

PART V

The Toolkit

When the policies of a local government are supported by a careful and deliberative study of existing and emerging land use patterns, government will be better equipped to make informed decisions concerning compatible land use activity near an active military installation.

INTRODUCTION

A. Laying the Foundation

Parts II, III, and IV covered the local, State, and Federal governments' roles in community land use planning and civilian development near military installations based on their respective legal authorities to plan and to regulate the public and private use of land. Part V presents this *Practical Guide's* "Toolkit" of applicable planning strategies and supporting land use regulations drawn from contemporary planning and legal literature, military training and readiness guidance, case studies, the policies and practices of State and local governments, and relevant State and local regulatory codes.

Promoting compatible development near military installations is the purpose of this Practical Guide

1. Land Use Compatibility and Military Installations: Promoting compatible development near military installations is the purpose of this *Practical Guide*. Local comprehensive land use planning and complementing land use regulations are the strategies available to local government to address urban growth and land use compatibility issues, whether the issues involve the military, the community, neighbors, or a combination of all three.

The planning process identifies community goals and objectives, policies, and strategies to balance differing objectives among interest groups and individuals. It relies on public forums, due process, and careful public deliberation to arrive at a consensus-based, long-range (10–15 years) plan for a community's future. It sets forth how and where a community will grow, develop, and prosper.

The comprehensive/general plan is more than mere public conjecturing and wild guessing on the part of local government. It embraces a process of consensus-based discovery affording opportunity to weigh a variety of factors, conditions, and variables that assist in establishing a community-based policy framework for dealing with a community's future.

There are many planning implementation techniques and tools available to local government. The key is wisely applying applicable tools in a constructive manner recognizing there are disparate goals and objectives represented by a constellation of special interests.

The planning processes and tools presented in Part V have direct application to resolving short- and long-term encroachment issues that may negatively affect the training and readiness operations of a military installation and, ultimately, the defense of this Nation.

2. The Land Use Plan as the Primary Planning Tool: A comprehensive/general plan (also known in some jurisdictions as simply the plan), once adopted by a planning commission and approved by the local legislative body, becomes the framework and guideposts for achieving local government's development policies and expectations over time.

The plan sets the local government’s development goals, objectives, policies, and strategies that comprise the legal and policy framework by which a local governing body justifies the fair and balanced application of land use regulatory tools in the public interest.

3. Land Use Regulations: Even though local government plans and land use regulations are administered under separate legislative processes, they are mutually interdependent and complementary. The plan’s goals and objectives cannot be realized outside a regulatory framework. A comprehensive regulatory structure is the key to a successful encroachment prevention strategy, whether it involves a military installation or civilian facilities, such as a commercial airport, rail facility, industrial plant, wastewater treatment plant, or an energy plant.

In some communities, the plan is considered a guide to future development, containing recommendations for the allocation of land use activities that are coordinated with the public infrastructure investments (e.g., streets and highways, parks, and schools). In other jurisdictions, it may be subject to a “consistency requirement,” where the plan and land use regulations must be synchronized so that, for instance, there must be a plan amendment before there can be a land use classification change inconsistent with the plan’s recommendations.

For example, following adoption of the Airport Land Use Compatibility Plan by the Solano County Airport Planning Commission, the City of Fairfield, California, amended its general plan to be consistent with the Airport Land Use Compatibility Plan.

Subsequently, Fairfield voters approved a ballot initiative that requires voter approval for any future developments proposed on thousands of acres of land around the Travis AFB within the defined “Area of Influence” (AOI) that may be inconsistent with the adopted general plan. This referendum measure remains in effect until the year 2020. It effectively prevents the local government from making any changes to their general plan in the Travis AFB AOI that would be inconsistent with the current general plan without voter approval.

Other States do not have a consistency requirement; the two processes can function independently and often do.

When a local government’s policies are supported by a careful and deliberative study of existing and emerging land use patterns, it will be better equipped to make informed decisions concerning compatible land use activity near an active military installation.

4. Encroachment Is Not One-Sided: Just as the military has publicly stated that the encroachment of incompatible civilian land use activities near a military installation can threaten mission capabilities; so also have neighboring community leaders and residents publicly stated that the encroachment of the military can threaten their “quality of life,” create excessive noise, and negatively affect property values.

The plan’s goals and objectives cannot be realized outside a regulatory framework

A comprehensive/ general plan (the plan) is only as good as the available and legally sustainable implementing strategies (tools)

- a. **The Military's Side:** At one time, military bases, except for ports, were located in out-of-the-way places both for security reasons and so that troops had room to train and to maneuver. Commerce, industry, and human settlements quickly followed, choosing to locate in close proximity to an installation. There was recognition that military bases were economic engines largely supporting many local economies. They provide jobs and the purchase of local goods and services. In exchange, the community prospers.

Local regions and States also benefit economically from the presence of the military. In contrast, remote military testing and training ranges normally do not have the same complement of personnel or the infrastructure and, thus, produce little in terms of direct expenditures to enhance the local economic base.

However, the importance of a testing and training range goes beyond the local economy. It involves a region of military influence that can and does affect a State's economy.

Ranges are under the command of assigned military installations. They are necessary to support the main installation's operational mission and meet DoD training and readiness requirements.

Military installations are dependent upon associated ranges for weapons testing, proficiency, and readiness training. It is this connectivity between a training range and its host operating base that elevates the importance of a test and training range to a State and regional economy.

For example, in the State of Arizona there are three major military air bases — Luke and Davis-Monthan AFBs and Marine Corps Air Station (MCAS) Yuma. These three air bases are connected by military air corridors or routes often referred to as "Military Training Routes" (MTRs) that connect test and training ranges (e.g., the Barry M. Goldwater Range Complex) and military restricted airspace located throughout the State to the home operational base. MTRs are highways in the sky used by military aircraft to practice high- and low-altitude training exercises while en route to an assigned restricted military airspace over an operational range.

The economic significance of the military presence to a State should be considered in the context of a regional system of operational home base connectivity to training and operational ranges with restricted airspace via MTRs.

In 2004, total direct DoD expenditures to support military installations nationwide amounted to over \$346 billion in personnel, contracts, and DoD grants. In 2004, Arizona was the recipient of over \$11.1 billion² in direct DoD expenditures. California, with the greatest number of military bases and ranges, is the largest recipient among all the States, with over \$ 42.3 billion in DoD direct expenditures (2004).³ None of these expenditures takes into account secondary economic effects on State, regional, and local communities.

- b. The Community's Side:** For many years, the military and the civilian communities harmoniously shared the same geographic space. However, as the military grew, modernized, and expanded, it took on louder and more dangerous missions. Aircraft became noisier, artillery grew bigger, and armored vehicles heavier — all producing noise, vibration, dust, smoke, and the potential for accidents that could occur on or off a military base or range. At the same time, community development was spreading across the landscape approaching and, in some instances, surrounding a military installation.

The Naval Air Station (NAS) Oceana in Virginia Beach, Virginia, often is cited as a prime example of significant urban encroachment, as are Nellis AFB in Las Vegas, Nevada, and Fort Hood, Texas.

As communities grew and prospered, residents discovered that they were no longer immune from the growing effects of the military's presence. In some locations the nightly roar of military aircraft taking off from a nearby airfield or a supersonic jet flying at low altitude, the sound of artillery firing in the middle of the night from a close-by range, or the staccato popping sounds from low-flying helicopters became unnerving.

It is not surprising that civilian complaints have grown in proportion to the growth and modernization of military operations in the face of urban sprawl. The two forces are bound to collide based simply on economic synergism.

In a planning context (e.g., urban, suburban, exurban, and rural),⁴ as the military expanded operations and grew in numbers of personnel, the nearby population also grew, largely attracted by the presence and growth of the military. As civilian developments chose to locate in closer proximity to military installations, they became exposed to noise and potential nuisance from expanding military operations.

When complaints mounted, demands to curtail or even cease day and nighttime operations increased. DoD, not immune from civil actions seeking relief, embarked on the Air Installations Compatible Use Zones (AICUZ) program in the early 1970s to inform residents and businesses in advance about the nature of its daily flight operations, type of aircraft flown, and the impact of the operations on the neighboring community.⁵

When civilian neighborhoods crowd around active military bases, airfields, and test and training ranges, the potential incompatibilities are magnified. DoD, through its AICUZ-type programs, identifies land use categories that are compatible and incompatible with military operations. The defining metrics are high noise levels generated from daily military operations of all types and the potential for accidents on or off base due to aircraft or errant ordinance. The data are based on a history of accidents in relation to a military activity.

Growth and economic development attract people and land use activities, including residential, hotels, conference centers, schools, places of worship, and shopping malls where people congregate. The closer a development locates near a military airfield runway or in a generalized sense a training range, the greater the exposure to the potential for noise impact and possible accident.

Over the past 30 years, DoD consistently has recommended compatible land use activities near and around military installations based on the findings of AICUZ and the Operational Noise Management Program (ONMP) and the recently established Range Air Installations Compatible Use Zones (RAICUZ) program reports. The purpose is to both protect the military mission and public health and safety.

B. The Land Use Planning Framework

Strategy: *The key to regulating the use of the land for the public good and in the interest of protecting the public health and safety is legitimacy of purpose; diligent study; due process; an adopted public plan; and the exercise of wise, fair, and informed decision making in the public interest.*

This planning framework and overall construct are organized around four strategies: (1) to organize, (2) to plan, (3) to implement, and (4) to monitor. The local comprehensive/general plan represents the framework and legal basis to achieve community goals and objectives by uniformly applying local government policies and procedures and planning strategies and implementing land use regulations in an effective, fair, and fiscally sound manner.

1. The Framework: The compatible land use planning framework as presented here represents a road map that local governments may follow in support of compatible land use planning and management near military installations. The goal is to maximize the economic benefits of the military's presence to State and local governments while protecting residents from the spillover effects associated with nearby military operations.

Strategy: *The steps in implementing a strategic approach to compatible land use planning near military installations are **organize, plan, implement, and monitor.***

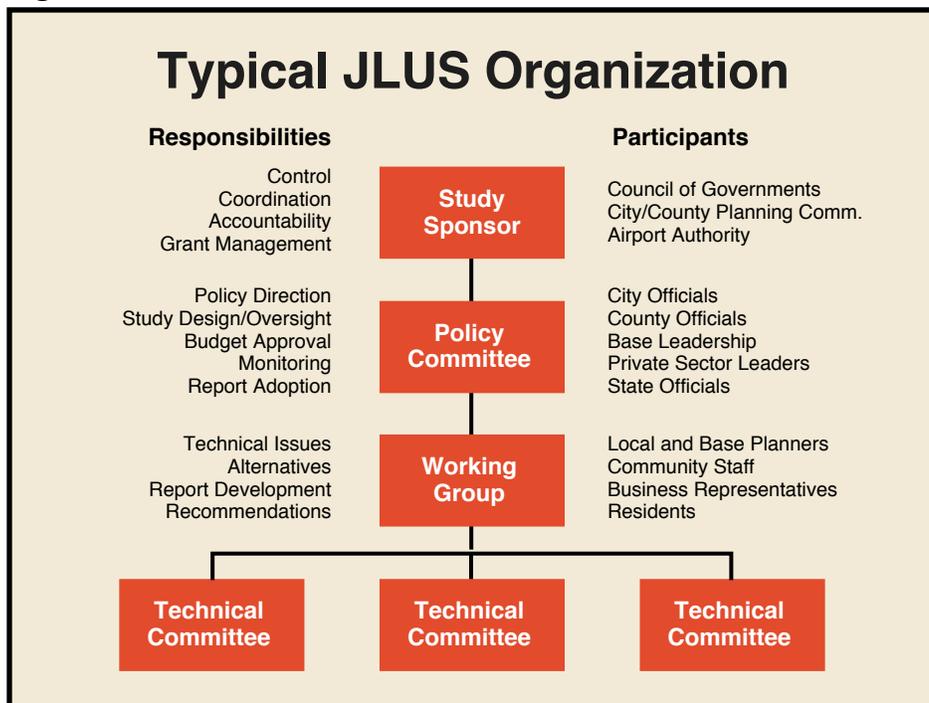
a. Organize: *The first steps in establishing a working collaborative relationship between the local jurisdiction and the military installation command are to:*

- *Organize around the compatibility issues to be addressed;*
- *Assess the issues and identify the available resources, community leadership, and planning programs that can respond;*
- *Formalize in writing or by a verbal understanding, sealed by a handshake if need be, the form of the compatible land use planning partnership;*
- *Appoint a joint policy advisory committee consisting of all stakeholders to address the compatible land use issues;*

- *Select the policy committee members from among the jurisdiction’s elected leadership, the military base command and staff, local government management, affected citizens, chambers of commerce, home builders, real estate interests, and the like; and*
- *Establish a technical staff working group from local planning and administrative support staff to provide technical support to the policy committee; and*
- *Seek out Federal or State funding assistance, if available.*

Figure V-1 presents a typical organizational structure of a “joint policy advisory committee” structure to guide the compatible land use planning process. It is based on the Joint Land Use Study (JLUS) Program supported by the Defense Office of Economic Adjustment.

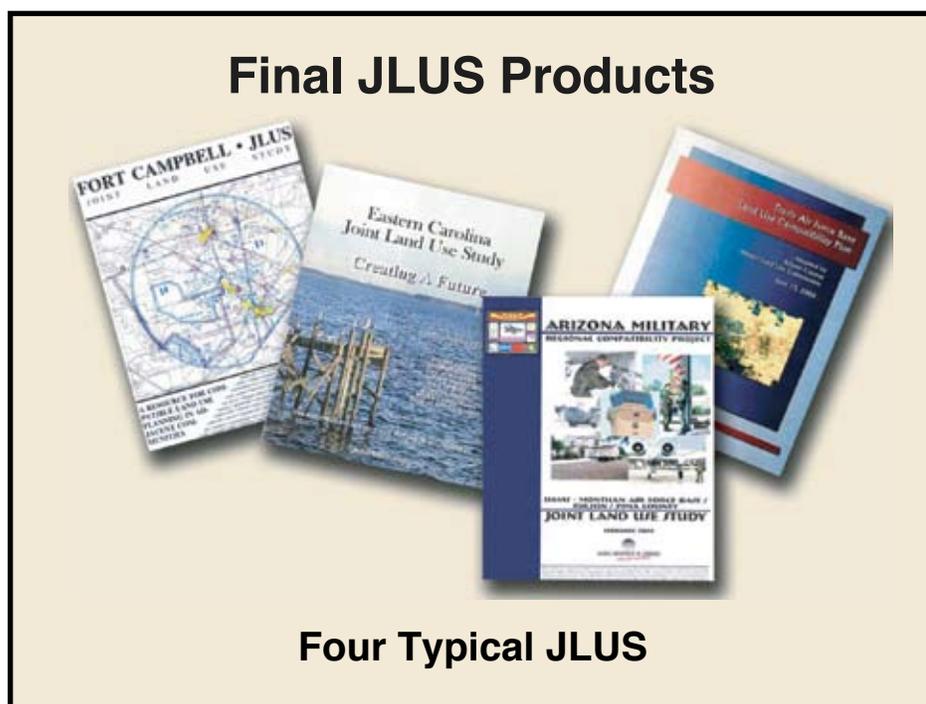
Figure V-1



b. Plan: Begin a joint compatibility planning and discovery processes by:

- *Conducting public meetings or open houses to help the committees understand the nature and extent of the encroachment issue(s) confronting the nearby community and the military installation (always, it is a two-way street);*
- *Developing a work program to address the issue(s);*
- *Assembling resources and technical advisors and commencing a collaborative joint land use planning process;*

- *Identifying the community's strengths, weaknesses, opportunities, and threats (SWOT Analysis) as a basis for issue(s) identification and formulation of planning goals, objectives, and probable actions;*
- *Applying the planning process and using the policy advisory committee structure as the forum to deliberate and reconcile issue(s) and to develop a plan of action;*
- *Readily sharing information, conducting focus group meetings; holding public hearings as necessary to accomplish the goal; and*
- *Preparing and finalizing the joint land use compatibility plans including recommendations for action by all participants.*

Figure V-2

- c. *Implement:*** This is the most difficult stage in the process. A joint compatible land use study/plan by itself will not resolve civilian or military encroachment issues. The recommendations put forward in the plan/study need to be formalized and accepted by the affected governing bodies and by the military by:
- *Incorporating the compatible land use plan recommendations into the local government's comprehensive/general plan;*
 - *Formalizing a Memorandum of Agreement (MOA) on how the military will conduct its operations, recognizing the positives and the necessary negatives for new development (Appendix 7.4);*
 - *Adopting and implementing land use regulations, including updates to the local zoning code, the official adopted zoning map, and other implementation strategies; and*

- *Identifying opportunities for compatible land use partnering to secure less than fee-simple interest in critical areas through acquisition of select development rights.*
- d. Monitor Results:** For any encroachment plan to succeed, continuous monitoring and collaboration between the military command and the surrounding communities is important for no other reason than to deal with changing circumstances, issues, and objectives of stakeholder interests.

2. The Land Use Planning Construct: The wise application of planning principles and practices is the key to implementing a smart growth strategy and promoting compatible land use in a consistent and balanced manner. Parts II through IV of this *Practical Guide* laid out the constitutional and legal framework for Government intervention in the conduct of public and private land use decision making.

Land use planning and zoning are the means by which local government may guide, direct, regulate, enforce, and encourage community growth and development. It is broadly accepted based on its grassroots appeal and the idea that a community can guide and determine its future by the wise application of State-delegated police powers. Absent these tools, a community cannot execute public land use policy in a coherent manner nor can it make sound financial decisions regarding the provision of public services. Land use planning is basic to community order, growth, and sustainability.

The balance of Part V is devoted to identifying those land use planning tools that may have a direct bearing on the issue of compatible land use near military installations. Following each table is an expanded discussion of each tool and its application to encroachment prevention through smart planning at the local government level.

3. This Toolkit: The Toolkit is organized around six land use planning and regulatory subject areas. Each subject area is introduced by a table outlining the planning tools that are discussed subsequently:

- Compatible Land Use Planning (*Table V-1*);
- Land Use Regulations (*Table V-2*);
- Land Subdivision Regulations (*Table V-3*);
- Building and Structural Codes (*Table V-4*);
- The Development Review Process (*Table V-5*); and
- Local Administrative Actions (*Table V-6*).

Each subject area presents a new stage in the land development process. Each subject area identifies a cluster of planning tools and actions that can be taken either by a State or local government or by a military installation to promote compatible land use patterns near military installations while protecting property values and the local tax base.

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The subject areas are presented as Sections C through H. Each section addresses those land use planning tools that can best promote compatible land use activities near military installations. If properly implemented in the context of an adopted and approved comprehensive/general plan framework, a higher degree of land use compatibility should be achievable.

C. Compatible Land Use Planning

The community comprehensive/general plan, once adopted by a local planning commission and approved by the local legislative body (city/county council, board of county commissioners, alderman, etc.), becomes the local jurisdiction's official policy statement for the orderly physical, social, and economic development of a community. For the purposes of this *Practical Guide*, it represents the starting point for identifying and promoting compatible civilian development near a military installation.

Table V-1

Compatible Land Use Planning

Strategies & Tools	Implementing Authorities	Relationship to Encroachment
<p>Land Use Planning Construct</p>	<p><i>State and local government</i></p> <p><i>The Plan represents the goals, objectives, and aspirations of local government (govt.) in the interest of protecting the public health, safety, and welfare.</i></p>	<p><i>This is the most important strategy in an encroachment prevention toolkit. The plan is the defining element of any local encroachment strategy. It is the glue binding a community's actions with a coherent statement of public policy having the force and effect of law.</i></p>
<p>DoD Support to State and Local Government</p> <ul style="list-style-type: none"> Military Department's AICUZ Programs 	<p><i>DoD encroachment programs are produced by the Military Services for use by local government in understanding the training and readiness mission requirements.</i></p>	<p><i>The AICUZ program is the DoD defining statement regarding the impact of DoD missions on the surrounding community. It provides invaluable information that could assist local government in reaching informed consent regarding the appropriate allocation of compatible land use relative to the military's sustaining missions. The programs are intended to support local government community land use planning programs and processes by providing scientifically based technical information on military activities.</i></p>

<ul style="list-style-type: none"> • Office of Economic Adjustment (OEA) Joint Land Use Study (JLUS) Grant Program 	<p><i>State and local govt.</i></p> <p><i>This program provides technical and financial assistance to State and local govt. to develop compatible land use plans based on DoD AICUZ programs.</i></p>	<p><i>This program financially supports a community-based land use planning process, funded by the DoD Office of Economic Adjustment through a planning assistance grant. The program promotes effective compatible land use planning near a military installation and helps set the local govt's legislative framework and action agenda to revise, as required, the community's plan, including supporting land use regulations.</i></p>
<ul style="list-style-type: none"> • DoD Conservation Partnering Authority 	<p><i>State and local govt. and conservation-based nongovernmental organizations (NGOs)</i></p> <p><i>This authority (10 U.S.C. § 2684a) encourages Military Departments to partner with State and local govt. and conservation-based NGOs to acquire interests in property surrounding a military installation that, if developed in an incompatible manner, could seriously affect the military's mission.</i></p>	<p><i>Military installations are increasingly being called upon to not only train and equip soldiers for combat, but to be stewards of critical natural habitat and protectors of endangered species. This is a role that the military gladly accepts and provides for in its annual operating budgets.</i></p> <p><i>In 2002, Congress authorized the DoD to enter into conservation partnering agreements that support conservation, protect endangered species and habitat, and prevent incompatible development that could compromise the mission of a military installation.</i></p>
<p>State Govt. Programs</p> <ul style="list-style-type: none"> • Legislative Initiatives 	<p><i>State govt.</i></p> <p><i>State legislatures may choose to pass legislation to require, by local planning statute, compatible land use plans that support the readiness missions of a nearby military installation.</i></p>	<p><i>State legislatures increasingly are recognizing the vulnerability of the military readiness training mission to civilian encroachment and have taken steps to require that local comprehensive/general plan updates include a new plan element devoted exclusively to the sustaining presence of the military.</i></p>

<p>• State Planning Authority</p>	<p><i>State govt.</i></p> <p><i>The powers to conduct planning and zoning and to regulate the use and occupancy of land are based on State enabling legislation or statute authorizing local govt. to develop comprehensive/general plans.</i></p>	<p><i>With this authority come a number of state-sponsored initiatives that can support a local govt's efforts to institute compatible land use planning and regulatory programs that contribute to the sustainability of local military readiness missions.</i></p> <p><i>The executive branch of State govt. has the ability to influence development decisions at the local level through the smart growth initiatives that support the local comprehensive/general plan and the military presence.</i></p>
<p>• Regions of Military Influence (RMI)</p>	<p><i>State, regional and local govt.</i></p> <p><i>The recognition of the regional and statewide impacts of the presence of a consortium of integrated military installations that support both the national defense mission and the prosperity of State and regional governance.</i></p>	<p><i>The designation of an RMI by the State or regional entity can bring with it the recognition of the importance and critical economic influence of the statewide military presence to the host State.</i></p> <p><i>This is a regional planning construct intended to elevate above the local planning level the significance of the presence of the military to the State. The RMI is a precursor to and recognition of the criticality to State and local govt. interests.</i></p>
<p>• Areas of Critical State/Local Concern and Interest</p>	<p><i>State or local govt.</i></p> <p><i>This is an authority available to a number of states and can be adopted by others to recognize the importance of the presence of the DoD to State and local economies and to national defense.</i></p>	<p><i>This authority represents an important encroachment prevention strategy that can be instituted at the State govt. level.</i></p> <p><i>The formal recognition of the military presence in a State general plan as an "area of critical State concern" can be significant and can require special State and local compatible development initiatives near military installations. The National Governors Association (NGA) has identified this tool as one of a series of best practices.</i></p>

<p>• State Capital Expenditures in Local Improvement Programs.</p>	<p><i>Office of the Governor</i></p> <p><i>The executive branch of State govt. has the authority to direct where and when State capital expenditures are to be made for such things as highway construction projects, and other public works projects.</i></p>	<p><i>The powers to plan, if not leverage, State capital investments are an important encroachment prevention strategy. State capital investments in public works projects can, and most often will, attract and support increased economic development activity and growth. When considering a State capital budget, the executive branch should take into consideration the impacts of their financial decisions on military readiness.</i></p>
<p>• State Mandates and State Funding</p>	<p><i>State legislatures</i></p> <p><i>When a State mandates that local govt. take on new, previously unfunded programs, such as a plan element devoted to the military's presence in the State, it should provide the financial support to relieve local govt. of the added fiscal burden.</i></p>	<p><i>When a State mandates or enables local government to initiate programs aimed at supporting the sustainability of the military presence in the State, the State legislature should provide the financial wherewithal and support to local govt. There are Federal programs, such as the OEA Joint Land Use Study Grant Program, that may assist in this regard.</i></p>
<p>Local Government Programs</p> <p>• The Local Comprehensive or General Plan (The Plan)</p>	<p><i>Local govt.</i></p> <p><i>The plan is the legal process and the means whereby local govt. can project and anticipate the future. An adopted and approved plan with complementing goals, objectives, policies, and strategies (land use regulatory standards) is the primary instrument to ensure land use compatibility between the surrounding community and nearby military installations.</i></p>	<p><i>Provides policy guidance on the physical, social, and economic development of a community or sub-area of a community and can legally support local land use development regulations and activities.</i></p> <p><i>This is the most important and flexible encroachment prevention tool available to local govt. It sets the policy framework to regulate and support present and future development through implementation of local land use regulations.</i></p>

<p>• Military Influence Planning District (MIPD):</p> <p>The Designation of a Special Public Planning District for Compatible Land Use Planning Purposes</p>	<p><i>Local planning commission and local governing body</i></p> <p><i>An established official planning area/district can provide the legislative purpose and justification for undertaking a joint compatible land use planning effort involving the community and neighboring military installation.</i></p>	<p><i>ANMIPD recognizes the importance of the military mission to the community. It also recognizes that compatible land use planning will protect the public health, safety, and welfare and supports the military mission.</i></p>
<p>• Military Influence Overlay District (MIOD):</p> <p>Designation of a Special Zoning Overlay District</p>	<p><i>Local planning commission recommends and the local legislative body adopts through the local zoning code.</i></p> <p><i>Gives local govt. additional standards and protections from excessive noise and/or accident potential in the MIOD.</i></p>	<p><i>An official designated zoning overlay district on the Official Adopted Zoning Map confers additional requirements over the use of land, density of population, structure heights, and requirements for indoor sound level reduction.</i></p> <p><i>The MIOD is an effective tool available to local govt. to encourage compatible development while protecting the public health, safety, and welfare and the sustainability of the military mission.</i></p>
<p>• Military Influence Disclosure District (MIDD):</p> <p>Designation of Real Estate Disclosure</p>	<p><i>State/local govt., depending on authority</i></p> <p><i>Real estate disclosure is important for protecting prospective purchasers, sellers, and the broker from possible civil action.</i></p>	<p><i>This is one of the most important encroachment prevention strategies. It does not matter the issue to be addressed. Prospective buyers of property should be made aware of all potential encumbrances on the land in order to make an informed decision.</i></p>
<p>• Development Moratorium or “Time-Out” on Development Application Processing</p>	<p><i>Local govt.</i></p> <p><i>This is a legal means to suspend acceptance and processing of zoning and development applications pending outcome of a study or plan.</i></p>	<p><i>A moratorium allows time for careful and deliberative study of encroachment issues.</i></p> <p><i>This strategy can be effective in encroachment prevention by allowing a local govt. to call a “time-out” from processing a development application until a planning study has been completed and land use guidance provided.</i></p>

1. The Department of Defense (DoD) Planning Programs: The DoD mission is national defense. The prevention of civilian encroachment near military installations and test and training ranges is a national defense priority. The missions of State and local governments are the preservation and protection the public health, safety, and welfare and promoting the wise use and stewardship of land. These are not mutually exclusive goals, provided both interests recognize the respective mission imperatives of the other.

Five DoD programs are available to State and local government to support compatible land use and civilian development near military installations. Typically, the Federal Government's role is limited to providing technical information and financial support in the form of grants to encourage jurisdictions to adopt and implement local planning and programs to achieve compatible civilian development.⁷

An objective of these DoD programs is to inform local government leaders, planning commissioners, zoning board members, and residents about the impacts of on- and off-base military operations. They also can assist in implementing local land use plans that support the military presence and local economic development while protecting the nearby civilian population from exposure to excessive noise and/or accident potential.

The applicable programs are:

- a. **Department of Defense (DoD) Compatible Use Zones Programs:**⁸ In the early 1970s, DoD acknowledged the potential impacts of its operations on areas outside the military installation fence line. In 1973, the Navy initiated the AICUZ program. Shortly thereafter (1978), the Army initiated the Installation Compatible Use Zone (ICUZ) program (now known as the Operational Noise Management Program [ONMP]) for all active Army installations (including testing and training ranges) in the United States. The program looks to both airfield operations and land noises in considering impacts on adjacent communities.

In 1998, the Navy and Marine Corps established the Range AICUZ programs. Today, these three programs provide land use guidelines for use by local governments based on accident potential and noise exposure data. For the purpose of this discussion, the compatible land use programs of the Military Services will be referred to collectively as the AICUZ programs.

An objective of the these DoD programs is to protect military operational capabilities by avoiding incompatible development to enable the installation to change or expand operations as required and coordinate the requirements of the military air and ground-based operations with neighboring civilian development planning goals, objectives, and policies. The goal is to achieve compatible civilian land use patterns and activities in the vicinity of a military installation.

*The DoD
mission is
national defense*

Under these programs, the military services develop and provide scientifically based information on noise generated by arriving and departing military aircraft and military ground-based range training exercises to the local surrounding communities in the hope that the information will be incorporated into local community planning programs.

The technical information contained in the studies include noise generated from military activities and the potential for accidents outside the perimeter of the military installation boundaries based on historic accident records. These are not predictions of what can or will occur, but rather a historical record of accidents based on the preponderance of historic information and the most likely area where similar accidents could occur. The AICUZ DoD program is implemented by each service through their respective guidelines (that can vary among services). The information often is provided to the affected local jurisdiction pursuant to service guidelines.

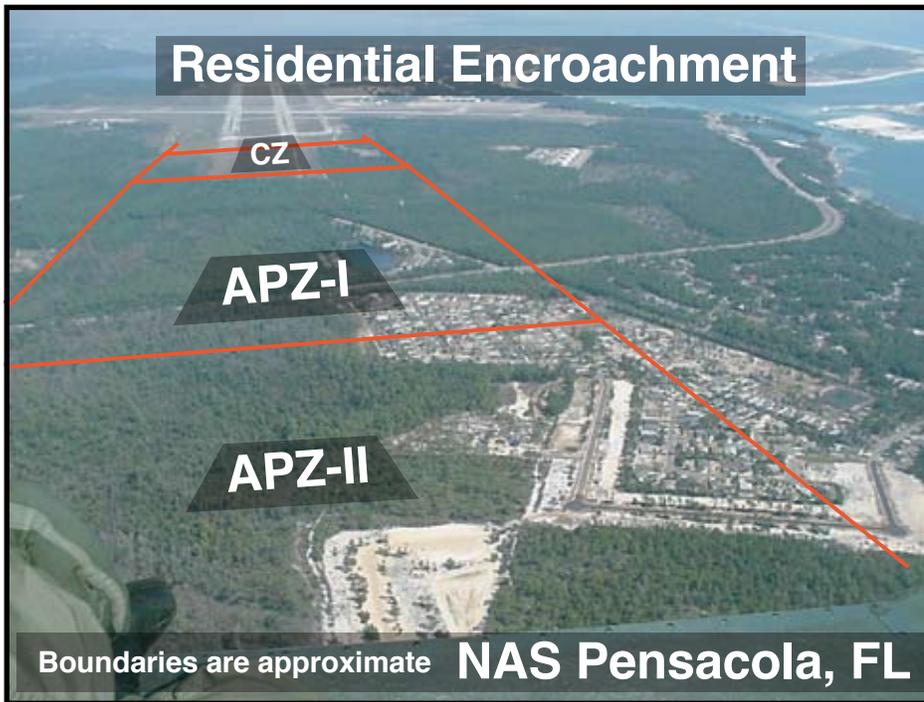
The information is provided in map form, which shows noise and accident potential in a geographic and aerial context both on and off the military base. Accompanying the map(s) is a technical report documenting the methodology used to develop the maps and land use activity that would be compatible with military operations. Figure V-3 dramatically illustrates the effects of civilian encroachment within both military accident potential zones (APZs) and high noise zones. Within the clear zone (CZ), there should be no structures of any kind. Agriculture is the recommended land use, with the exception that there should not be horticultural activities. Generally, the military owns or controls the CZ.

Within the APZ-I, the DoD AICUZ program recommends no residential structures of any type, or schools, nursing homes, places of assembly, day-care centers, or the like.

Within the APZ-II zone, DoD's land use recommendations suggest one to three dwelling units per acre on scattered lots.

The goal of the DoD AICUZ and similar programs is to help State and local governments anticipate, identify, and promote compatible land use and development near a military installation to protect the public health, safety, and welfare and take economic advantage of the presence of the military. Local governments may adopt and implement all or part of the AICUZ recommended report.

Figure V-3
Incompatible Residential Development Encroaching into APZs



There are two primary audiences for the AICUZ report: the military service and the local civilian community leadership.

The Military Services and AICUZ: AICUZ reports are produced by each of the respective military services. They are based on sophisticated, computer-based noise models, Federal Aviation Administration (FAA) land use guidelines, independent DoD research, DoD internal directives (DoDD) or instructions (DoDI), and community land use planning principles and practices.⁹ The local installation commander commissions the report to maximize the utility of the installation's assets while reducing to the extent practicable off-site impacts and nuisances.

Local Community Leadership: Local community leadership can emanate from the State or from local governments, airport authorities, and/or local and regional planning commissions. When the military service releases an AICUZ-type report for use by the public, military installation planners and range and traffic controllers are available to explain the technical information to the public and local community leaders, appear before a State or local decision-making body to provide testimony, and influence the decision makers.

Strategy: *There is ample case law and DoD policy to support the proposition that a military base commander or subordinate may meet with and provide public testimony dealing with potential development applications and pending ordinance changes before local decision makers.¹⁰ In Cox v. United States, the court stated:*

[T]he United States (and its Air Force), “like any other citizen or landowner, has the right to request local government to make zoning changes. Therefore, it can participate in local land use proceeding like any other landowner or citizen who attempts to persuade the local legislative body to regulate land use in a manner which is consistent with the use of the land ... The fact that these requests originated with recommendation in an AICUZ study does not render the act of making them unconstitutional.”¹¹

*The JLUS
program is
community
controlled and
directed*

- b. The Office of Economic Adjustment (OEA) and the JLUS Program:¹²** In 1985, Congress authorized a community planning assistance grant program to complement the AICUZ program. The program provides technical and financial assistance directly to State or local governments to undertake community-planning programs to resolve present and future incompatible civilian encroachment conflicts and protect the military mission.

It is a program to promote compatible community growth patterns near military installations by applying the local planning process to update the jurisdiction’s comprehensive/general plan and supporting land use regulations.

The JLUS program relies on strong community planning and land use regulatory (zoning) capabilities to implement the AICUZ recommendations through the local community’s comprehensive planning programs. The JLUS program is community controlled and directed.

A JLUS is produced by and for the local jurisdiction(s). It is a basic planning process designed to identify encroachment issues confronting both the civilian community and the military installation and to recommend strategies to address the issues in the context of the comprehensive/general plan of the community.

The JLUS is conducted in a collaborative manner involving all stakeholders, including the local elected officials, planning commissions, local military base command staff, community business leaders, chambers of commerce, homebuilders, real estate interests, and affected residents.

The JLUS planning area or district is defined by the jurisdiction(s) conducting the JLUS in consultation with the military and participants serving on a JLUS policy advisory committee. Generally, it includes the areas surrounding the military installation that are influenced by military operations. In this context, it is referred to here as the “Military Influence Planning District “(MIPD) that can ring a base or range and provide the impetus to create the context to formulate an amendment to a local comprehensive/general plan to guide compatible land use decisions.

Typically, a JLUS examines, among other things:

- The economic profile of the region and the impact of the military's presence on the surrounding local economy;
- The existing and proposed land use patterns and activities surrounding the military installation;
- The most current technical reports (ONMP, AICUZ, and RAICUZ) prepared by the military, including operational mission profiles and types of military aircraft and tracked or wheeled equipment (e.g., heavy or light tanks, artillery, personnel carriers, and helicopters) employed in testing and training operations;
- The extent of civilian community encroachment and how it is likely to impair the continued operational utility of the military installation; and
- The current adopted and approved comprehensive/general plan, development policies of local government, and existing land use regulations and codes.

Based on the analysis of the background information and pertinent data and facts, the participating jurisdiction(s) formulates an action strategy and incorporates, to the extent practicable, the JLUS recommendations into local plans and programs of the jurisdiction.

The following is a case study of a JLUS study conducted for Travis AFB in Solano County, California, in 2002.

Case Study – Travis AFB, Solano County, California

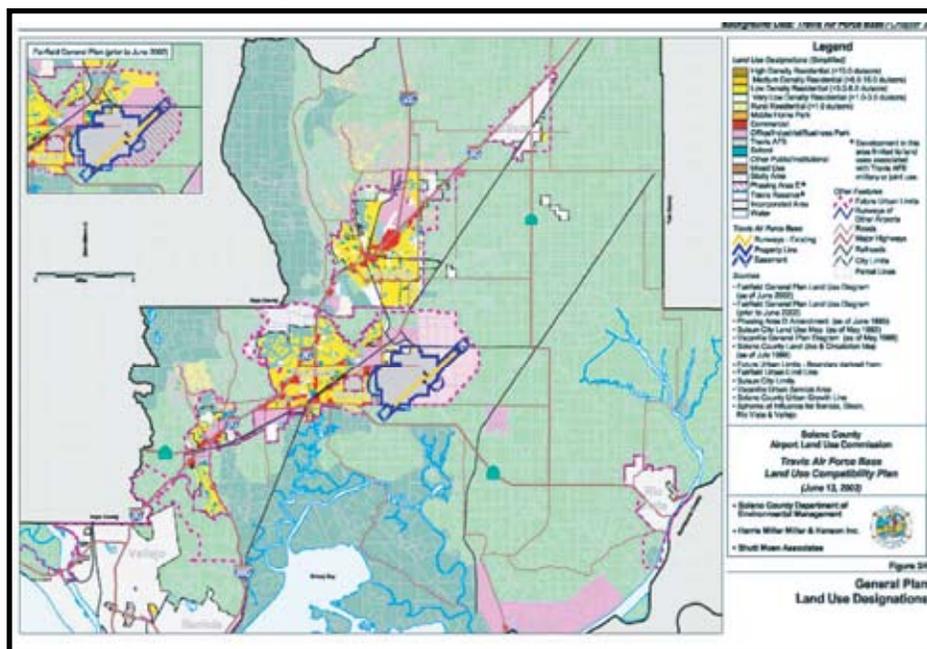
Travis AFB is located in California, east of the City of Fairfield, south of Vacaville, and northeast of Suisun City. State law requires preparation of Airport Land Use Plans (ALUP) by an established Airport Land Use Commission (ALUC). The plan requires local jurisdictions to adopt land use controls that are consistent with the plan or to override the plan by a two-thirds vote of the governing body (see Appendix 4.1).

Economic Impact: There are 14,000 military, reserves, civilian, and contractor personnel assigned to Travis AFB. Approximately one-third live on base and another one-third live in the immediately adjacent communities of Vacaville, Fairfield, and Suisun. The combined annual payroll is over \$400 million. In addition, almost 10,000 retirees live in the local Travis AFB area. These retirees have combined annual annuity payments of almost \$160 million. Local procurement contract expenditures total \$225 million.

The 2000 Census reported the Solano County labor force at almost 200,000, and total personal annual income of about \$9 billion. Travis provides almost 10 percent of this.

The participating jurisdiction(s) formulates an action strategy and incorporates, to the extent practicable the JLUS recommendation into local plans and programs of the jurisdiction

Figure V-4
Travis AFB, California – JLUS General Plan (2003)



Growth Pressures: Since the first ALUP was adopted in 1990 (funded through the JLUS Program), the Vallejo-Sacramento corridor has experienced extensive growth. The area is one of the few affordable housing areas for workers in the Silicon Valley and San Francisco. The City of Fairfield was pro-growth in the 1990s. It updated its general plan in 1995. The new plan included provision for 9,000 new housing units north of the base in areas affected by high aircraft noise. In order to implement the plan, the city would have to annex the land in order to change the zoning from agricultural. The State requires that a Local Agency Formation Commission (LAFCO) review annexation proposals.

In 1997, there was a series of referendum petitions seeking to limit Fairfield urbanization. They were defeated. Three persons own the area proposed for 9,000 new homes. There is a major north-south road proposed through the area intended as a reliever highway for I-80. This arterial would also increase development pressure adjacent to Travis AFB.

Figure V-4 identifies the location of Travis AFB in relation to the community of Fairfield and Solano County. The area outlined in dashes and colored purple is the designated “Area of Influence,” which, in accordance with city and county policies, should be free of incompatible urban development.

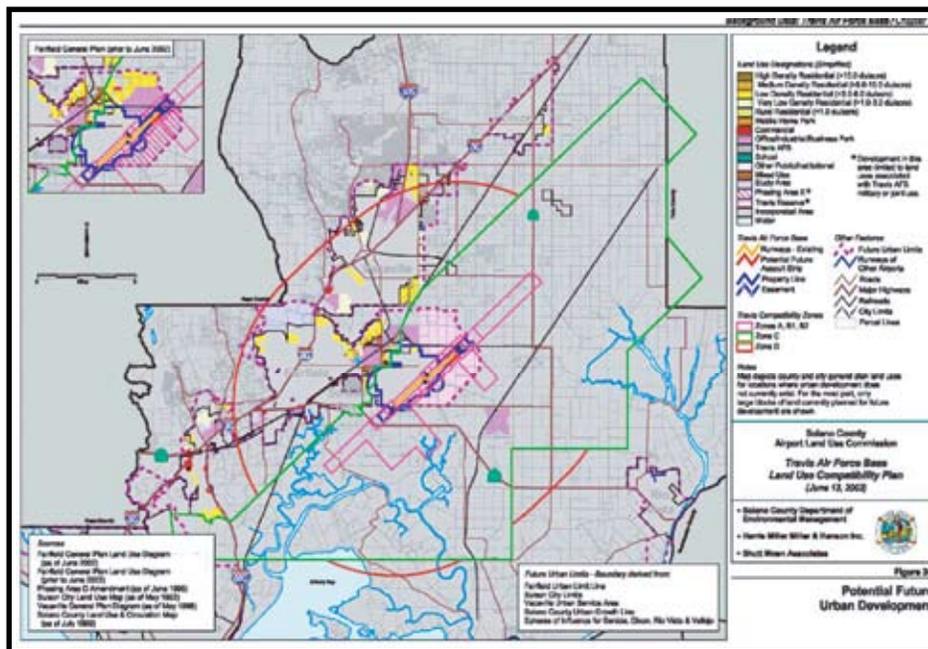
Mission Changes at Travis: Base Realignment and Closure (BRAC) actions during the 1990s at March AFB caused the relocation of a KC-10 refueling wing to Travis AFB. The mission change required a 1995 update of the AICUZ report used for the 1990 ALUP. At the request of the Solano Board of Supervisors, the update included a “Maximum Mission Contour” (MMC) noise footprint.

The MMC scenario is designed to avoid planning problems caused by changing missions and thus changing noise footprints over time that lead to an accordion effect of the noise footprint.

The 1995 AICUZ was reevaluated in March 2000 because C-141 aircraft left Travis and the base was amenable to joint civilian use of the runway for possible airfreight operations.

Political Winds: In 2003, voters in Fairfield elected a new city council that was less growth oriented. The new orientation was a “protect-Travis” initiative. Both the Solano County commissioners and the ALUC wanted to protect Travis missions from urban encroachment. Both the base and ALUC staff believed the time was right to effect long-term planning protection of Travis.

Figure V-5
Travis AFB, California – Potential Future Development

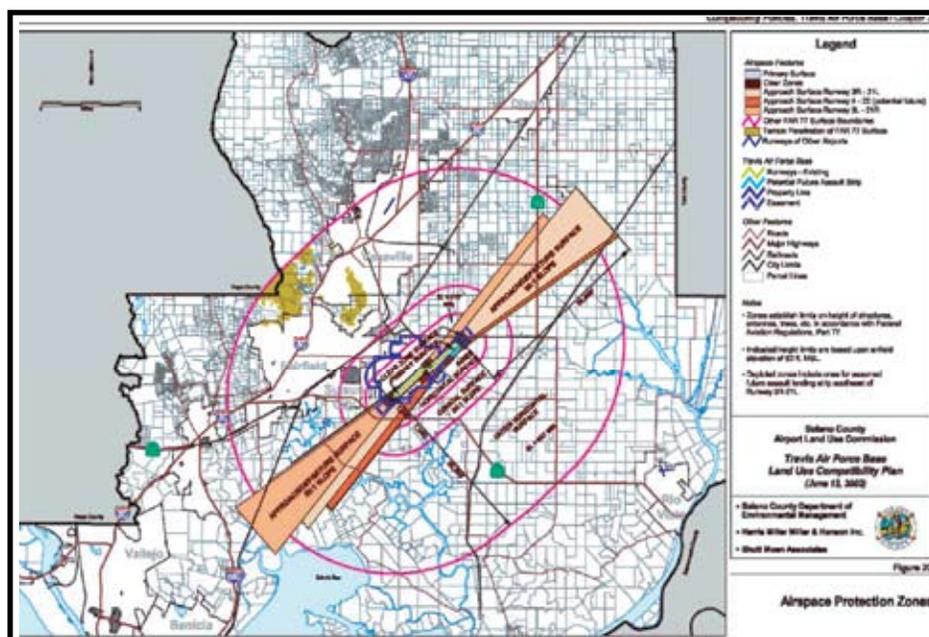


Needs: An updated ALUP was required by law to guide community-planning decisions. It also helped LAFCO develop annexation policy related to areas adjacent to Travis AFB. Planning decisions in California require significant public participation and are likely to be controversial.

Threats of legal action from adjacent landowners and multiple ballot box initiatives in the late 1990s focused on the future development around Travis. The ALUC viewed the ALUP update as a vehicle to settle simmering public controversy. Solano County hired a consultant to prepare the ALUP update and facilitate necessary community meetings and reviews.

OEA provided supporting funding assistance for select elements of the study. Work began in June 2000. The consultants presented data on land use trends, noise and safety impacts, and Travis operations at an ALUC meeting in January 2001. In June 2001, the ALUC held a workshop to discuss compatibility concepts, policy issues, and alternatives. There were no objections to the proposals.

Figure V-6
Travis AFB, California – FAA Height Control Surfaces



In August 2001, The Nature Conservancy (TNC) announced that it was purchasing the 3,369-acre Wilcox Ranch, east of Travis, adjacent to the Jepson Prairie Preserve, which includes seasonally flooded wetlands known as vernal pools. The announcement caused a stir in the county, as there had been no prior knowledge of the pending TNC acquisition. Concern was expressed about constraints that a nature preserve might place on increased activity at Travis (e.g., building a parallel assault runway). The California Resources Agency was the TNC sponsor for the purchase. Subsequently, a public workshop and meeting on the draft ALUP update was held in April 2002.

On June 13, 2002, the ALUC adopted the updated ALUP (called the Travis AFB Land Use Compatibility Plan). Local jurisdictions in Solano County had 180 days to amend their general plans and zoning ordinances to correspond with the ALUP recommendations. All jurisdictions quickly adopted the measures. Fairfield amended its General Plan to designate part of the Wilcox ranch near Travis as part of the “Travis Reserve,” an area previously proposed for intense housing development.

Lawyers for landowners near Travis contended that an environmental impact statement under the California Environmental Quality Act (CEQA) was required before adoption of the updated ALUP. The Solano County ALUC determined that the ALUP update was exempt from CEQA procedures: (A similar determination was made in 1994 for the original ALUP.) In 2004, the California Court of Appeals for the First Appellate District sustained the arguments of the landowners appealing the actions of the ALUC and overruled the lower District Court, setting aside the ALUP for failing to follow CEQA procedures. As of this writing, the plan is back before the ALUC to address the court’s concern over procedural failure by the ALUC to follow CEQA procedures.

In 2003, the voters of Fairfield adopted “Measure L.” It requires a vote of the people before there can be an amendment to the city’s general plan. In addition, as a result of the city’s own land use requirements and Solano County Orderly Growth Initiatives, it is believed development encroachment pressures near Travis AFB are less likely, the court challenge notwithstanding.

Implementation Actions: Allaying fears that Travis would have no room to expand, Solano County purchased 1,800 acres from the TNC immediately adjacent to Travis on the east side. This purchase ensures that, in the event the Air Force decides an additional parallel runway is needed, there will be no impediment to building one.

In October 2002, the ALUC approved the City of Vacaville General Plan and Land Use and Development Code amendments and the City of Fairfield General Plan to make them consistent with the Travis AFB Land Use Compatibility Plan (TAFB-LUCP).

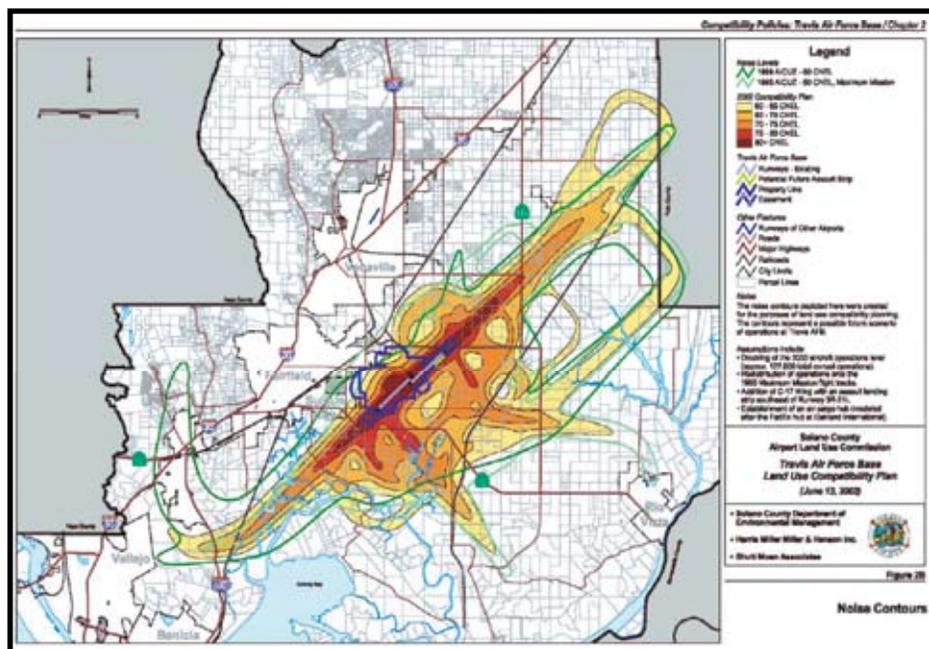
The question of a CEQA environmental impact statement (EIS) again became subject to challenge. In early January 2005, the State Court of Appeals, First Appellate District overturned an earlier ruling by the Solano County Superior Court based on a suit by an affected property owner.

The Appellate Court ruling compels the lower court to set aside the adopted 2002 Travis Air Force Base Land Use Compatibility Plan. The challenge dealt with the use of a 60-decibel (DNL) noise level zone to preclude large-scale development within “Compatibility Zone C.” The matter is subject to continuing adjudication as of this writing. It remains to be seen if the ALUC can address to the satisfaction of the court the CEQA – EIS issue.

Travis AFB — LUCP Tools and Techniques: The Solano County ALUC is the enforcement agent for the LUCP. The LUCP establishes compatibility zones within the Travis AFB AOI. It also establishes a Height Review Overlay Zone for any of the FAR Part 77 airspace protection surfaces (navigable airspace).

Figure V-7

Travis AFB, California – JLUS Noise Contours



Interior noise level criteria (< 45 dB) are prescribed for areas impacted by higher than acceptable noise levels pursuant to the California Noise Equivalent Level (> CNEL of 60 dB). The principal enforcement mechanism is a required update of general plans to conform to the LUCP dictates. Local jurisdictions must have a two-thirds vote of the governing body to override LUCP recommendations. Subsequent to an ALUC consistency review, local agencies continue to submit major land use actions for review of LUCP compatibility. However, the ALUC is acting only in an advisory capacity and thus local jurisdictions need not adhere to the two-thirds vote override required for general plans.

Sample deed notices are to be used for real property transactions in the Travis AFB AOI. They are to be included in parcel maps, tentative maps, or on a final map for subdivision approval.

As can be seen from this case study, a JLUS effort can become controversial. However, the benefits to be derived from implementation of the recommendations and curtailment of urban sprawl and encroachment are encouraging signs.¹³

Strategy: *The Defense OEA JLUS Program is an effective planning tool in the encroachment-prevention toolkit. Federal funding is available to State and local government to undertake compatible land use studies in the vicinity of military installations where the local military command identifies issues of civilian encroachment impacting the utility of the military mission.*

- c. DoD Conservation Partnering Authority:** The FY-03 Defense Authorization Act (Title 10 U.S. Code 2684a) includes a provision that authorizes the military departments to enter into agreements with eligible entities to acquire real estate interests near military installations. The purpose is to limit incompatible land use or to preserve habitat to preclude environmental restrictions that might otherwise interfere with military operations. This legislation provides a powerful new tool for the military departments to help in preventing civilian encroachment that could affect military missions.

The new legislation authorizes DoD to enter into agreements with States, political subdivisions, and private conservation entities (“conservators”). State and local agencies can offer the advantage of cost sharing, taking title to property interests, and working directly with officials responsible for zoning and land use policies affecting military installations. Private conservators — both national conservation groups and local land trusts — offer other advantages. Many conservators have conservation plans identifying regions and parcels of interest to them in the vicinity of military installations. They can also respond more quickly to land acquisition opportunities than can DoD and may be able to leverage other private and public sources of funds that are targeted to acquiring real estate interests in lands with conservation value.

This is the fifth and most recent DoD program designed to respond to civilian encroachment of incompatible development near military installations.¹⁴

In addition, each military department has developed its own protocol for implementing the new conservation partnering authority:

- 1) The Army Compatible Use Buffer (ACUB) Program:**¹⁵ This local Army commander’s outreach program is designed to avoid or limit civilian encroachment and provide for long-term range sustainability for Army installations and test and training ranges. It focuses on executing agreements between an installation and an “eligible entity” to address land use or potential development that could infringe upon the mission capability.

Eligible entities include State and local governments and private conservation organizations. A cooperative agreement is the vehicle used to obligate DoD funds to acquire less than fee simple interest in property in partnership with other eligible entities. The program is based on a willing seller and a willing buyer. Partners receive financial support from the Army for land conservation, including endangered species and habitat protection and other uses consistent with the authority under 10 U.S.C. § 2684a.

The Defense Office of Economic Adjustment Joint Land Use Study (JLUS) Program is an effective planning tool in the encroachment prevention toolkit

DoD Conservation Partnering Authority provides a powerful new tool for the military departments to help in preventing civilian encroachment that could affect military missions

The objective of the ACUB program is to provide the best training and maneuver range infrastructure and capabilities based on land availability, military mission, and doctrinal requirements. The U.S. Army Assistant Chief of Staff for Installation Management, Director of Environmental Programs, manages the ACUB program. The program supports each installation and the identification of lands that may have the potential to meet multiple public purposes, including conservation, while sustaining range capabilities.

- 2) **The Navy's Encroachment Partnering (EP) Program:** The Navy is particularly susceptible to a broad range of encroachment issues since many of its installations are located in ecologically important and high-growth urban areas. The objective of the Navy's Encroachment Partnering Program is to acquire real property interests, such as conservation easements, development rights, or water rights, which will address current or potential encroachment threats to the Navy's mission.

In order to ensure that the Encroachment Partnering (EP) program is effective, an installation or range must be aware of all of its encroachment threats. The Navy will develop an Encroachment Action Plan (EAP) that captures the results of identification, quantification, and mitigation of the potential encroachment threats to an installation or range. An EAP delineates a short-, mid-, and long-term strategy to address encroachment threats, including potential Encroachment Prevention partnerships. In addition, the Navy is using its Theater Assessment Program (TAP) to capture all encroachment threats at its training ranges through the development of Range Complex Management Plans (RCMP). Results of the RCMP will be used to develop potential EP projects.

- 3) **The Marine Corps** is authorized to acquire real property restrictive easements. The Marine Corps exercises this authority by participating in Conservation Forums led by states or nongovernmental organizations. These forums are open to all interested Federal and State agencies and nongovernmental organizations and individuals. Though not required, a charter agreed to by all participants usually governs the forums. The primary purpose of these forums is to identify criteria agreeable to all participants for identifying land desirable for acquisition, identifying land available for acquisition, developing a real estate process that meets all participants' legal requirements for property acquisition, and bringing together interested members of the forum to conduct the transaction.

Forum members fall into three categories: criteria development and property identification, political support, and real estate transaction. Those involved with criteria development are concerned about the condition of landscapes and bring a wealth of ecological and social knowledge of landscapes that are vital to ensuring effective use of the authority. These groups include universities, Federal and State regulatory agencies, and small nongovernmental organizations that focus on ecosystem health.

Organizations that provide political support are important as they help bring resources to bear and convince the public that the acquisition is desirable for multiple constituencies. These organizations include the Sierra Club, Natural Resources Defense Council, and other national and local environmental activist groups. Real estate transaction partners execute acquisitions and bring funding to the table. These groups include the military services, state agencies, and national and local land trusts (e.g., Trust for Public Land).

USMC has assisted in the establishment of five Conservation Forums to date, at Camp Lejeune, NC; Camp Pendleton, CA; Bridgeport, CT; Beaufort, SC, and Townsend Bombing Range, GA. Forums are being pursued in Hawaii; Yuma, AZ; and MCB Quantico, VA.

- 4) **The Air Force's** primary tool for addressing land use compatibility at air bases and areas outside its installation boundaries is the AICUZ program, which is enhanced by the JLUS program. Another more recent tool that can be useful on a case-by-case basis is to collaborate with State and local governments and nongovernmental conservancy organizations (public or private) to achieve compatible development or protect habitat. The nature of Air Force operations and the location of installations and ranges allow for flexibility in the application of a full range of encroachment prevention tools as appropriate.

2. State Government Programs: The power to regulate the use of land is constitutionally reserved to the States. States, for the most part, delegate this authority to local governments either through enabling legislation or through statute. Part III discussed the legislative role of State governments in setting the policy framework to support the sustaining presence of the military. Part II presented the myriad of local government opportunities to influence to location, timing, intensity, and density of development.

Beginning in early 2000, there was a spate of State legislative initiatives, such as those in Arizona, California, Florida, Georgia, North Carolina, Oklahoma, and Texas, directed toward protecting the sustainability of the military presence. From these legislative initiatives came new ideas and approaches to deal with balancing the need to growth and the military's need to sustain its missions. Most notable were States like Arizona,¹⁶ California,¹⁷ and Florida.¹⁸

In Arizona, the State required, as part of local comprehensive plan updates, an element dealing with land use compatibility surrounding military air bases and auxiliary airfields. The Community Planning Office of the State Department of Commerce was placed in charge of coordinating the Arizona Military Compatibility Project. The State financed the initial round of general plan updates in partnership with the Defense Office of Economic Adjustment, which provided matching grant funds to undertake three Joint Land Use Studies under the aegis of the Arizona Military Compatibility Project.¹⁹ The studies include Davis-Monthan AFB, Gila Bend Auxiliary Airfield and the Barry M. Goldwater Range, and the Luke AFB Auxiliary 1 airfield. The grant included a fourth element — a statewide handbook to guide cities and counties in future-plan updates.

The power to regulate the use of land is constitutionally reserved to the States

The Region of Military Influence model is a new idea that suggests the significance of the presence of the military goes beyond the boundaries of local jurisdictions to involve the state or a region

The State of California requires that cities and counties, when they update their general plans, include elements regarding “military readiness activities.” The State Office of Planning Research is charged with developing a statewide planning handbook to advise local jurisdictions to recognize the importance and need to consider military readiness in the context of local general plans and land use regulations. In addition, the California law requires that all development proposals be referred to the local military base for review and comment. The statute provides for arbitration in the event of disagreement between the applicant for the land use change and the military.²⁰

The State of Florida recently passed a bill that requires mandatory referral of pending development applications to the local military installation for review and comment. It also provides for the appointment of a military representative to the local planning commission as an *ex officio*, nonvoting member.²¹

3. New State Legislative and Planning Initiatives: This *Practical Guide* presents three new strategies whereby State governments may play a leading role in promoting compatible land use activity in the vicinity of military installations and in the process protect the military mission and readiness. The Region of Military Influence model is a new idea that suggests the significance of the presence of the military goes beyond the boundaries of local jurisdictions to involve the State or a region.

- a. **Regions of Military Influence (RMI) as a State Planning Element:** An RMI is a new three-dimensional planning model that looks beyond the immediate environs of the home military base and the surrounding jurisdictions. It recognizes the connectivity between the home base and distant test and training ranges (such as the Barry M. Goldwater Range [BMGR]). Some RMIs may be within the boundaries of a state; others may not.

MTR connect home air base with distant training and practice ranges. These highways in the sky support a complex of interconnected military test and training missions on which the military relies to maintain readiness and proficiency. They are key elements of the “system.” Without these corridors in the sky, the military’s ability to accomplish mission activities is significantly reduced.

For example, fighter bases such as Luke and Davis-Monthan AFB in Arizona and Nellis AFB in Las Vegas use enormous airspace to accomplish their training and qualifying missions. This airspace covers vast multistate regions.

The Naval Air Warfare Center (NAWC) China Lake, located in California, is in relative proximity to Edwards AFB. Together, they require over 20,000 square miles of Military Operating Area (MOA) as well as MTR.

MTRs represent complex systems of interrelated and inter-dependent highways in the sky that connect military installation and training ranges. They are important to sustaining military training and readiness.

To understand the challenges to this interconnected military “system,” it is first critical to define the area or RMI associated with the different system’s component parts. In some cases, the RMIs for the installation, range, and airspace may merge; in other instances, they may not. For example, in the case of an Air Force or Navy installation with a “backdoor” range within a relatively close distance (25 to 50 miles), it is likely that the airspace, installation, and range RMI will merge. If the range is across several States, the RMI will be separate distinct areas, one for the installation, one for the airspace, and one for the range, depending on how they are defined. The strings connecting the two are the MTR.

In addition, there may be multiple RMIs that reflect different factors, such as, noise contours, air quality control regions, critical habitat (or ecosystem), imaginary surfaces, 22 economic region of influence, and the like. To address all the factors, they must be combined into a composite RMI.

These RMIs are used to identify where DoD operations have impacts, as well as where activities can affect DoD’s ability to carry out its national defense missions. RMIs cross expansive geographical areas within a State and may go well beyond a State’s boarder into a neighboring State. These more expansive RMIs are of particular concern.

The RMI concept is also applicable at Marine Corps and Army installations where training is accomplished on the installation and on a distant range. The region, however, remains undefined based on changing training needs. In the instance where there are training exercises between distant installations, the entire geographic area becomes a training RMI that must be identified and “managed” in ways that allow the “integrated systems” to work as one. State and local government need to be aware of this system’s interdependency and seek ways to protect DoD critical air and land space as a vital national defense priority.

The States of Arizona, California, Nevada, and New Mexico function as a multistate RMI. Each State is advised to communicate with its counterpart to ensure the contiguity and functionality of this integrated system of installations, MTRs, and distant ranges.

Strategy: *The easiest and most effective means of ensuring public awareness of the presence of this integrated system is to require disclosure of the presence of operational parameters of these special use areas on all local government planning and zoning maps as well as in real estate land records.*

The State of California recently passed legislation requiring that maps showing MOAs and/or MTRs be provided to cities and counties to use in local planning and development review processes as a means of coordinating development.²³

The State of Arizona has passed similar legislation requiring the State Land Department to provide detailed maps of MTRs to city and county governments to be used for real estate disclosure.²⁴

The most effective means of ensuring public awareness is to require real estate disclosure of the presence of MTRs

- b. Areas of Critical State Concern:** This is the adaptation of an old idea to a new application.²⁵ Several States have enacted statutory provisions intended to protect areas of statewide importance. These special areas often are referred to as “Areas of Critical State Concern” or simply “Critical Areas.”

“Area of Critical State Concern” is the adaptation of an old idea to a new application

In most cases, local governments draft plans that are consistent with the State critical area plan and then apply to a State land development agency (or equivalent) for a permission to approve and develop applications within these designated areas that may have a regional impact. The majority of lands protected under the “Critical Areas” statutes fall into the environmentally sensitive areas that are of high value to a State, for example, Florida’s Everglades or Maryland’s Chesapeake Bay.

States with “Critical Areas” statutes include California, Florida, Maine, Maryland, Massachusetts, Minnesota, Nevada, New Jersey, North Carolina, South Carolina, Vermont, Virginia, and Wyoming. The statutory authority and objective of areas of critical State concern vary in title and in goal from State to State.

Within these State-designated areas, local governments and/or State agencies monitor development to ensure that the use of the land is compatible with the unique characteristics to be protected. Although this authority has not yet been extended to military installations, it could be adapted to do so.

Florida’s Land Development Code comes closest to this concept. It specifies that, in addition to qualifying environmental and ecological standards, other areas of significance may be considered for designation as an Area of Critical State Concern. Florida statute references areas “... having a significant impact upon, or being significantly impacted by, an existing or proposed major public facility or other area of major public investment including, but not limited to, highways, ports, airports, energy facilities, and water management projects ...” Such major public facility investments may also be considered for inclusion as a critical area.²⁶ The applicability of this statute to encroachment prevention by the State is potentially significant.

States can influence the timing, location, and staging of local community development by annual allocation of capital expenditures

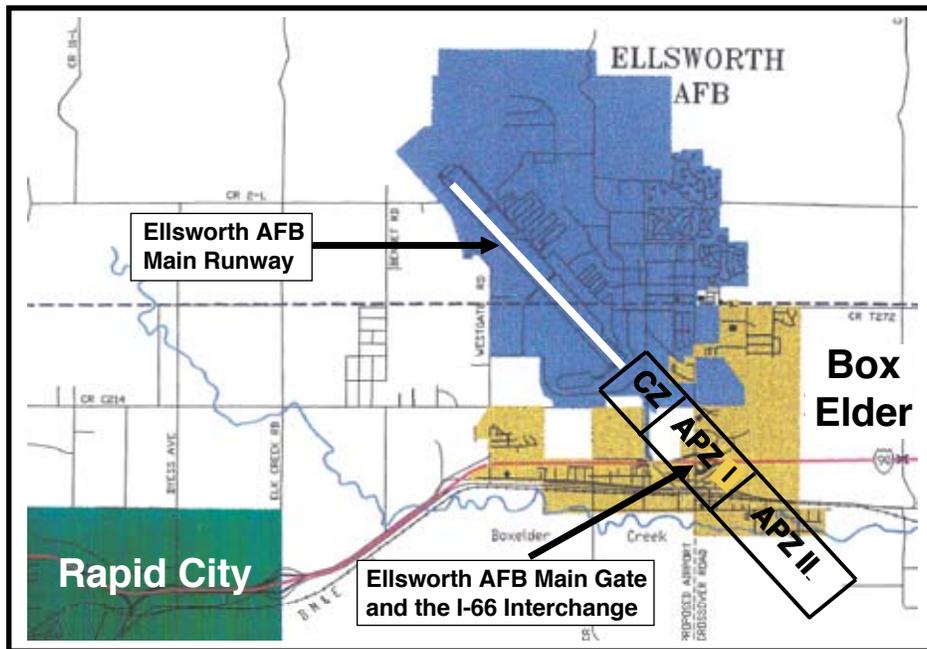
Strategy: *State designation of military installations as “Areas of Critical State Concern” can provide a statutory basis upon which State and local governments may partner with DoD to seek ways to redirect incompatible development away from sensitive areas that otherwise could threaten the utility and viability of a military mission and presence in a State.*

- c. State Capital Expenditures:** States can influence the timing, location, and staging of local community development by annual allocation of capital expenditures in public infrastructure, including State highways and mass transit development; the location of interstate interchanges; and the extension of public utility systems (water, sewerage, etc.). Capital investment decisions most often will influence private market location decisions.

Strategy: *This strategy represents an opportunity for a State to influence where and when growth will take place. State capital investment decisions can materially influence local private sector development decisions. It represents an important encroachment prevention tool in the compatible land-use development toolkit.*

Figure V-8

Ellsworth AFB, SD JLUS



State capital investment decisions can materially influence local private sector development decisions

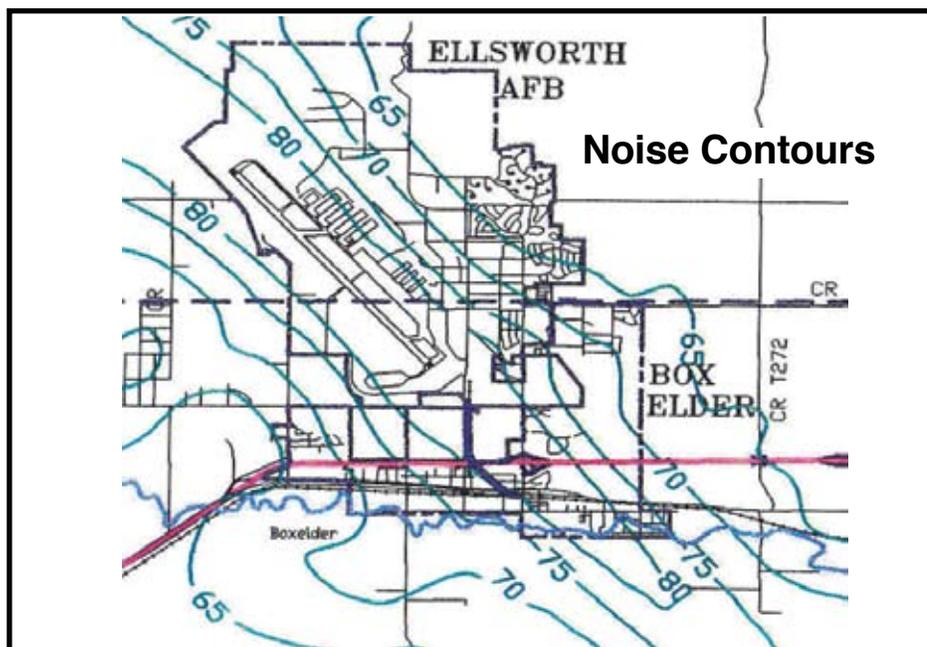
Case Study – Ellsworth AFB, South Dakota

Ellsworth AFB (Figure V-8) is a case in point. It is located approximately 7 miles east of Rapid City, South Dakota. Problems relating to incompatible land use surrounding Ellsworth AFB and, particularly, the section of Interstate I-90 passing through the town of Box Elder can be attributed to the location of the Exit 66 Interchange and the location of the main gate to Ellsworth AFB.²⁷

Over time, Box Elder grew in response to the presence and proximity of the AFB, and the presence of the interstate highway and Exit 66. Much of the town was clustered on the south side of the Interstate, close to Exit 66. On the north side of the interchange, several drive-in restaurants, gas stations, and commercial establishments were located to take advantage of the access to the AFB main gate and the traffic generated from the interstate.

The clustering of residential and commercial land use around Exit 66 subjected residents and businesses to extremely loud noise associated with aircraft takeoffs and landings. Properties and residents were exposed daily and nightly to noise levels well in excess of 80 dB (DNL/Ldn) (see Figure V-9).

Figure V-9
Ellsworth AFB, SD — AICUZ Noise Contours

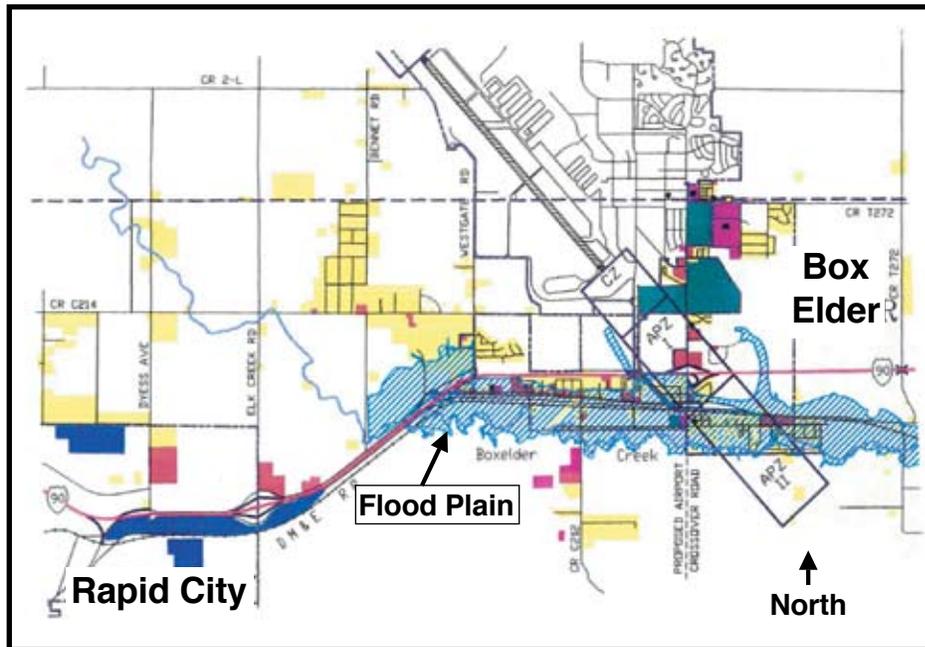


The AFB main gate and visitor center are located inside the accident potential zone (APZ-1), in the 80+ dB DNL/Ldn. Military installation main gates attract commercial development. In this case, the presence of both the main gate, visitor center, and the interstate interchange became strong attractors to residential and commercial development.

In 1995, the Defense Office of Economic Adjustment partnered with the Black Hills Council of Governments, the town of Box Elder, Ellsworth AFB, Meade and Pennington Counties, Rapid City, and the State of South Dakota to conduct a JLUS of the land uses surrounding the AFB.

During the development of the JLUS, the coordinating committee recognized the need for a concurrent “Transportation Network Planning Study” to assess the overall transportation systems servicing the area, since transportation systems are a basic determinant of land use patterns in that region.

A principal recommendation of the transportation study was to relocate Interstate Exit 66 one mile to the east, outside the accident potential and high noise areas. Even though the proposed location remained susceptible to high noise levels (in excess of 65 dB DNL/Ldn), the JLUS coordinating committee felt that, over time, a compatible environment could be achieved by relocating the interchange, causing the subsequent relocation of commercial and industrial business activity outside the high noise and accident potential zones.²⁸ Once the replacement access road to the main gate was completed, the State closed Exit 66.

Figure V-10**Ellsworth AFB, South Dakota Accident Potential Zones**

Today, many of the businesses have relocated outside the APZs. Thus, a primary objective of the JLUS was achieved. The decision by the State of South Dakota to invest its capital in the relocation of the interchange exit and the building of the new access road was prompted by a desire to protect the viability and utility of the flying missions at Ellsworth AFB. At the time, Ellsworth AFB was the largest employer in the State. The relocation of Exit 66 had the potential to become the new economic center of gravity for the relocated town of Box Elder. As soon as the community can extend infrastructure to the area of Exit 67, commercial development will begin to occur. Time will tell if the balance of the town follows the businesses and relocates outside the high noise and accident potential zones.

State of New Mexico: To further elaborate, in 2004, the Governor of New Mexico issued Executive Order No. 2004-046 dealing with Land Use Planning and Military Installations, which directed all relevant State agencies involved in land use planning to ensure compatible development with the State's military installations. The Governor went further. He recommended that all political subdivisions and municipalities that "adopt land-use plans and enforce zoning regulations ensure that planned development is compatible with military installations, and that they consider the impact of new growth on 'Military Value' when preparing zoning ordinances or designating land uses for land adjacent to military facilities or parcels of land that are in proximity to military installations."²⁹

This is one example of the positive role the executive branch of State government can play in promoting compatible land use near a military installation and an added tool in the encroachment-prevention toolkit.

4. State Mandates and Funding Shortfalls: Recent legislation in States such as Arizona and California now requires local governments to develop or update comprehensive/general plans to address the sustainability of military installations. State-mandated requirements often are viewed as “unfunded mandates” that local governments can ill afford. To overcome this possible impediment, local governments increasingly are looking to States and to the Federal Government for financial support.

When Arizona passed legislation requiring compatible land use plans around military airfields, it also appropriated funds to support the initial round of comprehensive plan updates. The State partnered with the Defense Office of Economic Adjustment, which provided a planning grant, matched by the State, to develop three joint land use compatibility plans and a statewide planning handbook using the experiences from the three studies.³⁰

In Arizona, the leveraging of the Defense Joint Land Use Study Program (JLUS), the military department’s AICUZ programs, the DoD Conservation Partnering Program, State and local funding assistance, and local government involvement are together contributing to a sustaining partnership to reduce incompatible development and to plan wisely for the future.

5. Local Government Programs: Local governments have authority from their parent State not only to plan but also to be creative in applying planning principles and practices as they go. As noted previously, the keystone to creative land use planning is the local comprehensive/general plan.

The plan is more than the paper it is written on or the maps, graphs, tables, and artist renderings of the possible future scenarios. The plan is the culmination of an intense process of public participation, debate, and involvement designed to lead to a consensus-based, publicly acceptable, and doable plan of action.

- a. The Local Comprehensive/General Plan:** The plan represents the community’s comprehensive guide to the physical, social, and economic development of the entire jurisdiction or a designated sub-geographic area thereof (*i.e.*, Central Business District, Neighborhood Planning Area, and a Military Influence Planning District [MIPD]).

The local plan does not take the place of existing zoning or land development regulations, nor does it compel, grant, or deny rezoning requests. These are separate legislative processes, with their own procedural rules and due process requirements.

The local Plan does not take the place of existing zoning or land development regulations, nor does it compel, grant, or deny rezoning requests

Part II explored the significance of the local plan to the community and to the presence of the military installation and its mission. Once the local legislative body approves the plan, it can have the force and effect of law. Part II also discussed the elements that comprise the plan and how the individual constituent parts sum to form a comprehensive and coherent picture of a community's past, present, and desired future.

Strategy: *This Practical Guide recommends that an MIPD element be incorporated by State statute or local initiative as an element of the local government's plan where there is the presence of a military installation.*

The importance and significance of a military installation to a community's economic health and well-being would support a stand-alone general plan element devoted to the presence of the military and its impacts on a local community's goals and objectives.

A federally funded JLUS can support an element of the comprehensive/general plan of a jurisdiction. The Defense Office of Economic Adjustment manages the JLUS program and can provide technical and financial support to a State or local government to prepare, adopt, and implement a Military Installation Element of a plan.

b. Military Influence Planning District (MIPD) Element — A New Planning Model

This Guide presents a new framework for integrating the military presence with the fabric of the surrounding landscape, using the community's comprehensive planning process. It is a model balanced approach to local joint military and community land use planning and supports the enduring presence of the military.

Until recently, military installations were considered self-sustaining islands, separate from the surrounding community. They provided their own infrastructure, including utilities, chapels, health facilities, police, and emergency services — even schools. On-base commissaries and military exchanges provided for the daily needs of military personnel and dependents.

However, in recent times, bases have closed and military units have relocated to remaining enduring bases. The receiving community may have experienced not only an increased operational tempo but also increased demands for publicly provided services, such as schools, police and fire services, and recreational programs.

This can present both a serious challenge to local government and an opportunity to take stock of its sustaining relationship with the military. In this context, the plan takes on greater significance as a tool of local government to anticipate and prepare for such eventuality.

A federally funded Joint Land Use Study (JLUS) can support an element of the comprehensive/general plan of a jurisdiction

With the increase of personnel stationed at a base, service families are buying homes or renting in the community and becoming involved in the lives of those communities so that the interdependence of the military and its civilian support community becomes more apparent. With these changes has come an increased awareness and dependency on smart planning and the need to accommodate and to adapt by promoting compatible land use patterns that take advantage of the military's presence and discourage incompatibilities that could negatively affect military operations.

This can become a challenge to local government and it can directly affect its comprehensive/general plan.

This second tool suggests that a new element should be added to the comprehensive plan when a jurisdiction is a host to a military installation. The Military Installation Planning District (MIPD) element would call on local governments to integrate the military presence and missions with the fabric and comprehensive picture of the community's future.

Much like a transportation or housing element of a comprehensive/general plan, a MIPD element would recognize the existence and mission (expanding or otherwise) of a military installation within a community's or region's sphere of influence (MRI).

There are aspects of the military mission that can affect community planning. For example, DoD standards require that, in times of national defense mobilization, military personnel living off the installation must be able to reach their assigned stations within 1-hour driving or walking time. If a base is located in a built-up, highly congested urban area where traffic congestion is a continuing problem, then the ability of military personnel to meet mobilization requirements may not be met.

Likewise, the interconnectivity of community infrastructure and the maintenance thereof are important not only to the base's operations but to the utility provider as well. Public capital investments are dependent on knowing the future plans of "the base next door," just as with any major development that demands and uses public services.

Strategy: *A comprehensive or general plan element devoted to the presence, impact, and future of the partnership between local government and the local military is an important consideration in the planning process and is highly recommended.*

Figure V-11 explores a typical comprehensive/general plan and its constituent elements, some of which may be prescribed by State statute (see Part II) as is the case in Arizona, California, and Florida. Each element stands alone, but also contributes to the whole. These elements organize and cement the policies of local government in one public statement. The key is that they all contribute to the fiscal and capital improvement decisions of local government that could have a profound effect on a military installation's mission. Added to the illustration is a new recommended element titled the MIPD element.

The MIPD element would call on local governments to integrate the military presence and missions with the fabric and comprehensive picture of the community's future

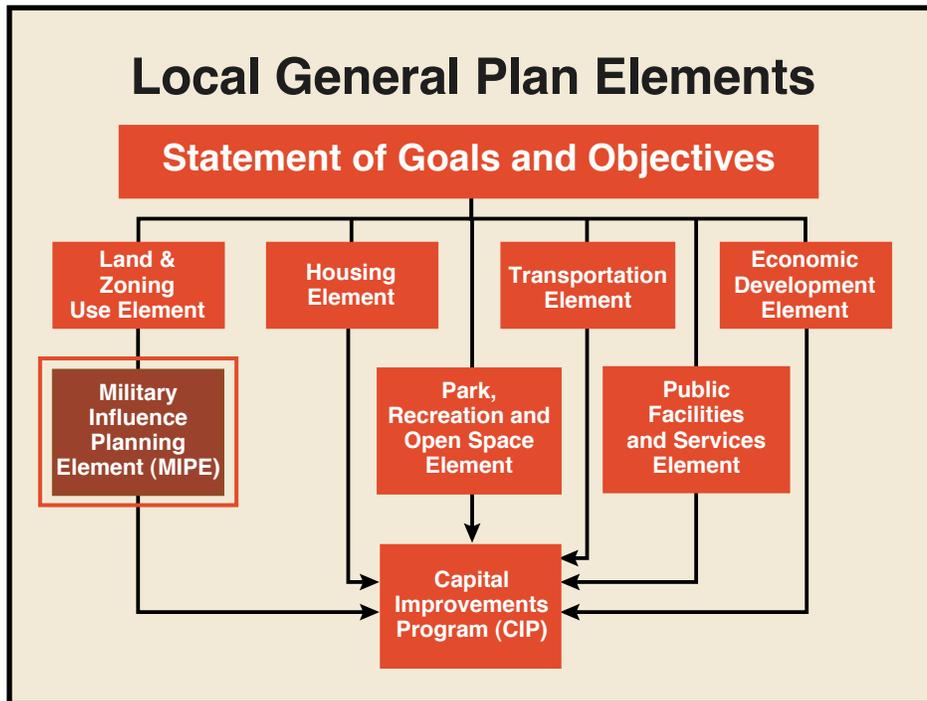
The following model approach proposes that this new plan element become an integral part of the overall local comprehensive/general plan, just as the land use, housing, transportation, finance, and other elements are integral to the local community comprehensive planning processes.

The MIPD model relies on the state legislature or a local government initiative to designate an MIPD as an official planning policy area surrounding a military installation. Its purpose is to promote compatible land use planning and development patterns that will sustain the military mission while promoting public health, safety, and welfare.

This is an important distinction for a military commander or base planner. A designated planning area, be it for the entire jurisdiction or a sub-district thereof, becomes an official “planning policy area” within which it is expected that a sector or neighborhood plan will be prepared, updated, adopted, and approved as an amendment to the jurisdiction’s comprehensive/general plan. When a plan or sub-area plan is under preparation, a military base commander or representative should participate in and influence the plan preparation and approval process just as any affected property owner would.

An MIPD model can represent an official planning policy area surrounding a military installation. Its purpose is to promote compatible land use planning

Figure V-11
Local General Plan Elements and the MIPD



This is a straightforward land use compatibility planning model that complements the comprehensive/general plan elements. The MIPD relies on local government, and, more specifically, the local planning commission to establish official planning areas or districts surrounding military installations. The objective is to establish a

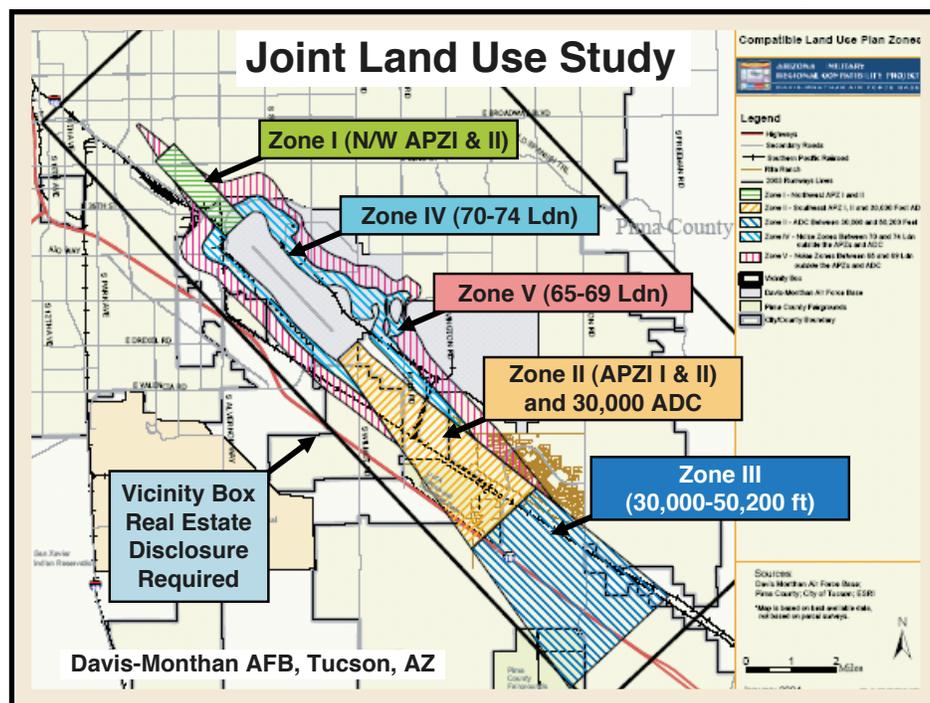
legal basis to implement zoning overlay districts to introduce compatible land use activity and discourage incompatible land use.

There are several successful examples of the MIPD model. Local governments in Arizona, California, and Florida have initiated and implemented this MIPD model in varying forms and under different names to deal with civilian encroachment and incompatible development issues that could negatively affect military mission and readiness requirements. All are represented in this *Practical Guide*.

Three examples of the application of the MIPD model are:

- **The State of Arizona** enacted a series of legislative initiatives requiring the preparation of compatible land use plans near civilian and military airfields based on a “Vicinity Box” or Area of Influence.³¹

Figure V-12
Davis-Monthan AFB, AZ JLUS and the “Vicinity Box”



The objective is to establish a legal basis to implement zoning overlay districts to introduce compatible land use activity and discourage incompatible land use

Figure V-12, illustrates one approach taken by the city of Tucson, Arizona, in its recently adopted JLUS for Davis-Monthan AFB. This illustration identifies Air Force recommended APZs and noise zones based on an AICUZ report. The map adds additional layers of protection that go beyond the AICUZ standards to include extended areas of protection. These designated areas go beyond the APZ-II zone for the southeast live ordnance departure corridor.

This area of protection is referred to locally as the “paddle” area. It extends 35,200 feet farther than the Air Force AICUZ APZs that, together, are 15,000 feet distant from the end of the air base runway for a total distance of protection of 50,200 linear feet (9.8 miles). Within the extended paddle area, the same land use and density recommendations as would apply to the APZ-II zone are carried forward in the extended paddle area. The paddle area has been incorporated by reference into the Arizona statutes. It represents State policy.³²

Encompassing the entire compatible land use planning district is a State - required “Vicinity Box” or “military area of influence.” Within the rectangular box, real estate disclosure and indoor noise level reduction (NLR) are required for all new construction.

- **The State of California** enacted legislation amending the California Government Code to require, as a mandatory element of a city or county general plan, consideration of the impact of new growth on “military readiness activities.”³³

The Solano County Airport Authority adopted as part of its Travis AFB JLUS an “Area of Influence” surrounding the air base for the purpose of implementing tools to prevent land use activity that could be incompatible with the Travis AFB flying mission (see earlier discussion).

- **Escambia County, Florida**, applied the MIPD concept to the NAS Pensacola JLUS, referring to it as an “Airfield Influence Planning District” (AIPD) (see case study below).

These efforts by three geographically separated jurisdictions resulted in amendments to their respective comprehensive/general plans and zoning ordinances. Each jurisdiction elected as an element of its planning process to incorporate a special planning district model that adds an additional layer of compatible land use protection surrounding a military installation.

The following case study reviews the Escambia County, Florida, JLUS and resulting implementation of the study recommendations by the Escambia County Board of County Commissioners.

Case Study: Escambia County, Florida

Escambia County, Florida, is home to the NAS Pensacola — the “birthplace of naval aviation.” The Escambia Board of County Commissioners recognized the importance, presence, and impacts of the air installation on the surrounding community in the late 1980s and worked with the Navy’s AICUZ program to implement a recommendation to achieve a compatible land use pattern. However, over time, the agreed-upon elements were reduced in force and effect.

In 2002, the county initiated a JLUS process with technical and financial support from the Defense Office of Economic Adjustment. The study involved NAS Pensacola and outlying airfields.

The county defined an “Airfield Influence Planning District” (AIPD) as the JLUS area of study. The AIPD included the air base and defined accident potential and noise zones based on the Navy’s AICUZ report. It also defined an extended area or district 1 mile beyond the traditional AICUZ boundaries, beginning at the 65 dB DNL/Ldn average noise contour.

The board of county commissioners by legislative amendment to the Escambia County General Plan implemented the AIPD concept. The strategy was to establish zoning overlay and real estate disclosure districts coterminous with the AIPD.

The AIPD was further subdivided into the AIPD-1 and AIPD-2 overlay zoning districts. Within these districts, land use classifications and densities were redefined taking into account existing conditions and projected development. Although the AIPD-1 restricts density of single- and multifamily dwelling units to maintain the safety for both residents and military operations, the AIPD-1 zone permits a variety of other land uses, such as recreational, agricultural, manufacturing, service trades, and industrial.

To facilitate incorporation of the JLUS recommendations into the County Land Development Code, the county established, as part of AIPD-1, an “Airfield Mixed-Use-1” Zoning District. It did the same for the AIPD-2 by establishing the “Airfield Mixed-Use-2” Zoning District within which a compatible mix of selected commercial and single-family residential uses are permitted. The AIPD-2 extends 1 mile beyond the 65 dB DNL/Ldn noise contour and represents a “buffer or transitional area.” The county’s JLUS stipulated that the land use mix and density reflect “the real world.” It was recognized that much development had already taken place in the critical areas and zones.

The primary purposes of the Escambia County AIPD are to:

- Promote an orderly transition and rational organization of land uses;
- Protect the health, safety, and welfare of the public;
- Maintain the military airfield mission;
- More accurately identify areas that are affected by military airfield operations; and
- Create a compatible mix of land uses.

By establishing, first, a formal AIPD followed by well-advertised compatible land use study area encompassing the district, the county was able to update its general plan and complementing land development code, incorporating the recommendations of the JLUS.

In addition, Escambia County adopted the following requirements for property lying within the AIPD:

- **Sound level reduction** is required in building construction based on degree of noise exposure;
- **Real estate disclosure** is required regarding the presence of the NAS and aircraft operations. Disclosure would be required in all listing agreements and in individual marketing materials before execution of a contract for sale or lease;

Figure V-13

***NAS Pensacola, FL — JLUS
Airfield Influence Planning District (AIPD)***



- **Avigation easements** are required as a condition of subdivision approval and/or building permit issuance. This legal agreement between a property owner and Escambia County provides for free and unobstructed flight of aircraft through airspace over property, with the right to create or cause noise, vibrations, odors, vapors, exhaust, smoke, or other effects that may be inherent in aircraft operations;
- **An amendment to the Escambia County Land Development Code** provides a place for the local naval command to participate as a standing ex officio member of the Escambia County Development Review Committee (DRC). The purpose is for the naval command to participate in the review of all development proposals and plans for land use compatibility, structure height, density, and intensity of use near the NAS;

- **Last**, the JLUS recommended that the Governor’s Commission designate the naval installation as an “Area of Critical State Concern” under the Florida Critical Areas Management Program and designate it the AIPD.

Laws and regulations vary from State to State and local government to local government. The reader is encouraged to review local state enabling legislation or statutory authority when considering application of the toolkit techniques suggested herein.

Based on the Defense Office of Economic Adjustment experience working in partnership with State and local governments to promoting JLUS; three elements of the MIPD concept have been identified.

The elements, when applied together, establish a workable planning framework and sustainable legislative basis for compatible land use planning in transitional areas between DoD-owned properties and the surrounding community.

c. Three Strategic Planning Elements:

This guide identifies three complementary sub-elements or tools a local government may pursue, adopt, and implement as a continuum of action to promote compatible land use activities. The interrelated planning elements are:

- **Military Influence Planning District (MIPD);**
- **Military Influence (zoning) Overlay District (MIOD); and**
- **Military Influence (real estate) Disclosure District (MIDD).**

This construct is based on a community designating overlapping geographic planning/regulatory districts; referred to as transitional area(s) in which land use densities and concentrations of human activity are maintained at the lowest levels to protect the public health and safety while protecting individual property rights.

A designated area could be defined as a transitional planning district, perhaps 1,000 feet to 5 miles distant from the perimeter of the military installation property line, noise, or accident potential zones. The boundary of an MIPD would be defined using recognizable and fixed geographic features such as the centerline of public and private streets, highways, railroad rights-of-way, major public or private utility easements and electric transmission corridors; natural features such as streams and rivers, and topographic ridge lines; real property boundaries; and the like.

1) Military Influence Planning District (MIPD):

The Legislative Construct: The objective is to encourage harmonious development while discouraging development that could expose future residents to high noise levels and accident potential. This is no different from a city or county identifying on planning advisory maps the presence of a noisy gravel quarry, sub-surface mining operation, or metal-fabricating hammer-mill.

A designated area could be defined as a transitional planning district, perhaps 1,000 feet to 5 miles distant from the perimeter of the military installation property line, noise, or accident potential zones

Strategy: *The MIPD model is based on local government designating a continuous geographic planning area surrounding a military installation. Its designation by a local governing body or planning authority as an official planning district is for undertaking focused planning analyses of an area that could be influenced by the presence of a military installation, its mission, and operations.*

Legislative Intent: Protect the public health, safety, and welfare of residents and business employees located near a military installation and promote smart growth and land use compatibility.

Legislative Purpose: Provide increased protection for the public through designation of a special planning district(s) within which will be required: (1) a compatible land use planning element of the jurisdiction's comprehensive/general plan; (2) implementation and enforcement of complementing land use regulations; and (3) real estate disclosure within an MIPD.

Definitions:

Military Influence Planning District (MIPD): Means a duly designated planning area contiguous to and bordering a military installation. It may range in size from 1,000 feet to 5 miles horizontal distance from the boundary of a military installation, depending on the mission of the installation. To the extent practicable, the MIPD shall follow discernable fixed boundaries based on natural and human-made geographic features such as property lines, centerlines of streets, streams, and ridgelines. The purpose of the MIPD is to consider the presence of a military installation in the context of a comprehensive/general plan and to adopt and enforce complementing land use regulations.

Military installation: Means a facility under the jurisdiction of the United States Department of Defense as defined in 10 U.S.C. § 2687(e)(1).

Military Installation Overlay (zoning) District (MIOD): Means a designated contiguous overlay-zoning district that may conform to the perimeter boundaries of a MIPD. It may be subdivided into various sub-zoning districts for promoting compatible growth and development of an area. The MIOD is a fixed geographic area bounded by discernable fixed boundaries based on natural and human-made geographic features such as property lines, centerlines of streets, streams, and ridgelines. It may be further subdivided into smaller zoning districts depending on the comprehensive/general plan recommendations and the nature of the military installation, its missions, and other parameters.

Military Installation (real estate) Disclosure District (MIDD): Means a contiguous geographic area that may conform to a MIPD. It may be identified on official maps of the political subdivision and used to enforce real estate disclosure of ongoing operational activities on nearby military installations and the possible spillover effects on the local surrounding community. The MIDD may use discernable fixed boundaries based on natural and human-made features such as, property lines, centerlines of streets, streams, and ridgelines.

The MIPD model is based on local government designating a continuous geographic planning area surrounding a military installation

Within a designated MIDD, real estate disclosure would be required at time of showing and sale or lease contract signing. Disclosure will reveal if the subject property is or is not located in the proximity of a military installation. It may or may not be exposed to excessive noise from military operations of all types, including aerial overflights, weapons and munitions firing, and periodic military ceremonial events.

Statutory Requirements: State statutes should require the following:

- Within the MIPD, the local political subdivision shall consider the impact of new growth and development on military readiness activities and enact complementing land use regulatory requirements to achieve compatible land use activities pursuant to the most recent:
 - Navy or Air Force Air Installations Compatible Use Zones report;
 - Army Operational Noise Management Plan;
 - Navy Range Air Installations Compatible Use Zones Report;
 - Joint Land Use Compatibility Study (JLUS);
 - Army Compatible Use Buffer Program (ACUB); and/or
 - Navy and Marine Corps Encroachment Partnering Programs.

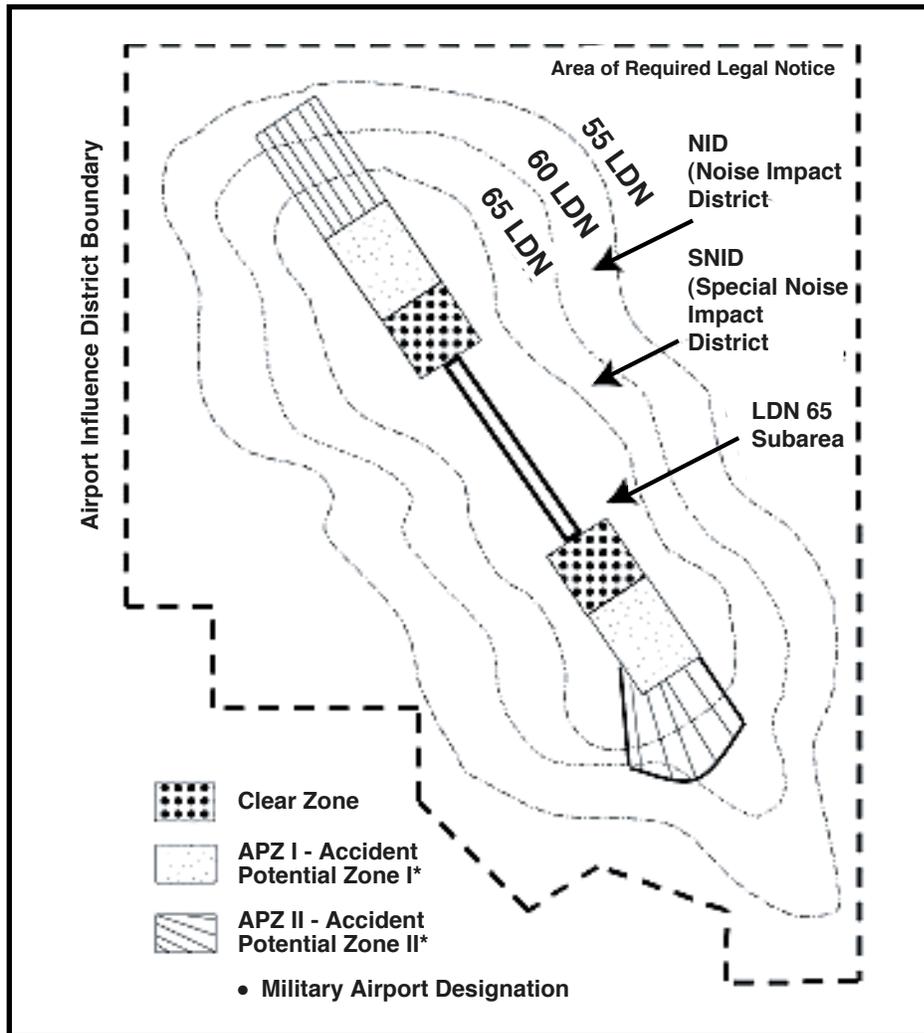
A political subdivision that is near a military installation shall adopt compatible land use elements as components of the city or county comprehensive/general plan and enforce the plan through land use regulations or as otherwise provided by law.

In determining the impact of new growth and development on military readiness activities, information provided by military facilities shall be considered. Cities and counties shall address military impacts based on consultation with the relevant military installation command authorities and information provided by the military.

Figure V-14, was taken from the City of Aurora, Colorado, Planning and Zoning Ordinance as an example of a long-standing application of the MIPD concept to a local community zoning ordinance. In the case of the City of Aurora, the “Airport Influence District” (AID) depicts noise and accident potential zones, and the real estate disclosure area. The ordinance covers commercial, executive and military airfields. In the case of Aurora’s zoning requirements, the 60 dB DNL/Ldn is the beginning of the noise district.

The zoning ordinance also specifies the density of employees permitted in the AID as well as identifying prohibited land uses, such as hazardous/flammable bulk storage, childcare and handicapped facilities, hospitals, hotels and motels, and residential uses (except in the APZ-II zone and outside the 65 dB DNL/Ldn where one unit per acre is permitted). This local zoning ordinance is one of the strongest ordinances in the country (see Appendix 4.3).

Figure V-14
Buckley AFB, CO — Airport Influence District



Source: City of Arizona, Colorado, Zoning Districts, Art. 8.

- 2) **Military Influence Overlay (Zoning) District (MIOD):** Complementing the MIPD is the MIOD. It is a mapped zoning district shown on the official adopted zoning map of a political subdivision. It should conform to the city or county comprehensive or general plan.

Strategy: In an MIOD, additional land use regulations may overlay the basic underlying zoning district(s) in recognition that the property could be affected by nearby military activities, including training and maneuvers, and require additional standards to protect the public health, safety, and welfare of residents (see Figure V-14.).

An MIOD can prescribe more stringent requirements in terms of land use and development than the underlying zoning classification

For example, the City of Aurora, Colorado, is a neighbor to four airports: Denver International Airport, Buckley Air Force Base, Front Range Airport, and Centennial Airport. The city proactively addresses possible airport noise issues in various manners.³⁴ Currently, the city is engaged in the following processes:

- No new residential zoning is permitted where existing or projected noise may exceed 60 dB DNL/Ldn; and
- New residential uses may be permitted within the 55 Ldn (and outside the 60 dB DNL/Ldn) noise contours, provided specific criteria are met.³⁵

Legislative Expectations: Protect the public health, safety, and welfare. Restrict certain land use activities that are incompatible with the mission and operations of the nearby military installation. Implement the recommendations of a duly adopted and approved comprehensive plan.

Legislative Purpose: To provide increased protection for the general public by providing more stringent land use regulations and requirements.

An MIOD can prescribe more stringent requirements in terms of land use and development than the underlying zoning classification of the property in order to protect the public health and safety. Figure V-14 illustrates an effective planning and zoning ordinance technique that clearly presents in graphic form the local government's policies and planning objectives relative to military airfields.

*Real estate
disclosure
permits
prospective
purchasers of
property the
opportunity to
make informed
decisions
regarding the
purchase or
lease of property*

- 3) **Military Influence Disclosure District (MIDD):** This is the third tool in the MIPD construct. Real estate disclosure permits prospective purchasers of property the opportunity to make informed decisions regarding the purchase or lease of property.

Real Estate Sale or Lease Disclosures: Real estate disclosure is among the least costly tools in the encroachment toolkit. The MIPD is the ideal planning district within which to require real estate disclosure. The purpose is to protect the seller, real estate agent, the buyer, the local jurisdiction, and the military. An informed public is an educated public.

- **The seller and agent** are protected from adverse actions that could be taken by a buyer should the buyer hold the seller or the real estate agent responsible and liable for failing to disclose pertinent information about the property to be bought or leased;
- **The buyer** is protected by disclosure and thus is given the opportunity to make an informed decision to accept or reject or condition the purchase or lease of the property;

- **Local government** is protected from liability that could be assigned based on foreknowledge that a property was located in a sensitive or potentially hazardous area; and
- **The military** is indemnified because disclosure has placed a prospective buyer on notice that the neighboring military installation makes noise and can present potential hazardous situations.

Strategy: *Real estate disclosure requirements present protections for the buyer, seller, and agent. An informed citizenry is an educated citizenry, capable of making decisions that are in their interest. Real estate disclosure should be required in areas affected by the presence of military operations. Where a local jurisdiction may not have the authority to require real estate disclosure, State legislation may be required.*

Local Property Owner's Concerns over Disclosure: There are property owners who are opposed to disclosure for fear of devaluing their property. However, some local governments have considered this and concluded the fears are not sufficient to override the public's need for disclosure. For example:

- **Orlando, Florida**, passed as part of its zoning ordinance the requirement to disclose noise impacts for all real estate transactions within the 55 dB DNL/Ldn noise contours around its primary and reliever airports.³⁶
- **The Raleigh/Durham Airport** is a second example of real estate disclosure requirement. In 1996, North Carolina amended its real estate disclosure law to require that any notification to a property owner by any State or local government entity that might affect the use or value of a property must be subsequently disclosed in all real estate transactions.³⁷

Using that general requirement, the Raleigh/Durham Airport Authority defined the 55 dB DNL/Ldn noise contour around the airport as a noise impact area and formally notified all area realtors and each owner of property within that area of the requirement to disclose airport noise impacts to prospective purchasers of property. Local realtors now appear to favor the disclosure requirement because they were previously exposed to suit if they failed to disclose potential airport operational impacts on transactions within the noise impact area.

A typical disclosure statement is based on a legislatively defined geographic area (such as a zone boundary [MIOD] or an MIPD boundary). In the Raleigh/Durham Airport disclosure area, the delimiter was the 55+ dB DNL/Ldn noise contour. However, this type of contour can expand or contract depending on the aircraft mix, type, and frequency of operations.

An MIDD need not follow specific noise contours that can divide parcels of land, but may define an area larger than the noise contour or accident potential zones. Noise does not stop at an abstract boundary, but it does

The MIPD is the ideal planning district within which to require real estate disclosure

Real estate disclosure requirements present protections for the buyer, seller, and agent

fade with distance from the noise source. As is the case in Orlando and the Raleigh/Durham Airport, the 55 dB DNL/Ldn boundary was used, as opposed to the 65 dB DNL/LDN noise contour. In Escambia County, Florida, the AIPD was used to define the geographic area requiring real estate disclosure. The boundary of the AIPD is 1 mile beyond and parallel to the 65 dB DNL/Ldn noise contour.

Strategy: *Within the MIDD, no contract for sale or lease, deed, plat of the property, or any portion thereof should be executed unless there is attached to the contract a statement of disclosure. The statement would specify if all or a part of the property is located within the MIDD. The best time for a prospective purchaser to be made aware of site conditions and exposure is prior to settlement or at the time of showing or sales contract negotiations between buyer and seller/agent.*

Appendix 6 presents samples of real estate disclosure statements.

The imposition of a moratorium on development is a legitimate exercise of local government's police powers

6. Development Moratoria and Relevant Case Law: This tool, though somewhat controversial, allows local legislative bodies to declare a legal “time-out” from the processing of development applications pending completion of a study by the local governing body dealing with a particular issue associated with the plan or other jurisdiction-wide development ordinances. It is based on local government police powers and is intended to allow the local legislative body time to assess planning goals, objectives, policies and programs before reopening an area to development.

The local legislative body is empowered under its police powers to impose a moratorium on zoning changes and issuance of building and development permits if it finds that such a moratorium is in the public interest. The imposition of a moratorium on development is a legitimate exercise of local government's police powers.

- 1) **Relevant Case Law:** The Supreme Court ruled in the case of *Tahoe-Sierra Preservation Council, Inc., et al. v Tahoe Regional Planning Agency, et al.* that temporary banning of land development on private property does not automatically result in compensation to the property owners as a “taking.”³⁸

The Court noted that freezes on building or development often are used by government agencies to preserve the status quo while it devises new development strategies to respond to the particular issue. In the context of the *Tahoe-Sierra* taking claim, the Court opined that a temporary freeze (in this case, 32 months) on development is just one element that should be considered by judges weighing whether a taking has occurred, along with the motives of government planners, landowners' expectations, and the impact of the moratorium on property values.

The decision in this case backed local government's efforts to protect the environment and guide land use decision making. The Court affirmed that local officials have the authority to halt development temporarily. The Court commented that:

“A rule that required compensation for every delay in the use of property would render routine government processes prohibitively expensive or encourage hasty decision-making. Such an important change in the law should be the product of legislative rulemaking rather than adjudication.”³⁹

The court noted that freezes on building often are used by agencies to preserve the status quo (time-out) while they devise permanent development strategies.⁴⁰

“To the extent that communities are forced to abandon using moratoria, landowners will have incentives to develop their property quickly before a comprehensive plan can be enacted, thereby fostering inefficient and ill-conceived growth....” Justice Stevens in U.S. Amicus Brief, (WL 1488022), 2001

Strategy: *Moratoria laws vary from State to State. The reader is encouraged to check the relevant state statute or local enabling code.*

- 2) **The Escambia County Board of County Commissioners, Florida**, in February 2001, imposed a development moratorium within noise and accident potential zones surrounding NAS Pensacola.⁴¹ This was in response to concerns raised by the Navy regarding urban development encroaching too close to the NAS and impeding its flying mission.

The purpose of the development moratorium was to allow time to sort out the impact of emergent development patterns near the NAS on the Station's mission and operations. Once sorted-out through a JLUS, the board of county commissioners amended the Escambia County Comprehensive Plan and Land Development Code to strengthen compatible development requirements in relation to the vicinity of the NAS. The moratorium was lifted upon adoption of the requisite plan and ordinances.

- 3) **The City of Tucson, Arizona**, adopted an interim regulation on October 28, 2002, that limited development in the “southeast paddle area” through November 2004.⁴² The city action effectively limited most development in the paddle area while the JLUS process developed new compatible use standards. The interim regulation prohibited potentially incompatible development activity being studied in the JLUS process, allowed some uses, and provided a special exception process with public hearing requirements. The city adopted the JLUS recommendations and incorporated the recommendations into the city Airport Environs Plan and city zoning ordinance in November 2004.

Appendix 11 presents a sample of a development moratorium resolution directly related to encroachment issues used by Escambia County, Florida.

7. Local Government’s Challenge: The responsibility to manage growth of incompatible development, civilian encroachment, and urban sprawl normally is delegated by State constitution and statute to local government. The premise of effective “local government land use planning and regulation” is based on the 1926 decision of the U.S. Supreme Court in *Village of Euclid, Ohio v. Ambler Realty Company*.⁴³ Land use regulations that are carefully thoughtout, based on a community adopted and approved plan, generally are constitutionally protected exercises of local government authority.

The tools presented here represent a strategic road map for local governments and DoD to consider in the conduct of day-to-day government affairs

An element of this authority is the avoidance of the physical clustering in space of dissimilar land use activities that may create unacceptable nuisances for residents and the local governing body. The responsibility to make a determination as to land use compatibility is an exclusively reserved prerogative of local governments. For the most part, it is based on land use planning principles and practices and community consensus.

The issue postulated by this *Practical Guide* is the sustainability of the military’s presence in a growing local community environment. This is both a matter of national pride and national defense.

Part III focused on the role of States in promoting community land use planning and preventing disruptive land use incompatibilities. Increasingly, States are looking to local government to address this issue, especially as it relates to the sustainability of the military presence in the State.

State governments are dependent on the local comprehensive planning process to arbitrate and resolve local land use issues that make up the fabric of a vibrant and dynamic community. As recorded in Part III, State legislatures are stepping forward to enact laws to support the military mission and to incorporate DoD installation planning into local government planning programs.

The following sections present planning and land use regulatory tools and strategies. These tools, if properly and judicially applied in a comprehensive planning framework, can materially improve the quality of local planning, discourage costly sprawl, and promote compatible land use near military installations. The tools presented here represent a strategic road map for local governments and DoD to consider in the conduct of day-to-day government affairs.

D. Land Use Regulations

This section expands up Table V-1 to address compatible land use regulatory tools intended to complement and implement the recommendations of a local comprehensive or general plan. Their importance in reducing incompatible civilian encroachment cannot be overstated.

Available to local government is a menu of State-delegated land use planning tools intended to protect the general public health, safety, and welfare. Residents, present and future, benefit from the “wise and judicious” application of government sponsored land use regulations consistent with a consensus based, duly adopted and approved comprehensive or general plan of local government.

1. The Local Zoning Code – The Tools: Zoning ordinances prescribe standards and specifications to guide legislative bodies and zoning boards of appeal in the legitimate exercise of the police powers (zoning authority) conferred by the State.

The local zoning code or ordinance is the primary means to designate defined geographic areas or zones that separate incompatible land use into different districts. General zoning categories include uses such as agriculture, residential (single-family or multifamily), commercial or industrial, or a mixture of all uses at varying densities and intensities and restrict other uses that may present nuisances for the neighboring property owner.

The zoning ordinance enumerates those uses that are permitted by right or by special exception in each district. Provided certain conditions are met, special exceptions may be approved on a case-by-case basis by a planning commission or board of appeals. Requests for variances from the strict application of zoning standards are acted on by the local board of zoning appeals or adjustment.

Table V-2

Land Use Regulations

Land Use Regulations	Implementing Authorities	Relationship to Encroachment
<p>The Local Zoning Code</p>	<p><i>Local govt.</i></p> <p><i>Local zoning authority is the means by which local govt. can legally implement the community’s plan.</i></p>	<p><i>An adopted and approved comprehensive plan, implemented through a local zoning authority, is the defining encroachment prevention tool. It represents the means whereby local govt. can influence the direction, type, use, density, and staging of civilian development. It is a local govt. public strategy to protect people from incompatible development and to promote compatible community development.</i></p>

<p>• Euclidian Zoning</p>	<p><i>Local govt.</i></p> <p><i>This is the oldest form of zoning, dating back to 1926 when the U.S. Supreme Court declared that local zoning was a legitimate exercise of local police powers to protect the public health, safety, and welfare.</i></p>	<p><i>Zoning has the force and effect of law. It establishes the basic land use category for an area and individual parcels of land, how they are to be developed, and to what density and intensity of use. It is the pathway to implementation of the plan.</i></p>
<p>• Piecemeal or Parcel-Specific Rezoning</p>	<p><i>Local govt.</i></p> <p><i>This is the foundation of modern zoning. In its purist form, it is intended to be a tool to implement the plan and to sustain the viability of the zoning process.</i></p> <p><i>Even though a local govt. may establish “original zoning” on a specific parcel of land, it does not guarantee the zoning will remain in place undisturbed. It may be changed upon petition from a property owner seeking to realize the highest and best use of property based on “changing conditions.”</i></p>	<p><i>Property owners have the right to petition to change the zoning of their property.</i></p> <p><i>A military base commander should be informed of rezoning applications.</i></p> <p><i>Piecemeal rezoning requests are filed by the property owner (or designated representative) with the local city or county planning department. Rezoning application is subject to planning staff review and presentation before the local planning commission in a public hearing. Recommendations are put forward for consideration by the local legislative body, which, in turn, conducts public hearings to determine the appropriateness of the proposed parcel-specific rezoning request and its relationship to the plan and changing conditions. It can be a laborious process.</i></p>
<p>• Comprehensive Zoning Map Amendment</p>	<p><i>Local govt.</i></p> <p><i>This form of zoning is initiated by the local planning commission. Normally it is applied to a planning district involving multiple properties based on the plan, and its recommendations are the basis for comprehensive rezoning.</i></p>	<p><i>This is the most important planning tool and strategy available to local govt. Only local govt. or the local planning commission may initiate a comprehensive zoning map amendment based on the plan. Its relevancy to encroachment prevention lies in the application of the comprehensive zoning map amendment based on a joint land use compatibility plan prepared and implemented by local govt.</i></p>

<p>• Comprehensive Downzoning</p>	<p><i>Local govt.</i></p> <p><i>This quasi-judicial/ legislative action by local govt. is an attempt to roll back previous govt. zoning decisions that are or have been incompatible with the nearby development. It is normally is part of a major updated of the general plan, its goals, objectives, and policies.</i></p>	<p><i>If properly implemented based on a careful and deliberate study, taking into account all relevant testimony from property owners and interested residents/stakeholders, this tool can be an effective means to reverse encroachment and urban sprawl. Under the rules of due process and fair consideration of all the facts, downzoning stands a good chance to be sustained by the courts.</i></p> <p><i>The relevance to civilian encroachment rests with the technical information provided by an AICUZ study, backed by a duly adopted and approved local plan.</i></p>
<p>Flexible Performance-Based Zoning Strategies</p>	<p><i>Local govt.</i></p> <p><i>This form of zoning is not based on the Euclidian model which specifies standards to be met. It is more flexible and allows a development proposal to provide certain public-benefiting activities in exchange for greater latitude.</i></p>	<p><i>An optional method of development that provides an applicant with greater flexibility in the design, location, density, and character of proposed development.</i></p> <p><i>This flexibility is relevant to the compatible land use planning issue surrounding military installations. It allows a developer to work closely with the community and base planners to arrive at a mutually acceptable development solution and plan.</i></p>
<p>• Floating Zone</p>	<p><i>Local govt.</i></p> <p><i>This is a flexible planning approach. As a special/unique planning authority, it can materially contribute to compatible land use strategy near a military installation.</i></p>	<p><i>Floating zones, when applied uniformly to a given situation, such as the physical presence of a military installation with active operational missions, can be a strong tool in the local legislative process and compatible land use planning.</i></p> <p><i>Its application, however, is subject to the interests of the property owner.</i></p>

<ul style="list-style-type: none"> • Overlay Zone 	<p><i>Local govt.</i></p> <p><i>This flexible approach to Euclidian zoning permits a local government to place a fixed zoning overlay on an existing zoning district to accomplish specific local government objectives to protect the public health, safety, and welfare.</i></p>	<p><i>Overlay zones generally cover multiple properties but do not change the underlying zoning classification. However, the underlying standards or requirements are amended generally to accomplish a particular objective identified in the plan.</i></p> <p><i>Its application to encroachment prevention can be significant; for example, in high noise environments, additional standards in construction practices and building design and orientation. On overlay zone may prohibit certain land uses that may not be appropriate due to an incompatibility.</i></p>
<ul style="list-style-type: none"> • Military Influence Zoning Overlay District (MIOD) 	<p><i>Local govt.</i></p> <p><i>This is a form of floating zoning used by local govt. intended to focus attention on policy issues affecting a particular area of interest. The standards and criteria are more rigid than underlying zoning requirements.</i></p>	<p><i>This zoning category establishes a legislative basis for special land use and development considerations near a military installation by taking into account the AICUZ technical recommendations for compatible land use activity near a military installation and the JLUS planning policies to protect the mission of the installation as well as public health, safety, and welfare.</i></p>

<p>• Accident Potential Zones (APZ) – Airport and Range</p>	<p><i>Local govt.</i></p> <p><i>The APZs are based on the AICUZ metrics developed by the respective military service. The intent is to provide the technical and scientific basis for local govt. land use regulations related to military aircraft, noise, and accident potential.</i></p>	<p><i>Military activities can present nuisances and/or public safety considerations for neighboring property owners. By incorporating into the local zoning ordinance an APZ overlay zoning district, additional protections can be provided to present and future property owners, including information relating to real estate disclosure, indoor sound level reduction (SLR), and limitations on placement of sensitive land use activity that otherwise would be permitted in the underlying zoning classification.</i></p>
<p>• Live Ordnance Aircraft Arrival and Departure Corridors</p>	<p><i>State/local govt.</i></p> <p><i>This is an overlay-zoning district that extends beyond the APZ-II to provide an added zone of protection from aircraft accident.</i></p>	<p><i>This extended overlay district has been effectively applied in the State of Arizona (ARS § 28-8461) to provide additional land use compatibility under a special designated military arrival/departure corridor where high-performance military aircraft carrying live ordnance (bombs and rockets) depart to or arrive from distant aerial combat training ranges.</i></p>
<p>• Noise Protection (Quiet) Zones (NPZ)</p>	<p><i>local govt.</i></p> <p><i>The NPZ is based on the AICUZ and ONMP metrics prepared by the respective military service and provided to local govt. The objective is to provide technical and scientific information as the basis for a local govt. land use regulatory strategy to protect residents for noise exposure.</i></p>	<p><i>Recognizes that sound can be invasive and disruptive to quality of life, by, for example, interrupting sleep and contributing to health problems.</i></p> <p><i>By identifying areas that are subject to high and offensive noise levels, sensitive land use activities may be excluded, such as: residences, schools, places of assembly and worship, hospitals, libraries, nursing homes, child care/day care, and so on. This is not a prohibition of all land uses. Uses that are less sensitive can and should be encouraged in a high noise zone.</i></p>

<ul style="list-style-type: none"> • Maximum Mission Contour (MMC) 	<p><i>Local govt.</i></p> <p><i>The MMC concept is based on the identification of projected noise contours based on assumptions jointly developed between the military service and projections of long term missions, types, and number of aircraft.</i></p>	<p><i>Local govts. have difficulty dealing with ever-changing noise contours that can create an “accordion effect” and destabilize zoning. The MMC represents a community-derived future scenario of the likely military flying mission(s) and the maximum geographic area of local impact.</i></p> <p><i>This is a planning concept that attempts to project future military fleet mix, operations, noise impacts, and the potential for accidents. It is no different from a long-term traffic impact analysis based on current and projected conditions.</i></p>
<ul style="list-style-type: none"> • Planned Unit Development (PUD) 	<p><i>Local govt.</i></p> <p><i>A PUD is an opportunity for a local government to promote creativity by relaxing some standards for the developer in return for receiving more amenities in the area being developed while taking into consideration the presence of a military installation.</i></p>	<p><i>Innovative land use development process that encourages a maximization of land use activities that result in a planned new community capable of supporting residences, businesses, and commerce.</i></p>
<ul style="list-style-type: none"> • Mixed-Use or Multi-Use Planned Development (Mx/MU-PD) 	<p><i>Local govt.</i></p> <p><i>This flexible development process allows a developer to vary from the strict application of a Euclidian zoning requirement, subject to the review and approval of a local planning commission.</i></p>	<p><i>Innovative development method to design complex development scenarios on the scale of a new community. Its relevancy to the military presence is relatively minor. However, it does present an opportunity for creativity and design recognizing the expectations of the marketplace.</i></p>
<ul style="list-style-type: none"> • Agricultural Zoning 	<p><i>Local govt.</i></p> <p><i>Preservation of agricultural lands as a viable component of the local economy.</i></p>	<p><i>The agriculture industry is the most compatible and viable land use activity in relationship to a military installation’s operations. It protects a vital component of the local economy.</i></p>

<p>• Transfer of Development (TDR)</p>	<p><i>Local govt.</i></p> <p><i>This is a sub-element of the agricultural and land preservation efforts of local govt and land conservation interests.</i></p>	<p><i>Military installations are more frequently confronted by development applications in the form of subdivision activity that can stress the multiple objectives of local government to preserve cultural, historic, and environmental values. Its place in encroachment prevention is well known.</i></p>
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The zoning ordinance sets standards for permitted land uses, densities of development, location of structures, building heights, setbacks, acreage requirements, and so forth for each zone. Zoning ordinances vary from State to State and location to location. The reader is encouraged to check with the local government planning and zoning department or commission for the most current zoning ordinance.

Decisions by a board of zoning appeal normally are considered quasi-judicial as compared to an action by a legislative body, such as a city or county council. When a legislative body reserves to itself the same authority as a board of appeals, its decisions on individual cases are considered quasi-judicial. Unlike quasi-judicial decisions, the act of rezoning property, amending a zoning ordinance text, or adopting a comprehensive zoning map amendment to the jurisdiction’s official adopted zoning map are considered legislative actions.

Military installations, indeed all Federal properties, are exempt from local zoning and regulatory requirements based on the “sovereignty principle.” Why is this important? A community may enact a land use plan thinking it is compatible with the mission of the military installation only to learn that uses by right may be incompatible with the military mission.

- a. **Euclidian Zoning:** What is Euclidian zoning? It is the oldest type of zoning. New York City was the first jurisdiction to enact zoning as a means of regulating land use, building heights, building bulk, and access to air and natural sunlight.

Local zoning codes are intended to protect abutting property owners from nuisances created by incompatible land uses.

The term Euclidian zoning is in reference to a seminal Supreme Court decision in the case of the *Village of Euclid, Ohio v. Ambler Realty Company*.⁴⁴ It is considered “original zoning” and it is parcel specific.

Euclidean zoning districts generally fall into four categories: residential, commercial, industrial, and agricultural. In residential zones, housing could range from single-family detached units on lots of varying dimensions and densities to high-rise apartment buildings. Commercial zones provide for retail, office, or service-commercial development activities at varying densities. Light and heavy

industrial zones permit a range and intensity of industrial activities that can be employee intensive. Heavier industrial uses (manufacturing) often are clustered in a designated (zoned) industrial area to avoid creating nuisance problems for neighbors (e.g., smoke, odor, dust, and noise.). Agricultural zones were designed to preserve agricultural lands as a viable land use and economic enterprise.

This is the most recognized form of zoning by use. It identifies land use activities that are permitted in a particular zoning district and those that are not. The military commander or planner should understand that Euclidian zoning is often enforced by a “prescriptive use” zoning ordinance. This means that a particular use category is called out in a zoning ordinance classification. If the use is not called out, it is not permitted in a particular zoning district. The only recourse for a prospective purchaser, then, is to seek an amendment to the local zoning ordinance list of permitted uses.

It is incumbent on the local military planner to review the local zoning ordinance and identify any land uses that are inconsistent with the military mission or activities

Strategy: *It is incumbent on the local military planner to review the local zoning ordinance and identify any land uses that are inconsistent with the military mission or activities. If there are any, the base/post commander or his designee should so advise the local government so that a zoning code amendment may be considered.*

Strategy: *Although a property may be zoned in a compatible use category a jurisdiction’s zoning ordinance might permit by right a less-dense incompatible use. Familiarity with and understanding of a jurisdiction’s zoning ordinance, permitted uses by right, and allowable densities are important.*

- **Accessory Uses Permitted:** Accessory uses are not well understood even by practitioners in the field. However, they are important considerations in developing an encroachment prevention zoning strategy. Land uses that are normally associated with an activity and support that activity by providing directly related and associated services oftentimes are permitted by right in the zoning code, even though not specified or called out. For example, a day care center may be located in an office complex, just as a dry-cleaning establishment, a deli or short-order restaurant, or express mail service could be considered accessory. These uses normally and customarily are associated with the principal permitted use and are permitted by right.

Strategy: *Accessory uses also can be problematic if permitted by right in high noise zones or APZs. Incompatible accessory uses that can subject residents or occupants to potential hazard should be prohibited in high noise and accident potential “overlay” zoning districts. A careful review of the local zoning ordinance in the context of an AICUZ study or JLUS should identify permitted accessory uses by zoning district. Recommendations can then be formulated to either restrict or condition the introduction of an accessory use in a high noise or accident potential zone.*

- b. Piecemeal or Parcel-Specific Rezoning:** This is occasioned by a straightforward request of a property owner to rezone property, most often from a lower zoning classification to a higher by correct zoning classification. Generally, the higher the zoning use category and density permitted, the higher the property value and the greater the income it produces.

Local planning commissions and/or the local legislative body may initiate a revision to the official adopted zoning map of a jurisdiction. It may do this as a broader class of properties (comprehensive rezoning) in accordance with the Plan of the local jurisdiction.

The process of seeking a parcel-specific rezoning often can be arduous, steeped in procedural and governmental delays. In some jurisdictions, a rezoning may not take place unless it can be established that the rezoning is in conformance with a duly adopted and approved comprehensive/general plan of the jurisdiction.

- c. Comprehensive Zoning Map Amendment:** The idea of a comprehensive zoning map amendment serving as an encroachment prevention tool was introduced in Part II. It can be one of the strongest tools available to local government to synchronize the plan's land use recommendations with the zoning code and official zoning map. It also can be a strategy to prevent encroachment and discourage sprawl.

Both the general plan and the implementing comprehensive zoning map amendment are the foundation for the application of the zoning tools available to local government.

- d. Comprehensive Downzoning:** Downzoning involves more than one property if properly and legally implemented in accordance with the general plan and established procedures. Most often this will be sustained by the courts. Generally, courts are hesitant to interfere in cases involving legislative wisdom, provided the four guiding principles discussed in Part IV and repeated here are followed.

Guiding Principles:

- 1. There must be a demonstrated public justification for the restriction;*
- 2. The objective must be a legitimate use of police powers;*
- 3. The means must be reasonable to accomplish the ends; and*
- 4. The means must not be unduly oppressive on the individual.*

For example, a Maryland court in the case of *Norbeck Village Joint Venture v. Montgomery County Council* (254 Md. 59, 254 A.2d 700 [1969]), held that comprehensive downzoning based on a plan did not constitute a taking. The downzoning the court reasoned was based on a comprehensive planning policy that fairly distributed the benefits and burdens of land use regulations.⁴⁵

Land developers seeking to be creative often turn to flexible or performance-based zoning

Increasingly, downzoning has become a tool of municipalities to seek to tighten zoning regulations in a comprehensive manner based on a duly adopted and approved plan and usually can receive deferential and favorable judicial review. However, downzoning of a single tract of land can and will receive closer judicial review as “spot zoning.”

Strategy: *The courts generally will not become involved in a zoning challenge if the legislative or quasi-judicial action was based on a comprehensive plan supported by a comprehensive zoning map amendment and is based on public hearings, due process, and careful deliberations that take into account all views and recommendations in a fair and impartial proceeding.*

2. Flexible or Performance-Based Zoning: Land developers seeking to be creative often turn to flexible or performance-based zoning, assuming the local jurisdiction has incorporated flexible zoning requirements in its planning and zoning code. An objective of performance-based zoning is to improve the quality and creativity of urban design and enhance salability and livability of the unit. In the process it also can provide public benefits and amenities in exchange for flexibility in design that otherwise would not be allowed.

Flexibility in design can improve the quality of site plan designs, innovative street widths, variable lot sizes, and variety in the mix of uses and the placement buildings and structures on-site. This normally would not be permitted under the Euclidian zoning model. There are several classes of flexible or performance-based zoning classifications.

Strategy: *Performance-based zoning can be a valuable encroachment prevention tool when coupled with a comprehensive/general plan. By introducing flexibility in site plan design, mix, and placement of land use activities the land developers may achieve the highest and best use of the property while protecting future residents and employees from externalities such as high noise levels and accident potential while supporting the sustainability of the military mission.*

Performance-based zoning can be a valuable encroachment prevention tool when coupled with a comprehensive/general plan

a. Floating Zones: These techniques are enormously important tools. A floating zone can allow flexibility in the design of a development project. This flexibility generally takes the form of relaxed building site placement and height requirements, allowing for a clustering of mixed land uses on-site. This normally is not attainable under Euclidian zoning. Floating zones, as the term implies, are not assigned to a specific property identified on the official zoning map, but are allowed to “float” in one or more zoning districts if recommended in the plan. It is more akin to a master site plan variance or special exception to the strict application of zoning standards (height, bulk, density, setbacks, and so on).

Depending on the sophistication of the local zoning ordinance, floating zones can require the submission of detailed site plans for review and approval by a local planning commission or legislative body. Euclidian zones do not require the submission of a detailed site plan.

The jurisdiction, through the comprehensive/general planning process, identifies geographic areas that may develop under traditional Euclidian zoning or through an optional method (floating zone) of development. A designated optional development area may be identified in the comprehensive/general plan or in accordance with the underlying zoning classification. A floating zone is an optional development procedure.

In exchange for the greater flexibility in development standards (i.e., lot size, density, land use mix, and the like), an application for a floating zone would be supported by a detailed site plan reviewed by the local planning commission, which will make judgments about the neighborhood compatibility and livability that a proposed development would introduce to an area. It would consider internal and external impacts of the proposed development on the character of the surrounding neighborhood and the community's comprehensive/general plan.

The traditional finding of changing conditions required for the grant of a Euclidean rezoning generally is not required under a floating zone or optional development approach.

An application for a floating zone generally involves a two-step process, where the applicant first seeks preliminary approval of a conceptual site development plan. Upon acceptance of the conceptual plan, the second phase of the application review process begins with the submission of a detailed site development plan.

A detailed plan submission may require architectural renderings/schematics, engineering drawings, a detailed signing plan, a detailed landscaping plan, special urban design and architectural elements, off-site traffic impact analysis and improvements, and demonstrated availability of adequate public facilities to serve the development, to name a few. These additional requirements satisfy both the land developer's need for speedy approval of development plans and the planning commission's requirements for detailed information upon which to make an informed decision.

There are several types of floating zones

There are several types of floating zones. Floating zones provide a means to mediate encroachment of incompatible development by permitting flexibility in the location and placement of multiple land use categories that can take into consideration high noise impact areas and accident potential most closely associated with military operations. It is a creative tool to address the location of incompatible and compatible civilian encroachment.

There are many types of floating zones ranging from planned unit development, to cluster subdivisions, to mixed-use development, to performance zoning. All typically require conceptual and detailed site plans reviewed and approved by a local planning commission as a prerequisite for approval. Traditional Euclidian zoning does not require a detailed site development plan as a condition for approval.

- b. Overlay Zones:** Overlay zones most often cover multiple properties but do not change the underlying designated zoning classification. They do amend the

underlying zoning use standards or requirements. Unlike floating zones, which are identified in a general zoning ordinance text, overlay zones are posted on the jurisdiction's official adopted zoning map as a special development district(s), enjoying special standards and prerogatives of local government.

A designated overlay zone can require stricter but not looser standards and requirements than the underlying zone standards and requirements

Strategy: *Overlay zones are assigned based on the recommendations of the plan and can be the most important and far-reaching planning and land use regulatory tool available to prevent encroachment of the civilian population into high noise sensitive and accident potential zones.*

A designated overlay zone can require stricter but not looser standards and requirements than the underlying zone standards and requirements. In addition, it may restrict land uses that otherwise would normally be permitted by right in an underlying zone.

Application of an overlay zone is appropriate where there are special public policy interests that cannot otherwise be met by either the standards of the underlying zoning or a rezoning to a different zoning classification. Overlay zoning districts need to be consistent with an approved and adopted comprehensive or general plan.

Strategy: *Overlay zones are important zoning tools available to protect military installations from encroachment by incompatible land use activity.*

An overlay zone literally overlays a traditional Euclidian zoning district and takes into consideration special conditions that may impact on certain proposed land use activities that can be sensitive to high noise and possible negatively influenced by a nearby military activity.

Overlay zoning districts need to be consistent with an approved and adopted comprehensive or general plan

Application of Performance-Based Zoning to Military Base Compatible Land Use Issues: By their nature, military installations and testing and training ranges are noisy and can present the potential for catastrophic accident involving loss of life and property. It is not wise for a local government to permit residential development or places of assembly, including hotels, schools, hospitals and nursing homes, places of worship, theaters, or sports stadiums, to locate near runway APZ or in high noise impact areas where the average day/night noise level can exceed 65 dB DNL/Ldn.

Strategy: *Performance-based overlay zones are among the most effective zoning tools available to a local government to prevent encroachment of incompatible land use activity by culling out specific use categories that are not appropriate in a special zoning overlay district.*

1) Relationship to the AICUZ Program: The information contained in an AICUZ study is valuable when applying overlay zoning to a Military Influence Planning District (MIPD). There are three applications of AICUZ information that can easily translate to a local overlay-zoning district: (1) the Military

Influence Overlay District (MIOD); (2) the accident potential zones; and (3) the noise protection zones.

- c. Military Influence Overlay District:** This mapped zoning overlay district is based on the designation of an MIPD for purposes of conducting careful and deliberate compatible land use study in relationship to emerging development patterns and operational requirements of a nearby military installation. Through a JLUS process, additional zoning conditions and requirements may overlay the basic underlying zoning district, providing guidance to prospective land developers as to what land use activity is mutually compatible with the nearby military operations.

Generally, land uses that are considered compatible are those that do not attract large numbers of people, such as a sports stadium or shopping mall, or places in general that attract large numbers of people to congregate there. The use of land for residential, school, day care, and hospital and nursing homes is generally discouraged, depending on the level of exposure to excessive noise and accident potential.

However, higher, income-producing land uses are encouraged, such as low-density industrial, business, and retail. To be effective in establishing a zoning overlay district, care must be taken to ensure that the exclusion of a land use activity is justified, based on protecting the public health, safety, and welfare, and is consistent with the goals and objectives of the jurisdiction's plan.

The following case study and Appendix 4.5 present a sample overlay zone taken from the Horsham Township (NAS Willow Grove) JLUS dated December 2001.

Case Study – Horsham Township, PA, JLUS

Background: Naval Air Station (NAS)/Joint Reserve Base (JRB) Willow Grove is located in Montgomery County, Pennsylvania, approximately 15 miles north of downtown Philadelphia. The land to the east, south, west, and northwest of the NAS is within the city limits of Horsham Township (pop. 24,326). To the south, east, and west, the predominant land use pattern consists of well-established residential subdivisions, multifamily residential areas, research office parks, and highway-oriented strip commercial development.

Northwest of the NAS/JRB Willow Grove, the area's character transitions to low-density, large-lot residential development with scattered commercial development.

To the north, in Montgomery County and bordering Bucks County, the suburban-rural character is experiencing pressures for higher density suburban residential and commercial development. This development presents a growing probability that encroachment will eventually surround the NAS and affect the station's joint services flying missions.

In September 1997, the Deputy Assistant Secretary of the Navy for Installations and Facilities nominated NAS Willow Grove for a JLUS, based on the likelihood of

Performed-based overlay zones are among the most effective zoning tools available to a local government to prevent encroachment of incompatible land use activity

incompatible development encroaching upon and compromising the missions of the NAS/JRB.

Growth Pressures: The NAS/JRB is within the geographic confines of the Philadelphia Metropolitan Area. The area is strongly influenced by the economic and social development pressures of the City of Philadelphia and the physical expansion exerted by these pressures on outlying suburban communities.

The townships surrounding the base, in Montgomery and in nearby Bucks Counties, are experiencing increased demand for available land for housing and industrial park development. These development pressures are likely to cause a change in the character of the northern and western sectors from agricultural and rural open space to higher density urban and suburban residential and commercial development.

Existing land use patterns near NAS/JRB Willow Grove are in a state of transition to higher density residential and commercial uses. The areas south of the NAS/JRB are essentially mature, developed communities. The emerging growth pressures are to the north and northwest.

NAS/JRB Willow Grove occupies a substantial portion of Horsham Township. Over the past 60 years, it has become a significant part of the economic life of the community. The aircraft operations, as with any airfield, can have negative impacts on the safety and environments of nearby residents because of noise and the potential for aircraft accident. It can also have a strong positive economic impact. This dichotomy is not unusual.

The population of Montgomery County has grown more than 31 percent since 1960 compared to the townships' population growth of 145 percent and 351 percent where the NAS is located.

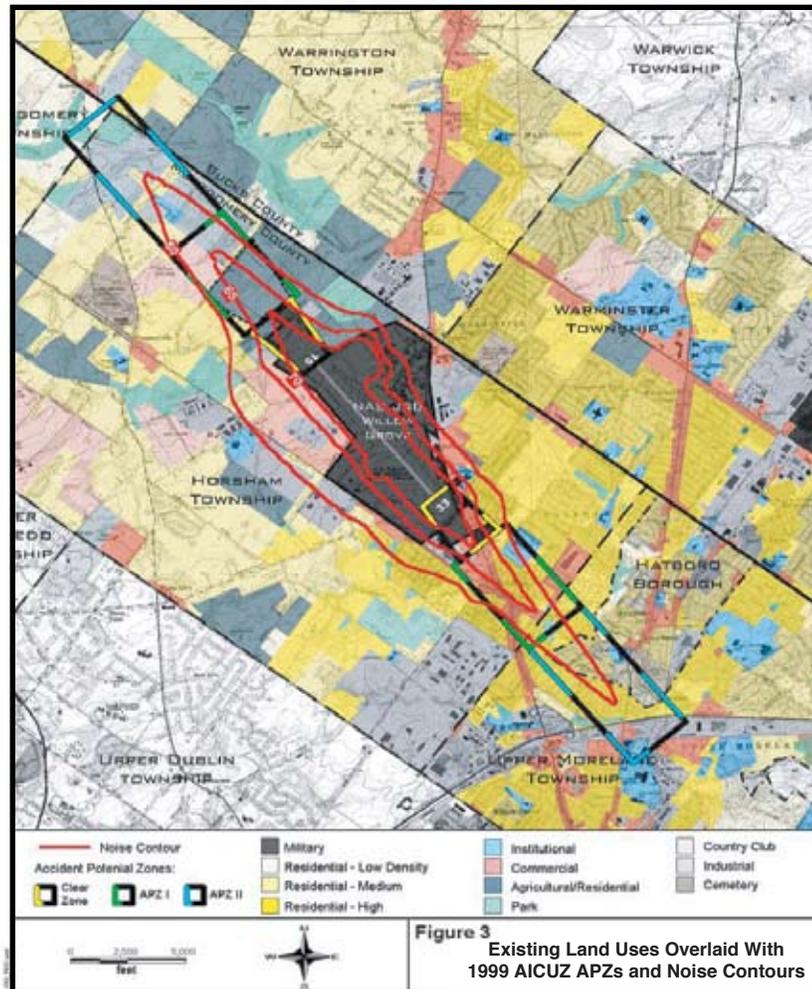
To be effective in establishing a zoning overlay district, care must be taken to ensure that the exclusion of a land use activity is justified

The Community Response: In January 2000, The Horsham Township JLUS Citizen Advisory Board was formed to develop the scope of work for the JLUS study and undertake the study in partnership with the Navy, and the Defense Office of Economic Adjustment (OEA). The JLUS Advisory Board was made up of elected and appointed officials and residents who recognized their civic obligation to protect lives and property of residents through imposition of compatible development strategies. The JLUS commenced in January 2000.

About the same time, in November 1998, the Navy began an update of the AICUZ study. The Base Command and Naval Facilities Engineering Command Headquarters — Northern Division fully participated in the process and provided technical assistance to the affected communities.

The Navy completed the AICUZ update in March 2001. Public presentation of the AICUZ report and data occurred in April 2001.

Figure V-16
Horsham Township, PA — Willow Grove
JLUS Existing Land Use



Source: Willow Grove 1999 AICUZ Report.

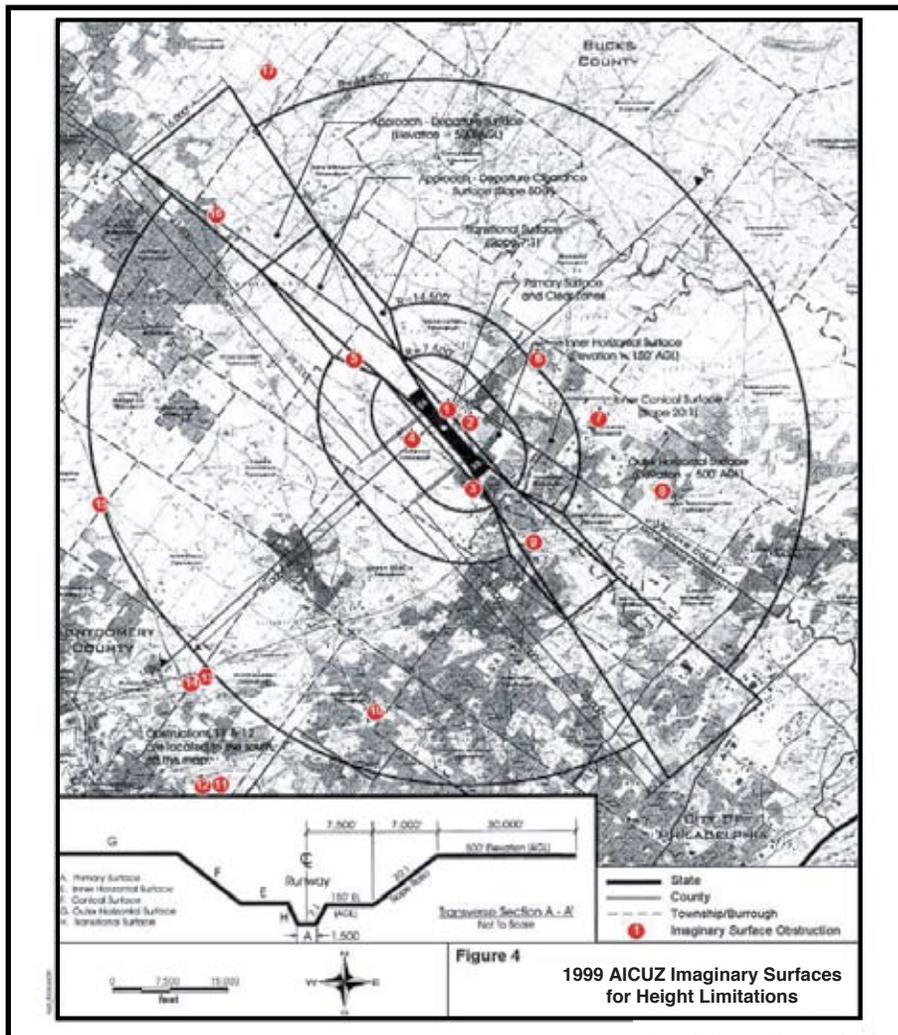
Planning: The following are the recommendations from the JLUS:

- Ensure that future development is consistent with adopted and approved Township's Comprehensive Land Use Plans;
- Protect the health, safety, and welfare of residents living in proximity to the NAS;
- Protect the existing flight corridors to and from the NAS;
- Initiate action to incorporate the report's recommendations into the local government comprehensive plans;
- As soon as possible after action on the comprehensive plans, initiate action to amend the zoning and building codes, including revisions to official zoning district maps (see Appendix 4.5).

- Develop a public outreach program to educate current and potential residents regarding the zoning and building code requirements, particularly with respect to the disclosure requirements;
- Reevaluate the Military Airport Planning Overlay District (MAPOD) every 10 years and as soon as possible following a mission change or issuance of an AICUZ update by NAS/JRB Willow Grove; and
- Establish an ad hoc advisory board when necessary to reevaluate the MAPOD and develop future recommendations to the comprehensive plans, zoning codes, and building codes.

The implementing strategies are pending before the respective township councils and counties as of this writing.

Figure V-17
Willow Grove JLUS — Height Limits



Source: Willow Grove 1999 AICUZ Report.

- d. Aircraft Accident Potential Zones:** At either end of a military airfield runway are designated clear zones (CZs) and an APZ. The APZ is further subdivided into the APZ-I and APZ-II.

APZ boundaries are readily identifiable through AICUZ studies. They are based on historic aircraft accidents, current fleet mix, and operational performance characteristics of military aircraft. A “footprint” is produced indicating an area where aircraft accidents have historically occurred.

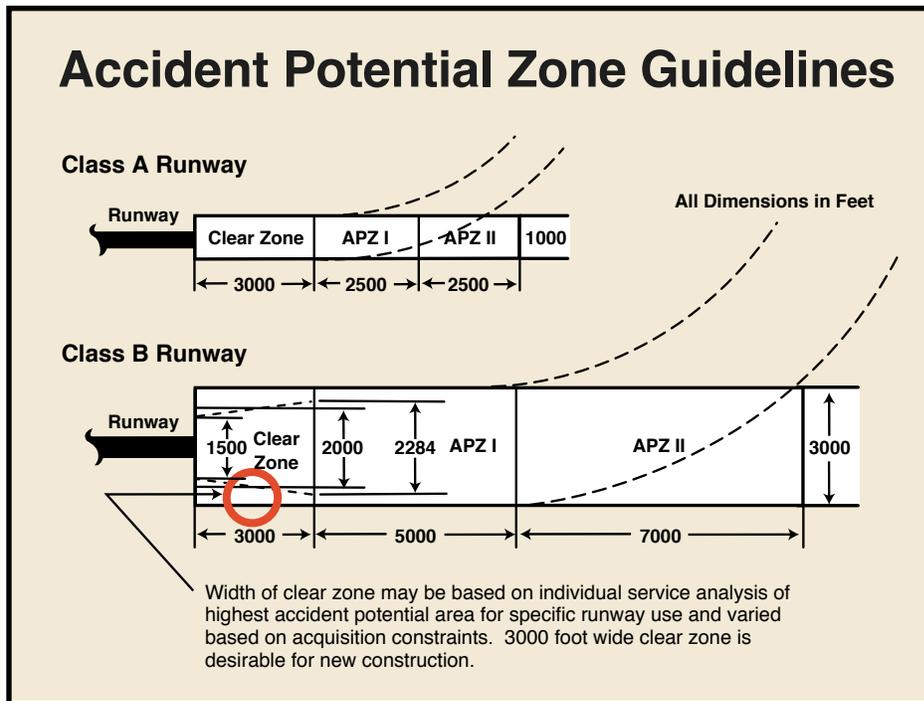
The footprint is not intended to indicate the probability of an accident occurring. Rather, it identifies areas of probable impact based on historic events. The footprint is based on actual recorded incidents. Figure V-18 illustrates the DoD APZ policy.

- 1) **The CZ:** The CZ is the area of highest aircraft accident potential. It is located at the immediate ends of an airfield runway. Typically, it is in the shape of a trapezoidal “approach” fan beginning at the end of a runway and extending outward from the runway centerline for 3,000 feet. The dimensions are 1,500 feet in width at the runway threshold and 2,284 feet in width at the outer edge, depending on the classification of aircraft using the airfield and fit within a 3,000-foot by 3,000-foot box. By definition, a CZ should have no buildings, structures, or other surface use that could impair takeoff and landing of aircraft. The only DoD recommended land use is agriculture, provided that a crop does not attract birds. The military attempts to purchase in fee or secure development rights in the CZ to prevent the erection of structures or buildings. Most often, a CZ is located wholly on a military airbase and does not extend into the civilian community. There are some exceptions, however.
- 2) **APZ-I:** This is the area immediately beyond CZ-1 whose dimensions roughly equate to a rectangular box 3,000 feet wide by 5,000 feet long. The APZ-I is less hazardous than the CZ, but it can pose a sufficient level of potential danger to the public health and safety to warrant consideration by a local planning commission as to the risk to human health and safety.

DoD policy recommends that no residential use be allowed in the APZ-I and severely restricts places of assembly, schools, nursing homes, hospitals, and the like. Limitations on building and structure height in excess of those that otherwise may be permitted by underlying zoning are encouraged, based on FAA regulations.

- 3) **APZ-II:** This is a tertiary rectangular area approximately 3,000 feet wide by 7,000 feet long and extending beyond APZ-1. There is a lesser degree of hazard from aircraft accident than in APZ 1. Nevertheless, it still poses a sufficient level of potential danger to the public health and safety. DoD policy for APZ-II recommends a low density of residential development of one to three dwelling units per acre on scattered sites, restrictions on places of assembly, and limitations on building and structure height in excess of those that otherwise may be permitted by underlying zoning.

Figure V-18



Source: DoD Instruction 4165.57.

Zoning and subdivision regulations are excellent vehicles to identify and regulate land uses and activities that are inconsistent with the concept of an APZ and its recognition of a potential for catastrophic aircraft accident and attendant loss of property, even lives.

e. Beyond the APZs — Live Ordnance Aircraft Arrival and Departure

Corridors:⁴⁶ When considering the issue of departing aircraft loaded with live ordnance (bombs and rockets), the State of Arizona devised an extended restricted use area that went beyond the standard AICUZ APZs. This was part of the State’s “Growing Smarter” effort to work with the local air bases in the State. The State believes it prudent and appropriate to provide added protection from inadvertent mishap. The State statute restricts land uses such as residential, places of assembly or worship, schools, day-care centers, hotels, hospitals, and stadiums from locating beneath a live-ordnance aircraft departure corridor as incompatible.

However, this is not considered a no-development zone. It is a zone in which compatible land uses, such as agriculture, warehousing, and light manufacturing, are permitted and encouraged. Land uses that attract people are discouraged. The same land use compatibility guidelines recommended under the DoD AICUZ standards for the APZ-II are carried forward by the State in this extended Live Ordinance Arrival and Departure Corridor. The following case study shows how this is being implemented.

Zoning and subdivision regulations are excellent vehicles to identify and regulate land uses and activities that are inconsistent with the concept of an APZ

Figure V-19**Case Study Luke AFB, AZ — Flying Mission**

Source: Luke AFB, 56th, Fighter Wing.

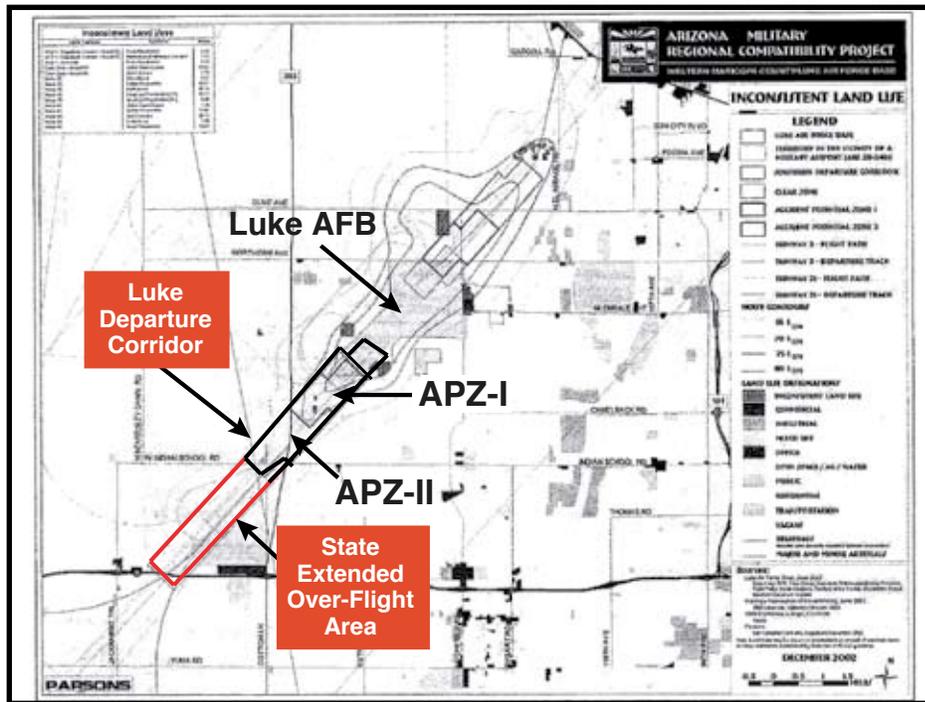
Luke AFB, Arizona, APZs (CZ, APZ I and II) are identified in the military's AICUZ programs as information to be used by local communities in their planning and zoning processes.

However, from the State's perspective, the AICUZ program does not recognize live ordnance aircraft flight departure corridors beyond the Air Force defined APZs. As mentioned above, Arizona law establishes a minimum "safe" ground area for aircraft carrying live ordnance (bombs and rockets) departing for distant training ranges.

The live ordnance departure corridor includes the Air Force designated CZ and APZs I and II. The corridor designated by the State for Luke AFB extends farther out than the Air Force APZ, to a total distance of 30,000 feet by State statute provision (ARS §28-8461.9[a]). In contrast, the standard military AICUZ accident potential zones extend 15,000 feet from the end of an airport runway (see Fig. V-20).

This "extended over-flight area" (Fig. V-20) begins from the end of the south runway. It is a trapezoidal-shaped area 2,000 feet wide at the end of the runway and widens thereafter to 10,400 feet at its terminus. Its purpose is to define for safety purposes the "Live Ordnance Aircraft Arrival and Departure Corridor."

Figure V-20
Luke AFB, AZ Live Ordnance Air Departure
Corridor and State Extended Over-Flight Area



Source: Arizona Department of Commerce.

The “Regional Compatibility Plan” for Luke AFB, developed under the auspices of the Arizona State Department of Commerce and the affected jurisdictions, incorporated this extended APZ, locally referred to as the “paddle area.”

The Plan “[e]ncourages the jurisdictions of Buckeye, Goodyear, and Maricopa County to adopt and enforce zoning ordinances to restrict sensitive land uses in the over flight areas associated with the Southern Departure Corridor.”⁴⁷ The same land-use compatibility standards as in the APZ-II were applied in the extended “paddle area.”

The Live Ordnance Arrival and Departure Corridor is identified in Figure V-20. It represents an extended APZ concept, not officially recognized or endorsed by the Air Force. This concept should and could be considered an added tool in the community planner’s compatible land use toolkit.

Tucson, Arizona, has established a 50,200-foot (9.8-mile) extended departure corridor from the southwest end of the Davis-Monthan AFB runway as an added safety zone for military aircraft departing with live ordnance destined for the Barry M. Goldwater Range in southern Arizona.⁴⁸

The Live Ordnance Arrival and Departure Corridor is identified in Figure V-20. It represents an extended APZ concept, not officially recognized or endorsed by the Air Force

Noise levels at or above 70 dB DNL/Ldn can seriously affect the quality of life, human health, and livability

- f. **Noise Zones (NZs):** Many jurisdictions recognize the potential impact of sound on human health and the environment. For example, in Montgomery County, Maryland, the acceptable range of average noise levels is between 60 and 65 dB DNL/Ldn. In Aurora, Colorado, any sound above 60 dB DNL/Ldn is unacceptable for residential development, especially under aircraft landing and departure corridors, regardless of the underlying zoning classification. In Orlando, Florida, it is 55 DNL/Ldn dB; in Raleigh/Durham, North Carolina, it is 55 DNL/Ldn dB.

Figure V-21 presents in matrix form a land use noise sensitivity chart developed by the FAA as part of the FAA Airport Noise Compatibility Planning Toolkit. The DoD-AICUZ programs specify 65 dB as the upper threshold of noise level compatible with residential development. Beyond 65 dB DNL/Ldn, residential development should not be permitted for public health and safety reasons without sound level reduction (SLR) measures employed as part of the local building code. Noise levels at or above 70 dB DNL/Ldn can seriously affect the quality of life, human health, and livability. In addition to residential uses of all types, land uses such as schools, hospitals, nursing homes, places of worship, libraries, and places of public assembly should also not be permitted in 70+ dB DNL/Ldn noise environments, whether military or not.⁴⁹

- g. **Notional Maximum Mission Contour (MMC):** The MMC conceptually is a defined projected noise impact area developed by the local jurisdiction after consultation with the military. It is developed based on information presented in an AICUZ study and confirmed through the JLUS program. Like other planning and regulatory parameters it is intended to project future conditions based not on certainty, but rather on sound judgment, information exchanged, and community goals and objectives.

A “notional” MMC can define the projected noise contours a community is willing to accept for land use planning purposes

Strategy: *A “notional” MMC can define the projected noise contours a community is willing to accept for land use planning purposes. It is based on a hypothetical maximum mission scenario jointly agreed to by the participating jurisdictions, with technical support from the local military installation. In this context it becomes public policy.*

The MMC concept has been successfully applied in the environs surrounding Wright-Patterson AFB in Dayton, Ohio, using the Joint Land Use Study (1996) model. The participating cities and counties adopted the findings and recommendations of the Joint Land Use Study and subsequently incorporated the recommendations into the Airport Zoning Authority’s zoning land use regulations.⁵⁰

Another example is the Davis-Monthan AFB JLUS, prepared by the City of Tucson and Pima County under the auspices of the Arizona Department of Commerce, which elected to use notional noise contours to reflect an MMC based on the Air Force F-22 (Raptor), an aircraft presumed noisier than the F-16.

Figure V-21
FAA Land Use Noise Sensitivity Matrix



Land Use Noise Sensitivity Matrix

		55-65 DNL	65-75 DNL	75+ DNL
 Residential	1-2 Family	Yellow	Red	Red
	Multi-Family	Yellow	Red	Red
	Mobile Homes	Yellow	Red	Red
	Dorms, etc.	Yellow	Red	Red
 Institutional	Churches	Yellow	Red	Red
	Schools	Yellow	Red	Red
	Hospitals	Yellow	Red	Red
	Nursing Homes	Yellow	Red	Red
	Libraries	Yellow	Red	Red
 Recreational	Sports/Play	Yellow	Yellow	Red
	Arts/Instructional	Yellow	Red	Red
	Camping	Yellow	Yellow	Red
Commercial	All Uses	Yellow	Yellow	Yellow
Industrial	All Uses	Yellow	Yellow	Yellow
Agricultural	All Uses	Yellow	Yellow	Yellow

Per Far Part 150	Compatible	
	Incompatible	

Source: Federal Aviation Administration.

The MMC can effectively respond to communities faced with expanding and contracting noise contours based on changing military operational missions and fleet mix

The MMC can effectively respond to communities faced with expanding and contracting noise contours based on changing military operational missions and fleet mix. Local governments find it difficult to stabilize zoning and land use patterns when the noise contours change continuously.

In recent Air Force and Navy Operational Instructions, the AICUZ program has been revised to require future noise contour AICUZ studies to consider in future (15 to 20-year projections) air base operations.⁵¹ In effect, this means the military is moving away from existing documental operational scenarios to consider future events and the ramifications of those events on the surrounding community.

Community planning by its nature is future oriented and designed to both anticipate and guide future growth consistent with local planning policies and implementing ordinances. The MMC fits the framework of a future-oriented scenario.

helping communities help themselves

- h. Planned Unit Development (PUD) Ordinance:** A PUD is a flexible zoning technique intended to encourage attractive new communities that offer a mix of housing unit types and densities and a variety of supporting land use activity. Application of a PUD normally involves large tracts of land in developing areas. The application must be consistent with a local comprehensive plan. The objective is to achieve a coordinated mix of residential and limited commercial uses and related public and private facilities that are compatible with the planned community and surrounding area.

Various jurisdictions may require that PUD's architectural design elements be compatible with neighboring properties. The clustering of development to take advantage of a site's characteristics, while preserving open space and higher quality design, are the objectives of the PUD concept. In addition to the provision of open space, a PUD can provide a package of amenities including playgrounds, community centers, pedestrian walkways and bikeways, affording safe and easy access to shops, schools, and other local facilities.

In a residential PUD, the site-plan review process may require development to be built away from noisy factories, sawmills, airports, high-noise impact zones, and military training ranges.

Figure V-22

Military Tanks on Maneuvers and Residential Subdivision in Background



Source: U.S. Army

A PUD is a valuable tool in encroachment prevention. It can organize the spatial character of the area to avoid placing incompatible land uses too close together causing nuisance conditions, a degraded quality of life, or subjecting future residents to known nuisances.

In addition to zoning standards and requirements, the local jurisdiction's subdivision regulations become the logical point in the development process to regulate human exposure to high noise levels in the interest of public health and safety. Noise limiting zoning is implemented at the individual lot level through subdivision regulations.

i. Mixed-Use or Multiple-Use Planned Development: In a number of communities on a grander scale, local planning and zoning authorities permit special development processes similar to a PUD.

- **“Mixed-Use Planned Development” (MxPD)** is a zoning classification that has relevance in this discussion. It is an alternative planned development concept that allows flexibility in land use mix and in its organization of uses and relationships in space. Its objective is to achieve a balanced and specially integrated mix of land use activities (vertically and horizontally), strongly supported by the market that animates and exudes a strong sense of place. In an urban design context, MxPD is attractive and reflective of quality urban development to counterbalance urban/suburban sprawl.
- **“Multiple-Use Planned Development” (MUPD)** is intended to encourage a mixture of commercial, industrial, and residential uses on tracts of land identified on a comprehensive plan as appropriate for large-scale, horizontal mixed-use development or as the cornerstone of multiple-use (big-box) retail centers. Most often MUPD are located outside high-density central business districts and are oriented to the suburban marketplace. It is employment oriented; with residential and supporting commercial development closely associated with and carefully scaled to respect village amenities, including open spaces and recreational attributes.

The JLUS provides the technical information to help land planners and architects avoid high-noise areas, Accident Potential Zones, and tall structures from creating air-navigation hazards, while developing market-viable uses of property in sensitive MIPDs.

j. Agricultural Zoning: This is the lowest density and use zone generally available to a local community under the “Standard State Zoning Enabling Act.”

It also can represent a set-aside or reserve for parks, recreation, and open space purposes as a way of protecting the future value and use of the property. In exchange, some States have enacted legislation intended to relieve the property tax burden so agricultural activities may continue until circumstances dictate otherwise.

A PUD is a valuable tool in encroachment prevention

The JLUS provides the technical information to help land planners and architects avoid high noise areas, accident potential zones

- **Preferential Farm Tax Assessment:** A preferential farm assessment method can be a constructive means of preserving farmland and open space. However, the rapid pace of urban sprawl and increasing property values has forced many farmers to abandon their livelihood.

State and local governments are perplexed and driven to consider the purchase of development rights or restrictive easements to hold in perpetuity farming as a viable industry or open space alternative.

In Montgomery County, Maryland, the county governing body and the local special district planning agency moved aggressively to preserve the county's agricultural uplands.⁵² The county embraced both the property tax relief (Preferential Farm Assessment) and the Transfer of Development Rights (TDR) program as growth management tools. The objective was to concentrate development in well-defined and publicly serviced "growth corridors and new town centers" while preserving agriculture and open space in upper county areas. These programs have been in existence for more than a quarter century with positive results.

- k. **Transfer of Development Rights (TDR):** This is a local government managed planning and development-rights transfer program. It most often is associated with agricultural, historic, and open space preservation. Communities located on the urban-rural fringe often are confronted with competing development objectives. There are pressures to convert farmland to urban and suburban development, taking productive farmlands out of its primary use at an increasing rate. The encroachment of urban development on productive agriculture and horticultural lands has focused conservation and government attention on the issue of agricultural lands preservation.

The TDR program has been viewed as a method of preserving agriculture lands by balancing the needs to retain lands in agriculture production and compensating landowners for the associated opportunity costs of not developing to the maximum density permitted by the underlying zoning classification.

The idea is similar to the cluster development concept in that development is shifted from a designated agriculture reserve to another location to achieve a public purpose — the preservation of open space. The major difference between a TDR program and cluster development is that TDR sending and receiving areas are not contiguous, and they may not necessarily be under the same ownership. By moving residential and other uses away from farmland, TDR protects a critical and irreplaceable natural resource (land) while still responding to market demand.

The TDR program may transfer dwelling units, valued as "development credits," from the designated agriculture reserve (sending area) to another geographic area (receiving area) possibly far removed from the designated reserve. The quidproquo is represented by the compensation received by the original property owner.⁵³

For example, if a 100-acre tract of land were to be zoned for single-family residential density of one unit to the acre, arguably, the property owner would be entitled to develop 100 dwelling units on the 100-acre site by right.

If the property were rezoned to an agricultural reserve zoning classification of one dwelling unit per 20 acres, the new entitlement would be five dwelling units (or a loss of 95 development unit rights or credits).

Under the TDR program, whatever the underlying development credits the property owner may have by right before the rezoning are not lost, but are converted to “development rights/credits” for transfer by sale to another property owner located in a planned and designated “receiving area.”

TDR sending and receiving zones are required to be depicted on an approved and adopted comprehensive/general or sectional plan map and on the official zoning map of the jurisdiction. The two must be consistent. Generally, they must also be in an area capable of being serviced by adequate public facilities.

There must be designated sending and receiving areas. In addition, TDRs require a willing seller and a willing buyer of development rights and a broker capable of administering the program.

Where a TDR program is in place and is managed effectively, it becomes another tool in the toolkit for compatible development near military installations. It merits further examination and consideration in order to avoid the legal entanglement associate with downzoning or the political pressures that could result there from.

The relevancy of the TDR program to encroachment prevention rests in the knowledge that agricultural land use is a compatible neighbor to a military installation. The conversion of agriculture lands to higher density residential uses may introduce land use incompatibilities. The TDR program is compatible with the objectives of preserving the military mission.

Montgomery County, Maryland, presents an excellent example of the TDR program. Its purpose is to preserve and protect vanishing farmlands in a heavily populated and growing urban county next to the nation’s capital.⁵⁴

E. Land Subdivision Regulations

Subdivision regulations play as important a role in land use planning as zoning. Also known as record or subdivision plan or plat, they are next steps in the land development process prior to a property owner obtaining vesting. The steps can include land use, grading and erosion control plans, and building and occupancy permits, generally in that order.

Strategy: *The subdivision regulations coupled with zoning standards based on public policy guidance contained in a duly adopted and approved comprehensive plan can be a very effective tool in protecting future residents from an unacceptably noisy environment that can have a negative impact on human health and the quality of life.*

TDRs require a willing seller and a willing buyer of development rights and a broker capable of administering the program

The TDR program holds promise for developing areas near military installations. It should be explored as a possible encroachment prevention tool

1. Local Subdivision Regulations: In nearly all cases, the local planning commission is the subdivision approving authority. Appeals to a planning commission decision may be made either to the local legislative body or to the circuit court, depending on State and local law.

The approval of a subdivision plan or plat by a planning commission is considered an administrative action as opposed to a quasi-judicial or legislative action. It is viewed as implementing the community comprehensive plan and zoning ordinance as it applies to a specific property.

Land subdivision by record plat or map is the jurisdiction’s official record and legal description of property by meets and bounds. Property may be subdivided into smaller developable lots, parcels, or tracts of land for purposes of ownership, transfer of ownership, or development.

The subdivision plat or plan typically is in map form and provides detailed metes and bounds descriptions of the location, length, width, and orientation of property lines, proposed building orientation to the defined lot and its relationship to other neighboring lots or parcels. It includes utility easements, street rights-of-way for recordation and dedication purposes, and contiguity with abutting streets and utilities, including stormwater easements.

Figure V-23
Historic Subdivision Plan of Rockville, Maryland — Circa 1783

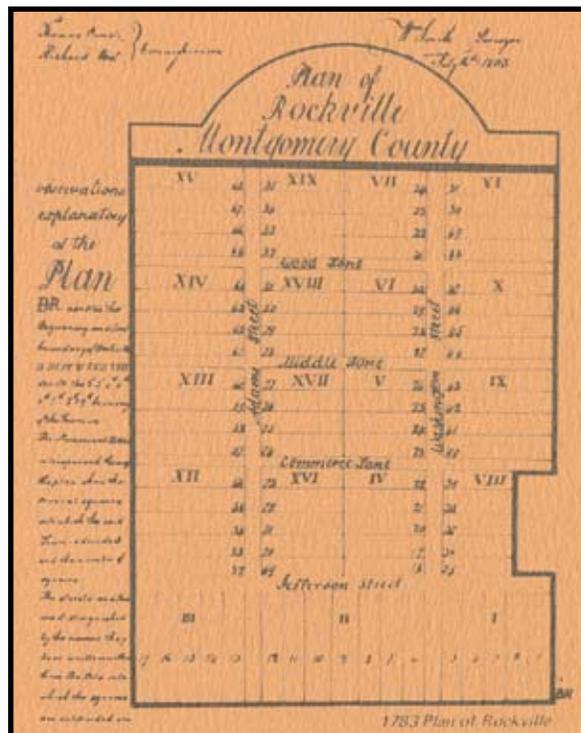


Table V-3

Land Subdivision Regulations

<p>Implementing Relationships Strategies & Tools</p>	<p>Implementing Authorities</p>	<p>Relationships to Encroachment</p>
<p>Subdivision Regulations</p> <ul style="list-style-type: none"> • Conditions of Approval • Developer Agreements 	<p><i>Local govt. and planning commission</i></p> <p><i>The division of property into developable lots for purposes of sale or development. A subdivision plan or plan is required to be acted on by a planning commission or planning official and recorded in the land records office of the jurisdiction.</i></p> <p><i>Virtually all building permits are dependent on the presentation of an approved subdivision plan or plat.</i></p>	<p><i>The platting of property in accordance with a local zoning ordinance establishes the legal basis to transfer property from one interest to another.</i></p> <p><i>Subdivision regulations are an important planning consideration.</i></p> <p><i>This is more of an engineering and site planning stage in the development process where utilities are coordinated with adjacent development exactions for public need and necessity, easements, and the like are negotiated between the applicant’s representative and the local planning commission or government professional staff.</i></p> <p><i>Developers may agree to provide real estate disclosure, recorded with the approved record plan or with the land records, that discloses to a prospective purchaser or lessee the potential for nuisance from military over-flights or range artillery practice.</i></p>
<ul style="list-style-type: none"> • Capital Improvements Program (CIP) 	<p><i>Local govt.</i></p> <p><i>This program is used by local govt. to identify capital needs over time and to budget accordingly. It is a financial and planning tool to support compatible land use and contribute to smart growth initiatives.</i></p>	<p><i>The CIP is the primary public capital-funding program used by local govt. to identify future capital requirements necessary to implement the local comprehensive plan.</i></p> <p><i>It is important that military installation planners provide input to the local planning and facilities programming decision processes.</i></p>

<ul style="list-style-type: none"> • Cluster Subdivisions 	<p><i>Local govt./planning commission</i></p> <p><i>This is the implementation of a planned unit development permitted by the zoning code whereby property is subdivided into lots of varying sizes and shapes to achieve open space and other public benefits in exchange for flexibility in design and mix of housing unit types.</i></p>	<p><i>Innovative development method to design a complex development or new community and avoid impacting the military mission while realizing full development expectations.</i></p>
<ul style="list-style-type: none"> • Special Environmental Considerations 	<p><i>Local govt./planning commission</i></p> <p><i>Special conditions imposed on the subdivision of property for the protection of the public health and safety and the environment.</i></p>	<p><i>Effort by local govt. to steer development away from incompatible areas based on environmental factors such as steep slopes, flood plains, unstable soils for construction, unstable geology, etc.</i></p>

Large or small tracts of land may be subdivided into developable parcels or lots depending on the zoning ordinance classification that applies to the subject property

- **The Division of Property into Developable Lots/Parcels:** Large or small tracts of land may be subdivided into developable tracts or lots depending on the underlying zoning classification. The size, shape, configuration, and orientation of a tract of land or an individual lot in the platting process are governed by the local government’s subdivision regulations, the comprehensive plan, and the over-arching zoning ordinance. The final record plat or plan of subdivision is recorded in the land records of the local jurisdiction for ownership and tax records purposes, as well as other government requirements.
- **Subdivision Regulations: Aircraft Clear and Accident Potential Zones:** In its simplest form, subdivision regulations may prohibit the division of property into residential building lots within the CZ and APZ-I and limit lot size, density, and intensity of land use activity in the APZ-II, if a local governing body should so devise.

This, combined with zoning limitations, possibly in the form of floating zones, can place additional layers of restrictions on the density of population and minimum lot size permitted; thus preventing incompatible development from taking place in the CZ and APZs.

Strategy: *Subdivision regulations and overlay or floating zones can work together as additional layers of protection with the local comprehensive/general plan providing the overall regulatory and planning framework.*

2. Conditions of Subdivision Approval: Many local governments require as conditions of approval the identification, set-aside, and/or dedication for public purpose basic features common to a typical development. These include:

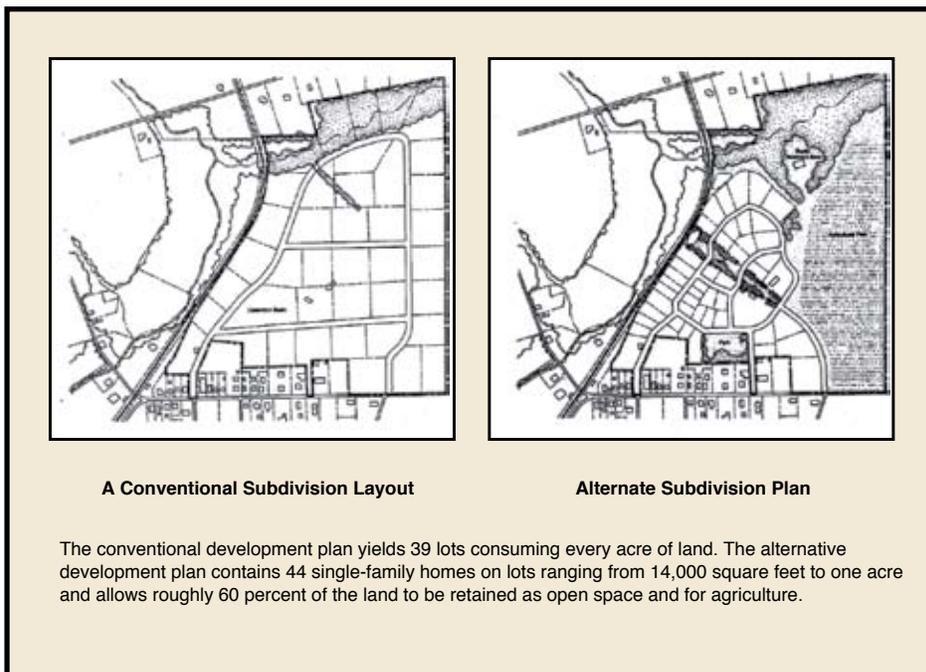
- a. Adequate Public Facilities Ordinance (APFO)** — basis of subdivision application review. It reviews the adequacy of such items as:
 - schools;
 - parks;
 - streets;
 - public transit;
 - water and sewerage; and
 - storm drainage.

- b. Environmental Safeguards** — development restricted areas based on public health, safety, and general welfare. These include items and areas such as:
 - flood plains;
 - grading and erosion control plans;
 - high noise zones; and
 - accident Potential Zones.

- c. Exactions and Impact Fees** — necessary set aside for subdivision to function properly, for example:
 - conservation easements;
 - scenic easements;
 - utility easements;
 - public access easements;
 - easements that provide reciprocity among adjoining property owners (access driveways);
 - off-site road improvements to accommodate the traffic, utility, requirements, etc.; and
 - developer contributions to offset the public service requirements to support the proposed development.

- d. Dedications** — for public need and necessity. These can be required as conditions for subdivision approval, requiring set-asides for:
 - street rights-of-way for street extensions or widening;
 - school site reservations for future public purchase;
 - park site reservations for future public purchase;
 - open space (public or private);
 - bikeways, walkways, transit ways, and trails; and
 - easements (public utilities, public/private access, reciprocal access, avigation)

Figure V-24
Conventional and Alternative Development Plans



Source: Randall Arendt, *Crossroads, Hamlet, Village, Town: Design characteristics of Traditional Neighborhood, Old and New*, (rev. ed.), Advisory Service Report No. 523/524 (Chicago: American Planning Association, 2004, with permission).

Several States protect developers of property from later zoning changes, through the use of development agreements

3. Developer Agreement: This is an agreement between the subdividing authority (most often a planning commission) and the applicant seeking authority to subdivide the subject property into recordable lots for the purpose of development. Development agreements are recorded along with the approved subdivision plan or plat in the local land records office in the form of covenants either in a deed description or on the face of a recorded site development plan.

The developer agreement binds up in one place all mutually agreed-upon terms and conditions that will run with the land and require compliance by the owner or subsequent owners who develop the property. It may involve the dedication and construction of streets; payment of off-site development impact fees; and on-site installation of water, sewer, and storm drainage, streets; curb and gutter, street lighting, and the like that are required as a condition of building permit issuance. It could include the payment of fees such as utility tap fees and drainage fees. It also could acknowledge that a property is located in a high noise zone requiring special building standards for sound level reduction (SLR) (see Appendixes 8 and 10).

Several States protect developers of property from later zoning changes through the use of development agreements. The agreement between a developer and the approving governmental body represents an entitlement extended to the developer to proceed unencumbered by a subsequent change in zoning. The California law is illustrative.⁵⁵

Strategy: *The subdivision plat is a convenient place to specify any special conditions placed on the use of the land, usually in the form of an easement or development agreement between the owner/developer of the property seeking to subdivide and the approving authority. Participation by a military base representative on a local development review committee (as in the case of Escambia County, Florida) could head off potential conflicts or worse embarrassment. No military base commander wants to be accused of “being asleep at the switch.”*

4. Capital Improvements Program (CIP): Common among local governments is the CIP. This is both a fiscal and planning document used to complement the local government’s comprehensive plan and annual operating budget. Normally a CIP covers a 6-year period, with the first year being the capital budget year.

A CIP lays out public facilities plans and programs of a local government. It is intended to coordinate planned public expenditures of other public agencies. For example, local street construction should be synchronized with utility projects, school construction, and private subdivision development.

Strategy: *The CIP can be a very powerful tool in the encroachment prevention toolkit. By staging the location, timing, and construction of public facilities, local government can control the tone, direction, spread, and timing of development so it does not outstrip the ability of the local public agencies to provide adequate public services and facilities in a timely and cost effective manner.*

In the context of encroachment prevention, it is well known that, with the introduction of major public facilities such as sewerage interceptors, major water mains, roads, and other public service facilities improvements, development is soon to follow. The extension of such public facilities is by no means ubiquitous. It is usually based on public need and necessity and is guided by the comprehensive/general plan of the city/county. It is a critical element of the growth management and staging element of the plan.

Where there is an independent water and sewerage authority, the question will arise as to who is managing growth and development, its staging geographically, and its timing relative to the provision of other public facilities.

5. Adequate Public Facilities Ordinance (APFO): As mentioned above in relation to the requirements for obtaining a building permit for a subdivision, these ordinances may be a requirement of a local government. In jurisdictions with an APFO, a condition of subdivision approval is the demonstration that adequate public facilities (such as streets, water and sewerage systems, storm water, public transit, and schools) are available or will be made available in the foreseeable (projected) future. Absent this certification by the applicant, the subdivision may not be approved unless the developer provides the services necessary to accommodate and sustain the proposed development. Most often this is embodied in a development agreement between the approving authority (planning commission or city/county council) and the applicant.

The subdivision plat is a convenient place to specify any special conditions placed on the use of the land

The CIP can be a very powerful tool in the encroachment prevention toolkit

Strategy: *An APFO is an important consideration for any military installation commander when assessing the ability to conduct ongoing military missions and responsibly respond to the pressures of development that could be incompatible with the military mission.*

Of particular interest to a military base commander is the transportation infrastructure. As mentioned previously, an example of the importance of this feature in a proposed development is the DoD requirement that, in times of national defense mobilization, military personnel living off base must be able to reach their assigned station within 1 hour. If a base is located in an existing built-up, highly congested urban area or in a rural location that is subjected to intense development pressures, local traffic congestion can affect the ability of military personnel to meet mobilization requirements.

An APFO is a tool to relate development applications (principally subdivision) to an area's carrying capacity measured in the adequacy of public facilities and services (e.g., water and sewerage, streets and highways, police and emergency services, adequate school capacity) to support the proposed development.

A local government's knowledge of the needs of the military installation to perform its mission is essential to smart planning and programming of public facilities and services

Strategy: *Knowledge and awareness of the local jurisdiction's CIP, the comprehensive/general plan, and the infrastructure carrying capacity within the MIPD is valuable information to be added to installation planner's toolkit.*

Strategy: *A local government's knowledge of the needs of the military installation to perform its mission is essential to smart planning and programming of public facilities and services. It is a two-way street requiring each interest to coordinate respective plans and investment strategies so both may mutually coexist and prosper.*

Strategy: *When tied to and made a part of a comprehensive plan's development staging element, the CIP can be a positive public policy tool of local government's development review requirements. In this context, the CIP can telegraph local government's investment plans coordinated with the local comprehensive/general plan. It can be used by the local military command to influence and redirect incompatible growth and development that could be deleterious to the military installation's mission.*

6. Cluster Development: Cluster development is less a floating zone and more an optional method of development or a variance. It can be permitted under zoning and implemented through the subdivision regulations of a local jurisdiction. Cluster development is intended to promote flexibility in a site plan design in residential communities without sacrificing existing, permitted densities or changing the character of the neighborhood. Cluster development also encourages the preservation of natural features, topography, and open space.

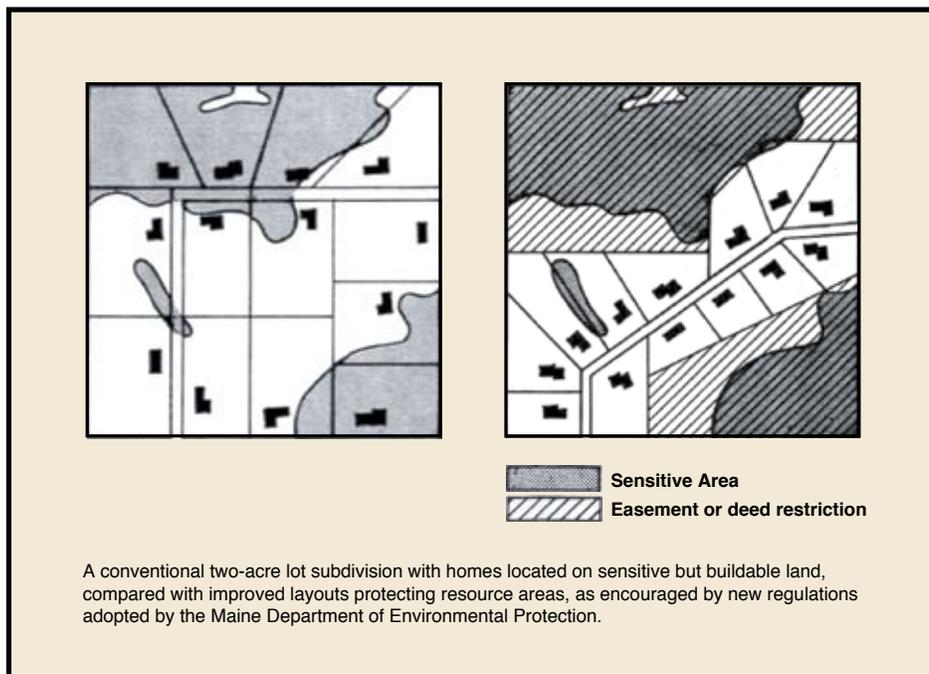
Strategy: *Cluster development is particularly useful in encroachment prevention when a larger development parcel is located half in and half out of a sensitive noise or Accident Potential Zone.*

Under conventional zoning and subdivision regulations, specified minimum lot sizes and uniform building setback requirements can produce monotonous, look-alike subdivisions sprawling across the landscape and increase the cost of infrastructure to service the development.

Clustering of developable lots in a subdivision allows variety in design and land conservation. A jurisdiction's zoning and subdivision regulation may permit the division of land into development lots of varying shapes and sizes, some smaller than the minimum area permitted by a conventional subdivision development under the same zoning classification. Some local zoning codes may permit higher densities than permitted by the underlying zoning district provided there is an offsetting and commensurate public benefit. For example, Pennsylvania's Growing Greener Program⁵⁶ may permit higher densities in exchange for increased open space and conservation areas. This is an incentive for developers to produce superior subdivision layouts, and promote a more creative arrangement of land use, based on type of unit and open space and land conservation characteristics desired. In the process, property values rise because of a better development plan.

Figure V-25

Typical Cluster Development



A recent trend is to apply cluster subdivision concept to open space conservation

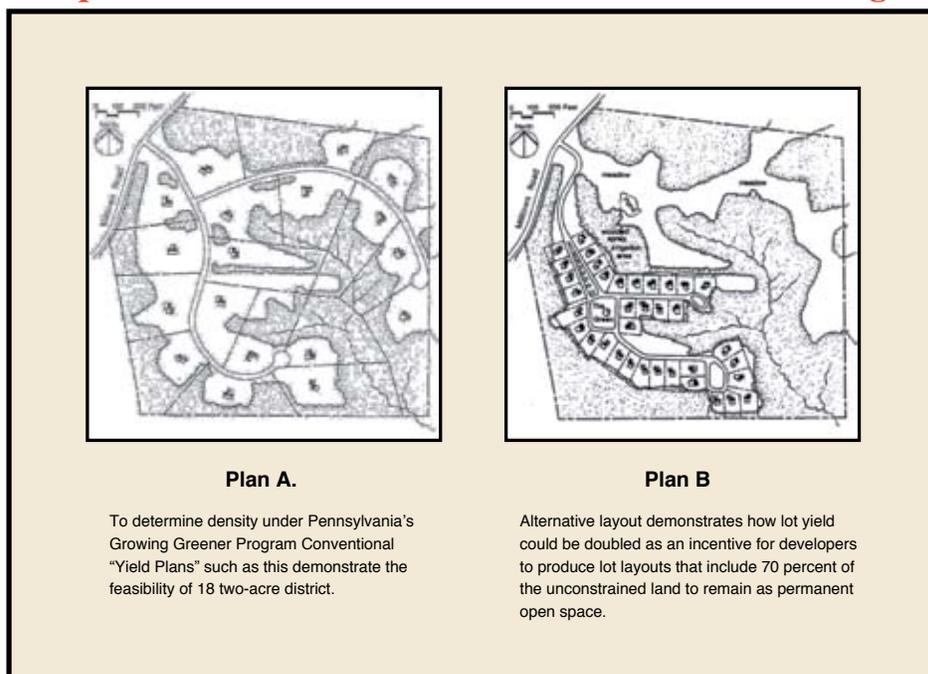
Source: Randall Arend, et al., *Rural by Design* (Chicago: American Planning Association, 2004, with permission).

A recent trend is to apply the cluster subdivision concept to open space conservation. Referred to as conservation subdivisions, the idea is to permit builders to cluster homes on a site in exchange for preserving up to half the land as open space. As with cluster subdivisions, the total unit number cannot exceed traditional zoning limits. A benefit or trade-off is reduced development and infrastructure costs.

7. Special Environmental Conditions: Special environmental considerations have become accepted as part of the subdivision development process and are justified under the delegated police powers to protect the public health, safety, and general welfare. Examples include the following:

Figure V-26

Comparison Between Conventional and Cluster Design



Source: Randall Arendt, *Crossroads, Hamlet, Village, Town: Design characteristics of Traditional Neighborhood, Old and New*, (rev. ed.), Advisory Service Report No. 523/524 (Chicago: American Planning Association, 2004, with permission).

- a. Floodplain Regulation Zone (FPZ):** Building in the floodplain of streams and rivers is considered unsafe and generally is prohibited, except for roads or other transportation facilities that must be constructed across floodplains.

Most local jurisdictions use FPZs to prohibit the subdivision of single-family residential lots within the 50-year floodplains of streams and rivers. This area could be inundated by storm water runoff equal to what could occur on an average of once every 50 years based on the total development potential of the watershed.

Other jurisdictions face the same requirement on the 100-year floodplain, but allow the subdivision of the property into building lots provided all buildings are located outside the 50-year floodplain and the first floor of habitable portions of the structure is 1 foot above the 100-year mean flood elevation.

In either case, the public objective is to prevent homesites from being exposed to the potential for loss of life or being damaged or destroyed by flood waters. An FPZ is an example of the important role subdivision regulation can play in

guiding development and implementing the jurisdiction's comprehensive plan and zoning ordinance. Other parameters can have a direct bearing on encroachment and urban sprawl near military installations.

- b. Steep Slopes and Unstable Geology:** Most local governments recognize the inherent problems associated with developing property on steep or unstable slopes. In addition, where the geology cannot support urban or suburban development, local subdivision regulations may require special consideration. For example, when a development plan or plat seeks to locate on unstable terrain, additional criteria may have to be applied to protect future residents and structures from harm.
- c. High-Noise Impact Zones:** In the interest of protecting public health and safety, a subdivision regulation may prohibit the subdividing of property into building lots for residential purposes if the property is located within a designated AICUZ high noise zone recognized by the local approving authority as the maximum threshold for intrusive noise.

The city of Aurora, Colorado, prohibits residential uses regardless of the underlying zone in the 65+ dB DNL/Ldn; residential uses are permitted in the 60-65 dB DNL/Ldn subject to a public hearing, approval, and authorization by the city council.⁵⁷

Military installations, particularly airfields and test and training ranges, with their high-performance jet aircraft, aerial bombing practice, and artillery firing, can easily generate noise well in excess of 65+ dB DNL/Ldn both on and off the air station or range. The DoD-AICUZ programs can identify the on- and off- site impacts of military noise on the surrounding community. This is the most valuable information a jurisdiction can have for use in the comprehensive planning process.

- d. Aircraft Accident Potential Zones (APZs):** Public health and safety establishes a threshold beyond which it is not prudent to encourage residential development in areas prone to accident. The police powers can prohibit the subdivision of parcels or tracts of land into residential building lots if the subject property is located in a designated APZ-I. The AICUZ instruction relative to the AZP-II zone recommends one to three dwelling units per acre on scattered sites.

F. Building and Structural Height Codes

Building and structural height codes prescribe the basic requirements to regulate construction of buildings and structures.

- 1. Building Code:** The local governing body is responsible for implementation and enforcement of the building codes. The codes set requirements to ensure that a structure is safe and habitable. These requirements include specifying acceptable building materials, and establishing minimum electrical, plumbing, ventilation, and structural requirements.

Most local governments recognize the inherent problems associated with developing property on steep or unstable slopes

The DoD-AICUZ programs can identify the on- and off-site impacts of military noise on the surrounding community

Table V-4
Building and Structural Codes

Strategies & Tools	Implementing Authorities	Relationships to Encroachment
<p>Building Codes</p>	<p><i>Local govt.</i></p> <p><i>The major application of building codes to compatible land use planning involves residential and other noise-sensitive land use activities.</i></p> <p><i>However, sound level reduction (SLR) in buildings may be the mediating factor to establish compatibility.</i></p>	<p><i>Building codes establish the basic standard for building construction based on public health and safety codes.</i></p> <p><i>When noise-sensitive structures are either located within or are planned to be located within an a high noise zone, building standards need to require indoor SLR in the magnitude of 25 to 30 dB to provide a level of sound attenuation compatible with occupancy.</i></p>
<p>Indoor Sound Level Reduction (SLR)</p> <ul style="list-style-type: none"> • International Building Code under the International Code Council (ICC) 	<p><i>Local govt.</i></p> <p><i>Application of building standards and requirements to achieve indoor SLR.</i></p>	<p><i>In the category of building code enforcement, indoor SLR is an important tool to protect residents from intrusive and unsettling noise.</i></p>
<ul style="list-style-type: none"> • Building and Structure Height Limitation (i.e., electric-generating windmill, cell towers, microwave towers, buildings) 	<p><i>Local govt. and FAA</i></p> <p><i>This is becoming an issue relative to aircraft flying requirements and the regulation of building and structural height. The FAA regulates structural heights near airfields and advises local government and the development community of the air navigation hazards associated with structures that exceed FAA recommendations.</i></p>	<p><i>The relationship of structure height to aircraft operations is critical to the health and safety of pilots and the public.</i></p> <p><i>The emergence of electric-generating windmills, cell towers, and microwave towers in isolated rural environments are in competition with existing low-level military training routes and may threaten military training and readiness.</i></p>

2. Indoor Sound Level Reduction: Building code sound level reduction (SLR) requirements may be achieved by any suitable combination of building designs, choice of building materials, and execution of construction details in accordance with established architectural and acoustical principals. SLR in buildings usually applies to occupied rooms having one or more exterior walls or ceiling. Like floodplain regulations, traditional building codes can require minimally acceptable levels of indoor sound attenuation through application of SLR construction practices, including proper insulation, triple-pane glass windows and insulated doors, air conditioning, and the like (see building code discussion). Typically, by utilizing specific building techniques and materials, the ambient noise level within a residential dwelling unit can be reduce DNL/Ldn from 25 to 30 dB, making the dwelling more habitable . However, this does not protect residents from episodic events when a low-flying aircraft can generate in excess of 100 dB and a resulting shock wave.

Exterior noise can have a significant impact on human activity, health, and safety. Noise may be isolated and reduced in homes and working environments where public contact is common through application of standard construction techniques that selectively increase the insulating quality of the exterior of occupied structures.

Appendix 10 provides an example of a building code from Eastern Carolina Council of Governments in North Carolina. It incorporates SLR to achieve DNL/Ldn of between 25 and 30 dB. The same basic building code with SRL has been used in Montgomery County, Ohio. Calculation of noise exposure taken from the Maximum Mission Contour (MMC) is an estimate of the maximum sound levels measured in decibels (dB) using average annual day-night logarithmic scale (DNL/Ldn) that could be expected given the nature of the military mission and operational characteristics.

The military has few opportunities to mitigate noise at the source. There is a potential, however, to mitigate by altering the path between the noise source and the receiver. The simplest way to reduce noise impact is to lengthen the distance between source and receiver (buffer). When sound waves propagate along the surface of the earth, acoustic energy can be lost in several ways. One way is directly into the ground. Forests are more effective in reducing high-frequency sound than in reducing low-frequency sound. Small earthen berms, noise barriers, or natural terrain are the most common uses of sound barriers to shield homes from highway traffic noise.

The most effective way to reduce the impact of noise on surrounding areas is to identify noise-sensitive uses and prevent those uses from locating in high noise environments. DoD Instruction 4265.57 presents a matrix of land use activities in relationship to noise levels (Appendix 2). It suggests land uses that are and are not compatible in noisy environments.

3. Structural Height Limitations: Building codes prescribe the basic requirements to regulate construction of structures. The local governing body under the police powers may adopt stricter land development regulations to ensure that a structure is safe and habitable. Structural height limitations are specified in the FAA Regulations (FAR),⁵⁸ and Military Airport Imaginary Surfaces.

Exterior noise can have a significant impact on human activity, health, and safety

The simplest way to reduce noise impact is to lengthen the distance between source and receiver (buffer)

Throughout the aircraft approach, transitional, inner horizontal, outer horizontal, and conical areas as defined, no building, structure, or object of natural growth is to be permitted to be erected, extended, or allowed to grow beyond the maximum height established. Figure V- 27 is a representation of the height limitations used by the FAA for approach, horizontal, and conical zones surrounding airfields.

However, the FAA is not a regulatory body. It is advisory to the local jurisdiction, which may or may not abide by the FAA recommendation. In such instances, the burden normally falls on the operators of the military or civilian airfield to make adjustments in flight patterns to avoid air hazard should a building or structure encroach into navigable airspace. Typically, building and structural height limits are carried in the local zoning ordinance and implemented during the development review processes. Oftentimes, communities in the vicinity of an airfield will work with the FAA to implement the FAR Part 77 when it involves construction of tall structures, including buildings, construction cranes, microwave and cell towers, and the like.

Typically, building and structural height limits are carried in the local zoning ordinance and implemented during the development review processes

The FAA airspace process serves several essential notification and coordination functions beyond simply ensuring that the approaches to an airport are not obstructed by tall objects. Persons proposing any type of construction or alteration under provisions of FAR Part 77 are required to notify the FAA by completing FAA Form 7460-1, “Notice of Proposed Construction or Alteration.”⁵⁹

The FAA will conduct an aeronautical study and issue a determination to the proponent of the construction/alteration.

Strategy: *The FAA has no land use control powers. It is important that local community and base planners be aware of the various critical safety considerations when helping to site development near airfields, including military airfields.*

Appendix 9.2 presents a sample height ordinance dealing with Fort Campbell, Kentucky, and environs.

The FAA cannot regulate building or structural height; this is a matter reserved to local government through the zoning laws. However, it can issue advisories and notices regarding air navigation hazards to redirect flights away from the known obstructions, and it can require appropriate markings.

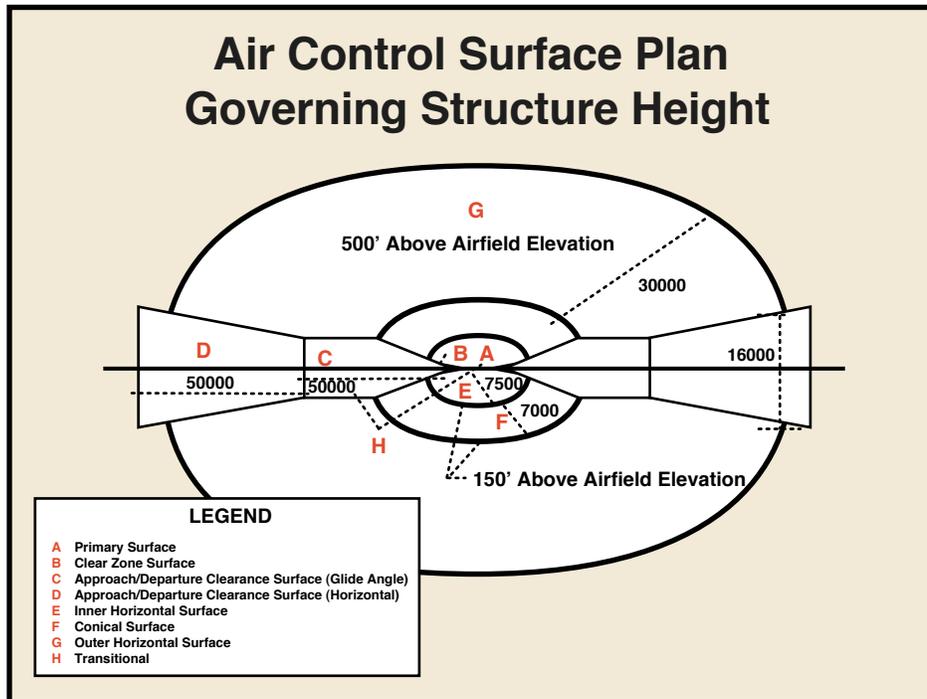
In Arizona, California, Nevada, Utah, and other western States, alternative wind energy projects known, as “windmill farms” have become a matter of priority for the U.S. Department of Energy and DoD. Many of the windmills exceed heights of 200 feet above ground level (AGL). A new generation of electric-generating windmills soon may reach heights in excess of 1,000 feet AGL in remote mountain and desert environments.

The problem presented for the DoD is that many low-level military training routes (MTRs) crisscross the country, especially in remote mountain and desert environments. The uncoordinated spread of energy windmills encroaching into the air space used for military

aerial training can present an air safety problem and seriously affect mission sustainment and readiness, not to mention present hazards to flight crews and civilians living beneath an MTR.

Normally this would not present a major issue for high-level MTRs. However, for low-level MTRs it can be a deadly business. In FAAs and DoD-designated MTRs, high-performance military aircraft, piloted or not, can cruise at ground-hugging altitudes as low as 200 feet AGL and at ground speeds in excess of 400 knots.

Figure V-27



Source: Federal Aviation Administration.

Strategy: Greater coordination among FAA, DoD, the Department of Energy, State energy agencies, and local government is required in order to address the issue on a national basis. The very purpose of MTRs can be eroded by residential development and tall structures built in their paths, seriously impeding military testing, training, and readiness.

G. Development Review Process

Across the country in the halls of city and county government are multiple departments devoted to public works, planning, transportation, parks and recreation, police and emergency services, public and private utility and communications services, and development ombudspersons who represent an applicant seeking to develop property. The development review process focuses administrative attention on development applications and their relationship to the plan, the zoning ordinance, subdivision regulations, building codes, and the like.

Table V-5
The Development Review Process

Strategies & Tools	Implementing Authorities	Relationships to Encroachment
<p>Local govt. Development Application Review Processes</p>	<p><i>Local planning commission and local governing body (possibly a hearing examiner).</i></p>	<p><i>Military installations may participate⁶⁰ in the local planning commission and local government deliberations relative to pending development applications and influence the decision-making process like any other neighboring land owner.</i></p> <p><i>Military interests and concerns should be expressed early in the application review process to establish standing and to participate in the hearing process.</i></p>
<ul style="list-style-type: none"> Mandatory Referral of Development Applications 	<p><i>Local planning department</i></p> <p><i>This referral of development applications is standard among government entities to ensure that all development conditions and requirements are coordinated among all responsible parties.</i></p>	<p><i>The local planning department may enter into agreements with the local military base command to submit pending development applications within a specified geographic area of an installation for review and comment at a scheduled public hearing.</i></p> <p><i>This provides an early advisory as to the potential impacts of a rezoning or development application on the military installation's operations.</i></p>

<ul style="list-style-type: none"> • Military Participation on Local Planning Boards as Seated Ex Officio Board Member 	<p><i>Planning commission</i></p> <p><i>This practice provides the opportunity for a military installation commander or representative to participate as a nonvoting member of a planning commission as it considers development application proposals pending before the local govt.</i></p>	<p><i>Recently, State legislatures (Florida) and local governments (Biloxi, MS) have extended the opportunity to a local base command to participate in an advisory capacity as a seated member of an appointed board of citizen advisors.</i></p>
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1. Local Development Review: This review is a very important part of the local government’s development process. The formal technical staff review of an application will result in recommendations to the local planning commission or, city/county government upon which decisions are made.

The review process presents an opportunity for a military representative to work with the local government development review team to identify issues and opportunities associated with the development application. From this process can come an informal understanding between the professional development review team and the applicant.

Staff reports vary from jurisdiction to jurisdiction. However, in the development review process, local planning commission staff reports become part of the official public hearing record, and can, and often will, influence the final decision.

Strategy: *Local government should invite a representative of the local military installation to participate on the local development review staff team as a way to integrate the military missions with the local government’s planning and development review processes.*

The JLUS of NAS Pensacola located in Escambia County, Florida, calls for a seat on the County Development Review Committee to be reserved for a representative of the Naval Air Station. Recent law passed by the Florida legislature mirrors the county’s strategy. Implementation of this law should greatly improve coordination of development applications among the military installation, the county, and the applicant.

Strategy: *Increasingly, military installations are seeking opportunities to participate as early as possible in the development review process. They are major stakeholders and their input is needed if the decision makers are to consider the full impact of a development proposal on all neighbors.*

The review process presents an opportunity for a military representative to work with the local government development review team

- a. Mandatory Referrals of zoning and Development Applications:** In several states (Arizona, California, Florida, Georgia, and Washington are examples), the local planning commission or zoning review board is required to formally notify other government agencies on proposed zoning and land use changes that could affect other governmental or nongovernmental interests. This process is often referred to as a “mandatory referral” because it is required, by either statute or local code.

When a comprehensive plan or any sort of development change is proposed, the host jurisdiction may be obliged to notify its neighbors and provide information on the pending change. An opportunity is provided, within a set period of time, to comment to the public record on the proposed change.

Military installations in the States noted above and, perhaps, others will be included on the list of governmental agencies that must receive referrals of proposed development applications for review and comment as appropriate.

This “give and take” between local governments and neighboring governmental entities, including the Federal Government, is a healthy exercise in coordinating respective development activities. This safeguard protects one agency from being surprised by actions of another that could affect it physically, fiscally, or otherwise. The reviewing authority is required to consider the comments and recommendations submitted to the public record and render a final decision.

Strategy: *A mandatory referral requirement is a particularly important tool for military installation commanders. A mandatory referral agreement (in the form of a memorandum or letter of understanding) between a local planning commission and the base commander will ensure that the installation will receive notice of every agenda and development proposal pending before the city/county planning commission or city/county council near a military installation.*

The significance of this and similar State enactments is to recognize the presence and importance of the military in local government affairs. Even if a pending action has no apparent affect on base operations, establishing standing in the proceedings is important for a base commander or his/her representative. Establishing standing before a deciding body is normally done by appearing and providing written or oral testimony to the public record. Without having standing it is difficult to appeal a decision by a deciding body should the decision be contrary to the military’s interests.

By establishing standing and becoming a party at interest, the military, possibly aggrieved by a land use decision, may become an appellant in subsequent proceedings.⁶¹

A mandatory referral requirement is a particularly important tool for military installation commanders

- b. Military Participation on Local Planning Commission:** The State of Florida passed legislation⁶² assigning a military installation representative a seat as an ex-officio, nonvoting member on a local government land planning or zoning board. The representative may participate in planning board deliberations on a zoning and development application pending before the board, but cannot vote on the issue.

Oftentimes a developer is unaware of the mission or activities on going on the base next door. If it were, it might be able to make adjustments and accommodations that can speed the process, save time and money for the applicant, and possibly resolve contentious encroachment issues early in the process.

Strategy: *A local jurisdiction that permits a major public interest such as the local military base command staff to participate in a development review dialogue has a greater likelihood of working out technical differences between the applicant, local government, and the neighboring military installation.*

Oftentimes a developer is unaware of the mission or activities on going on the base next door

H. Local Administrative Actions

The final litmus test to achieving compatible land use opportunities near a military installation is local government administrative actions that execute public policy. This last section reviews the tools available to deal with civilian encroachment issues through the judicious administration of local government policies and regulations.

1. Caveats to Administrative Action: The practitioner should be aware there are certain due process issues and legal doctrines of which planners must be aware. These include a prescription against ex parte communications and the legal doctrines of vesting and estoppel.

- a. Ex Parte Communications:** In the case of a quasi-judicial action, a deciding board of appeals or local legislative body is bound by the rule of ex parte communications. This means decision makers cannot talk to one party about the merits of a pending case without all parties being present. Every interested party must have the opportunity to hear all testimony and facts submitted to the record that may have a bearing on the final decision. Decision makers who accept or exchange information on a pending case outside of the normal public process could jeopardize a pending zoning case and may have it declared prejudiced and flawed by the courts, assuming a challenge.

There are strict rules on pre-hearing contacts with decision makers, and there are limitations on lobbying by local board or planning staffs outside their normal report and presentation functions at zoning hearings. This is true for military base commanders attempting to influence a local decision-making process.

Today, nine States are considered quasi-judicial in matters of zoning, whereas 27 States are legislative. In the remaining 15 States, it is unclear (see Appendix 1 for State listings).

- b. Vesting and Estoppel:** The doctrines of vesting and estoppel are fundamental to the local zoning and development process.⁶³ Once a right to develop property is “vested,” subsequent governmental actions to thwart such development may be judged a “taking.” However, prior to vesting, permission to develop property still can be denied or modified for cause.

The legal concept of vesting is entirely a matter of State law. For instance, when a landowner’s right to develop his land becomes vested will differ from State to State. In principle, the law of vested rights seeks to balance competing interests of the developer and the municipality. A developer needs some protection from changing development requirements that would otherwise prevent completion of a project or make it more costly to complete.⁶⁴ On the other hand, a locality must have the ability to respond to changed circumstances as part of its police powers.

The legal doctrine of estoppel will be applied by a court to prevent a jurisdiction from asserting that a change in law or circumstances prevents a landowner from asserting his/her common law property rights. To be successful in asking that estoppel be applied against a defendant, a plaintiff must show that he/she has changed his/her position to his/her detriment after relying on some official action that was appropriately and legally accomplished.

There are some similarities between the fact situations necessary for a landowner to assert vesting or ask that estoppel be applied. Vested rights that are denied by a local jurisdiction can lead to a takings claim against that jurisdiction. Therefore, it is important that planners be especially aware of their state law as to vesting.

Here are some examples of when vesting has been deemed to occur in three different states:

- 1) In the State of Maryland, vesting does not occur until ground is broken and footings are poured. The possession of a building permit or a grading, erosion, and sediment control permit does not necessarily confer vesting.⁶⁵
- 2) In the State of Virginia (a Dillon Rule State), vesting occurs when the developer and the local governing body reach agreement on “proffers” or formulate a development agreement. Once accepted by local government, development of the property may proceed unencumbered by right.
- 3) In the State of California, a property is vested when three things have occurred:
 - a) All necessary permits for development (entitlements) have been secured from appropriate public agencies
 - b) Such permits specifically describe the improvements to be made
 - c) The developer has done substantial work, expending substantial money, and incurred liability in reliance on permits received.⁶⁶

Each State is different in terms of when vesting occurs

It is important that planners be especially aware of their state law as to vesting

Just as courts may vary, so also may States. Each State is different in terms of when vesting occurs. The reader is urged to research this topic before assuming a governmental action can change or rescind a legitimate development application, without incurring charges of inverse condemnation.

2. Geographic Information System (GIS): A GIS is a computer-based system capable of capturing, storing, analyzing, and displaying geographic information; that is, multifaceted data absent specific locations and the relationship among differing sets of information on that location. GIS technology can be used for resource management analysis and community land use planning. It has the capability for identifying compatible and incompatible land use activity that could impact on the operational utility of a military installation. In this sense, GIS is a powerful administrative and planning tool to help in analyzing existing, potential, and planned spatial land use relationships in a geographical context. The power of a GIS to the compatible land use planning process and toolkit comes from its ability to characterize unique natural and human-made characteristics in a spatial context.

As a land use planning tool, digitized spatial geographic information in computer-generated format can represent current and future land-based resources and activities. It can help to understand what property needs to be protected or limited in development because of a variety of characteristics. These include but are not limited to areas affected by high noise or military aircraft crash hazard, environmentally sensitive lands, floodplains, water quality protection, cultural and natural resources, endangered species habitat, and productive farmland.

By analyzing the GIS information layers, often several land protection objectives can be served. For example, an area adversely affected by aircraft approach and departure zones and high noise might also be an area harboring endangered species habitat or precious farmlands, or needing water quality protection. An area adversely affected by military operations might be protected from incompatible development by applying multiple land protection programs or devices within the areas affected.

A land use compatibility planning program under the aegis of a number of Federal, State, local, and conservation-based organizations was undertaken for Fort Bragg/Pope AFB, North Carolina. The program used extensive GIS data collection by the North Carolina Center for Geographic Information Analysis (see Fort Bragg, NC, Case Study below). By observing the characteristics of parcels needing protection revealed in GIS mapping layers, appropriate Federal, State, and private sector conservation/protection programs could be targeted for these parcels. Sometimes the protection of endangered species habitat outside a military installation reduces the need to protect that habitat on the base, thereby freeing up military land needed for training and operations.

The use of GIS provides insight into multidisciplinary techniques and resources that can be used to protect the public health, safety, and welfare, the dual goal of a JLUS program.

3. Real Property Transaction Strategies: The following tools can be used by planners and others to purchase or encumber all or a portion of property rights on property that might create an encroachment issue for military installations.

- a. **Securing Property Rights:** Ownership of property includes possession of a series of rights to the property. The State or the general public always retains certain basic rights to all real property. These rights include police powers, right of taxation, eminent domain, and escheat (the right of the sovereign to own those properties not in the ownership of others). Other, neighboring property owners retain certain rights over their neighbor's property, such as the flow of water across land. Ownership rights may be bought and sold, collectively or separately, depending on the interests of the buyer and the willingness of the seller. An easement is a right of another to a part(s) of the benefits of real property ownership, depending on what is available for sale.

4. **Easements:** Easements are permanent set-asides of land, with the title to the easement held by the easement purchaser until sold or released. The original property owner retains property rights to the unsold bundle of rights. Easements work well within different jurisdictions and represent agreements between the private property owner and the local jurisdiction. Easements are enforceable in civil court and may often be acquired for a fraction of the cost of the true land value and still achieve the sought-after protection.

Table V- 6

Local Administrative Actions

Strategies & Tools	Implementing Authorities	Relationships to Encroachment
ADMINISTRATIVE ACTIONS		
Real Property Transaction Strategies	<p><i>Local govt.</i></p> <p><i>These are ministerial actions taken by a public official to implement the Plan, codes and ordinances, and policies.</i></p>	<p><i>Administrative actions are the final authorities of local govt. to influence development applications, be it through the development review process, the proffering of on- and off-site improvements for the benefit of the public, or cooperative agreements between local govt. and a land developer.</i></p>
<p>Easements</p> <ul style="list-style-type: none"> • Avigation 	<p><i>Local govt./military and property owner and acquisition of select property rights.</i></p>	<p><i>An easement would allow military aircraft to fly below approved FAA levels of 500 feet for rural areas and 1,000 feet for urban areas (AGL).</i></p>

<ul style="list-style-type: none"> • Conservation Easements and Partnering 	<p><i>State and local govt./DoD/ NGO and property owner.</i></p> <p><i>Acquisition of select property rights and interests.</i></p>	<p><i>Conservation easements are different from avigation easements in that they deal with the future use of land.</i></p> <p><i>The application to compatible land use near military installation and the preservation of environmental values are interconnected and valuable, complementing objectives.</i></p>
<ul style="list-style-type: none"> • Open Space 	<p><i>State and local govt./DoD/ NGO and property owner.</i></p> <p><i>Acquisition of select property rights and interests.</i></p>	<p><i>Securing open space through dedication, gift, or purchase is a valuable use of land long term.</i></p> <p><i>Open space is a compatible neighbor to military installations and operations.</i></p>
<ul style="list-style-type: none"> • Less than Fee Simple Acquisition 	<p><i>State and local govt./DoD/ NGO and property owner.</i></p> <p><i>Acquisition of property rights and interests.</i></p>	<p><i>Complex planning process requiring careful coordination with the local military installation and the governing body.</i></p>
<ul style="list-style-type: none"> • Covenant and Deed Restriction 	<p><i>State and local govt./DoD/ NGO and property owner.</i></p> <p><i>Acquisition of property rights and interests.</i></p>	<p><i>Similar to cooperative agreements that are recorded with the deed to run in perpetuity or until original purpose is extinguished.</i></p>
<ul style="list-style-type: none"> • Purchase of Development Rights 	<p><i>State and local govt./DoD/ NGO and property owner.</i></p> <p><i>Acquisition of property rights and interests.</i></p>	<p><i>Willing buyer and willing seller.</i></p>
<ul style="list-style-type: none"> • Land Swaps/ Transfers 	<p><i>State and local govt./DoD/ NGO and property owner.</i></p>	<p><i>Willing land transfer between two parties of interest</i></p>

<ul style="list-style-type: none"> • Property Tax Incentives 	<p>State/Local govt.</p>	<p>Property owners compensated through property tax reduction. State/local govt. compensated by continuing presence of military.</p>
<ul style="list-style-type: none"> • Fee Simple Acquisition 	<p>State and local govt./DoD/ NGO and property owner.</p>	<p>All interests compensated.</p>

Easements are important implementing elements of the military’s overall conservation partnering program

Easements are important implementing elements of the military’s overall conservation partnering program. The authority extended by Congress for DoD to encourage conservation partnering with nongovernmental organizations (The Nature Conservancy, for example) and State and local governments focuses on securing specific development rights to property for conservation and natural resources protection purposes. In addition, its purpose is to prevent incompatible development from encroaching upon and interfering with the mission of a nearby military installation.

There are many types of easements. They can be categorized as subsurface, surface, and above surface, even aerial (avigation). Easements are secure surface and subsurface rights to access and sustain public and private services and facilities, such as underground and aerial utilities, transportation facilities, and navigation (aerial and surface) and the preservation of farmland, natural resources, and scenic views.

Strategy: *When property is acquired, usually all rights, except those retained by the State, are purchased in fee. However, it is possible to acquire only certain rights that are needed for a specific purpose assuming a willing seller and a willing buyer.*

These limited rights can be acquired in the form of easements, with the owner retaining other rights to the property. Easements are recorded in the land records of the local jurisdiction. The price for an easement is determined by the value that the landowner is willing to place on rights to be sold. If the requested easements will not significantly impair the owner’s contemplated use or sale of the land, the cost could be low. In the case of utility easements and rights-of-way on the property, the owner may find it advantageous to dedicate an easement at no cost or consideration.

Strategy: *The enforcement of recorded easements not held by local government is the responsibility of the party holding the easement. Utility companies police their own easements, as do neighboring property owners, who may hold a reciprocal cross access easement, and a conservation-based organization. Easements acquired and held by the DoD are enforced by the military installation. Often this becomes problematic as personnel changes can lose the continuity and awareness that easements held require continuous monitoring.*

- a. Avigation Easements:** Avigation (air navigation) easements may be donated by a property owner or purchased by an entity desiring a right to fly unencumbered over property below the 500-foot AGL floor established for rural areas and 1,000 feet AGL floor for urban areas established by the “500-Foot Rule.”⁶⁷ In some jurisdictions, for example Aurora, Colorado, and Escambia County, Florida, an avigation easement is required as a condition of subdivision approval. In Virginia Beach, Virginia, the Navy purchased avigation easements in an effort to protect the flying mission of NAS Oceana located there.
- b. Conservation Easements:** The focus of this subsection is conservation easements and buffers of all types. Typically, they are based on specific arrangements made between the property owner and a second or third party of interest. Consideration may involve set-aside of land for easements, tax incentives, or other forms of compensation.

In addition, the compensation could be a set-aside for philanthropic and eleemosynary purposes with no exchange of value or property tax incentives. Whatever form it may take, it is a matter between the property owner and the interest seeking to secure the easement(s). It may be a special-purpose easement such as a unique wildlife habitat or natural geologic features easement, scenic easement, forest preservation easement, floodplain easement, farmland easement, and so on.

Such easements represent an agreement between the property owner and a second party, be it a State or local government unit or private interests, or neighboring property owner. Easements can be recorded on a subdivision plan or plat of record, in the land records as part of a city or county deed description, or both.

- **Conservation Partnerships and Buffer Areas:** Congress authorized the DoD to partner with States and local governments and conservation-based nongovernmental organizations to address the use or development of real property in the vicinity of a military installation for the purpose of limiting development that may be incompatible with the military mission, and to preserve environmental and conservation values⁶⁸ (See Appendix 2.2).

A second congressional authorization involved conveyance of surplus military real property for natural resource conservation purposes. When there is surplus military property that may be used for conservation purposes, the conveyance of the property may be made to a State or political subdivision of a State or a nonprofit organization whose purpose is conservation of natural resources on the surplus property.⁶⁹

Case Study: Fort Bragg and Pope AFB, North Carolina

DoD is now positioned to work with various states and conservation land trust nongovernmental organizations (NGOs) to leverage DoD resources with public and private funding sources to protect training and readiness missions that could be negatively impacted by encroachment of incompatible development. This authority was used at Fort Bragg, North Carolina, where the U.S. Army, the State of North Carolina, the U.S. Fish and Wildlife Service (USFWS), and The Nature Conservancy (TNC) joined together to form the North Carolina Sandhills Preservation Project.

The purpose was to develop a plan to protect and conserve the red-cockaded woodpecker (RCW), the longleaf pine, and other ecosystems in the sandhills of North Carolina while also protecting the training and readiness missions at Fort Bragg. Under this plan, the USFWS has acquired lands through purchase or conservation easements that could support RCW populations and other listed rare species.

This case study exemplifies this new approach to conservation partnering. The focus areas involved more than 220,000 noncontiguous acres of land managed by State and Federal agencies. The goal is to create wildlife habitat corridors between the RCW populations at Fort Bragg and nearby Camp Mackall. This will be accomplished by:

- purchasing key parcels from willing sellers based on priorities identified in the collaborative planning process executed under the aegis of the Fort Bragg–Pope AFB JLUS;
- purchasing conservation easements from willing sellers;
- entering into cooperative management agreements with private landowners;
- participation in the North Carolina Sandhills Safe Harbor program, which is open to non-Federal landowners within an area comprising six counties in the south-central portion of the State (Cumberland, Harnett, Hoke, Moore, Richmond, and Scotland). Under the program, landowners enroll land in the program by agreeing to carry out any of a number of activities beneficial to the RCW. These include wise land management and conservation practices to provide good quality foraging habitat, restore the open, park-like pine forest conditions that the woodpecker requires, and enhancing opportunity for nesting and roosting sites;⁷⁰ and
- Management of newly acquired areas by the North Carolina Games Lands Commission, the USFWS, or TNC. Fort Bragg will be able to use the land for training (such as using areas for parachute training drop zones) so long as the activity conducted by the military is consistent with the conservation objectives.

Figure V-28
Fort Bragg/Pope AFB, NC — JLUS

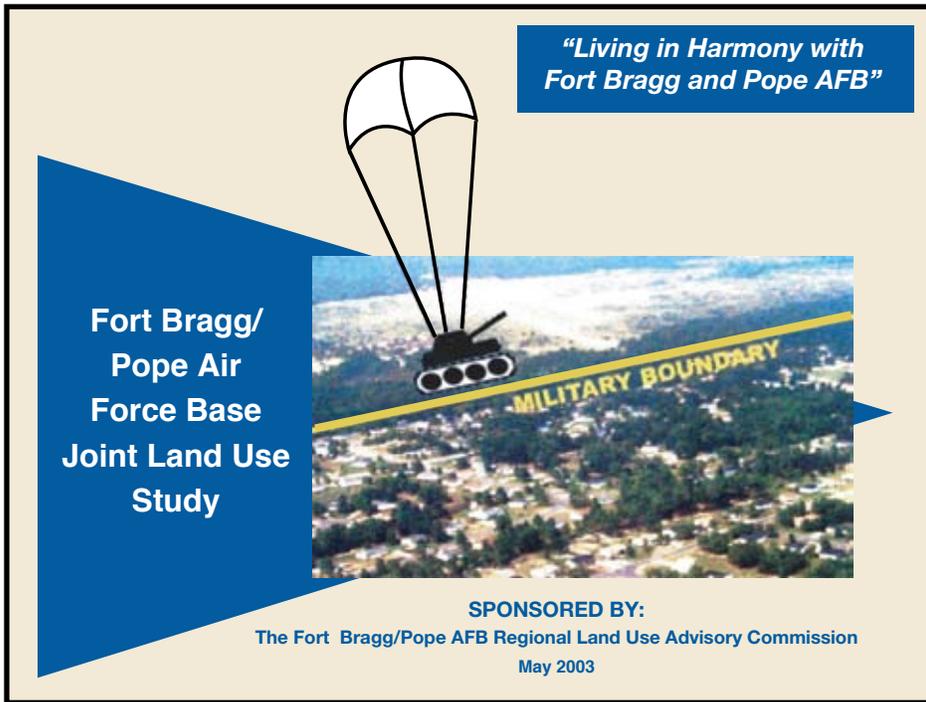


Figure V-29
Civilian Growth Near Fort Bragg, NC — 1930-1990

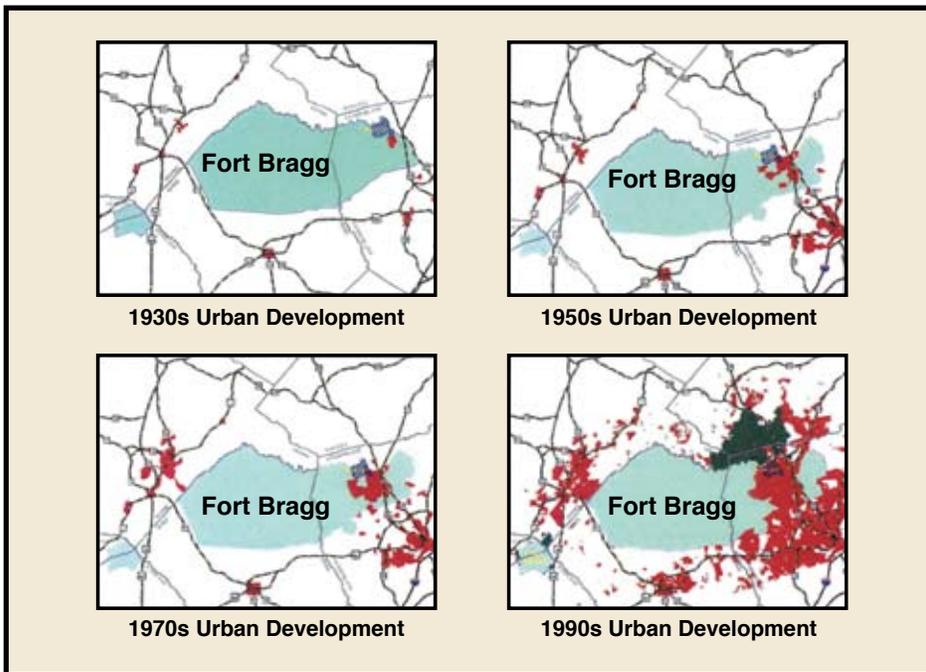
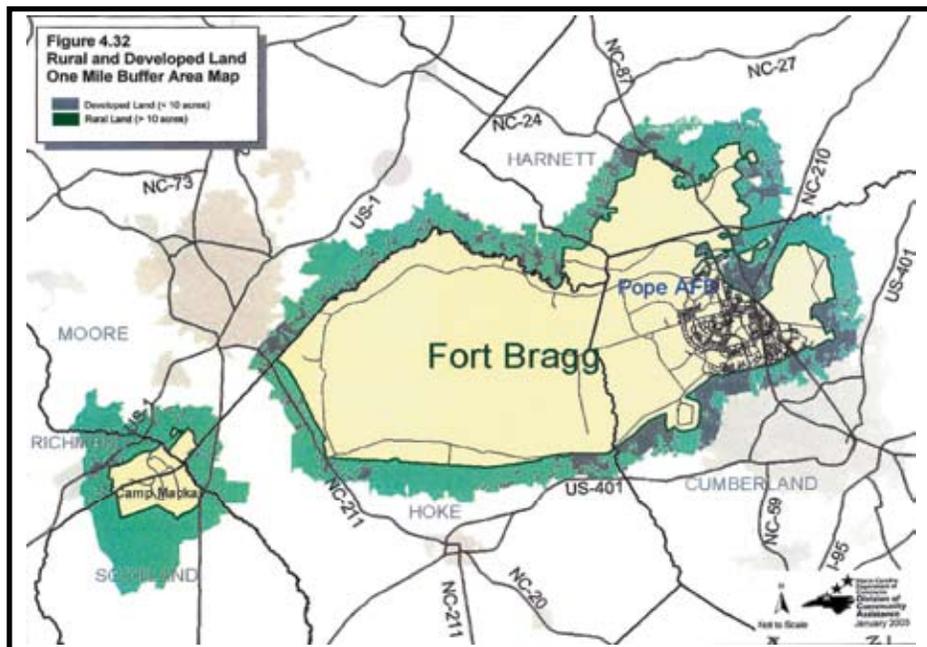


Figure V-30
Fort Bragg, NC — One-Mile Buffer Area Map



Such a partnership as demonstrated at Fort Bragg and Pope AFB (Fig. V-30) is a powerful model in encroachment prevention, preserving national defense training and readiness while protecting endangered species and critical habitat and providing more public recreation opportunities.

The preservation of open space near a military installation can be a means of insulating the military mission from civilian encroachment

- **Cooperative Agreements:** In 1995, a cooperative agreement was signed between the U.S. Army Environmental Center (AEC) and The Nature Conservancy (TNC). The agreement calls for a cost sharing in the acquisition of conservation encumbrances (fee simple land purchases by the TNC) or the purchase of deed restrictions in perpetuity by the TNC.

All acquisitions are between a willing seller and a willing buyer. The objective of the cooperative agreement between the AEC and TNC is to secure long-term military mission capability and preserve declining natural resources.

To date, the DoD conservation partnering authority has been used at the following locations:

- Florida Greenway Project involving ARNG Camp Blanding, Eglin and Tindall AFBs (2004);
- Fort Carlson, CO (2005);
- MCB Camp Lejeune, NC (2004);
- MCAS Beaufort, SC (2004); and
- NAS Pensacola, FL (2003).

Strategy: *Conservation partnerships between entities with seemingly disparate interests can achieve each party's goals and objectives. By sharing the burden of natural resource conservation and influencing the use of lands outside the military installation, encroachment is avoided and all interests are satisfied. Conservation partnering, acquisition of easements, and deed restriction are important tools in the encroachment prevention toolkit.*

- c. Open Space Preservation:** An objective of comprehensive/general plans is to identify open space intended to break the monotony of urban development, provide green space for buffering conservation and protection of unique natural resource areas, and contribute to the quality of urban life. Open space may be purchased by an interested party, such as The Nature Conservancy, for conservation purposes or a local government to achieve the objectives of the park recreation and open space element of a comprehensive plan; or it may be donated to a local governing body as a condition of development approval.

5. Less than Fee Simple Acquisition:

- a. Covenants, Easements, and Other Deed Restrictions:** Certain rights to property may be purchased by other than a governmental entity. This may be referred to as “less than fee simple” purchase. Normally this is a matter between a willing seller and a willing buyer. The deed, including the covenant or restrictive easement, is recorded in the public land records of the city or the county. Covenants on a property are enforceable in the courts.

There are several types of covenants and deed restrictions. Perhaps the most obvious are homeowner association covenants imposed on homes and property within an association's territory. There are covenants that deal with uniformity of building design and color, landscaping, signing, parking, uses, and so forth. The objective is to maintain property values and the appearance and value of community.

There can also be covenants on the use of property, limiting what would otherwise be permitted by the local zoning code. These are in the form of an agreement between a willing seller and a willing buyer that the property will be retained in a certain specified use category. Easements and deed restrictions run with the land.

- b. Purchase of Development Rights (PDR):** Title to real property involves a bundle of rights that may be acquired by a purchaser. The difference is that only one or more targeted right(s) is purchased rather than the entire bundle of property rights. Development rights generally are the most valuable.

An example of where the program works best is the acquisition of development rights associated with agricultural lands. In suburban farmland environments, the local zoning ordinance may permit a specified density of residential subdivision development in addition to agricultural activities.

Generally, rural agriculture land uses and activities are compatible with the presence of the military

Short of downzoning, the purchase of development rights has been used to reverse this trend by reducing residential densities in areas where local government desires to preserve the open, agricultural character. It is costly, but it also avoids possible costly litigation over the specter of downzoning.

For the local county government, the piecemeal urbanization of the countryside will ultimately require the expansion of schools and roads, the increase of fire and police services, and the extension of public support services to support development. How does this relate to military installations and encroachment issues? Most installations and ranges are located in rural environments. The underlying zoning patterns, assuming there is original zoning in the first place, may present an opportunity for conversion of open, compatible farmlands to piecemeal, incompatible development that can place pressure on and threaten the utility of the operating missions of the military.

Generally, rural agriculture land uses and activities are compatible with the presence of the military. There are some exceptions. For instance, crops that attract birds can create a hazard to aircraft. Some livestock, such as ostrich, are frightened by low-flying helicopters. However, for the most part, agriculture and the military are compatible neighbors, each pursuing their respective missions without interference.

- c. **Land Swaps/Transfers:** The swapping of like-valued parcels of land can be an effective means of preventing encroachment pressures. The transfer or exchange of property rights may involve no consideration other than the inherent value of the respective properties.

Strategy: *Equal exchange between and among conservation foundations, the military, and state and local government can achieve the same encroachment prevention objectives short of fee simple acquisition.*

- d. **Property Tax Incentives:** State and local governments, in setting property tax rates and collection requirements, may provide property tax incentives to achieve a valued public benefit.

Strategy: *By offering preferential property assessment programs in exchange for the reservation of development rights that otherwise might contribute to encroachment, the local government and the property owner are compensated accordingly, the mutual objectives of each are satisfied, and the military mission is sustained.*

Military installations demand less in local services than residential development would, and contribute much more to the local economies. It is in the interest of state and local government to protect the military presence just as it would protect a major corporate employer.

- **Open Space and Local Tax Options:** The States of Pennsylvania and North Carolina have developed programs to provide a means whereby cities and counties may acquire, by purchase, gift, grant, bequests, devises, lease, or otherwise, using public funds, the fee or any lesser interest or right in real property in order to preserve open space. This particular technique can be especially valuable in acquiring buffer areas adjacent to military installations using this open space acquisition authority granted by the State (see Appendix 7.6. for examples of State enabling statutes).

6. Fee Simple Acquisition: The acquisition in fee of property within a designated transitional or buffer area near a military installation is the most expensive option available to government. The issue is that not all land use surrounding a military installation is incompatible with the base mission. To the contrary, there are many land use activities, ranging from agriculture to commercial and industrial land use, that are highly compatible and good neighbors. The cost to DoD or another governmental body to acquire more property than is needed or necessary to insulate military installations and ranges from civilian growth is both wasteful of limited public resources and can remove revenue-producing property from the local tax rolls.

By substituting compatible and economically viable land use activities, the community's goals for a vibrant and productive local economy are achieved and the mission of the military installation is sustained.

Acquisition of property should be the last strategy used in the encroachment prevention toolkit unless there are no options, the risk to mission is significant, or there is an opportunity to partner with public and private conservation-based organizations to achieve multiple objectives that enhance the environment and support the military's continuing presence. The Sandhills Partnership and the Fort Bragg-Pope AFB conservation partnering experience are positive case studies in leveraging limited public and private resources to achieve multiple public and private goals.

Strategy: *The time and cost involved amassing sufficient public resources to acquire property that may be in excess of need or necessity is wasteful of government resources and fiscally unsound. There are equally viable, less costly options available. Smart planning and the wise application of legally sustainable land use regulations simply make sense.*

Conclusion

Promoting compatible development near military installations is the thesis of this *Practical Guide*. Planning and land use regulations are the best strategies to address land use compatibility issues, whether the issues involve the military, the community, neighbors, or a combination of all three.

The goal of this *Practical Guide* is to inform and to encourage State and local governments and military leaders to work together to identify and solve the encroachment problem that can be harmful to both interests while protecting individual property rights. Military

The acquisition in fee of property within a designated transitional or buffer area near a military installation is the most expensive option available to government

Acquisition of property should be the last strategy used in the encroachment prevention toolkit unless there are no options

installations working together on the issues addressed in this *Guide* can successfully carry over to working together on other issues that arise from neighbors living together – the military and the supporting community.

Planning and land use regulations are the best strategies to address land use compatibility issues

The comprehensive/general planning themes identified in this *Practical Guide* focus on organizing community leaders and military installation commanders to work together, to plan, to implement, and to monitor balanced land use patterns near military installations. In the end this will be for the benefit of both the neighboring community and the Department of Defense.

This *Practical Guide* demonstrates that there are over 50 local land planning and regulatory tools and techniques available to guide compatible land use activities while protecting the public health, safety, and general welfare; reducing sprawl; and sustaining the military's presence and missions in a community and a State.

An important aspect of State planning law is to delegate to local government the responsibility to conduct land use planning as a grassroots exercise in local governance. The challenge confronting States that desire to deal with the issue of sprawl while sustaining military presence rests with the proper delegation of authority and accountability.

States are aware of the economic impact the military presence can have on both the State and the local community's economy. Some States have taken aggressive steps to insulate installations from incompatible civilian encroachment. Examples include Arizona, California, Florida, Georgia, Kentucky, North and South Carolina, Oklahoma, Texas, and Washington, to name a few. All have enacted statutes to promote compatible land use patterns near military installations and ranges in one form or another. However, the implementation of the State's guidance rests with local government and its willingness to recognize inherent conflicting interests and to balance those interests in a way that creates a win-win for all interests and stakeholders. This is no easy task. It requires an in-depth understanding of the dynamic relationships that exist among all stakeholders.

There are over 50 local land planning and regulatory tools and techniques available

The Appendixes present relevant resource materials, including examples of successful local statutes, codes, ordinances, and strategies that if judicially applied can promote compatible community planning and growth near military installations.

The local comprehensive/general plan is the guiding light that can and should balance land use and community development goals for the benefit of all. It represents the official public policy of local government and a statement about the future growth and development intentions that a local government may support. It cannot be taken lightly because it sets the public policy framework and legislative agenda for local development codes as they may be enacted and enforced.

The past 15 years have witnessed enormous change in the way the Department of Defense operates. Over 100 military installations of all types closed and a number of enduring installations became receiving stations for realigning military units and missions. This trend is expected to continue with another round of base realignments and closures in 2005.

With the rise in worldwide terrorist's threats, DoD has revised how it will respond to such threats. It is realigning the military force structure to be more mobile, agile, and responsive to any threat anywhere in the world, even within the continental United States.

As a result, some local base operations may expand mission in response to the realignments of military personnel and assets. Others may contract in response to realignments or close altogether. For the receiving communities, the operational tempo will become more active. More aircraft may be flying. Test and training ranges may expand. Joint basing may become a focus of a realigned and reengineered force structure.

The implications for State and local governments are twofold. Increased military operations will yield greater local economic activity that will benefit State and local governments by the creation of new jobs and economic wealth. Likewise, increased military operations will create increased potential for noise and accidents on and off base. The compromise is compatible land use planning at the local government level.

State and local governments that recognize these potentials and plan accordingly will be positioned to accommodate, manage, and direct growth in order to be responsive to the expanding military presence. State and local governments that do not will find themselves poorly positioned to take full advantage of the military presence while protecting the public health, safety, and welfare of their residents.

This *Practical Guide to Compatible Development Near Military Installations* provides guidance to State and local governments, military installation commanders, military and community planners, developers, business leaders, and residents on how to take maximum advantage of the available tools in support of the sustaining presence of the military.

The local comprehensive/general plan is the guiding light that can and should balance land use and community development goals for the benefit of all

ENDNOTES

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- ¹ Solano County Airport Land Use Commission, California, Travis AFB Land Use Compatibility Plan (June 2002).
- ² U.S. DoD. Atlas/Data Abstract, FY 2003, *available at*: <http://www.dior.whs.mil/MMID/pubs.htm>.
- ³ *Id.*
- ⁴ Civilian encroachment includes urban, suburban, exurban, and rural development patterns.
- ⁵ The U.S. Army manages a program equivalent to the Navy and Air Force AICUZ Program. It is focused on military range test and training activities mostly associated with ground-based activities including the discharge and impact associated with artillery, aerial bomb drops, missile firing, heavy armor, and related ordnance practice. It is referred to as the Army's Operational Noise Management Program (ONMP). For purposes of this guide, it will be considered synonymous to the AICUZ and RAICUZ programs.
- ⁶ The Defense Office of Economic Development manages the Joint Land Use Study (JLUS) program that may provide both technical and financial support to State or local governments that undertake joint compatible land use studies in cooperation with the nearby military installation. *Also available at*: <http://www.oea.gov/oeaweb.nsf/Encroachment?OpenForm>.
- ⁷ The Federal Aviation Administration (FAA) promulgated the Part 150 — Airport Noise Compatibility Planning Program. Its purpose is to manage noise issues and achieve indoor sound level reduction to protect neighbors from aircraft noise. However, the Part 150 Program does not include military airfields except for joint military-civilian use airfields. *Also available at*: <http://www.faa.gov/arp/environmental/14cfr150/index14.cfm?ARNav=acs>.
- ⁸ Unless otherwise stated, reference to “AICUZ program or report” includes ONMP and the RAICUZ programs and reports.
- ⁹ These studies and the information they contain closely follow the FAA 14 C.F.R. Part 150 Program. However, the orientation is military operations.
- ¹⁰ *F.E. Trotter, Inc. v. Watkins*, 869 F.2d 1312, 1314 (9th Cir. 1989); *Blue v. United States*, 21 Cl. Ct. 359 (1990); and *Chester Cox, Jr.; et al. v. the City of Wichita Falls, Texas, and the United States*, No.99-11249 (5th Cir. 2001), *available at*: <http://www.usdoj.gov/osg/briefs/2001/0responses/2001-0062.resp.pdf>.
- ¹¹ *Id.*13.
- ¹² 10 U.S.C. § 2391(b)(1).
- ¹³ Solano County, CA. Travis Air Force Base Land Use Compatibility Plan (adopted by the Solano County Airport Land Use Commission (June 13, 2002)) (prepared by Shutt Moen Associates).
- ¹⁴ 10 U.S.C. § 2684(a).
- ¹⁵ U.S. Army Regulation 200-4. Department of the Army, *available at*: <http://www.tradoc.army.mil/sja/webdocs%5Cenvironment%5CAR200-4.htm>.

- ¹⁶ Ariz. Rev. Stat. §§ 9-461.06, available at: <http://www.azleg.state.az.us/FormatDocument.asp?inDoc=/ars/9/00461-06.htm&Title=9&DocType=ARS> ; 28-8461 available at: <http://www.azleg.state.az.us/FormatDocument.asp?inDoc=/ars/28/08461.htm&Title=28&DocType=ARS>.
- ¹⁷ Cal. Gov't Code § 65300 *et seq.*, available at: <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=65001-66000&file=65300-65303.4>.
- ¹⁸ Florida Senate Bill — S.B.1604 (2004), available at: http://www.flsenate.gov/cgi-bin/view_page.pl?Tab=session&Submenu=1&FT=D&File=sb1604er.html&Directory=session/2004/Senate/bills/billtext/html/.
- ¹⁹ Arizona Military Compatibility Project, available at: <http://www.azcommerce.com/communityplanning/compatibility.asp> .
- ²⁰ Cal. GOV'T CODE §§§§ 65352, 65944, 65404, 65940, and 65944, (2004), available at: <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=gov&codebody=&hits=20>.
- ²¹ S.B. 1604 (2004), amending Fla. Stat. §163.3175, available at: http://www.flsenate.gov/cgi-bin/view_page.pl?Tab=session&Submenu=1&FT=D&File=sb1604er.html&Directory=session/2004/Senate/bills/billtext/html/.
- ²² See Figure V-17 for an illustration of an imaginary surface.
- ²³ Cal. Gov't Code § 65300 *et seq.*
- ²⁴ H.B. 2662, amending Ariz. Rev. Stat. § 28-8483, available at: <http://www.azleg.state.az.us/FormatDocument.asp?inDoc=/ars/28/08483.htm&Title=28&DocType=ARS>.
- ²⁵ “Areas of Critical State Concern” is one reference used throughout this *Guide*. However, this is a term of art, and those States that have embraced the concept also refer to such areas of interest by terms such as, “Areas of Greater than Local Concern” (Washington State), or “Areas of Statewide Significance” (California and New York), or “Areas of Activities of State Interest” (Colorado) or simply “Areas of Concern.” In the State of Georgia the State Department of Community Affairs may designate a natural or historic resource of importance as a “Regionally Important Resource” (RIR). The RIR warrants special consideration by local government. Failure by a local government to honor the State designation could make the local government ineligible for State funding for regional economic development grants.
- Whatever term a State chooses to identify such areas, the importance is that States are increasingly recognizing that there are unique assets and resources that are of significance to an entire State (*i.e.*, Maryland’s Chesapeake Bay, Florida’s Everglades, etc.). This significance goes beyond local concern and requires special oversight.
- ²⁶ Fla. Stat. § 380.05(2)(c).
- ²⁷ Black Hills Council of Local Governments, Ellsworth AFB Joint Land Use Study (June 1995).
- ²⁸ *Id.*
- ²⁹ State of New Mexico, Office of the Governor, Exec. Order No. 2004-046, “Land-Use Planning and Military Installations Compatibility,” available at: http://www.governor.state.nm.us/orders/2004/EO_2004_046.pdf.

³⁰ Davis-Monthan AFB, Gila Bend Auxiliary Airfield, Luke Auxiliary Airfield #1, Florence and Silver Bell Air National Guard Bases, and a statewide planning handbook for use by local cities and counties.

³¹ See Ariz. Rev. Stat. § 28-8485, available at: <http://www.azleg.state.az.us/FormatDocument.asp?inDoc=/ars/28/08485.htm&Title=28&DocType=ARSFormat Document>.

The statute states:

Airport influence areas; notice:

- A. After notice and hearing, this state [Arizona] or the governing body of a political subdivision that has established or operates an airport may designate as an Airport Influence Area for all property that is in the vicinity of the airport, that is currently exposed to aircraft noise and overflight and that either has a day-night average sound level of sixty-five (65) decibels or higher; or is within such geographical distance from an existing runway that exposes the area to aircraft noise and overflights as determined by the airport owner or operator.
- B. If this state or the governing body of a political subdivision establishes an airport influence area, this state or the governing body shall prepare and file a record of the airport influence area in the office of the county recorder in each county that contains property in the airport influence area. The record shall be sufficient to notify owners or potential purchasers of property in the airport influence area that property in the area is currently subject to aircraft noise and aircraft overflights.

³² Ariz. Rev. Stat. § 28-8461, available at: <http://www.azleg.state.az.us/FormatDocument.asp?inDoc=/ars/28/08461.htm&Title=28&DocType=ARSFormat Document>.

³³ Cal. Gov't Code § 65300 et seq., available at: <http://www.planning.org/growingsmart/pdf/states/cal.pdf><http://www.planning.org/growingsmart/pdf/states/cal.pdf>.

³⁴ City of Aurora, Colorado, Zoning Districts (Art. 8, Overlay Districts, Div. 1 Airport Districts, Sec. 146-801 – 811), available at: http://library6.municode.com/gateway.dll/CO/colorado/2616?f=templates&fn=default.htm&npusername=13725&nppassword=MCC&npac_credentialspresent=true&vid=default; and [Municode.com | Online Library](#) and visit Zoning Districts, Art. 8, Sec. 146-801 – 811.

³⁵ City of Aurora, Colorado. Airport Noise Standards, available at: http://library6.municode.com/gateway.dll/CO/colorado/2616?f=templates&fn=default.htm&npusername=13725&nppassword=MCC&npac_credentialspresent=true&vid=default; and [Municode.com | Online Library](#) and visit Zoning Districts, Art. 8, Sec. 146-811-817.

³⁶ Orlando, Fla, ordinance § 58.383, available at: <http://64.233.161.104/search?q=cache:1Yma3ygrT6YJ:www.wyleacoustics.com/acpdfs/OrlandoZO.pdf+orlando+florida+ordinance+Section+58.383&hl=en&ie=UTF-8>.

³⁷ North Carolina General Statute Chapter 47E – Residential Property Disclosure Act, available at: <http://www.ncrec.state.nc.us/bulletin/fall95bulletin/disclosureinstructions.htm>.

Arizona also has disclosure laws. See Ariz. Rev. Stat. §§ 32-2114A and 32-2183A. See also Virginia disclosure laws, [Residential Property Disclosure Act](#), § 55-518 and 55-519. In Virginia, real estate disclosure law is permissive in that disclosure may or may not occur. It largely depends on the local government and real estate community.

- ³⁸ *Tahoe-Sierra Preservation Council, Inc., et al. v. Tahoe Regional Planning Agency et al.*, 535 U.S. 302 (2002), available at: <http://law.wustl.edu/landuselaw/tahoeusamicusbrief.htm>.
- ³⁹ *Id.* Justice Stevens delivered the opinion of the Supreme Court.
- ⁴⁰ *Id.*
- ⁴¹ Escambia Cty, Fla., ordinance no. 2003-24 (June 24, 2003).
- ⁴² Tucson, Ariz., ordinance § 97-81.
- ⁴³ 274 U.S. 365 (1926).
- ⁴⁴ APA. (9193) *A Planning Guide to Land Use Law*. Edited by Stuart Meck and Edith M. Netter. APA Planning Press. “Comprehensive Plan and the Law,” by Daniel R. Mandelker and Edith M. Netter.
- ⁴⁵ Live Ordinance Arrival and Departure Corridors is a term of art and does not reflect accepted military terminology, nor terminology used by the State of Arizona.
- ⁴⁶ Arizona Department of Commerce, Draft Regional Compatibility Plan for Maricopa County/Luke AFB (prepared by Parsons and Associates) (Dec. 2002), available at: http://www.commerce.state.az.us/doclib/COMMASST/WMCC_LAFB_Regional_Compatibility_Plan_-_March_2003.pdf.
- ⁴⁷ Ariz. Rev. Stat. § 28-8461.9, available at: <http://www.azleg.state.az.us/ars/28/08461.htm>.
- ⁴⁸ Federal Aviation Administration, available at: [FAA Airport Noise Compatibility Planning Toolkit, V-10](#) (Apr. 2000).
- ⁴⁹ Montgomery County Planning Commission, Ohio, Joint Land-Use Study to Revise the Wright-Patterson Air Force Base Zoning Regulations iii-iv (prepared by Wyle Research Laboratories, Arlington, VA) (Sept. 1996).
- ⁵⁰ Air Force Instruction 327063 (2002) and Navy Instructions 11010.36B (2002).
- ⁵¹ Maryland-National Capital Park and Planning Commission, Functional Master Plan for Preservation of Agriculture and Rural Open Space in Montgomery County (Oct. 1980), available at: http://www.mncppc.org/community/plan_areas/rural_area/master_plans/ag_openspace/toc_ag_open80.shtm.
- ⁵² *Id.*
- ⁵³ This program originally was proposed by the Maryland-National Capital Park and Planning Commission (MNCPPC) (see note 53 supra) and adopted by the Montgomery County Council in 1980 as an adjunct to the *Master Plan for Preservation of Agriculture and Rural Open Space*.
- ⁵⁴ Cal. Gov’t Code §§ 65846-65869.5. See also Fla. Stat. Ann. §§163.3220-163.3243.
- ⁵⁵ Signed into law by Gov. Tom Ridge in 1999, available at: <http://www.dep.state.pa.us/growgreen>.

⁵⁶ Aurora, Colo. Code. § 146-808(b), 809(B), available at: http://library6.municode.com/gateway.dll/CO/colorado/2616?f=templates&fn=default.htm&nusername=13725&npassword=MCC&nac_credentialspresent=true&vid=default ; and Municode.com | Online Library , and visit Zoning Districts, Art. 8, Sec. 146-808-809.

⁵⁷ 14 C.F.R. Part 77.28, available at: http://www.access.gpo.gov/nara/cfr/waisidx_04/14cfr77_04.html.

⁵⁸ Federal Aviation Admin. (Airport Div, Southern Region) Land Use Compatibility and Airports, iii-15 (Sept. 1999), available at: http://www.aee.faa.gov/noise/aee100_files/LUPItoolkit/iii.b.pdf.

⁵⁹ *Blue v. United States*, 21 Cl. Ct. 359 (1990); *F.E. Trotter, Inc. v. Watkins*, 869 F.2d 1312, 1314 (9th Cir. 1989).

⁶⁰ *Id.*

⁶¹ S.B. 1604 (2004), amending Fla. Stat. §163.3175, available at: http://www.flsenate.gov/cgi-bin/view_page.pl?Tab=session&Submenu=1&FT=D&File=sb1604er.html&Directory=session/2004/Senate/bills/billtext/html/.

⁶² DANIAL R. MANDELKER, Land Use Law §6.13 (4th ed. 1977). See also John J. Delaney, Vesting Verities and Development Chronology: A Gaping Disconnect, 3 Wash U. J. L. Pol’y 603–622 (2000), available at: <http://law.wustl.edu/journal/3/pg603to662.pdf> This is an exhaustive treatment of the question of vesting, and the reader is encouraged to visit this site.

⁶³ *Id.* at § 6.12.

⁶⁴ See, e.g., *Prince Georges County v. Blumberg*, 407 A.2d 1151 (Md. 1979); *Pemberton v. Montgomery County*, 340 A.2d 240 (Md. 1975).

⁶⁵ *Avco Community Developers, Inc. v. South Coast Regional Commission*, 553 P.2d 546 (Cal. 1976).

⁶⁶ Federal Aviation Act, 49 U.S.C. §§ 40103(a)(1), (2) and 40102(30) *et seq*; *Causby v. United States*, 328 U.S. 346 (1946), and *Aaron v. United States*, 160 Ct. Cl, 295, 311 F.2d 798, 801 (1963).

⁶⁷ 10 U.S.C. § 2684a.

⁶⁸ *Id.*

⁶⁹ North Carolina Safe Harbors program description and resource materials available at: <http://www.environmentaldefense.org/article.cfm?ContentID=139&Page=2&subnav=&project=&colorback=ffffff>.

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