Expand pedestrian, bicycle, and transit opportunities to connect the base with the surrounding community.** A new sector plan for this area, the Morningside–Andrews–Camp Springs Sector Plan, should fully study improving and expanding bike and pedestrian access to the base. This plan should include recommendations for making these corridors more attractive and usable for pedestrians and bicyclists, especially to facilitate travel to and from the base. The plan should also support Joint Base Andrews' short-term plans for pedestrian access improvements, including pedestrian-entry gates near on-base destinations.

❖ **Improve multi-modal transportation options with more sidewalks, pathways, and bicycle routes.** The goal of creating a multi-modal transportation system for the JLUS study area is included in the many subregion master plans that affect the base area, the base's Strategic Plan, and the county's approved Master Plan of Transportation (MPOT). Future high-density mixed use centers in the study area, such as the Westphalia Town Center, town center at Camp Springs, and the on-base town center should include amenities that increase pedestrian and bicycle activity.

4.5 ECONOMIC AND COMMUNITY DEVELOPMENT

Economic and community development issues, as profiled in **Chapter 3**, are a key concern for those who live and work in the areas around Joint Base Andrews. This JLUS seeks to build on the base's economic resources by using it as a catalyst for new economic development initiatives in the surrounding communities. The recommendations below are intended to reflect community input and to guide future planning and redevelopment efforts in areas around the base. Recommendations include expanding retail options for both local residents and base employees, promoting key locations around the base as office/contractor sites, and building relationships between the base and local firms that can supply the base's needs.

Policy

Promote quality economic development that builds on the base's presence and provides both the base and the local community with a variety of commercial and employment opportunities.

Strategies

Employment and Business Growth

❖ Encourage more contractors doing work for JBA to locate near the base.

While the exact share of procurements from Joint Base Andrews that results in spending in Prince George's County is not known, participants in the JLUS process familiar with the base and related business activity believe strongly that the share could and should increase. Newer development and redevelopment around the base should offer attractive locations to desired businesses.

Achieving this strategy is beyond JBA's and the county's direct control. A key component of this strategy is for county and state officials and elected representatives to work with the Air Force and federally-elected representatives to review the Air Force's contractor location proximity policies. Some branches of the military require contractors to locate near the facilities from which their businesses benefit. A policy that would require more Joint Base Andrews contractors to locate near Andrews would increase the demand for contractor space—thus boosting the local real estate market—and increase local spending by employees. The county, particularly the Economic Development Corporation, should continue to work with the Andrews Business and Community Alliance and other organizations to expand growth and economic development opportunities in the communities surrounding JBA and further the Andrews Business and Community Alliance's vision for the National Defense and Technology Corridor (**See Chapter 3**).

❖ Seek to attract uses in the base vicinity that would better serve base personnel and the local community. Working with base staff to identify services most desired by base personnel will help the county focus investment and revitalization efforts on attracting and supporting businesses that may provide needed/desired services for base personnel and the local community.

❖ Publicize potential business opportunities with JBA to local businesses.

On March 4, 2009, JBA held its first Annual Andrews Leadership Summit, a forum for interaction between base leadership and community leaders and businesses. At this

event, base leaders shared the “Andrews Way” vision and processes which included joint basing, BRAC, and other activities that provide contracting and subcontracting opportunities.⁸ Fostering a dialogue between Joint Base Andrews business services and local business leaders and economic development groups can lead to greater opportunities for area businesses to procure Joint Base Andrews-related contracts.

Revitalization and Development

❖ **Give priority to the implementation of relevant economic development recommendations in county plans.** Implementation of economic development recommendations for the JBA vicinity should be assigned high importance in subregion and master plan implementation plans. Additionally, the following recommendations should supplement those in the relevant subregion or sector plan:⁹

- ⊗ *Balance the desire for quality economic development and the need to discourage blighting uses with the need to minimize the potential effects of an aircraft crash on life and property.* This issue primarily affects aircraft safety zones. Portions of commercial/industrial areas in the base vicinity lie in the base’s safety zones (**See Chapter 3**). Land use recommendations for these areas are discussed above.
- ⊗ *Encourage redevelopment along Branch Avenue.* Branch Avenue is one of the main gateways to Andrews. Development has recently occurred in the town center at Camp Springs; however, many commercial vacancies exist. The county, led by the Economic Development Corporation, should work closely with local business leaders to encourage development in this gateway area and reduce the number of business vacancies. The county should also explore opportunities to utilize incentives from the BRAC Revitalization and Incentive Zone to achieve its redevelopment goals.
- ⊗ *Create revitalization strategies for the Allentown Road and Suitland Road corridors.* Like Branch Avenue, Allentown Road and Suitland Road serve as key gateways to JBA. Many commercial buildings in these areas are obsolete, have low occupancy rates, and present unattractive appearances. The area assessment conducted for this study reinforced the importance of the Henson Creek-South Potomac Master Plan proposal for revitalizing the Allentown Road corridor. Findings from the assessment also highlight the need to include the Suitland Road corridor as a component of a revitalization plan. The Allentown Road and Suitland Road corridors should be analyzed together to determine the potential for revitalization and reinvestment opportunities. The proposed revitalization plan should include collaboration with Joint Base Andrews, the Town of Morningside, the Andrews Business and Community Alliance, and other interested stakeholders.

⁸ “Joint basing” refers to the BRAC-mandated requirement to combine military installations administratively to reduce duplication of effort and achieve efficiencies.

⁹ These recommendations are based on an assessment of commercial and industrial areas in the JLUS study area (**See Chapter 3 and Appendix 10**).

Incentive Programs

❖ **Focus economic development incentive programs on growing existing businesses and attracting new businesses to the base vicinity.** Various incentive programs exist, often in the form of tax credits to commercial property owners and developers and other funds, that can help attract businesses to the area around Joint Base Andrews. Three main state and local incentive programs could directly benefit these areas:

- ⊗ *Revitalization Area Tax Credits.* These credits apply to new construction and renovation of business property in certain census tracts. The credit represents a reduction of property taxes during a five-year period.
- ⊗ *BRAC Revitalization and Incentive Zone funds.* Auth Road, Allentown Road, and the Branch Avenue Metro station area lie within the BRAC Zone. Potential infrastructure projects that may be funded by BRAC monies include upgrades to Suitland Road, Auth Road, and Morningside Fire/EMS Station 27.
- ⊗ *Enterprise Zone Tax Credits.* A Maryland Enterprise Zone is a state-designated commercial area in which special incentives are offered to stimulate economic development. Businesses that locate in one of these zones may be eligible for income tax credits and real property tax credits in return for job creation and investments made in the zone. The Enterprise Zone program also designates special “focus areas” in Baltimore and Prince George’s County for additional tax incentives. Thus, businesses that locate in one of Prince George’s County’s Enterprise Zone focus areas are also eligible for personal property tax credits.

4.6 ENVIRONMENTAL/NATURAL RESOURCES

The recommendations below are aimed at protecting natural resources and improving environmental conditions around the base. Incompatible and poorly-considered development can threaten public health and safety by placing people and property in potentially hazardous situations. Protecting local natural resources will support the base mission by improving the long-term sustainability of both the base and civilian communities.

Policy

Protect environmental resources on and around the base from incompatible uses and development.

Strategies

- ❖ **Coordinate with the base to improve water quality and watershed health.**
Implement the recommendations of Prince George's County's stream corridor assessments and Watershed Restoration Action Strategies, and coordinate with Joint Base Andrews stream restoration and wetland restoration and enhancement projects.
- ❖ **Work jointly to protect and enhance green infrastructure in and around the base.**
Joint Base Andrews contains the headwaters of several streams that form components of the county's green infrastructure network (**See Chapter 3**). Potential opportunities exist to meet both Joint Base Andrews' Natural Infrastructure Management objectives and the policies and strategies of the *Approved Countywide Green Infrastructure Plan*. Consider, in particular, opportunities on the southeastern side of the base along Piscataway Creek, and whether the Readiness for Environmental Protection Initiative (REPI) program could be used in this area.
- ❖ **Ensure that future development in the vicinity of Joint Base Andrews does not attract birds or waterfowl.** Stormwater management ponds and wetlands can be designed in ways that do not attract large numbers of birds, for example, through vegetation choices. This strategy will also be addressed by continuing to refer development projects to Joint Base Andrews for review (**See Chapter 3**).
- ❖ **Address groundwater contamination concerns and issues associated with the former landfill near Foxley Road.** Concerted efforts need to be undertaken to ensure adequate community awareness of the extent and effects of groundwater contamination in two areas off Air Force property. County agencies have been aware of these issues and have been reluctant to allow development on contaminated properties. The process by which these agencies track impacted lands should be improved for permit review. A shared process through which DER, the Prince George's County Planning Department, and other agencies can jointly annotate constraints or opportunities in parcel permits should be developed. This would apply to all properties in the base's safety zones and noise contours, along with any base area properties affected by groundwater contamination.

4.7 HISTORIC AND CULTURAL RESOURCES

Chapter 3 describes the historical and cultural buildings, structures, and sites that are located on and near the base. These resources should be protected from incompatible development because they contribute to community character and provide a tangible link to the past. Two historic properties, Forest Grove Methodist Church (designated as Chapel 2 by Joint Base Andrews) and the Belle Chance house, are located on the base and are actively used by the Air Force.

Policy

Protect historic and cultural resources on and around the base from incompatible uses and development.

Strategies

- ❖ **Continue to work cooperatively to preserve historic sites on and surrounding the base.** Historic sites on federal land are not subject to the protections of the county's Historic Preservation Ordinance. However, Joint Base Andrews consults with the Maryland Historic Trust before undertaking changes to these sites.
- ❖ **Investigate the possibility of improved public access to on-base historic properties.** Two historic resources, Belle Chance and the Forest Grove Methodist Church, are located on the base, which limits opportunities for the public to visit these properties. The county should work with the base to determine whether access to these sites could be improved for the general public.
- ❖ **In a manner sensitive to historic resources, manage vegetation growth north of the base that may interfere with aircraft flight patterns.** The historic Suitland Parkway north of Joint Base Andrews is managed by the National Park Service. The parkway is partially located within the Clear Zone, and concerns have arisen about vegetation growth interfering with aircraft departure and arrivals. Officials involved should seek to respect the aesthetic significance of Suitland Parkway while facilitating military operations at the base.
- ❖ **Continue to maintain the Joint Base Andrews Integrated Cultural Resources Management Plan (ICRMP).** The ICRMP is required every five years and provides guidance for the effective and efficient management of cultural resources as an integral part of the Base Comprehensive Plan. The county and the Maryland Historical Trust should be given the opportunity to participate in the preparation of the ICRMP and review and comment on the document prior to its release.

4.8 IMPLEMENTATION

Implementation is a vital element of the JLUS program and of this Joint Land Use Study. No JLUS is considered a success unless the study recommendations are implemented and incorporated into the study partners' plans, policies, ordinances, regulations, and codes.

This section summarizes the above recommendations, identifies responsible parties, provides additional detail for some of the strategies, and gives a time frame for implementation. Implementing the JLUS will require collaboration among a broad range of interested parties, including Prince George's County; M-NCPPC; various federal, state, and local agencies; Joint Base Andrews; the State of Maryland; the Department of Defense; the Town of Morningside; residents; and businesses of the JLUS study area.

An important first step in the implementation process is the adoption of the recommendations by the JLUS Policy Committee, and transmittal of the JLUS report and recommendations to the Prince George's County Planning Board and County Council for their endorsement of the JLUS as a guide for implementation actions.

Implementation Leadership

This JLUS envisions that responsibility for implementation would rest with a new oversight committee, called perhaps the Joint Base Andrews JLUS Implementation Committee. This committee should include a mix of senior technical and professional staff from the county and the base as well as elected and appointed officials. The committee might need to meet frequently (monthly) at the beginning of the implementation process and perhaps quarterly thereafter. Key actions for the implementation committee include:

- ❖ Leading and coordinating the strategic planning needed to implement the JLUS (i.e., what needs to be done first, second, and so on).
- ❖ Taking initiatives to further plan implementation (e.g., work with Joint Base Andrews to seek Congressional appropriations for Clear Zone property acquisition; seek grant funds such as REPI funds, BRAC Zone funds, and transportation funds; and help coordinate plans of various implementation parties).
- ❖ Advising the Prince George's County Planning Board and County Council on regulatory changes needed for the plan.
- ❖ Ensuring that all actions and decisions are consistent with the JLUS goals, and ensuring that one action does not preclude or prevent implementation of another key element.
- ❖ Spearheading public outreach and involvement.
- ❖ Helping coordinate public agency decision-making that may influence implementation of the JLUS recommendations.

Implementation Matrix

The following implementation table summarizes strategies in the form of an action plan and identifies which parties or agencies would be responsible for implementation. To facilitate implementation, the table is organized by study area element. In many cases responsibility would be shared among more than one partner. In the table the lead partner is identified in bold. The time frame for implementation is given as ongoing, short-term (within three years), or long-term (after three years).

Joint Base Andrews Joint Land Use Study Implementation Table				
Strategy Number	Action	Key Features	Implementation Partners	Timeframe Short = < 3 years Long = > 3 years
Implementation Leadership				
1	Create an implementation committee responsible for coordinating the strategic planning needed to implement JLUS recommendations.	<p>The committee should include staff from the county and the base, as well as elected and appointed officials. This group should be primarily responsible for:</p> <ul style="list-style-type: none"> ❖ Coordination of planning needed to implement JLUS recommendations, including working with public agencies and other implementation partners. ❖ Working with the base/military to seek funding for plan initiatives, such as seeking a Congressional appropriation for the acquisition of Clear Zone properties and pursuing BRAC Zone funds. ❖ Advising the Prince George’s County Planning Board and County Council on regulatory changes needed to enact plan recommendations. ❖ Leading public outreach efforts. 	Planning Board, County Council* and Joint Base Andrews.	Short

* See page 105 for an explanation of abbreviations.

Joint Base Andrews Joint Land Use Study Implementation Table				
Strategy Number	Action	Key Features	Implementation Partners	Timeframe Short = < 3 years Long = > 3 years
Land Use Compatibility				
General				
1	Establish a Military Installation Overlay Zone District as a new zoning overlay district.	<p>Include the following provisions:</p> <ul style="list-style-type: none"> ❖ Permitted uses: Prohibit specific land uses that regularly attract large concentrations of people, such as schools, community centers, theatres, and churches. ❖ Limit non-residential uses by restricting the permitted number of people per acre. The limitation is calculated by restricting the number of parking spaces allowed for a given use, which ultimately limits the size of the building, therefore limiting the number of customers and employees on the site. ❖ The maximum permitted density requirement is based on a 35 persons per acre density that will be achieved by applying a parking limitation on all new commercial and industrial development in APZ I. The maximum permitted density for APZ II commercial and industrial uses is 50 people per acre. ❖ Do not allow permitted residential densities to increase through rezoning in APZ I and II. ❖ Allow existing uses to remain. ❖ Retail and additional residential development are not encouraged in APZ I. 	Planning Board and County Council.	Short
Clear Zone				
2	Remove all buildings and structures from the Clear Zone.	For public health and safety reasons all properties in the CZ should be publicly acquired and all buildings/structures should be removed. Acquisition costs should be borne by the federal government.	Department of Defense, Joint Base Andrews.	Long
3	Consider the possibility of a moratorium on new development while Clear Zone properties are being acquired.	To avoid development that would create additional safety risks, a short-term moratorium should be placed on new development in the northern CZ while a property acquisition program is being funded and initiated.	Planning Board and County Council.	Short
4	Relocate businesses from the Clear Zone.	Government assistance should be provided to help businesses relocate from the CZ. However, these businesses should be kept in the general area so that they continue to contribute to the local economy.	Prince George's County EDC.	Long

Joint Base Andrews Joint Land Use Study Implementation Table				
Strategy Number	Action	Key Features	Implementation Partners	Timeframe Short = < 3 years Long = > 3 years
5	Obtain federal funding for Clear Zone property acquisition and business relocation.	The base and the county should work together to obtain a Congressional appropriation and other federal monies for Clear Zone property acquisition and business relocation.	JBA, Department of Defense , Prince George's County.	Short
6	Identify the Clear Zone on future land use maps used in county plans, studies, and reports.	All future land use maps should identify the Clear Zone so as to highlight its importance and the need for special restrictions for this area.	County Planning Department, Planning Board, and County Council.	Short
APZ I and APZ II				
7	Prohibit specific land uses in APZ I and APZ II to minimize public safety risks.	The proposed Military Installation Overlay Zone should contain provisions that prohibit land uses that attract large concentrations of people and/or involve hazardous materials.	Planning Board and County Council.	Short
8	Limit the density of non-residential uses in APZ I and APZ II.	Limit the number of people per acre on commercial and industrial properties through reductions in allowed parking spaces.	Planning Board and County Council.	Short
9	Establish a notification requirement at real estate sale and lease execution.	Add a requirement to the real estate practices section (Section 2-162.01) of the County Code that mandates all contracts for the sale or lease of properties within the JLUS study area should disclose the property's location within a designated safety zone.	Planning Board, County Council, and Prince George's County Association of Realtors.	Short
10	Formalize the development review process between JBA and the county.	The county and the base should create a formal system whereby designated personnel on both sides are responsible for coordinating the review of proposed development projects.	County Planning Department and JBA.	Short
APZ I				
11	Do not allow additional residential development in APZ I.	Rezoning of non-residential land to a residential zoning district should not be permitted.	County Planning Department, Planning Board, and County Council.	Ongoing
12	Work towards rezoning residential land to employment zoning districts in the long term.	As the opportunity arises, blocks of residential land should be rezoned to an appropriate employment zoning category per the master plan recommendations. The possibility of streamlining the rezoning process for these large groups of properties should be investigated.	County Planning Department and the Planning Board.	Ongoing

Joint Base Andrews Joint Land Use Study Implementation Table				
Strategy Number	Action	Key Features	Implementation Partners	Timeframe Short = < 3 years Long = > 3 years
13	Discourage additional commercial retail zoning in APZ I.	Discourage the rezoning of residential and industrial properties to commercial districts that permit retail uses, due to the number of people that retail uses can attract.	County Planning Department, Planning Board, and County Council.	Ongoing
APZ II				
14	Allow existing residential development to remain.	Stable existing residential neighborhoods should not be disturbed.	County Planning Department.	Ongoing
15	Do not allow increased permitted residential density in APZ I and APZ II.	Residential zoning in APZ I and APZ II should be low density to minimize safety risks. Rezoning to higher-density residential zoning districts should not be permitted.	County Planning Department, Planning Board, and County Council.	Ongoing
Noise				
1	Create an aggressive public awareness and outreach program that emphasizes aircraft noise as an integral part of living or working near an Air Force base.	<ul style="list-style-type: none"> ❖ Develop informational materials that can be widely disseminated to the public, realtors, and other interested parties and that use easy-to-understand graphics to explain noise issues. ❖ Publicize the appropriate contacts for residents or businesses to register noise complaints. ❖ Establish a notification requirement at sale and lease execution for property in the vicinity of Joint Base Andrews. 	Joint Base Andrews, Prince George's County Health Department, and Prince George's County Association of Realtors.	Short
2	Seek compatibility with future military operations.	In the future, modify the boundaries of the Military Installation Overlay Zone to reflect any changes in AICUZ noise contours.	Planning Board and County Council.	Ongoing
3	Promote compatible development in the 75 dB and above noise zones.	<ul style="list-style-type: none"> ❖ Support rezoning residential land to non-residential in the 75 dB and above noise zones as opportunities arise. ❖ Investigate the feasibility of creating a program to assist property owners of older residential homes without noise attenuation with relocation costs if their property is redeveloped to a non-residential use as part of the JLUS recommendations. ❖ Discourage the location of noise-sensitive institutional uses in the AICUZ noise zones. 	County Planning Department and Planning Board.	Ongoing

Joint Base Andrews Joint Land Use Study Implementation Table				
Strategy Number	Action	Key Features	Implementation Partners	Timeframe Short = < 3 years Long = > 3 years
4	Ensure noise attenuation for development in all noise zones greater than 65 dB.	<ul style="list-style-type: none"> ❖ Continue to require all new development in noise zones greater than 65 dB to incorporate noise level reduction (NLR) measures. ❖ Investigate funding options to retrofit existing homes with NLR, giving priority to those in the 80 dB and above noise zones. ❖ Add noise standards and reduction requirements to the zoning code. 	Prince George's County Planning Department.	Ongoing
Height of Structures				
1	Add a maximum height requirement to the Prince George's County zoning code that applies to designated areas within the new overlay zone around Joint Base Andrews.	<ul style="list-style-type: none"> ❖ The height limit would apply to buildings and structures. ❖ The maximum height would involve three considerations: the above-ground building height, identified imaginary surfaces, and the natural grade of the property. Substantial re-grading of a site may require special review. ❖ The maximum permitted height would be the lesser of the maximum height of the underlying zoning district and the height specified on the building heights map. 	Planning Board and County Council.	Short
2	Refer to federal and state aviation regulations in the Prince George's County zoning code.	A reference should be included in the zoning code to Federal Aviation Regulations, Part 77, or the Code of Maryland, COMAR 11.03.05, Obstructions to Air Navigation.	Planning Board and County Council.	Short
3	Increase public awareness of the height issue around Joint Base Andrews.	Include height issues in a public awareness and outreach program about base-community encroachment issues.	County Planning Department.	Short
4	Require consideration of building heights by M-NCPPC and JBA when reviewing proposed development projects near the base.	Development review should include consideration of proposed building heights and identification of any conflicts with Joint Base Andrews airspace.	County Planning Department and Joint Base Andrews.	Short

Joint Base Andrews Joint Land Use Study Implementation Table				
Strategy Number	Action	Key Features	Implementation Partners	Timeframe Short = < 3 years Long = > 3 years
Transportation				
1	Work cooperatively to support important road projects near Joint Base Andrews.	Projects are shown in Chapter 3. High priority projects include: <ul style="list-style-type: none"> ❖ Realignment of Dower House Road and associated improvements at the Pearl Harbor Gate. ❖ Upgrading the Suitland Parkway/MD 4 intersection. ❖ Signalization and road capacity improvements along Allentown Road to enhance base access at the Main Gate. ❖ Virginia Gate access realignment and alternatives study to examine improvements along Old Alexandria Ferry Road. 	County Planning Department, Joint Base Andrews, DPW&T, and SHA.	Ongoing
2	Seek grant funding to supplement state and local funds for roadway projects.	Funding from the BRAC Revitalization Zone should be used to support road projects.	DPW&T, SHA, and FHWA.	Ongoing
3	Continue to work with members of the Westphalia development team to ensure Westphalia development coordinates with necessary road improvements.	Ensure proper staging, timing, and review of proposed Westphalia transportation projects.	County Planning Department and Westphalia development team.	Short
4	Work with Joint Base Andrews and WMATA to improve transit service to the base area.	Work to improve bus service to Joint Base Andrews, including providing more frequent service and creating a new bus stop at the base's West Gate.	County Planning Department, DPW&T, JBA, and WMATA.	Short
5	Support light rail/ bus rapid transit extension with access to Andrews AFB.	Continue to work with the Southern Maryland Transit Corridor Study team to facilitate an extension of transit to Joint Base Andrews.	Joint Base Andrews and Maryland Transit Administration.	Short
6	Support longer-term mass transit extension plans, such as the Green and Purple Lines, to serve the base and surrounding community.	Mass transit access to Joint Base Andrews from metropolitan Washington, D.C., is critical to the economic viability of the base and the community.	FTA , Joint Base Andrews, Maryland Transit Administration, and DPW&T.	Ongoing

Joint Base Andrews Joint Land Use Study Implementation Table				
Strategy Number	Action	Key Features	Implementation Partners	Timeframe Short = < 3 years Long = > 3 years
7	Expand pedestrian, bicycle, and transit opportunities to connect the base with the surrounding community.	The Morningside—Andrews—Camp Springs Sector Plan will study expanding bike and pedestrian access around the base.	County Planning Department, DPW&T, and JBA.	Short
8	Improve multimodal transportation options with more sidewalks, pathways, and bicycle routes.	Plans for revitalization and future high-density mixed-use centers in the Joint Base Andrews area should include amenities that increase pedestrian and bicycle activity.	County Planning Department and DPW&T.	Short
Economic and Community Development				
Employment and Business Growth				
1	Encourage more contractors doing work for Joint Base Andrews to locate near the base.	Some branches of the military require contractors to locate near the facilities from which their businesses benefit. A policy that requires more Joint Base Andrews contractors to locate near the base would increase the demand for contractor space, thus boosting the real estate market, and increase local spending by employees.	DOD, Air Force, EDC, and ABCA.	Short
2	Seek to attract uses in the base vicinity that would better serve base personnel and the local community.	Working with base staff to identify services most desired by base personnel will help the county focus investment and revitalization efforts on attracting and supporting businesses that provide needed/desired services for base personnel and the local community.	EDC , ABCA, and Joint Base Andrews.	Ongoing
3	Publicize business opportunities with Joint Base Andrews to local businesses.	Foster a dialogue of open communication between Joint Base Andrews business services, local business leaders, and economic development groups to lead to greater opportunities for area businesses to procure contracts.	EDC , Joint Base Andrews, and ABCA.	Short
Revitalization and Development				
4	Give priority to the implementation of relevant economic development recommendations in county plans.	<ul style="list-style-type: none"> ❖ Balance the desire for quality economic development and the need to discourage blighting uses with the need to minimize the potential effects of an aircraft crash on life and property. ❖ Encourage redevelopment along Branch Avenue (a main gateway to JBA). ❖ Create revitalization strategies for the Allentown Road and Suitland Road corridors. 	EDC , County Planning Department, ABCA, RA, and DHCD (state and county).	Ongoing

Joint Base Andrews Joint Land Use Study Implementation Table				
Strategy Number	Action	Key Features	Implementation Partners	Timeframe Short = < 3 years Long = > 3 years
5	Focus economic development incentive programs on growing existing businesses and attracting new businesses to the base vicinity.	Utilize various incentive programs to spur economic development, such as tax credits or BRAC incentive zone funds.	EDC , DHCD (state and county), DBED, and SBA.	Ongoing
Environmental/Natural Resources				
1	Coordinate with the base to improve water quality and watershed health.	Implement recommendations of county stream corridor assessments and watershed restoration action strategies, and coordinate with Joint Base Andrews stream restoration, wetland restoration, and enhancement projects.	DER , Joint Base Andrews, and County Planning Department.	Ongoing
2	Work jointly to protect and enhance green infrastructure in and around the base.	Potential opportunities exist to meet both Joint Base Andrews' Natural Infrastructure Management objectives and the county's Green Infrastructure Plan policies and strategies. The REPI program could potentially be used to fund acquisitions in the area along Piscataway Creek.	Joint Base Andrews , M-NCPPC, DER, and DOD.	Short
3	Ensure that future development in the vicinity of Joint Base Andrews does not attract birds and/or waterfowl.	Continue to refer development projects to Joint Base Andrews for review (see above recommendation).	M-NCPPC , Joint Base Andrews.	Ongoing
4	Address groundwater contamination concerns and issues associated with the former landfill near Foxley Road.	Community awareness of the extent of contamination and its impacts should be improved. Additionally, the county and the base should work together to develop an improved permitting system that allows for joint annotation of development constraints or opportunities on base area parcel permits.	Joint Base Andrews , DER, and Prince George's County Health Department.	Short
Historic and Cultural Resources				
1	Continue to work cooperatively to preserve historic sites on and surrounding the base.	Continue to work cooperatively with Prince George's County, military officials, and the Maryland Historic Trust. Investigate opportunities for increased public access to on-base historic sites.	JBA , County Planning Department, and Maryland Historic Trust (MHT).	Ongoing
2	Investigate the possibility of improved public access to on-base historic properties.	Work with Joint Base Andrews to determine whether access to these on-base historic resources can be improved for the general public.	County Planning Department , MHT, and JBA.	Short

Joint Base Andrews Joint Land Use Study Implementation Table				
Strategy Number	Action	Key Features	Implementation Partners	Timeframe Short = < 3 years Long = > 3 years
3	In a manner sensitive to historic resources, manage vegetation growth north of the base that may interfere with aircraft flight patterns.	Coordinate an approach to managing vegetation that respects the historic character of Suitland Parkway and facilitates base aircraft operations.	Joint Base Andrews and the National Park Service.	Ongoing
4	Continue to maintain the Joint Base Andrews Integrated Cultural Resources Management Plan (ICRMP).	The county and the Maryland Historical Trust should be given the opportunity to participate in the preparation of the plan and review and comment on the document prior to its release.	Joint Base Andrews , County Planning Department, and MHT.	Ongoing

Explanatory Note

ABCA: Andrews Business and Community Alliance

Air Force: United States Air Force

County Council: Prince George's County Council

County Planning Department: Prince George's County Planning Department

DBED: Maryland Department of Business and Economic Development

DER: Prince George's County Department of Environmental Resources

DHCD: Department of Housing and Community Development (state and local)

DOD: United States Department of Defense

DPW&T: Prince George's County Department of Public Works and Transportation

EDC: Prince George's County Economic Development Corporation

FHWA: Federal Highway Administration

FTA: Federal Transit Administration

JBA: Joint Base Andrews Naval Air Facility Washington

MHT: Maryland Historic Trust

M-NCPPC: The Maryland-National Capital Park and Planning Commission

Planning Board: Prince George's County Planning Board

RA: Redevelopment Authority of Prince George's County

SBA: Maryland Small Business Administration

SHA: Maryland State Highway Administration

WMATA: Washington Metropolitan Area Transit Authority

Appendix 1: Glossary of Terms

Acronym	Full Name	Explanation/Definition
JBA	Joint Base Andrews Naval Air Facility Washington	The Air Force base which is responsible for the defense of Washington, D.C., and which serves as the capital's gateway for distinguished national and international visitors.
AFDW	Air Force District of Washington	The Air Force component for the National Capital Region.
AFRES	Air Force Reserve	Air Force reserve units for national security missions.
ANG	Air National Guard	Air Force reserve units for national security missions.
AICUZ	Air Installations Compatible Use Zone	Department of Defense program established in 1974 to promote compatible land development in areas subject to aircraft noise and accident potential.
APA	Aviation Policy Area	Adjacent to general aviation airports in Prince George's County, these areas have special regulations to promote safety and compatible development.
APZ	Accident Potential Zone	An area around an airfield that has a statistically higher possibility of aircraft accidents than other areas.
BRAC	Base Realignment and Closure	A federal process intended to result in the closure and realignment of military installations inside the United States in order to reduce maintenance and operations costs.
CES	Civil Engineer Squadron	One of the units of the 316 th Wing at Joint Base Andrews, this group oversees base facilities and plans for the base's physical development.
CZ	Clear Zone	The safety zone located at the end of air base runways, it has the highest accident potential of the three safety zones.
DOD	Department of Defense	The federal department responsible for the national security of the United States.
JLUS	Joint Land Use Study	A study to address incompatibilities between a military installation and the surrounding community.
M-NCPPC	The Maryland- National Capital Park and Planning Commission	A bicounty agency with geographic authority over the majority of Montgomery and Prince George's Counties, the Commission has three major functions: the preparation, adoption, and, from time to time, amendment or extension of the General Plan for the physical development of the Maryland-Washington Regional District; the acquisition, development, operation, and maintenance of a public park system; and, in Prince George's County only, the operation of the entire county public recreation program. The Commission operates in each county through a planning board appointed by and responsible to the county government.
MTA	Maryland Transit Administration	An arm of the Maryland Department of Transportation, this agency oversees a regional transit system in the Washington, D.C.–Baltimore area.
NCR	National Capital Region	A federal government designation for Washington, D.C., and the areas surrounding it in northern Virginia and Maryland.
OEA	Office of Economic Adjustment	The Department of Defense's primary source for assisting communities adversely impacted by defense program changes, such as base closures or realignments, base expansions, and contract or program cancellations.
SLUCM	Standard Land Use Coding Manual	A detailed listing of land-use categories with numeric codes assigned to them.
SMA	Sectional Map Amendment	Comprehensive rezoning of an area of Prince George's County to implement a comprehensive plan.
TAZ	Traffic Analysis Zone	Small statistical area used primarily in traffic flow analyses. Prince George's County has approximately 380 TAZs.

Appendix 2: Demographic Tables

Joint Base Andrews Study Area Population, 2000—2030				
Transportation Analysis Zone (TAZ)	Subregion	2000 ¹	2008 ²	2030 ³
744	4/Suitland	2,951	3,136	3,013
745	4/Suitland	4,473	4,600	4,478
746	4/Suitland	1,236	1,259	1,250
747	4/Suitland	2,308	2,427	6,710
760	7/Heights	220	1,528	2,280
761	7/Heights	1,178	1,225	1,232
762	7/Heights	1,432	1,469	1,566
764	4/Suitland	8,617	10,249	10,052
765	4/Suitland	2,309	2,613	2,565
766	7/Heights	2,315	2,549	2,522
821	6/Westphalia	2,366	2,383	4,101
822	6/Westphalia	611	754	9,968
824	6/Westphalia	220	321	268
825	6/Westphalia	2,045	2,497	4,212
826	6/Westphalia	46	65	1,571
827	6/Westphalia	31	31	1,042
828	6	72	73	71
829	6	8,591	2,318	2,244
830	7/Henson Creek	1,999	2,305	2,834
831	5	835	2,766	2,884
832	6	821	1,450	1,442
833	6	1,658	1,888	2,467
842	5	5,403	5,136	5,364
843	5	1,014	951	1,037
844	7/Henson Creek	2,911	2,844	3,228
845	5	1,243	1,450	1,442
846	7/Henson Creek	4,056	1,417	2,467
847	7/Henson Creek	505	3,970	5,364
951	5	3,381	3,165	3,365
954	5	1,882	1,984	2,565
956	6	1,480	1,779	2,834
957	6	1,497	2,396	3,289
959	6	1,304	1,463	1,847
964	5	1,775	1,764	1,989
TOTAL		72,785	76,224	101,235
Prince George's County		808,060	852,884	992,868

¹ 2000 population data based on M-NCPPC Round 7.0 Cooperative Forecast.
² 2008 population data derived from M-NCPPC dwelling unit projections, applying a household size factor of 2.59.
³ 2030 population data derived from M-NCPPC dwelling unit projection, applying a household size factor of 2.53.

Joint Base Andrews Study Area Dwelling Units, 2000—2030						
Transportation Analysis Zone (TAZ)	Subregion	2000 ¹	2008 ²	2008 + Pipeline ³	2030 ⁴	2030 JLUS Working Numbers ⁵
744	4/Suitland	1,146	1,211	1,211	1,191	1,191
745	4/Suitland	1,729	1,776	1,776	1,770	1,770
746	4/Suitland	476	486	489	494	494
747	4/Suitland	890	937	2,652	1,084	2,652
760	7/Heights	87	590	603	901	901
761	7/Heights	466	473	473	487	487
762	7/Heights	565	567	567	619	619
764	4/Suitland	3,784	3,957	3,979	3,973	3,973
765	4/Suitland	1,001	1,009	1,009	1,014	1,014
766	7/Heights	978	984	984	997	997
821	6/Westphalia	915	920	1,125	1,621	1,621
822	6/Westphalia	237	291	3,940	416	3,940
824	6/Westphalia	85	124	124	106	106
825	6/Westphalia	788	964	1,302	1,665	1,665
826	6/Westphalia	18	25	25	621	621
827	6/Westphalia	12	12	12	412	412
828	6	28	28	28	28	28
829	6	2,338	895	895	887	887
830	7/Henson Creek	847	890	890	1,120	1,120
831	5	329	1,068	1,068	1,140	1,140
832	6	291	560	560	570	570
833	6	556	729	968	975	975
842	5	1,911	1,983	2,001	2,120	2,120
843	5	359	367	367	410	410
844	7/Henson Creek	1,088	1,098	1,276	1,151	1,276
845	5	435	560	560	585	585
846	7/Henson Creek	515	547	547	563	563
847	7/Henson Creek	1,512	1,533	1,563	1,597	1,597
951	5	1,134	1,222	1,284	1,330	1,330
954	5	666	766	999	1,014	1,014
956	6	522	687	1,111	1,120	1,120
957	6	528	925	1,180	1,300	1,300
959	6	460	565	690	730	730
964	5	563	681	776	786	786
TOTAL		27,259	29,430	37,051	34,797	40,014
Prince George's County		306,190	328,928	364,719	392,490	392,490

¹ 2000 dwelling unit data based on M-NCPPC Round 7.0 Cooperative Forecast.

² 2008 dwelling unit data based on M-NCPPC staff forecast.

³ 2008 + pipeline data based on M-NCPPC staff forecast.

⁴ 2030 dwelling unit data based on M-NCPPC staff forecast.

⁵ In cases where the 2008 + Pipeline data exceeded the 2030 forecast, the pipeline number is used for 2030 data.

Joint Base Andrews Study Area Employment, 2000—2030					
Transportation Analysis Zone (TAZ)	Subregion	2000 ¹	2005 ²	2005 + Pipeline ³	2030 ⁴
744	4/Suitland	2,847	2,867	--	3,610
745	4/Suitland	829	836	--	1,044
746	4/Suitland	2,397	2,397	--	3,022
747	4/Suitland	355	356	--	413
760	7/Heights	2,747	3,996	--	5,120
761	7/Heights	158	179	--	208
762	7/Heights	166	166	--	193
764	4/Suitland	182	193	--	224
765	4/Suitland	1,948	2,095	--	2,641
766	7/Heights	245	248	--	288
821	6/Westphalia	559	561	--	1,561
822	6/Westphalia	489	475	--	1,059
824	6/Westphalia	20	22	--	521
825	6/Westphalia	64	71	--	71
826	6/Westphalia	1,802	1,948	--	8,881
827	6/Westphalia	25	30	--	10,144
828	6	1,718	1,738	1,784	2,191
829	6	10,039	10,096	12,296	12,796
830	7/Henson Creek	1,109	1,116	--	1,407
831	5	3,396	3,584	4,373	5,282
832	6	162	181	181	400
833	6	2,947	2,947	2,947	3,459
842	5	899	1,272	1,272	1,300
843	5	2,996	3,099	3,099	3,378
844	7/Henson Creek	1,698	1,799	--	2,268
845	5	278	308	631	750
846	7/Henson Creek	400	416	--	483
847	7/Henson Creek	649	678	--	806
951	5	281	345	345	500
954	5	30	31	31	47
956	6	11	12	12	12
957	6	103	118	118	137
959	6	230	234	560	572
964	5	548	532	647	950
TOTAL		42,327	44,946	28,296	75,738
Prince George's County		338,296	347,886	423,983	518,386

¹ 2000 employment data from M-NCPPC Round 7.0 Cooperative Forecast.
² 2005 employment data from M-NCPPC Round 7.0 Cooperative Forecast and Round 7.1 Cooperative Forecast.
³ 2005 + Pipeline data based on M-NCPPC staff forecast.
⁴ 2030 employment data based on M-NCPPC staff forecast and Round 7.1 Cooperative Forecast.

Appendix 3: Compatible Land Uses

SLUCM Number	Land Use Name ¹	Clear Zone Recommendation	APZ-I Recommendation	APZ-II Recommendation	Density Recommendation
10	Residential				
11	Household units				
11.11	Single units: detached	N	N	Y ²	Maximum density of 1-2 Du/Ac
11.12	Single units: semidetached	N	N	N	
11.13	Single units: attached row	N	N	N	
11.21	Two units: side-by-side	N	N	N	
11.22	Two units: one above the other	N	N	N	
11.31	Apartment: walk-up	N	N	N	
11.32	Apartment: elevator	N	N	N	
12	Group quarters	N	N	N	
13	Residential hotels	N	N	N	
14	Mobile home parks or courts	N	N	N	
15	Transient lodgings	N	N	N	
16	Other residential	N	N	N	
20	Manufacturing³				
21	Food and kindred products; manufacturing	N	N	Y	Maximum FAR 0.56 in APZ II
22	Textile mill products; manufacturing	N	N	Y	Same as above
23	Apparel and other finished products; products made from fabrics, leather and similar materials; manufacturing	N	N	N	
24	Lumber and wood products	N	Y	Y	Maximum FAR of 0.28 in APZ I & FAR of 0.56 in APZ II
25	Furniture and fixtures; manufacturing	N	Y	Y	Same as above
26	Paper and allied products; manufacturing	N	Y	Y	Same as above
27	Printing, publishing, and allied industries	N	Y	Y	Same as above
28	Chemicals and allied products; manufacturing	N	N	N	
29	Petroleum refining and related industries	N	N	N	
30	Manufacturing³ (continued)				
31	Rubber and miscellaneous plastic products; manufacturing	N	N	N	
32	Stone, clay and glass products; manufacturing	N	N	Y	Maximum FAR 0.56 in APZ II
33	Primary metal products; manufacturing	N	N	Y	Same as above
34	Fabricated metal products; manufacturing	N	N	Y	Same as above
35	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks	N	N	N	
39	Miscellaneous manufacturing	N	Y	Y	Maximum FAR of 0.28 in APZ I & FAR of 0.56 in APZ II

SLUCM Number	Land Use Name ¹	Clear Zone Recommendation	APZ-I Recommendation	APZ-II Recommendation	Density Recommendation
40	Transportation, Communication, and Utilities^{3,4}				See footnote 3 below
41	Railroad, rapid trail transit, and street railway transportation	N	Y ⁵	Y	Same as above
42	Motor vehicle transportation	N	Y ⁵	Y	Same as above
43	Aircraft transportation	N	Y ⁵	Y	Same as above
44	Marine craft transportation	N	Y ⁵	Y	Same as above
45	Highway and street right-of-way	N	Y ⁵	Y	Same as above
46	Automobile parking	N	Y ⁵	Y	Same as above
47	Communication	N	Y ⁵	Y	Same as above
48	Utilities	N	Y ⁵	Y	Same as above
48.5	Solid waste disposal (landfills, incinerators, etc.)	N	N	N	
49	Other transportation, communication, and utilities	N	Y ⁵	Y	Same as above
50	Trade				
51	Wholesale trade	N	Y	Y	Maximum FAR of 0.28 in APZ I and 0.56 in APZ II
52	Retail trade-building materials, hardware, and farm equipment	N	Y	Y	Maximum FAR of 0.14 in APZ I and 0.28 in APZ II
53	Retail trade-general merchandise	N	N	Y	Maximum FAR of 0.14
54	Retail trade-food	N	N	Y	Maximum FAR of 0.24
55	Retail trade-automotive, marine craft, aircraft, and accessories	N	Y	Y	Maximum FAR of 0.14 in APZ I & 0.28 in APZ II
56	Retail trade-apparel and accessories	N	N	Y	Maximum FAR 0.28
57	Retail trade-furniture, home furnishings, and equipment	N	N	Y	Same as above
58	Retail trade-eating and drinking establishments	N	N	Y	
59	Other retail trade	N	N	Y	Maximum FAR of 0.22
60	Services⁶				
61	Finance, insurance, and real estate services	N	N	Y	Maximum FARs of 0.22 for "General Office/Office Park"
62	Personal services	N	N	Y	Office uses only; Maximum FAR of 0.22
62.4	Cemeteries	N	Y ⁷	Y ⁷	
63	Business services	N	Y	Y	Maximum FARs of 0.11 in APZ I; 0.22 in APZ II
63.7	Warehousing and storage services	N	Y	Y	Maximum FAR of 1.0
64	Repair services	N	Y	Y	Maximum FARs of 0.11 in APZ I; 0.22 in APZ II
65	Professional services	N	N	Y	Maximum FAR of 0.22

SLUCM Number	Land Use Name ¹	Clear Zone Recommendation	APZ-I Recommendation	APZ-II Recommendation	Density Recommendation
65.1	Hospitals, nursing homes	N	N	N	
65.16	Other medical facilities	N	N	N	
66	Contract construction services	N	Y	Y	Maximum FARs of 0.11 in APZ I; 0.22 in APZ II
67	Government services	N	N	Y	Maximum FAR of 0.22
68	Educational services	N	N	N	
69	Miscellaneous	N	N	Y	Maximum FAR of 0.22
70	Cultural, Entertainment, and Recreational				
71	Cultural activities	N	N	N	
71.2	Nature exhibits	N	Y ⁸	Y ⁸	
72	Public assembly	N	N	N	
72.1	Auditoriums, concert halls	N	N	N	
72.11	Outdoor music shells, amphitheatres	N	N	N	
72.2	Outdoor sports arenas, spectator sports	N	N	N	
73	Amusements	N	N	Y ⁸	
74	Recreational activities (including golf courses, riding stables, water recreation)	N	Y ⁸	Y ⁸	No club house
75	Resorts and group camps	N	N	N	
76	Parks	N	Y ⁸	Y ⁸	Same as 74
79	Other cultural, entertainment and recreation	N	Y ⁸	Y ⁸	Same as 74
80	Resource Production and Extraction				
81	Agriculture (except livestock) ⁹	Y ⁴	Y	Y	
81.5, 81.7	Livestock farming and breeding	N	Y ¹⁰	Y ¹⁰	
82	Agriculture-related activities (processing and husbandry services)	N	Y	Y	Maximum FAR of 0.28; no activity that produces smoke, or glare—or that involves explosives
83	Forestry activities ¹¹	N	Y	Y	Same as above
84	Fishing activities ¹²	N ¹²	Y	Y	Same as above
85	Mining activities ¹³	N	Y	Y	Same as above
89	Other resource production or extraction	N	Y	Y	Same as above
90	Other				
91	Undeveloped land	Y	Y	Y	
93	Water areas	N ¹⁴	N ¹⁴	N ¹⁴	

Legend

The following legend refers to the preceding table.

***Standard Land Use Coding Manual (SLUCM)**, U.S. Department of Transportation.

Y (Yes)—Land uses and related structure are normally compatible without restriction.

N (No)—Land uses and related structure are not normally compatible and should be prohibited.

Y^x (Yes with restrictions)—The land uses and related structures are generally compatible; see notes indicated by the superscript.

N^x (No with exceptions)—See notes indicated by the superscript.

FAR (Floor area ratio)—A floor area ratio is the ratio between the square feet of floor area of the building and the site area. It is customarily used to measure non-residential densities.

Du/Ac (Dwelling Units per Acre)—This is customarily used to measure residential densities.

Notes

The following notes refer to the preceding table.

1. A “Yes” or “No” designation for compatible land use is to be used only for general comparison. Within each, uses exist where further evaluation may be needed in each category as to whether it is clearly compatible, normally compatible, or not compatible due to the variation of densities of people and structures. In order to assist installations and local governments, general suggestions as to floor/area ratios are provided as a guide to density in some categories. In general, land use restrictions which limit commercial, services, or industrial buildings or structure occupants to 25 per acre in APZ I and 50 per acre in APZ II are the range of occupancy levels considered to be low density. Outside events should normally be limited to assemblies of not more than 25 people per acre in APZ I and maximum assemblies of 50 people per acres in APZ II. Recommended FARs are calculated using standard parking generation rates for various land uses, vehicle occupancy rates, and desired density in APZ I and II.
2. The suggested maximum density for detached single-family housing is 1 to 2 Du/Ac. In a planned unit development (PUD) of single-family detached units, this density could possibly be increased slightly, where the amount of open space is significant and the amount of surface area covered by structures does not exceed 20 percent of the PUD total area.
3. Other factors to be considered: labor intensity, structural coverage, explosive characteristics, air pollution, electronic interference with aircraft, height of structures, and potential glare to pilots.
4. No structures (except airfield lighting and navigational aids necessary for the safe operation of the airfield when there are no other siting options), buildings, or above-ground utility/communications lines should normally be located in Clear Zone areas on or off the installation. The clear zone is subject to severe restrictions.
5. No passenger terminals and no major aboveground transmission lines in APZ I.
6. Low-intensity office uses only. Ancillary uses such as meeting places, auditoriums, etc. are not recommended. See recommended FARs.
7. No chapels are allowed within APZ I or APZ II.

8. Facilities must be low-intensity; club houses, meeting places, auditoriums, large classes, etc., are not recommended.
9. Excludes feedlots and intensive animal husbandry (see SLUCM 81.5, 81.7). Activities that attract concentrations of birds, creating a hazard to aircraft operations, should be excluded.
10. Includes feedlots and intensive animal husbandry.
11. Lumber and timber products removed due to establishment, expansion, or maintenance of clear zones will be disposed of in accordance with appropriate DOD Natural Resources Instructions.
12. Controlled hunting and fishing may be permitted for the purpose of wildlife management.
13. Surface mining operations that could create retention ponds that may attract waterfowl and present bird aircraft strike hazards (BASH)—or operations that produce dust and/or light emissions that could impact pilot vision—are not compatible.
14. Naturally occurring water features (e.g. rivers, lakes, streams, wetlands) are pre-existing, non-conforming land uses. Naturally occurring water features that attract waterfowl present a potential BASH. Actions to expand naturally occurring water features should not be encouraged.

Appendix 4: Guide to Existing and Future Land Use Designations and Zoning Districts

a. Existing Land Use

Residential

Rural – Detached single-family dwelling units w/ associated areas at densities less than or equal to .5 du/acre (Property acreages of 2 acres to 15 acres as 15 acres is the cut off for residential labels).

Residential Low – Detached single-family dwelling units w/ associated areas at densities between .5 du/acre and 2 du/acre.

Residential Low Medium – Detached single-family dwelling units w/ associated areas at densities between 2 du/acre and 3 du/acre.

Residential Medium – Detached and attached dwelling units w/ associated areas at densities between 3 du/acre and 8 du/acre.

Residential Medium-High – Detached and attached dwelling units w/ associated areas at densities between 8 du/acre and 20 du/acre.

Residential High – Detached and attached dwelling units w/ associated areas at densities higher than 20 du/acre.

Mixed-Use Residential – These are mixed-use properties which are predominantly residential and are selected on a case by case basis from: Residential Medium, Residential Medium-High, and Residential High categories as well as Mixed-Use Zones.

Commercial

Mixed-Use Commercial – These are mixed-use properties which are predominantly commercial and are selected on a case by case basis from Commercial, Industrial, and Mixed-Use Zones.

Commercial – Offices, retail and wholesale services. Areas used primarily for offices and /or the sale of products and services, including associated yards and parking areas.

Industrial – Manufacturing and industrial parks, including associated warehouses, storage yards, research laboratories, and parking areas.

Institutional – Elementary and secondary schools, middle schools, junior and senior high schools, public and private colleges and universities, military installations (built-up areas only, including buildings and storage, training, and similar areas), churches, medical and health facilities, correctional facilities, and government offices and facilities that are clearly separable from the surrounding land cover.

Extractive – Active surface mining operations, including sand and gravel pits, quarries, coal surface mines, and deep coal mines.

Parks and Open Space – Areas whose use does not require structures such as golf courses, parks, recreation areas (except areas associated with schools or other institutions), cemeteries.

Agricultural – Cropland, Pasture, Orchards/vineyards/horticulture, feeding operations, agricultural buildings and facilities, row and garden crops.

Forest – Deciduous forest (trees characteristically lose their leaves at the end of the growing season), Evergreen forest (trees are characterized by persistent foliage throughout the year), Mixed forest (neither deciduous nor evergreen species dominate but both are present), brush (areas which do not produce timber or other wood products but may have cut-over timber stands, abandoned agriculture fields, or pasture).

Water – Rivers, waterways, reservoirs, ponds, bays, estuaries, and ocean.

Wetlands – Forested or non-forested wetlands, including tidal flats, tidal and non-tidal marshes, and upland swamps and wet areas.

Beaches – Extensive shoreline areas of sand and gravel accumulation, with no vegetative cover or other land use.

Bare exposed rock – Areas of bedrock exposure, scarps, and other natural accumulations of rock without vegetative cover.

Bare ground – Areas of exposed ground caused naturally, by construction, or by other cultural processes including grassy areas.

Transportation – Miscellaneous Transportation features not elsewhere classified (ex. public and private roads, parking lots).

b. Future Land Use

Future Land Use Designation	Intent/Types of Land Uses
Commercial	Retail and business areas, including employment uses such as office and service uses.
Industrial	Manufacturing and industrial parks, warehouses and distribution. May include other employment such as office and service uses.
Mixed use	Areas of various residential, commercial, employment and institutional uses. Residential uses may include a range of unit types. Different mixed use areas may vary with respect to their dominant land uses; i.e. commercial uses may dominate overall land use in one mixed use area, whereas residential uses may dominate in another.
Institutional	Uses such as military installations, sewerage treatment plants, schools.
Residential high	Residential areas over 20 dwelling units per acre. Mix of dwelling unit types, including apartments.
Residential medium-high	Residential areas between eight and 20 dwelling units per acre. Mix of dwelling unit types, including apartments.
Residential medium	Residential areas between 3.5 and eight dwelling units per acre. Primarily single-family dwellings (detached and attached).
Residential low	Residential areas up to 3.5 dwelling units per acre. Primarily single-family detached dwellings.
Rural	Agricultural land (cropland, pasture, farm fields), forest, very low density residential. The county’s intent is for these areas to remain rural and to conserve these areas’ natural resources, primarily forest and forest resources, for future generations. New residential development is permitted at a maximum density of one dwelling unit per five acres.
Public parks and open space	Parks and recreation areas, publicly owned natural areas.

c. Zoning

This portion of the appendix contains excerpts from the *Guide to Zoning Categories* published by The Maryland-National Capital Park and Planning Commission in May 2002. These excerpts include only zoning districts in safety zones north and south of Andrews Air Force Base.

RESIDENTIAL ZONES¹

R-O-S: Reserved Open Space - Provides for permanent maintenance of certain areas of land in an undeveloped state, with the consent of the property owners; encourages preservation of large areas of trees and open space; designed to protect scenic and environmentally sensitive areas and ensure retention of land for nonintensive active or passive recreational uses; provides for very low density residential development and a limited range of public, recreational, and agricultural uses.

Minimum lot size	-	20 acres*
Maximum dwelling units per net acre	-	0.05

* Except for public recreational uses, for which no minimum area is required.

O-S: Open Space - Provides for areas of low-intensity residential (5 acre) development; promotes the economic use and conservation of land for agriculture, natural resource use, large-lot residential estates, nonintensive recreational use.

Standard lot size	-	5 acres
Maximum dwelling units per net acre	-	0.20

R-A: Residential-Agricultural - Provides for large-lot (2 acre) residential uses while encouraging the retention of agriculture as a primary land use.

Standard lot size	-	2 acres
Maximum dwelling units per net acre	-	0.50

¹ Definitions:

Minimum or Standard lot size: The current minimum net contiguous land area required for a lot.

Average dwelling units per acre: The number of dwelling units which may be built on a tract--including the typical mix of streets, public facility sites and areas within the 100-year floodplain--expressed as a per-acre average.

Maximum dwelling units per net acre: The number of dwelling units which may be built on the total tract--excluding streets and public facility sites, and generally excluding land within the 100-year floodplain--expressed as a per-acre average.

R-R: Rural Residential - Permits approximately one-half-acre residential lots; subdivision lot sizes depend on date of recordation; allows a number of nonresidential special exception uses.

Standard lot size	-	20,000 sq. ft.
	-	15,000 sq. ft. if recorded prior to February 1, 1970
	-	10,000 sq. ft. if recorded prior to July 1, 1967
Maximum dwelling units per net acre	-	2.17
Estimated average dwelling units per acre	-	1.85

R-80: One-Family Detached Residential - Provides for variation in the size, shape, and width of subdivision lots to better utilize the natural terrain and to facilitate planning of single-family developments with lots and dwellings of various sizes and styles.

Standard lot size	-	9,500 sq. ft.
Maximum dwelling units per net acre	-	4.5
Estimated average dwelling units per acre	-	3.4

R-55: One-Family Detached Residential - Permits small-lot residential subdivisions; promotes high density, single-family detached dwellings.

Standard lot size	-	6,500 sq. ft.
Maximum dwelling units per net acre	-	6.70
Estimated average dwelling units per acre	-	4.2

R-T: Townhouse - Permits one-family detached and attached, two-family, and three-family dwellings; promotes the maximum amount of freedom in the design of attached dwellings and their grouping and layout; Detailed Site Plan approval required for attached dwellings.

Standard lot size per attached dwelling	-	1,800 sq. ft.
Maximum dwelling units per net acre	-	Three-family dwellings - 9 Two-family dwellings - 8 Other attached dwellings - 6
Minimum area for development	-	2 acres

R-30: Multifamily Low Density Residential - Provides for low density garden apartments; single-family detached; single-family attached, two-family and three-family dwellings in accordance with R-T Zone provisions; Detailed Site Plan approval required for multifamily and attached dwellings.

- Standard lot size
 - Garden apartments - 14,000 sq. ft.
 - Two-family dwellings - 1,500 sq. ft.
 - Other attached dwellings - 1,800 sq. ft.
- Maximum dwelling units per net acre
 - Garden apartments - 10
 - Three-family dwellings - 9
 - Two-family dwellings - 8
 - Other attached dwellings - 6

R-30C: Multifamily Low Density Residential-Condominium - Same as R-30 above except ownership must be condominium, or development in accordance with the R-T Zone; Detailed Site Plan approval required for multifamily and attached dwellings.

- Standard lot size
 - Garden apartments - 14,000 sq. ft.
 - Two-family dwellings - 1,500 sq. ft.
 - Other attached dwellings - 1,800 sq. ft.
- Maximum dwelling units per net acre
 - Garden apartments - 12
 - Three-family dwellings - 9
 - Two-family dwellings - 8
 - Other attached dwellings - 6

COMMERCIAL ZONES

- C-O:** Commercial Office - Uses of a predominantly nonretail commercial nature, such as business, professional and medical offices, or related administrative services.
- C-A:** Ancillary Commercial - Certain small retail commercial uses, physician and dental offices, and similar professional offices that are strictly related to and supply necessities in frequent demand and daily needs of an area with a minimum of consumer travel; maximum size of zone: 3 net acres.
- C-2:** General Commercial, Existing - All of the uses permitted in the C-S-C Zone, with additions and modifications.
- C-C:** Community Commercial, Existing - All of the uses permitted in the C-S-C Zone.
- C-S-C:** Commercial Shopping Center - Retail and service commercial activities generally located within shopping center facilities; size will vary according to trade area.
- C-M:** Commercial Miscellaneous - Varied commercial uses, including office and highway-oriented uses, which may be disruptive to the compactness and homogeneity of retail shopping centers.

INDUSTRIAL ZONES

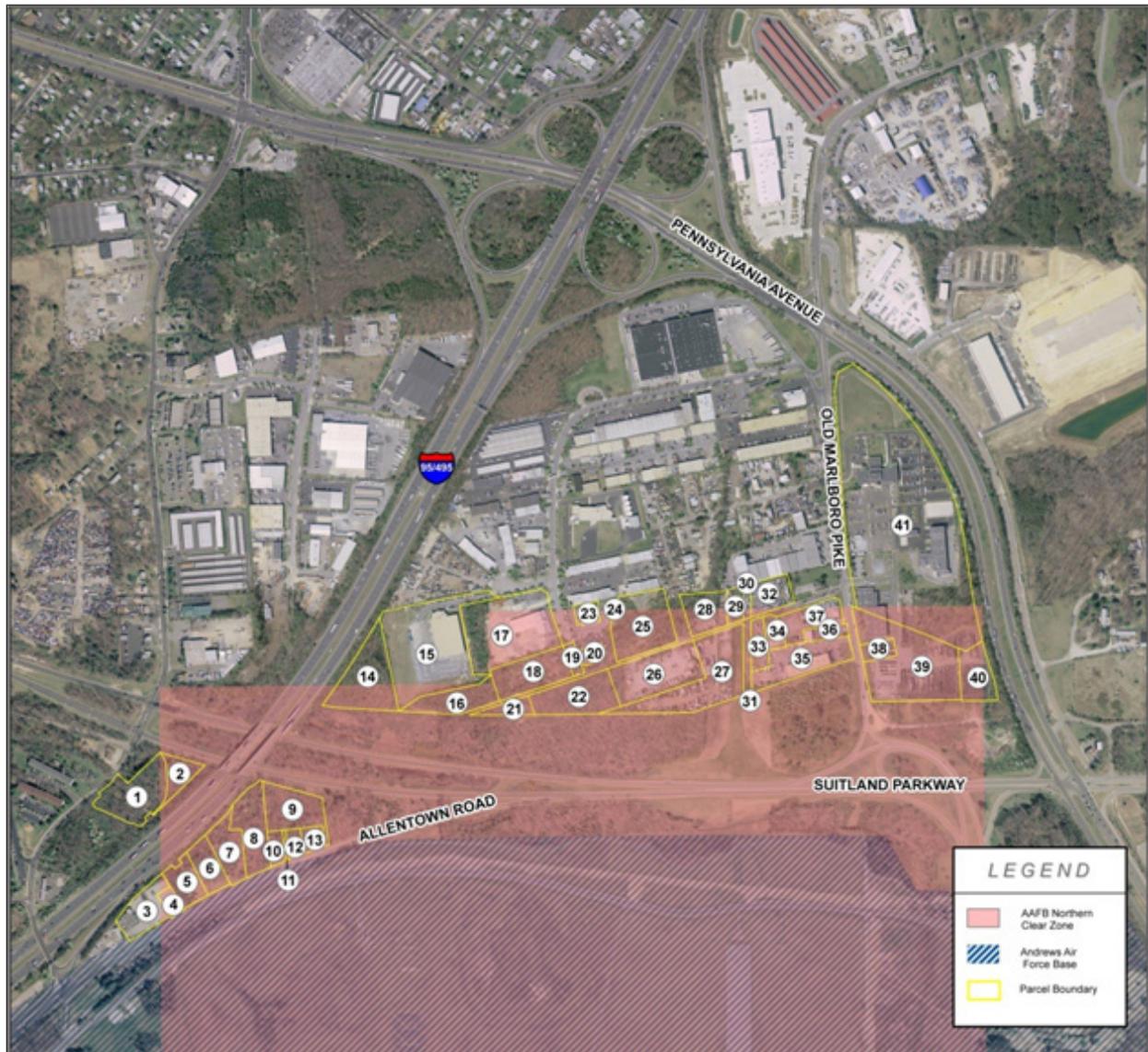
- I-1:** Light Industrial - Light intensity manufacturing, warehousing, and distribution uses; 10% green area required.
- I-2:** Heavy Industrial - Highly intensive industrial and manufacturing uses; 10% green area required.
- I-3:** Planned Industrial/Employment Park - Uses that will minimize detrimental effects on residential and other adjacent areas; a mixture of industrial, research, and office uses with compatible institutional, recreational, and service uses in a manner that will retain the dominant industrial/employment character of the zone; standard minimum tract size of 25 adjoining gross acres; standard minimum lot size of two acres; Conceptual and Detailed Site Plan approval required; 25% green area required; outdoor uses restricted; warehousing and wholesaling uses limited.
- I-4:** Limited Intensity Industrial - Limited intensity (0.3 FAR) commercial, manufacturing, warehousing, and distribution uses; development standards extended to assure limited intensity industrial and commercial development, and compatibility with surrounding zoning and uses; 25% green area required.

Appendix 5: Clear Zone Parcels

Map ID	Account Number	Tax District	Existing Land Use	SLUCM No.* (by field survey)	Compatibility with AICUZ Guidelines	Owner	Tax Use (Md. DAT)	Year Structure Built	Enclosed Building Area (sf)	Land Area (sf)	Assessed Value	
Parcels Slightly Impacted by Clear Zone												
3	594119	06	Commercial	58 Retail trade	N	Lawrence Hillman	Commercial	1971	8,861	1,58	\$1,489,466	
15	0455204	06	Industrial	63 Business services	N	Republic Properties	Industrial	1996	45,962	6.68	\$3,648,700	
										TOTAL SLIGHTLY IMPACTED BY CLEAR ZONE:	8	5,138,166
Parcels Entirely within Clear Zone												
1	646612	06	Forest	91 Undeveloped land	Y	Prince George's County	Exempt Commercial			2.15	\$0	
2	646653	06	Forest	91 Undeveloped land	Y	United States of America	Exempt Commercial			1.84	\$0	
4	646620	06	Transportation	49 Other transportation	Y	Lawrence Hillman	Industrial			0.37	\$84,600	
5	558700	06	Bare Ground	91 Undeveloped land	Y	United States of America	Exempt Commercial			1.04	\$0	
6	646646	06	Bare Ground	91 Undeveloped land	Y	United States of America	Exempt Commercial			1.06	\$0	
7	640144	06	Bare Ground	91 Undeveloped land	Y	United States of America	Exempt Commercial			1.46	\$0	
8	646638	06	Bare Ground	91 Undeveloped land	Y	United States of America	Exempt Commercial			1.97	\$0	
9	646653	06	Bare ground	91 Undeveloped land	Y	United States of America	Exempt Commercial			1.84	\$0	
10	646596	06	Bare Ground	91 Undeveloped land	Y	United States of America	Exempt Commercial			0.49	\$0	
11	552844	06	Bare Ground	91 Undeveloped land	Y	United States of America	Exempt Commercial			0.10	\$0	
12	538132	06	Bare Ground	91 Undeveloped land	Y	United States of America	Exempt Commercial			0.46	\$0	
13	538124	06	Bare Ground	91 Undeveloped land	Y	United States of America	Exempt Commercial			0.45	\$0	
14	455162	06	Forest	91 Undeveloped land	Y	Prince George's County	Exempt Commercial			2.93	\$0	
16	0455170	06	Forest	91 Undeveloped land	Y	Republic Properties	Industrial			1.64	\$35,700	
17	0455147	06	Industrial	34 Fabricated metal products	N	J.P. Penn Randall LLC	Industrial	1984	19,401	5.03	\$1,866,800	
18	0554394	06	Industrial	46 Junkyard	N	Strong, Ashbell	Residential	1928	1,533	2.14	\$421,883	
19	0579490	06	Forest	91 Undeveloped land	Y	Blakeney, Charles	Industrial			0.32	\$59,700	
20	0470443	06	Industrial	51 Wholesale trade	N	Trinity Investments LLC	Commercial Condo	1987	1,931	0.30	\$131,266	
22	0447029	06	Residential Low	11 Single family detached	N	Ramsey, Judith	Residential	1952	1,344	0.38	\$230,933	
22	0447045	06	Forest	91 Undeveloped land	Y	James, Patricia Et Al	Industrial			2.34	\$89,600	
23	0470419	06	Industrial	51 Wholesale trade	N	Roadrunner Property LLC	Commercial Condo	1987	4,898	0.30	\$333,033	
24	0463281	06	Forest	91 Undeveloped land	Y	Roadrunner Property LLC	Industrial			0.13	\$2,500	
25	0511220	06	Forest	91 Undeveloped land	Y	Prince Georges County	Exempt Commercial			2.86	\$294,600	
26	0536037	06	Industrial	63 Business services	N	Finechum Enterprises	Industrial			2.98	\$433,800	
27	0421305	06	Industrial	63 Business services	N	Burton Lane Properties LLC	Industrial			3.75	\$768,000	
28	0635920	06	Industrial	63 Business services	N	George Tate Trucking	Industrial			1.76	\$27,400	
29	426429	06	Industrial	63 Business services	N	George Tate Trucking	Industrial			0.48	\$83,700	
30 and 31	0640169	06	Bare Ground	91 Undeveloped land	Y	USA	Exempt Commercial			0.51	\$97,700	
32	0450163	06	Bare Ground	91 Undeveloped land	Y	MFR Properties	Industrial			1.57	\$201,166	
33	3155421	06	Bare Ground	91 Undeveloped land	Y	Prince Georges County	Exempt Commercial			0.70	\$100	
34	3155439	06	Industrial	63 Business services	N	Kelly Properties LLC	Industrial			0.56	\$67,400	
35	3155405	06	Industrial	63 Business services	N	Kelly Properties LLC	Industrial	2000	20,049	2.80	\$1,923,433	
36	0547083	06	Industrial	63 Business services	N	Blank, Victor	Industrial	1996	3,994	0.46	\$335,600	
37	3155447	06	Industrial	63 Business services	N	Moss Carpet Service Inc	Industrial			0.57	\$67,500	
38	0521145	06	Institutional	48 Utilities	N	PEPCO	Exempt Commercial			0.50	\$100	
39	0636225	06	Institutional	48 Utilities	N	PEPCO	Exempt Commercial			5.68	\$100	
40	0559468	06	Institutional	48 Utilities	N	PEPCO	Exempt Commercial			1.34	\$100	
41	0592345	06	Institutional	48 Utilities	N	PEPCO	Exempt Commercial			1.35	\$100	
										TOTALS:	53,150	\$7,556,814

* Standard Land Use Coding Manual (SLUCM)
 Sources: Maryland Department of Assessments and Taxation (January 11, 2009); Prince Georges County Existing Land Use (November 2008); ERM Field survey (December 2008)
 Prepared by: Environmental Resources Management
 7-May-09

Clear Zone Parcels, Northern Side of Joint Base Andrews



Appendix 6: Prince George's County Development Review Procedures for Noise

Prince George's County has instituted review procedures for development in noise affected areas to ensure that most new development incorporates noise level reduction (NLR) into buildings. Review of development with respect to noise is conducted by the Prince George's County Department of Environmental Resources (DER) and divisions of the M-NCPPC's Prince George's County Planning Department: Development Review Division; and Countywide Planning Division, Environmental Planning Section.

Development applications can be submitted in one of the following forms:

- ❖ Subdivision
- ❖ Detailed site plan (DSP)
- ❖ Special exception
- ❖ Building permit
- ❖ Change of use (use and occupancy permit)

Subdivisions, DSPs, and special exceptions are referred to the M-NCPPC Environmental Planning Section, which reviews the location of a proposed project in respect to AICUZ noise zones. The section requires notes on the approved plan and can require NLR, which must be incorporated into architectural drawings submitted with a building permit application for the development. The section below indicates notes typically required.

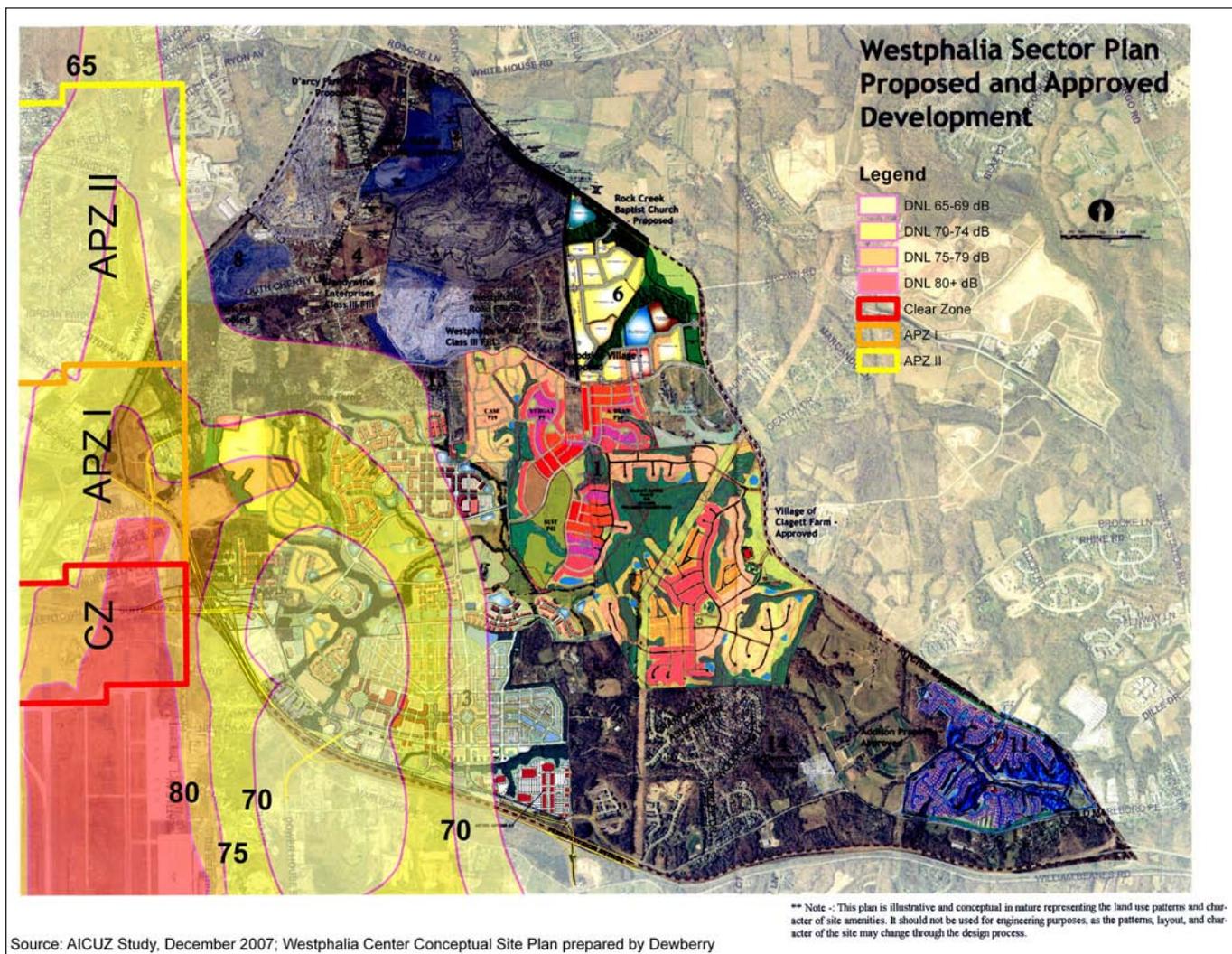
Typical Plat Notes

1. *"All deeds conveying lots to future homeowners within this subdivision shall include language notifying all future contract purchasers of the proximity of the property to Joint Base Andrews and noise levels related to military aircraft overflights. The deeds of conveyance shall include the disclosure notice. At the time of purchase contract with homebuyers, the contract purchaser shall sign an acknowledgement of receipt of the disclosure notice. This condition shall be noted on the final plat along with a description of the proximity of the development to Joint Base Andrews and noise levels related to military aircraft overflights."*
2. *"Properties within this subdivision have been identified as possibly having noise levels that exceed 65 dBA Ldn due to military aircraft overflights. This level of noise is above the Maryland designated acceptable noise levels for residential uses."*
3. *"Prior to the application for building permits, a certification by a professional engineer with competency in acoustical analysis shall be placed on the building permits stating that building shells of structures have been designed to reduce interior noise levels to 45 dBA Ldn or less."*

Applications for building permits and changes of use are made to DER. DER refers applications to the M-NCPPC Environmental Planning Section if there is a note on a subdivision plat. In these cases the Environmental Planning Section can require NLR. In Prince George's County construction plans must comply with the International Building Code.

The only cases where a development that should incorporate NLR may not be required to do so involve older parcels that never went through the subdivision process, or lots in an older subdivision that was approved without the plat notes now required. DER could approve a building permit or use and occupancy permit (U & O) on such parcels or lots without the application being reviewed by the Environmental Planning Section.

Appendix 7: Westphalia Center Conceptual Site Plan with Noise and Accident Potential Zones

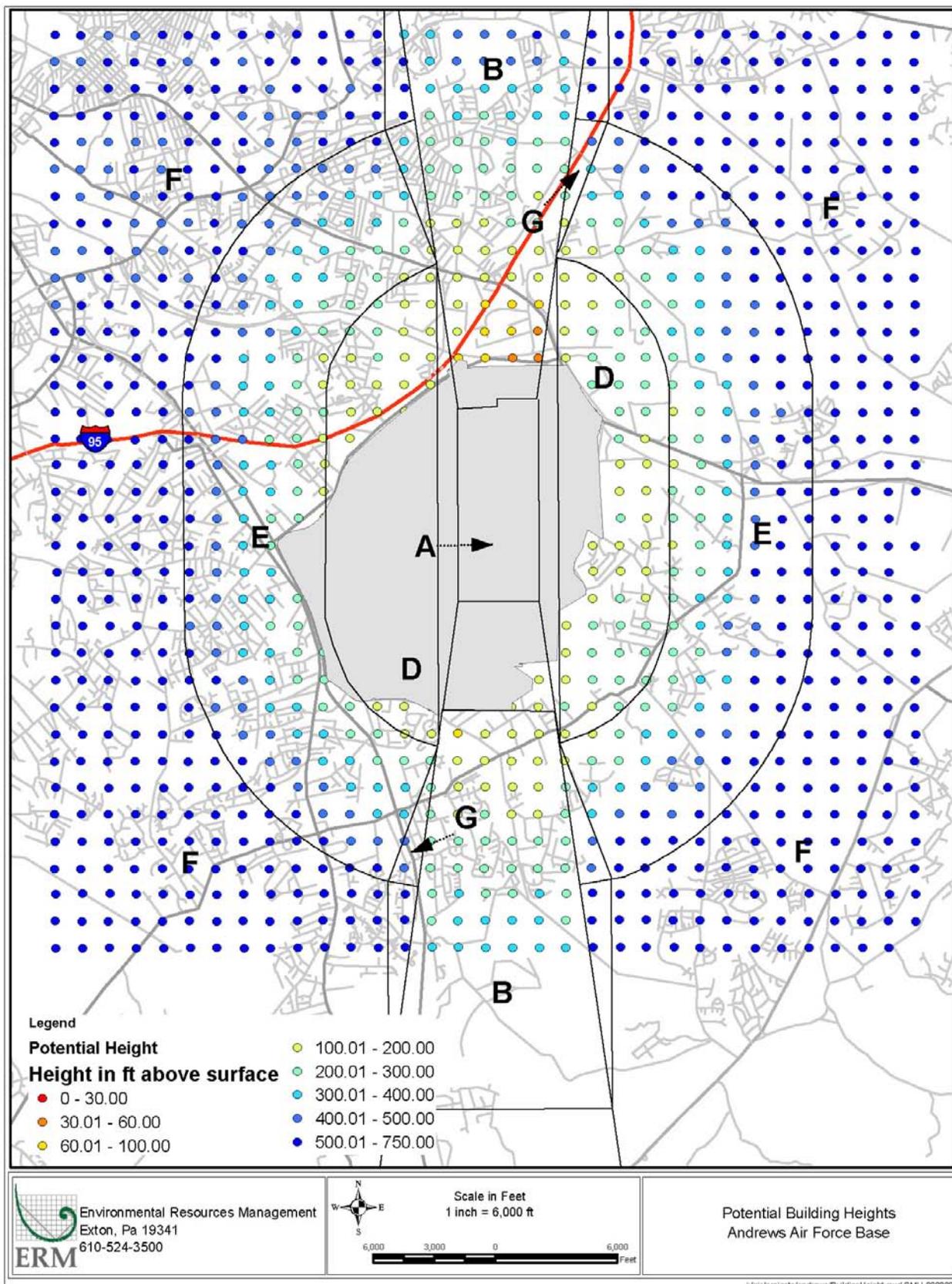


Appendix 8: Zoning Districts in Runway Airspace Imaginary Surfaces

Zone	Specific	Height Restriction (feet)	AAFB Runway Airspace Imaginary Surfaces						
			A	B	C	D	E	G	
Residential	R-O-S (Reserved Open Space)	35		X	X	X	X	X	
	O-S Zone (Open Space)	35		X			X		
	R-A Zone (Residential-Agricultural)	50		X	X	X	X		
	R-E Zone (Residential-Estate)	35		X	X		X		
	R-R Zone (Rural Residential)	35		X	X	X	X	X	
	R-80 Zone (One-Family Detached Residential)	40		X		X	X	X	
	R-55 Zone (One-Family Detached Residential)	35		X		X	X	X	
	R-T Zone (Townhouse)	40					X		
	R-30 Zone (Multifamily Low Density Residential)	40					X		
	R-30C Zone (Multi family Low Density Residential Condominium)	40					X		
	R-18 Zone (Multifamily Medium Density Residential)	40				X	X		
	R-18C Zone (Multi family Medium Density Residential- Condominium)	40					X		
	Commercial	C-A Zone (Ancillary Commercial)	-						X
		C-O Zone (Commercial Office)	-		X		X	X	X
C-S-C Zone (Commercial Shopping Center)		-		X	X	X	X	X	
C-1 Zone (Local Commercial, Existing)		-					X		
C-2 Zone (General Commercial, Existing)		-					X		
C-M Zone (Miscellaneous Commercial)		-		X	X	X	X		
Industrial	I-3 Zone (Planned Industrial/Employment Park)	-			X				
	I-4 Zone (Limited Intensity Industrial)	-		X		X	X		
	I-1 Zone (Light Industrial)	-		X	X	X	X	X	
	I-2 Zone (Heavy Industrial)	-			X	X	X		
Comprehensive Design	R-S Zone (Residential Suburban Development)	40			X		X		
	R-M Zone (Residential Medium Development)	40			X	X	X		
	L-A-C Zone (Local Activity Center)	80			X	X	X		
	E-I-A Zone (Employment and Institutional Area)	-			X				
Planned Community	R-M-H Zone (Planned Mobile Home Community)	35				X			
Mixed Use	M-X-T Zone (Mixed Use - Transportation Oriented)	110				X	X	X	

Primary Surface - All Clear Zone On Base

Appendix 9: Potential Building Heights



Appendix 10: Economic Development Assessment

As part of the JLUS, the consultant team conducted a survey of the commercial and industrial areas around Joint Base Andrews in February 2009. This survey focused on vacancy and general appearance and condition of base area properties. It also considered the effects of potential JLUS land use policies and opportunities for economic synergies with the base. Areas were categorized as one of three conditions:

- ❖ Needs investment/revitalization (1)
- ❖ Healthy/stable (3)
- ❖ Intermediate (2) falling between conditions expressed by (1) and (3).

The areas assessed are depicted on **Appendix Map 1** and the categorizations are summarized in the following table.

Appendix Table 10–1. Survey of Commercial and Industrial Land Uses

Area		Condition			Located	
Number	Description	1. Needs investment/revitalization	2. Intermediate	3. Healthy/Stable	In BRAC Zone	In Enterprise Zone
1	D'Arcy Road, Cryden Way, the Kaverton Road Business, and Industrial Parks		✓			✓
2	Forestville Plaza Commercial	✓				✓
3	Intersection of Forestville Road, Marlboro Pike, and Marlo Plaza		✓			✓
4	Southeast Quadrant of Forestville Road and Pennsylvania Avenue	Vacant Land				
5	Penn-Belt Area Industrial and Business Parks		✓			
6	Penn-Mar Shopping Plaza, Centre at Forestville, Great Eastern Plaza, Penn Station Shopping Center, Silver Hill Plaza		✓			✓
7	Branch Avenue		✓		✓	✓
8	Allentown Road Corridor	✓			✓	✓
9	Suitland Road/Morningside	✓			✓	✓
10	Clinton			✓		
11	Old Alexandria Ferry Road	✓				
12	Presidential Parkway Area			✓		
13	Dower House Road/Melwood		✓			

Source: ERM February 2009 fieldwork

Commercial and Industrial Area Assessment Data

The following section contains assessment details for each commercial/industrial area identified on **Appendix Map 1**. Arranged by Prince George's County planning subregions, this data describes current conditions and identifies existing master plan or sector plan recommendations relating to economic development for the relevant area.

Subregion 4

Area 1 on Appendix Map 1: The D'Arcy Road, Cryden Way, and Kaverton Road business and industrial park area is in intermediate condition. Sections of D'Arcy Road need revitalization but the commercial areas have relatively high occupancy levels. Development on Kaverton Road and Cryden Way is newer and better maintained than on D'Arcy Road, although the newer buildings have higher vacancy rates.

Area 2 on Appendix Map 1: The Forestville Plaza commercial area needs revitalization and investment. The area is approximately 75 percent occupied but has an overall appearance of underutilization. The occupation of the site is mostly storefront churches which only see foot traffic on Sundays. The *Adopted Subregion 4 Master Plan and Endorsed Sectional Map Amendment* recommends the redevelopment of the Forestville Shopping Center for light industrial uses. It also recommends considering the area for a new business park and employment center, given its proximity to MD 4 (Pennsylvania Avenue) and Marlboro Pike. The plan recommends redeveloping the Marlo Furniture site and existing industrial uses at the northeastern corner of MD 4 (Pennsylvania Avenue) and Forestville Road as an expansion of the Penn-Belt South Industrial Park and the Penn-East Business Park.

Area 3 on Appendix Map 1: The southeastern quadrant of Forestville Road and MD 4 (Pennsylvania Avenue) currently is undeveloped. The Subregion 4 Master Plan recommends this area as an extension of the industrial area to the south.

Area 4 on Appendix Map 1: The shopping center cluster located at Marlboro Pike and Silver Hill Road is one of the best commercial/retail areas in the study area. With the exception of Eastern Plaza, which is in intermediate condition, the other shopping centers, including the one on Donnell Drive, appear healthy and stable. The *Approved Marlboro Pike Sector Plan and Sectional Map Amendment* recommends the following:

- ❖ Creation of a Silver Hill Cultural Triangle; strategically place new commercial structures along Marlboro Pike and Silver Hill Road to enhance the area and support a more pedestrian-friendly environment.
- ❖ Develop a health and wellness center at Great Eastern Plaza; redevelop and extend the existing retail structure to front Marlboro Pike. New retail stores should focus on health and wellness and include medical offices.
- ❖ Donnell Drive mixed-use development; extend Boone's Lane across Marlboro Pike into and through the Penn-Mar Center, crossing Donnell Drive and into the Centre at Forestville. New restaurants and retail businesses would be developed along Boone's Lane and Marlboro Pike. The Subregion 4 Master Plan goes one step further, showing a vision plan for the Donnell Drive site that extends to Pennsylvania Avenue.
- ❖ A marketing and branding program.

Areas 1, 2, 3, and 6 are wholly or partially located within an enterprise zone. Businesses that locate in these areas may be eligible for income tax credits and real property tax credits in exchange for job creation and investments made in the zone.

Subregion 5

Area 10 on Appendix Map 1: Clinton is another of the stronger commercial areas in the base vicinity. This area has high occupancy rates, exhibits an overall well-maintained appearance, and appears active with shoppers. The *Approved Subregion 5 Master Plan and Sectional Map Amendment* recommends the preparation of a Clinton Sector Plan and SMA to, among other issues, address the appropriate channeling of commercial development in this area.

Area 11 on Appendix Map 1: The entire stretch of Old Alexandria Ferry Road needs revitalization and reinvestment to improve the area as an economic center. The area appears to have a relatively low occupancy rate, and has sections in disrepair or in need of maintenance. Much light industrial warehouse and business park space zoned for light industrial warehouse and business park use is being occupied by ministries and churches. The Subregion 5 plan recommends retaining existing industrial and employment areas along Old Alexandria Ferry Road and Kirby Road.

Subregion 6

Area 5 on Appendix Map 1: The Penn-Belt industrial and business parks area is located partially in Subregion 4 and partially in Subregion 6. Categorized as in intermediate condition, the area is well maintained; however, ministries and churches occupy some underutilized spaces. The Subregion 6 Plan encourages industrial uses in areas affected by aircraft noise and flight paths, and in base accident potential zones.

Area 12 on Appendix Map 1: The Presidential Parkway area in Westphalia is developed as a business park and is one of the most attractive business parks in the entire county. Occupants include the International Association of Machinists and Aerospace Workers. The Westphalia Sector Plan recommends this area for mixed-use and secure office park development.

Area 13 on Appendix Map 1: The Dower House Road area on the eastern side of Joint Base Andrews contains a mix of industrial uses, undeveloped areas, and residential uses. The area is in intermediate condition. Most of the industrial uses are set back from the road and are not highly visible. The Subregion 6 plan recommends industrial uses for most of this area, with commercial uses north of Old Marlboro Pike.

Subregion 7

Area 7 on Appendix Map 1: MD 5 (Branch Avenue) is an important gateway to Joint Base Andrews. Branch Avenue north of the Capital Beltway is dominated by car dealerships and new mixed-use development at the Camp Springs town center near the Branch Avenue Metro station. While development in this area is fairly new and well-maintained, a significant amount of commercial vacancies exists, especially in the mixed-use areas off Branch Avenue on Capital Gateway Drive and Auth Way. Area 7 was not covered in the *Approved Branch Avenue Corridor Sector Plan and Sectional Map Amendment*.

The *Approved Master Plan and Sectional Map Amendment for the Henson Creek–South Potomac Plan Area* envisions the Camp Springs town center as a mixed-use activity center with an arts or cultural theme, providing a diverse and integrated mix of opportunities to live, work, shop, and play. The plan recommends a transit-oriented development pattern to aid in connecting this area to the Branch Avenue Metro station.

Area 8 on Appendix Map 1: The Allentown Road Corridor needs significant public and private investment if it is to become a stronger economic center for Joint Base Andrews. Allentown Road is the “front door” to the base but investment in the area is lacking, as evidenced by low occupancy rates and a lackluster appearance. The Henson Creek-South Potomac Master Plan recommends that the county designate revitalization overlay areas to direct revitalization assistance and efforts to small, targeted locations where

they would be most effective. The Allentown Road corridor is one such location. The Henson Creek plan recommends preparation of a revitalization plan for the north side of Allentown Road directly across from Joint Base Andrews. The proposed plan should promote a new identity and sense of place as the “Gateway to Joint Base Andrews” and should specifically:

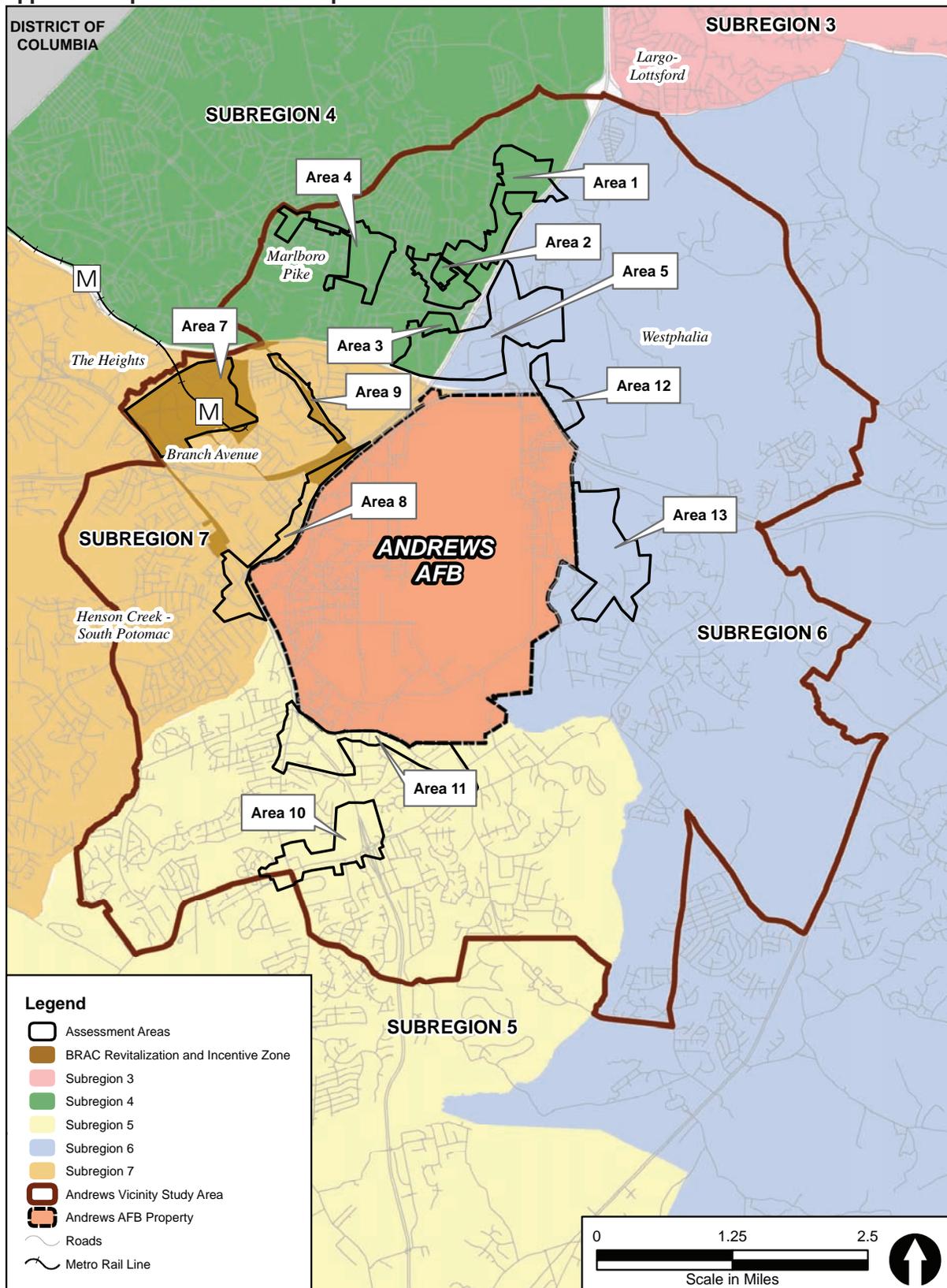
- ❖ Promote a balanced mix of new or revitalized commercial and residential land uses.
- ❖ Identify specific urban design elements for the Joint Base Andrews “gateway,” including:
 - New buildings facing onto wide, tree-lined sidewalks along Allentown Road.
 - Surface parking lots located in the rear of buildings.
 - A new street and sidewalk grid to connect Allentown Road to adjacent residential areas, enhance pedestrian circulation, improve access to bus stops, and reduce traffic conflicts.
 - Live/work or elderly housing located in edge areas that face onto existing residential neighborhoods.
 - Streetscape and public art elements that create a sense of arrival or departure from the area.

Additionally, the Henson Creek plan calls for the development of a Padgett’s Corner community-scaled activity center at the intersection of Allentown Road and Temple Hill Road.

Area 9 on Appendix Map 1: The Town of Morningside and Suitland Road area needs new investment due to high vacancy rates and a somewhat unappealing streetscape. Thoughtful revitalization in this area could attract businesses that would be patronized by Joint Base Andrews personnel due to the proximity of this area to the base’s Main Gate. The *Approved Master Plan and Sectional Map Amendment for the Heights and Vicinity (Planning Area 76A)* recommends the Morningside Industrial Center for light industrial uses to encourage employment development. A county streetscape project for Suitland Road is currently in the construction phase.

Areas 7, 8, and 9 in Subregion 7 are located in the BRAC Revitalization and Incentive Zone. These areas are also located within an enterprise zone.

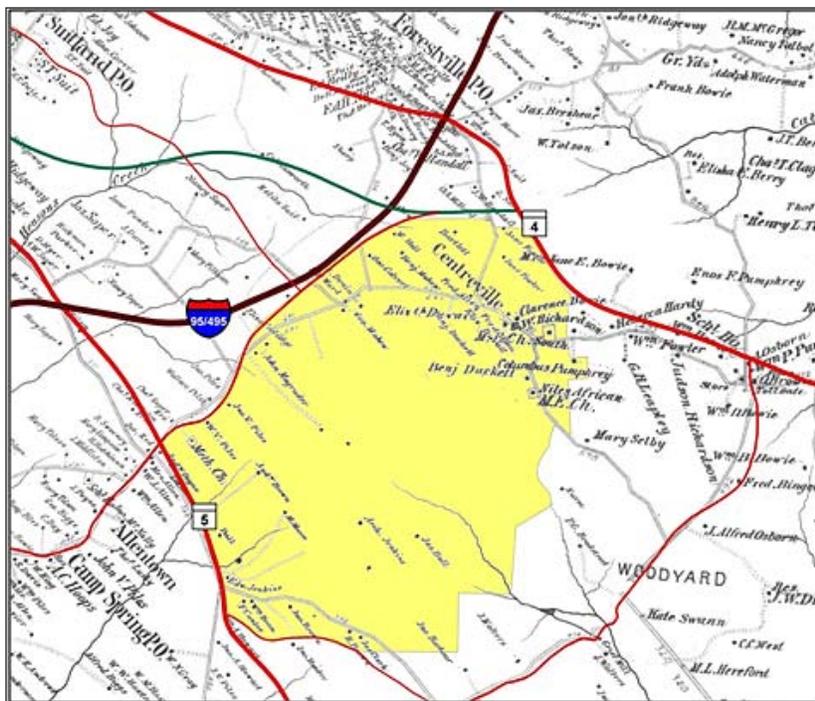
Appendix Map 1: Economic Development Assessment Areas



Source: ERM

Appendix 11: History of Joint Base Andrews Vicinity

From the period of colonial settlement until the twentieth century, the area surrounding what is today Joint Base Andrews was agricultural, catering to the cash crop of tobacco and later diversifying into farming that supplied the food needs of Washington and Baltimore. The only settlements, such as Clinton and Long Old Fields (now Forestville), were small, little more than crossroad communities consisting of dwellings and farm-related buildings. Beginning in the twentieth century, development began occurring outside Washington, D.C., as the idea of living on the outskirts of the city became increasingly appealing to people looking for housing. Large-scale development did not begin until after the extension of the rail lines and



Joint Base Andrews Vicinity in 1878. (Modern roadways and base boundaries have been added for ease of reference.)

streetcar lines from the city. This prompted the establishment of towns at the edge of the city about five miles away from present-day Joint Base Andrews, including Capitol Heights (1910), Seat Pleasant (1931), and District Heights (1936).

Early Suburbs

Capitol Heights was established in the early twentieth century as a residential suburb. Although the subdivision was not directly located on railroad or streetcar lines, the adjacent neighborhoods of Maryland Park and Seat Pleasant were served by the rail lines. Residents of Capitol Heights lived within a mile of railroad and streetcar stops. Because of its relative convenience to public transportation and the

affordability of the houses there, Capitol Heights proved to be a popular new subdivision. A review of the 1910 census indicates that residents of Capitol Heights and Greater Capitol Heights were white, had small families, and had working-class jobs that included firemen, salesmen, electricians, plasterers, carpenters, post office workers, merchants, and printers. By the third quarter of the twentieth century, the historic commercial core of Capitol Heights was losing many businesses, largely because of the construction of a new Central Avenue that bypassed the town. By the 1970s, the once-bustling commercial corridor along Old Central Avenue had begun to decline and buildings were abandoned.¹ Vacant lots and parking lots that replaced the older commercial buildings in Capitol Heights have no visual or physical relationship to the historic neighborhood.

Seat Pleasant was located at the convergence of two railroad lines and the streetcar line, which made it a convenient location for commuters. Seat Pleasant contains a wide variety of buildings constructed from

¹ Town of Capitol Heights, Maryland, "Capitol Heights," <http://www.mdmunicipal.org/cities/index.cfm?townname=CapitolHeights&page=home>, accessed 20 December 2008.

the 1890s through the present. The most intense period of development dates from the 1890s through the 1940s. Buildings in Seat Pleasant reflect a variety of popular architectural styles, including Queen Anne, Italianate, Colonial Revival, Craftsman, and several illustrations of the Modern Movement. Several structures are vernacular interpretations of popular styles. Common building forms in Seat Pleasant include Foursquare, bungalow, Cape Cod, ranch houses, minimal traditional houses, and split-levels. A common building form in Seat Pleasant is the detached rowhouse. These wood-frame houses are typically two stories in height with a full-width porch and have either flat roofs or shed roofs. Most display modest interpretations of the Queen Anne or Italianate styles, common in the late nineteenth century.

District Heights was established in the first quarter of the twentieth century as a commuter suburb located approximately two miles east of the District of Columbia. By 1926, the District Heights Company constructed approximately 25 houses, which included five-room “California” bungalows and two-story, six-room American Foursquares.² The new subdivision was described as a “community of homes for government employees” and a place that “answers the cry of the wage earner for a restricted community coming up to the high ideals of the average working man and still at a price within his reach.” Unlike suburban developments in northwestern Prince George’s County, District Heights was not accessible by streetcar or public transportation. The District Heights Company provided bus service to local residents. Buildings in District Heights are primarily residential, with limited commercial development along Marlboro Pike. Public buildings include a fire station, municipal center, and several schools. Several churches are also located within the survey area. Buildings range in age from 1925 to circa 1965. There is little modern infill within the community. Building forms represented include the bungalow, American Foursquare, Cape Cod, minimal traditional, ranch houses, split foyers, and split-level houses.

Other than these incorporated towns and some scattered development in Forestville (1930s), Suitland (1909), and Morningside (1949), most of the nearby lands remained agricultural with small scattered villages across the landscape.

Post-World War II Development

By the late 1940s and early 1950s population in the surrounding area gradually increased, prompted by the suburbanization of Washington. Trolley and streetcar service radiated from Washington and towns at the edge began to expand. The Town of Morningside came into existence in 1949 when residents, mainly veterans of World War II, decided to incorporate. Other neighborhoods and communities began to appear during this same time frame in areas north and west of the base.

Rapid population growth occurred in the 1960s following construction of the Capital Beltway in the late 1950s, which provided regional access and the opportunity for a greater range in housing choice. Subdivisions of single-family detached dwellings were approved steadily in locations such as Camp Springs, south of District Heights, and along Woodyard Road (MD 223).

Between the 1970s and mid 1990s development continued, especially south and east of the base in Clinton and Melwood, though east of Melwood the area remained largely rural. Since the mid-1990s much of the development has been “infill,” filling in previously undeveloped land.

² Norton, *A History of Suitland*.

Appendix 12: Land Use Regulations for Safety Zones

Memorandum

To: Andrews AFB Joint Land Use Study (JLUS) Policy Committee

From: Planning Department JLUS Project Team

Subject: Land Use Regulations for Safety Zones

Date: August 31, 2009

Introduction

This memorandum describes and explains the process by which the Andrews Air Force Base Joint Land Use Study (JLUS) proposes to regulate land uses and development in areas exposed to above average accident potential and noise levels. This process will be used by Andrews AFB and Prince George's County staff to ensure that future development in these areas is compatible with the base's mission.

Background

Regulating land uses within Andrews AFB's Safety Zones (APZ I and APZ II) is a critical issue from the perspective of public health, safety and welfare. Andrews AFB and Prince George's County are currently working collaboratively on a Joint Land Use Study, which is aimed at limiting the loss of life and property in the event of an aircraft accident in the safety zones. This can be done by reducing the public's exposure to hazards through planning for low density land uses and development patterns.

Through the Andrews AFB Air Installation Compatible Use Zone (AICUZ) study, the Air Force delineated three safety zones at each end of the base's runways: a Clear Zone (CZ), Accident Potential Zone I (APZ I), and Accident Potential Zone II (APZ II). The CZ has the highest accident potential of the three zones. At the southern end of the base's runways the CZ is entirely on the base. However, at the northern end of the runways the CZ is partially on the base and partially off the base, extending across the Suitland Parkway into the Penn-Belt South Industrial Center. The JLUS recommends that existing businesses in the CZ be relocated to nearby sites and the land acquired by a government agency.

The potential for accidents in APZ I is less than in the CZ, but APZ I still has a higher than normal risk factor for crashes. The AICUZ compatibility guidelines for land uses in APZ I are more flexible when compared to guidelines for the CZ and are intended to allow reasonable economic use of the land. However, all residential uses and any non-residential uses that concentrate people in small areas are considered incompatible.

Accident potential in APZ II is still higher than normal, but less than in APZ I. Under the AICUZ guidelines acceptable uses include those of APZ I, as well as low density single-family residential uses, low intensity office and retail uses, and certain types of manufacturing uses.

In general, the AICUZ land use guidelines recommend combining two approaches towards regulating land uses within the safety zones: 1) Prohibiting specific land uses that concentrate large gatherings of people or vulnerable populations such as the elderly or disabled on a regular basis, and 2) Using density restrictions to keep land use densities low, such as to 25 people per acre in APZ I and 50 people per acre in APZ II.

The APZ I and APZ II land use guidelines recommend the prohibition of land uses that:

- ❖ Promote the concentration of large gatherings of people on a regular basis, such as theaters, community centers, hospitals, schools, churches, and high density office uses.
- ❖ Require multistory buildings that could impair aircraft operation and navigation.
- ❖ Specifically cater to people who may not be able to respond to an emergency situation, such as children, the elderly, the disabled, and those requiring medical attention.
- ❖ Are highly labor intensive.
- ❖ Create a potential hazard to the public by involving the storage or use of explosive, flammable, or toxic material in outdoor above ground storage tanks.

In addition to prohibiting specific uses in APZ I and APZ II, the AICUZ guidelines recommend setting density limits on most allowable land uses in order to reduce the number of people that regularly congregate in the safety zones. “In general, land use restrictions which limit commercial, services, or industrial buildings or structures occupants to 25 per acre in APZ I, and 50 per acre in APZ II are the range of occupancy levels considered to be low density.”¹ The JLUS study recommends this approach of limiting non-residential uses by placing a limit on the allowable number of people per acre. The limitation is calculated by limiting the number of parking spaces allowed for a given use, which ultimately limits the size of the building, therefore limiting the number of customers and employees on-site.

The critical statistic in this approach is the vehicle occupancy rate that is used to calculate the number of people per car. Staff reviewed a number of sources to determine this number. The 2000 United States Census lists Maryland’s average vehicle occupancy as 1.08 persons per vehicle. The U.S. Transportation Energy Data Book set the overall vehicle occupancy in the county as 1.57 in 2006. According to the 2007-2008 Prince George’s County Growth Policy Update, vehicle occupancy in the county was approximately 1.3 persons per car. This figure was used in the transportation modeling for the 2002 General Plan and the 2009 Master Plan of Transportation. The figure represents the average number of persons per car in the county. The transportation model does not differentiate between geographic areas in the county, nor can it document trip purpose such as journey to work or shopping trips. The staff recommends that any regulations be based on the 2007–2008 Growth Policy Update figures which give a more accurate indication of local driving behavior.

General light industrial uses generate 0.97 trips per 1000 square feet according to the Institute of Transportation Engineers trip generation rates. A general office building generates 1.40 trips per 1000 sq. ft. and a shopping center generates 3.73 trips per 1000 sq. ft. Commercial is the most intense use, generating more trips and more people, while general office and light industrial uses generate considerably less trips and people. It would be preferable if the undeveloped areas in the APZ locations developed as a mix of general office and light industrial uses. The JLUS study does not recommend changing the existing base zoning on any property in the study area but rather recommends using one or more zoning overlay districts to limit development to keep the concentration of people low.

Recommendations

The following recommendations are presented in the JLUS report and are summarized here. The JLUS land use policy will prohibit specific land uses and limit the density of most allowed uses. For a detailed explanation and the complete recommendations please see Chapter 4 of the JLUS.

¹ OPNAV Instruction 11010.36b, Chief of Naval Operations, AICUZ Programs-Dec. 19, 2002, p. 26.

1: Prohibit specific land uses in APZ I and APZ II.

The JLUS study recommends prohibiting the following land uses that attract high concentrations of people from the safety zones:

- ❖ Hospitals, doctor's offices, and medical clinics
- ❖ Emergency/first response services (fire stations, ambulance)
- ❖ Government services (libraries, post offices, offices)
- ❖ Churches
- ❖ Nursing or care home
- ❖ Schools—private/public
- ❖ Daycare centers—children and adults
- ❖ Elderly housing
- ❖ Hotels
- ❖ Multifamily dwellings
- ❖ Bowling alleys
- ❖ Clubs or private lodges
- ❖ Theatres—indoor/outdoor
- ❖ Indoor rifle or pistol range
- ❖ Mobile home parks
- ❖ Restaurants (permitted in APZ II)
- ❖ Catering use with banquet facility
- ❖ Funeral parlor

The following land uses are prohibited from APZ I and II because they involve the storage or use of explosive materials:

- ❖ Storage of explosive, flammable, or toxic materials in outdoor above ground storage tanks
- ❖ Petroleum refining or related industries
- ❖ Chemical manufacturing
- ❖ Manufacturing of rubber or plastic products
- ❖ Gas stations and fuel depots

2: Limit the density of non-residential uses in APZ I and APZ II.

The JLUS recommends placing a density requirement on all permitted commercial, retail, office uses, and industrial development. The density requirement is based on a 35 person per acre density that will be regulated through applying a parking limitation on all new development in APZ I. The density requirement for APZ II is 50 people per acre.

3: Retain existing residential land uses and do not increase the permitted density of residential development.

AICUZ land use guidelines recommend a maximum permitted residential density of one to two single-family detached dwellings per acre.² This density is generally already present on the southern side of the base in APZ I and II. On the north side of the base there is existing residential development that is 4.5 units per acre. It is not practical or financially feasible to relocate these households; therefore the JLUS recommendation is that the existing residential zoning should remain but no increase in permitted density be allowed.

² Andrews Air Force Base Air Installation Compatible Use Zone (AICUZ) Study, December 2007, p. 4-13, 4-17.

Appendix 13: Density Calculations

Population Density Calculation for 1 Acre Sites									
A	B	C	D	E	F	G	H	I	
Density of People per Acre:	People per Car ¹ :	Number of Parking Spaces per Acre ² :	Allowable Commercial Square Footage per Parking Space:	Allowable Commercial Square Footage on a 1 Acre Site:	Percent of Lot Coverage:	Floor Area Ratio (FAR):	Possible Commercial Uses:	Visual Representation:	
		<i>Column A divided by Column B equals Column C</i>		<i>Column C multiplied by Column D equals Column E</i>	<i>Column E divided by 43,560, then multiplied by 100, equals Column F</i>	<i>6750 divided by 43,560 equals Column G</i>			
Accident Potential Zone (APZ) I									
35	1.3	27	250	6,750	15.5 %	0.15	Small Commercial Building (Bank)		

¹ The figure of 1.3 occupants per car is taken from the 2007-2008 Prince George's County Growth Policy Update.

² The allowable number of parking spaces per acre is derived from the Prince George's County Zoning Ordinance (Section 27-568).

Appendix 14: Federal Policy and Funding Programs that Address Encroachment Issues around Civilian and Military Airports¹

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1 Presented as a memorandum to the Prince George’s County Council on November 17, 2009.

Introduction

All airports, military and civilian, affect their surrounding communities. Limiting development encroachment into flight approaches and “safety areas,” ensuring land use compatibility, and mitigating airport noise impacts are goals shared by local and state governments and federal agencies, including the Federal Aviation Administration (FAA) and the Department of Defense (DoD). Although airport configurations, compatibility goals, and land acquisition policies are similar for all types of airport facilities, federal funding programs markedly differ for military and civilian airports. The FAA operates the Airport Improvement Program (AIP), an annual competitive grant program funded by aviation user fees and taxes. In contrast, no similar funding program exists for land acquisition and compatibility efforts around military air installations. Small technical assistance programs are offered through the Department of Defense to promote joint land use planning between local governments and their military bases, but no large, ongoing funding source exists to help ensure appropriate land acquisition and noise attenuation around military airports. Any federal monies allocated for these projects would have to be authorized through a Congressional appropriation.

Federal Funding Programs for Land Use Compatibility around Civilian Airports

The Airport Improvement Program (AIP)

In the late 1960s, increased demand for commercial air travel placed operational strains on the United States’ existing system of airports. Recognizing the need for expansion of existing air facilities and construction of new airports, Congress authorized the Airport and Airway Development Act of 1970 and the associated Airport and Airway Revenue Act of 1970. These two acts established new federal funding sources for commercial airports, including the Airport Development Aid Program (ADAP), which was funded primarily through new aviation user fees and taxes. Modeled on the funding mechanism for the United States’ interstate highway system, this program ensured grant monies would be designated for aviation purposes only and would, given user trends, provide an increasing source of revenue in the future. The ADAP program was used throughout the 1970s to fund land acquisition for airport expansion/construction and airport improvements, such as runway extensions and the purchase of new navigational technologies.

The success of this federal funding program led to its renewal in the late 1970s. In 1982, Congress passed the Airport and Airway Improvement Act of 1982, which ended the ADAP but established a new grant program in its place, the Airport Improvement Program (AIP). This program expanded the types of aviation projects eligible for federal funding, including airport noise compatibility programs authorized by the Aviation Safety and Noise Abatement Act of 1979. The AIP has been reauthorized several times since its inception, and it currently is the main federal funding source available to projects at commercial airports. Grants are awarded annually on a competitive basis, and demand typically exceeds the amount of programmed funding. All sponsors of proposed projects must submit annual applications. In FY 2008, 2,457 grant awards were executed nationwide under this program.^{1,2} The average grant totaled \$14,128, and the largest grant was for over \$34 million.³ In FY 2009, over \$3.9 billion was programmed through the AIP for civilian airport improvements

¹ “Airport Improvement Program,” Catalog of Federal Domestic Assistance (www.cfda.gov).

² No Maryland aviation project was funded in the FY 2008 round of grants.

³ *Ibid.*

and land use compatibility projects.⁴ Additionally, Congress allocated \$1.1 billion for “ready-to-go” AIP aviation projects through the American Recovery and Investment Act (2009).⁵ Although intended primarily for commercial airports, a small portion of AIP funds (2.5%) are set aside annually for the Military Airport Program (MAP), which helps current or former military airports convert to civilian facilities. No direct assistance is available through the AIP program to existing, viable military air installations.

Land Use and Height Compatibility

As with military air bases, civilian airports have special “safety zones” that relate to aircraft approaches and takeoffs. Land use compatibility within these areas is critical to minimize safety hazards. Civilian airports have Runway Protection Zones (RPZs), which are divided into “object free” and “controlled activity” areas.^{6,7} The dimensions of the RPZs vary by airport, as the length of an RPZ is determined by approach visibility and the size of aircraft served.⁸

The Federal Aviation Administration (FAA) recommends fee simple acquisition of all properties in the RPZ, ideally with all structures removed after acquisition. Each civilian airport is required to have an “object free” zone within the central portion of its RPZs. However, the FAA acknowledges that it may be impractical to displace some development which precedes the creation (or relocation) of an RPZ. In these “controlled activity” areas, FAA policy requires, at a minimum, the imposition of height restrictions and the prohibition of residential land uses and uses that promote gatherings of people.⁹ Properties lying beyond the RPZ in an area known as a Transitional Zone incur a lower safety risk and thus require fewer restrictions. FAA policy for Transitional Zones states that: “Unless there is need for the land for future development or noise compatibility purposes, sponsors should be encouraged to acquire the minimum property interest necessary to ensure safe aeronautical use.”¹⁰ This may come in the form of an avigation easement which limits height, prevents the development of incompatible structures, and “convey[s] the right of flight with inherent noise and vibration below the approach surface.”¹¹

The federal Airport Improvement Program (AIP) provides funds for fee simple acquisition and the acquisition of avigation easements in the RPZs and the Transitional Zones.¹² In order to be eligible, an airport must be included in the National Plan of Integrated Airport Systems (NPIAS). For large and medium hub airports, an AIP grant will cover 75 percent of all eligible costs. Smaller commercial and

⁴ Heibeck, Wayne T. “Economic Recovery Program Airport Improvement Program.” Presentation at the Eastern Region Airports Division Annual Airports Conference. March 5, 2009.

⁵ *Ibid.*

⁶ RPZs originally were called “Clear Zones” by the Federal Aviation Administration (FAA).

⁷ FAA Order 5100.37B, Section 2-27 (2005) states that an RPZ is “centered about the extended runway centerline and begins 200 feet beyond the end of the area usable for takeoff and landing.”

⁸ FAA Advisory Circular 150/5300-13 Change 4 describes RPZ dimensions as varying from spaces of approximately 1,000 feet in length and 450 feet in width (for small aircraft only) to areas 2,500 feet in length and 1,750 feet in width. Areas covered range from 8.035 acres to 78.914 acres.

⁹ FAA Order 5100.37B, Section 2-27 (2005) identifies these incompatible land uses as “residences and places of public assembly (churches, schools, hospitals, office buildings, shopping centers, and other uses with similar concentrations of persons) and other uses inconsistent with airport operations.”

¹⁰ FAA Order 5100.38C, Section 701 (2005).

¹¹ *Ibid.*

¹² FAA Order 5100.38C, Section 701 (2005) states, however, that funding for fee simple acquisition in the Transitional Zones is limited to an area within “5,000 feet from the end of the existing or proposed primary surface.”

general aviation airports will receive AIP grants covering 95 percent of all eligible costs. Land acquisition must occur no more than five years prior to property development/improvement. Land options may be purchased with AIP funds, but this is not strongly encouraged, due to the highly speculative nature of options. Land option costs may only be reimbursed with AIP funds if the land optioned is actually acquired in fee by an airport owner.

Noise Compatibility

Noise impacts created by commercial and general aviation airports are regulated by Federal Aviation Regulation, Part 150, which focuses on planning for noise compatibility around civilian airports. Authorized under the Aviation Safety and Noise Abatement Act of 1979, Part 150 establishes a voluntary program through which airport owners/operators may acquire federal grants for noise abatement initiatives. Participation in the Part 150 program requires an airport owner/operator to prepare Airport Noise Exposure Maps (NEM) that delineate existing airport-area noise contours for DNL 65 dB and above areas and any anticipated future changes to these noise contours. These maps are used to identify areas within the noise zones that contain incompatible land uses. Additionally, an airport owner/operator must prepare a Noise Compatibility Program (NCP) that details how the airport intends to reduce incompatible land uses and/or mitigate adverse noise impacts in DNL 65 dB and above noise zones.

Noise compatibility projects receive 34 percent of the Airport Improvement Program's discretionary funds. Eligible projects may include land acquisition, noise monitoring equipment, noise barriers, and noise level reduction (NLR) in area residences or places of public assembly that fall within the DNL 65 dB and DNL 74 dB noise contours.¹³ Land acquisition costs may include:

- ❖ Fee simple buyouts by the airport owner that allow a change in land use (to one that is compatible with the noise zone).
- ❖ Fee simple acquisition of residential properties in which AIP funds are used to purchase the properties and institute noise level reduction (NLR) measures before the property is resold for residential uses ("purchase assurance"). An aviation easement is placed on the property at the time of resale.
- ❖ A guarantee by the airport owner that properties falling within designated noise contours (DNL 65 dB–DNL 74 dB) will sell at their fair market value; if not, the airport owner will be responsible for using AIP funds to cover the difference. The seller will only be compensated if an aviation easement is placed on the property at the time of sale ("sales assurance").
- ❖ An agreement by the airport owner to pay certain transactional costs at the time of a property's sale in exchange for an aviation easement being placed on the property ("transaction assistance").¹⁴

Additionally, easements, restrictive covenants, and/or development rights may be purchased with AIP funds.

Noise level reduction (NLR) projects are commonly undertaken with AIP funds. AIP funds typically will cover 80 percent of costs associated with these projects. NLR projects must be identified in an NCP and funds must be used on properties falling within the DNL 65 dB–DNL 74 dB noise zone. Noise attenuation measures, which may include window and door replacement, increased insulation, weatherstripping, and

¹³ FAA Order 5100.38C, Section 811 (2005) provides that noise compatibility projects may be eligible if they fall in DNL 55 dB–DNL 64 dB noise zones, if it can be established that the project will create a noise buffer or achieve equitable conditions across a neighborhood (*e.g.*, all houses in a neighborhood become eligible for noise level reduction measures).

¹⁴ *Ibid.*

central air conditioning, should reduce interior noise levels to DNL 45 dB. Funds will not be allocated for proposed NLR in residences or places of assembly located in DNL 75 dB or greater noise zones, as FAA policy strongly recommends a land use change for these properties.¹⁵

Federal Relocation Assistance

Any project receiving AIP funds for land use or noise compatibility falls under the jurisdiction of the Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C. §4601 *et seq.*). Enacted in 1971, this federal law ensures that any individual or business displaced from his/her/its residence or property due to federal actions will receive federal reimbursement for new property acquisition and/or relocation costs (in addition to the fair market value purchase price). Individuals displaced from residences may receive moving costs, up to \$22,500 to purchase a replacement dwelling, and up to \$5,250 in downpayment assistance.¹⁶ Businesses may receive up to \$2,500 for relocation searches, up to \$10,000 for re-establishment costs, and moving costs. Businesses and individual residents will also receive relocation assistance in the form of advisory services, assistance in locating new property, and help in completing any necessary forms/applications.

Federally-Funded Compatibility Programs at Baltimore-Washington International Airport (BWI)

Operated by the Maryland Aviation Administration (MAA), the Baltimore-Washington International Airport (BWI) participates in the FAA's Part 150 program. BWI's Office of Noise, Real Estate, and Land Use Compatibility has an FAA-approved Noise Compatibility Program (NCP) and uses several AIP-funded strategies for noise mitigation, including acquisition of aviation easements, a Voluntary Noise Acquisition (Buyout) Program, a purchase assistance program, and a noise level reduction (NLR)/soundproofing program for eligible homeowners and airport-area schools.

Under the Voluntary Noise Acquisition Program, the MAA uses AIP funds to purchase properties located in noise zones greater than DNL 70 dB. Homes that can remain in residential use will receive noise level reduction measures; others will be rezoned to industrial or commercial uses. In 2007, 343 properties were eligible for this program; of these, 250 had been acquired. Participation is voluntary, and 89 owners either declined or did not apply for this program. The MAA has received approximately \$28 million over the course of the Voluntary Noise Acquisition Program to purchase 200 residential properties and rezone them to compatible industrial uses. In addition, the MAA spent \$9.3 million to purchase a mobile home park located within the DNL 65 dB noise zone and relocate its residents.¹⁷ The MAA has received and expended over \$40 million in AIP funds on this acquisition program since the AIP grant process began in 1982.¹⁸

BWI's Homeowners Assistance Program has two prongs: 1) "purchase assurance"; and 2) an NLR component. Under "purchase assurance," the MAA will provide financial assistance to homeowners in the DNL 70 dB–75 dB noise contour who do not qualify for the Voluntary Noise Acquisition Program. This comes in the form of a contract that commits the MAA to pay the difference between the property's fair

¹⁵ Additionally, FAA Order 5100.38C, Section 12 (2005) states that mobile homes are not eligible for any NLR funding.

¹⁶ Actual amount received varies according to tenure (owner-occupant or renter) and time one occupied a residence.

¹⁷ Personal communication with Ellen Sample, Director of the Aviation Noise and Abatement Office of the MAA, on 12 November 2009.

¹⁸ "Baltimore-Washington International Thurgood Marshall Airport," found at <http://www.boeing.com/commercial/noise/baltimore.html>.

market value and its actual selling price (if lower) and also cover a portion of closing costs on a new home so the homeowner can move out of the noise zone. The noise attenuation component of the Homeowners Assistance Program is a voluntary program that applies to all properties located in noise zones greater than DNL 65 dB.¹⁹ Applicants to this program can receive funds to reduce interior noise levels to DNL 45 dB in exchange for the conveyance of an avigation easement on the property after NLR measures are completed and approved by the MAA.^{20, 21} As of September 2004, 675 homes around BWI had received NLR funding, and another 40 were on a waiting list. Additionally, the MAA provided AIP funds to conduct soundproofing measures at four middle and elementary schools falling within the DNL 65 dB and above noise zones.²²

Federal Policy and Funding for Land Use Compatibility around Military Air Installations

Land use compatibility issues around military air installations are as important as those around civilian airports. Although many military bases are located in relatively undeveloped areas, others have experienced steady encroachment due to patterns of suburban development during the late twentieth century. Minimizing land use, height, and noise level conflicts has become of paramount importance to the Department of Defense to ensure that a military base's mission will not be compromised. Similarly, local and state governments have strong interests in supporting base missions due to the economic benefits these military installations bring to a community.

Local land use planning, however, is considered the province of state and local governments. Although some federal decisions can impact local ordinances, the federal government generally does not intervene in community land use and zoning issues. This system of legal powers places the burden of ensuring land use compatibility on state and local governments. Few federal regulations exist, and federal policy for safety zones and noise zones is limited. Cooperative efforts with local governments are anticipated, but little federal funding is available to support land use compatibility planning around military installations.²³

¹⁹ This noise contour extends approximately seven miles from the end of BWI's runways.

²⁰ According to the Maryland Aviation Administration handout "Residential Sound Insulation Program," "standard treatment" in the NLR program includes new windows, prime doors, storm doors, wall treatment, attic insulation, central air conditioning (for homes that do not already have this), a fresh air system, and kitchen and bath exhaust fans.

²¹ The average total for retrofitting is \$45,000–\$50,000 per home, and the entire retrofitting process typically takes four to six weeks. According to the MAA's website (<http://www.maacommunityrelations.com/content/communityprograms/homeownerassistprograms.php>), approximately 60 homes receive NLR measures each year.

²² Completed in 1991, this project cost \$9.3 million. Maryland Aviation Administration, *Baltimore-Washington International Airport FAR Part 150 Update/Noise Exposure Map Executive Summary* (March 2005).

²³ Department of Defense Instruction (DODI) 4165.57, Section 4.2.1.1. (1977) states that "DoD policy is to work toward achieving compatibility between air installations and neighboring civilian communities by means of a compatible land use planning and control process conducted by the local community."

Federal Policy for Safety Zones

Department of Defense Instruction (DODI) 4165.57 (32 CFR Part 256) identifies basic federal policy for the three safety zones associated with a military air installation.²⁴ According to this document, “Areas immediately beyond the ends of runways and along primary flight paths...should remain undeveloped, or if developed should be only sparsely developed in order to limit, as much as possible, the adverse effects of a possible aircraft accident.”²⁵ The area located immediately adjacent to the end of the runway, the Clear Zone, “has traditionally been acquired by the Government in fee and kept clear of obstructions to flight.”²⁶ Land use acquisition policy prioritizes Clear Zone fee simple acquisition or the acquisition of easements when a fee simple conveyance cannot be achieved.²⁷ Acquisition of properties in Accident Potential Zone I (APZ I) and Accident Potential Zone II (APZ II), both of which are larger than the Clear Zone and have lower accident risk, is deemed less important, and military policy requires exhausting “all possibilities of achieving compatible use zoning, or similar protection” before land use acquisition can occur.²⁸

DODI 4165.57 also identifies appropriate land uses for safety zone areas. The extensive list of land use guidelines is based on a series of principles defined by the need for unobstructed flight paths and realities associated with military technologies.²⁹ These principles include:

- ❖ Flying over safety zone property and generating aircraft noise.
- ❖ Limiting light emissions or the release of substances into the air that have the potential to affect aircraft operations.
- ❖ Prohibiting electrical emissions that could interfere with aircraft equipment.
- ❖ Prohibiting land uses that attract birds or waterfowl.
- ❖ Prohibiting and removing buildings and structures.
- ❖ Limiting vegetation growth.
- ❖ Limiting land uses to those that are compatible with a base’s mission, such as agricultural, utilities, and open space uses.³⁰

Federal policies that impact land use compatibility planning extend beyond Department of Defense administrative regulations. The Department of Housing and Urban Development (HUD) has adopted a policy of “discourag[ing] the provision of any assistance, subsidy, or insurance” for projects and actions within military safety zones.³¹ This policy is designed “to prevent incompatible development around...

²⁴ It should be noted that the three military “safety zones” are typically larger than the “safety zones” at civilian airports. For example, one of the Clear Zones at Joint Base Andrews Naval Air Facility Washington covers over 344 acres. In contrast, a civilian airport’s “object free” Runway Protection Zone area may cover up to approximately 58 acres. Federal Aviation Administration Advisory Circular 150/5300-13 (2007), p. 19.

²⁵ DODI 4165.57, Section 3.3.1.1 (1977).

²⁶ *Ibid*, Section 3.3.2.1.

²⁷ *Ibid*, Section 4.2.2.2.1.

²⁸ *Ibid*, Section 4.2.2.2.2.

²⁹ The full list of compatible and incompatible uses can be found in DODI 4165.57, Enclosure 4.

³⁰ Additional principles can be found in DODI 4165.57, Section 6.

³¹ 24 CFR Subtitle A, § 51.303 (2008).

military airfields.”³² Additionally, the National Environmental Policy Act of 1969 (NEPA) requires that all military branches assess the impact of their operations on the environment, including specific impacts on local communities. This results in an Environmental Impact Statement (EIS) or Environmental Assessment (EA) that is available for public review and comment and which may limit military actions.

Federal Policy for Noise Zones

General federal policy relating to noise associated with military air bases involves taking “all reasonable, economical, and practical measures to “reduce and/or control the generation of noise from flying and flying related activities.”³³ More specific policies also apply to land use compatibility issues in noise zones around military air installations. DODI 4165.57, Section 3.4.2.1 requires the military to identify areas falling within the DNL 65 dB, 70 dB, 75 dB, and 80 dB noise contours and make associated maps available to local governments for appropriate land use planning. Federal acquisition of property in the noise zones is discouraged (unless it also lies in a Clear Zone): land use acquisition based on noise incompatibility is of a lower priority than safety zone land acquisition, and acquisition is authorized only if “all possibilities of achieving compatible use zoning” have been exhausted.³⁴ This position results from the military’s recognition that shifts in noise contours may occur due to increased/decreased flight operations and new technologies, making land acquisition for compatibility in the noise zones a more uncertain proposition than acquisition for compatibility in established safety zones.³⁵

Federal Assistance

Unlike the case of civilian airports, no broad federal funding program is available to assist the military and local governments with property acquisition or noise attenuation around military bases. Instead, the emphasis is on local land use planning, and the military offers three programs designed to provide limited financial and technical planning assistance to local governments working in partnership with their military installations.

Air Installation Compatible Use Zone (AICUZ) Program

Established in 1973 by the Department of Defense in response to growing concern over encroachment pressures around the nation’s military bases, the Air Installation Compatible Use Zone (AICUZ) Program studies noise levels, existing community land uses, and building heights near air bases, collecting data on existing and potential incompatibilities and distributing this data to local governments. Data required under DODI 4165.57 are incorporated into AICUZ reports, including maps of base-area noise contours and safety zones. Furthermore, AICUZ studies incorporate the compatible/incompatible land use table found in DODI 4165.57 for local governments to use as guidance for land use, zoning, and development decisions in safety zones and noise zones around air installations.

³² *Ibid.*

³³ DODI 4165.57, Section 4.1.

³⁴ *Ibid.*, Section 4.2.2.2.2.

³⁵ Additionally, DODI 4165.57, Section 4.2.2.2.2.1 cautions that “Costs of establishing and maintaining compatible use zones must be weighed against other available options, such as changing the installation’s mission and relocating the flying activities, closing the installation, or such other courses of actions as may be available.”

Joint Land Use Study (JLUS) Program

The Department of Defense's Office of Economic Adjustment (OEA) administers another technical assistance program designed to promote cooperative planning between local governments and military installations. Created in 1985, this program aims to "reduce the operational impacts of the military bases on adjacent land" and reduce the potential for future encroachment conflicts.³⁶ Under the JLUS program, the OEA may provide local governments with limited financial assistance to conduct specialized studies that focus on land use, height, and noise zone compatibility issues. Recommendations made through a JLUS help local governments implement regulations and policies that reduce compatibility conflicts while respecting the growth needs of the local community and the military base's mission.

Readiness and Environmental Protection Initiative (REPI)

Another method by which the federal government can offer assistance to promote land use compatibility is through joint partnerships with other federal agencies, a state or local government, or a conservation group under the National Defense Authorization Act for Fiscal Year 2003. This legislation, known as the Readiness and Environmental Protection Initiative (REPI), allows the Department of Defense to work with these groups to acquire an interest in land around military bases to protect important environmental resources and prevent local development from impacting the military base mission. The REPI program does not, however, permit the military to acquire property under this program. The land interest acquired by the partner is a less than fee simple interest, typically a conservation easement. This conservation partnering initiative has resulted in habitat protection for endangered species and land conservation (as protected open space), which helps form a buffer between a military installation and the nearby community. In FY 2009, the REPI program received over \$56.5 million in Department of Defense funds; however, this figure has been reduced to just over \$39 million for FY 2010 in order to reduce overall department costs.³⁷

Conclusion

Although the public safety need to acquire properties in a military air installation's Clear Zone is similar to that of a civilian airport owner's need to acquire properties in the Runway Protection Zone, little funding exists for fee simple acquisition or avigation easements around military air bases. Any federal funds for this purpose must be authorized through a special Congressional appropriation. Other compatibility issues within air installation safety zones or noise zones must be addressed through rezonings and cooperative land use planning.

³⁶ Office of Economic Adjustment (OEA). *Joint Land Use Study Program Guidance Manual* (November 2006), p. 2.

³⁷ Office of the Secretary of Defense, *Fiscal Year 2010 Budget Estimates* (May 2009), p. OSD 610.

Appendix Map 2: Baltimore-Washington International Airport Runway Protection Zones and Noise Contours

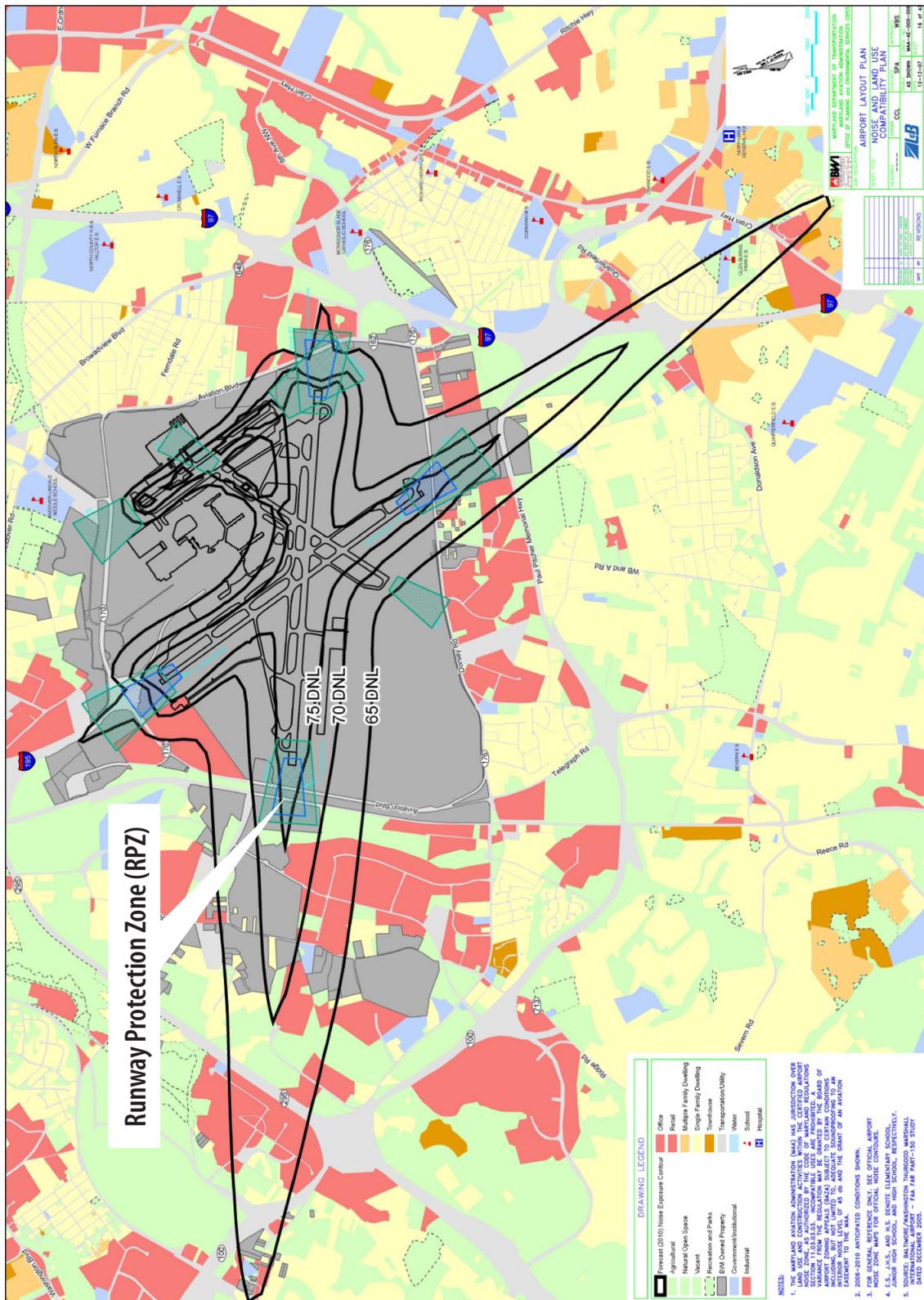


Table 1. Comparison of Safety Zone Acreages at BWI and JBA

Safety Zone	Acreage
Baltimore-Washington International Airport	
Runway Protection Zone (RPZ)	
Runway 15 R	78.914
Runway 15 L	78.914
Runway 33 R	78.914
Runway 33 L	78.914
Runway 28	78.914
Runway 10	78.914
Runway 4	29.465
Runway 22	29.465
TOTAL	532.414
Joint Base Andrews Naval Air Facility Washington	
Northern Clear Zone (CZ)	344 (136 off base)
Southern Clear Zone (CZ)	344 (all on base)
Northern Accident Potential Zone I (APZ I)	564
Southern Accident Potential Zone I (APZ I)	574 (349 off base)
Northern Accident Potential Zone II (APZ II)	804
Southern Accident Potential Zone II (APZ II)	804
TOTAL	3,434 (2,657 off base)

Source: M-NCPPC GIS data and BWI Division of Airport Facilities Planning

Acknowledgments

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