



Westover Air Reserve Base, Massachusetts

AIR INSTALLATIONS COMPATIBLE USE ZONES (AICUZ) STUDY

Final • October 2020



Headquarters Air Force Reserve Command
Office of the Civil Engineer (AFRC/A4C)
Robins Air Force Base, Georgia

This page left intentionally blank.

Westover Air Reserve Base, Massachusetts

Air Installations Compatible Use Zones (AICUZ) Study

Final
October 2020



Prepared for
Headquarters Air Force Reserve Command
Office of the Civil Engineer (AFRC/A4C)
Robins Air Force Base, Georgia
AFRC Contract No. FA6643-18-D-0004



DEPARTMENT OF THE AIR FORCE

AIR FORCE RESERVE COMMAND

1 October 2020

MEMORANDUM FOR AREA GOVERNMENTS

FROM: 439th Airlift Wing
Westover Air Reserve Base
57 Patriot Avenue, Westover ARB, Chicopee, MA 01022

SUBJECT: Air Installations Compatible Use Zones (AICUZ) Study

1. The 2020 AICUZ Study for Westover Air Reserve Base (ARB) is an update of the AICUZ Study dated 2013. The Air Force Reserve Command initiated the update to include changes such as flight track changes, operational changes, and development changes in the surrounding community. This Study is a reevaluation of aircraft noise and accident potential related to United States Air Force flying operations. The Air Force provides this AICUZ study to aid in the development of local planning mechanisms that will protect the public safety and health, as well as preserve the operational capabilities of Westover ARB.
2. The AICUZ Study contains a description of the affected area around the installation. It outlines the location of runway Clear Zones (CZs), Accident Potential Zones (APZs), and noise contours, and provides recommendations for development that is compatible with military flight operations. It is our recommendation that local governments incorporate these recommendations into community plans, zoning ordinances, subdivision regulations, building codes, and other related documents.
3. This update provides noise contours based upon the Day-Night Average Sound Level (DNL) metric and utilizes a planning noise contour. Long-range planning by local land use authorities involves strategies to influence present and future uses of land. Due to the long-range nature of planning, the Air Force provides planning contours—noise contours based on reasonable projections of future missions and operations. AICUZ studies using planning contours provide a description of the aircraft noise environment for operations that is more consistent with the planning horizon used by state, tribal, regional, and local planning bodies.
4. We greatly value the positive relationship Westover ARB has experienced with its neighbors over the years. As a partner in the process, we have attempted to minimize noise disturbances through such actions as minimizing night flying, engine upgrades to quieter versions, avoiding flights over heavily populated areas as much as practical, and utilizing jet engine noise suppressers for maintenance activities. The Air Force appreciates and values the cooperation of all community stakeholders in the collaborative implementation of the recommendations and guidelines presented in this AICUZ Study update.

Craig C. Peters
Colonel, Air Force Reserve
Commander



Table of Contents

Section

Abbreviations and Acronyms	v
1.0 Introduction	7
1.1 AICUZ Program	7
1.2 Scope and Authority	8
1.2.1 Scope	8
1.2.2 Authority	8
1.3 Previous AICUZ Efforts and Related Studies	8
1.4 Changes that Require an AICUZ Study Update	9
2.0 Westover ARB, Massachusetts	10
2.1 Location	10
2.2 History	10
2.3 Mission	14
2.4 Host and Tenant Organizations	14
2.4.1 Air Force Reserve Command	14
2.4.2 Other DoD Reserve Units	15
2.4.3 Commercial and General Aviation	15
2.5 Airfield Environment	15
2.6 Local Economic Impacts	17
3.0 Aircraft Operations	21
3.1 Aircraft Types	21
3.1.1 Permanently Assigned Aircraft	21
3.1.2 Potential Future Aircraft	21
3.1.3 Transient Aircraft	22
3.1.4 Civilian Aircraft	24
3.2 Pre-flight and Maintenance Operations	24
3.3 Flight Operations	27
3.4 Annual Aircraft Operations	28
3.4.1 Projected Annual Operations	29
3.5 Runway Utilization and Flight Tracks	31
3.5.1 Runway Utilization	31
3.5.2 Flight Tracks	32
4.0 Aircraft Noise	37
4.1 What is Sound/Noise?	37
4.2 How Sound is Perceived	38
4.3 The Day-Night Average Sound Level	39
4.3.1 Noise Contours	39
4.3.2 AICUZ Planning Contours	40
4.4 Noise Abatement	44
4.5 Noise Complaints	44



5.0	Community and Aircraft Safety	46
5.1	Clear Zones and Accident Potential Zones	46
5.1.1	Runway 05 Displaced Threshold Clear Zones and Accident Potential Zones	48
5.2	Imaginary Surfaces	50
5.3	Hazards to Aircraft Flight Zone.....	54
6.0	Land Use Compatibility Analysis	57
6.1	Land Use Compatibility Guidelines and Classifications	57
6.1.1	Suggested Land Use Compatibility for Noise.....	57
6.1.2	Suggested Land Use Compatibility for Accident Potential Zones.....	57
6.2	Planning Authorities, Stakeholders, and Policies	59
6.2.1	Pioneer Valley Planning Commission	59
6.2.2	The City of Chicopee	60
6.2.3	The Town of Ludlow	60
6.2.4	The Town of Granby	61
6.2.5	The Town of South Hadley.....	61
6.2.6	The City of Springfield.....	62
6.2.7	Massachusetts Military Asset and Security Strategy Task Force.....	62
6.2.8	Westover Metropolitan Development Corporation.....	63
6.3	Land Use and Proposed Development	63
6.3.1	Existing Land Uses Surrounding Westover ARB.....	65
6.3.2	Zoning Surrounding Westover ARB	70
6.4	Land Use Compatibility Concerns.....	73
6.4.1	Existing Land Use Compatibility Concerns.....	75
6.4.2	Future Compatibility Concerns	83
7.0	Implementation	86
7.1	Military Role	86
7.2	Westover Metropolitan Development Corporation/Joint Civilian Use Partner Roles	87
7.3	Commonwealth/Regional Roles.....	88
7.4	Local Government Role	89
7.5	Community Role	91
8.0	References	93
Appendix A.	Land Use Compatibility Tables	95
Appendix B.	Westover ARB AICUZ Land Use Compatibility Matrix.....	107



Figures

Figure 2-1. Regional Setting	11
Figure 2-2. Westover ARB Airfield Diagram	16
Figure 3-1. Engine Runup Locations	26
Figure 3-2. Summary of Westover ARB Flight Operations for Calendar Years 2015 – 2019	29
Figure 3-3. Runway 05 Flight Tracks	33
Figure 3-4. Runway 23 Flight Tracks	34
Figure 3-5. Runway 15 Flight Tracks	35
Figure 3-6. Runway 33 Flight Tracks	36
Figure 4-1. Typical A-weighted Sound Levels of Common Sounds	38
Figure 4-2. 2020 AICUZ Noise Contours with Gradient Shading	42
Figure 4-3. Comparison of the 2020 AICUZ and the 2013 AICUZ Noise Contours	43
Figure 5-1. Runway Clear Zones and Accident Potential Zones for Class B Runways	47
Figure 5-2. 2020 AICUZ Clear Zones and Accident Potential Zones for Westover ARB	49
Figure 5-3. Imaginary Surfaces and Transition Planes for Class B Fixed-Wing Runways	51
Figure 5-4. Runway Airspace Imaginary Surfaces and Transition Planes for Westover ARB	53
Figure 6-1. Composite AICUZ Footprint	58
Figure 6-2. Existing Land Use and 2020 AICUZ Noise Contours, CZs, and APZs	69
Figure 6-3. Zoning and 2020 AICUZ Noise Contours, CZs, and APZs	72
Figure 6-4. Incompatible Existing Land Use within Noise Contours	77
Figure 6-5. Clear Zones of Runway 05 and 33 end with Existing Land Use	78
Figure 6-6. Incompatible Existing Land Use within CZs and APZs	79
Figure 6-7. APZ I and II of Runway 15 end with Existing Land Use	80
Figure 6-8. APZ I and II of Runway 33 end with Existing Land Use	80
Figure 6-9. APZ I and II of Runway 23 end with Existing Land Use	81
Figure 6-10. APZ I and II of Runway 05 end with Existing Land Use	81
Figure 6-11. APZ I and II of Runway 33 end with Zoning	83
Figure 6-12. APZ I and II of Runway 15 end with Zoning	84



Tables

Table 2-1. Grand Total Economic Impact by Year	17
Table 2-2. Total Military Personnel and Dependents by Classification and Housing (Total Persons)	18
Table 2-3. Total Civilian Personnel by Appropriated and Non-Appropriated Funds (Total Persons)	18
Table 2-4. Annual Military Payroll by Category and Housing Location (Millions of Dollars)	19
Table 2-5. Annual Civilian Payroll by Appropriated and Non-Appropriated Funds (Millions of Dollars)....	19
Table 2-6. Summary of Construction, Contracts, and Expenditures for Materials, Equipment and Supplies (Millions of Dollars)	19
Table 2-7. Estimated Number and Dollar Value (Millions of Dollars) of Indirect Jobs Created.....	20
Table 3-1. Projected Annual Aircraft Flight Operations Modeled for 2020 AICUZ Noise Contours (Planning Contours for CY 2023)	30
Table 3-2. Current Runway Usage and Flight Routing for All Military Aircraft	32
Table 4-1. Subjective Response to Changes in Sound Level	39
Table 4-2. Off-installation Land Area and Estimated Population within Noise Zones for the 2020 AICUZ Noise Contours at Westover ARB	41
Table 5-1. Off-installation Land Area and Estimated Population within the Clear Zones and Accident Potential Zones.....	48
Table 5-2. Descriptions of Imaginary Surfaces for Military Airfields with Class B Runways.....	52
Table 6-1. Generalized Land Use Categories and Noise/Safety Compatibility	74
Table 6-2. Off-installation Existing Land Use Acreage Compatibility within AICUZ Noise Zones	76
Table 6-3. Off-installation Existing Land Use Acreage Compatibility within Clear Zones/Accident Potential Zones.....	82
Table A-1. Land Use Compatibility Recommendations in APZs and CZs.....	95
Table A-2. Recommended Land Use Compatibility for Noise Zones	102



Abbreviations and Acronyms

AFB	Air Force Base
AFH	Air Force Handbook
AFI	Air Force Instruction
AFRC	Air Force Reserve Command
AGL	above ground level
AICUZ	Air Installations Compatible Use Zones
AICUZ PM	AICUZ Program Manager
Air Force	United States Air Force
APZ	Accident Potential Zone
ARB	Air Reserve Base
Army	United States Army
ATC	air traffic control
BASH	Bird/Wildlife Aircraft Strike Hazard
CFR	Code of Federal Regulations
CZ	Clear Zone
dB	decibel
dBA	A-weighted decibel
DNL	Day-Night Average Sound Level
DoD	Department of Defense
DoDI	Department of Defense Instruction
Du/Ac	dwelling units per acre
EIS	Environmental Impact Statement
EO	Executive Order
EMI	Electromagnetic Interference
EPA	United States Environmental Protection Agency
FAA	Federal Aviation Administration
FAR	Floor Area Ratio (also Federal Aviation Regulation)
FHA	Federal Housing Administration
GCA	Ground Control Approach
GIS	geographic information system
HAFZ	Hazards to Aircraft Flight Zone
HUD	Department of Housing and Urban Development
Hz	hertz
I-	Interstate
IFR	Instrument Flight Rules
JLUS	Joint Land Use Study
MASS GIS	Massachusetts Bureau of Geographic Information
MASS-TF	Massachusetts Military Asset and Security Strategy Task Force
Navy	United States Navy
NLR	Noise Level Reduction
NVGs	night vision goggles
PA	Public Affairs



PVPC	Pioneer Valley Planning Commission
ROI	Region of Influence
SAC	Strategic Air Command
SFD	single-family detached dwelling
SLUCM	Standard Land Use Coding Manual
T&G	Touch-and-Go
TACAN	Tactical Area Navigation
UAS	Unmanned Aircraft Systems
WMA	Westover Metropolitan Airport
WMDC	Westover Metropolitan Development Corporation



1.0 Introduction

The 2020 Westover Air Reserve Base (ARB) Air Installations Compatible Use Zones (AICUZ) Study is an update of the previous AICUZ Study released in 2013. It reaffirms the United States Air Force's policy of promoting public health, safety, and general welfare in areas surrounding an air installation while seeking development that is compatible with the defense mission. This study presents changes in flight operations since the previous study and provides planning noise contours for Westover ARB and recommendations for compatible land use.



C-5 on ramp near Westover Tower

1.1 AICUZ Program

Military installations attract development—people who work on the installation want to live nearby, while others want to provide services to installation employees and residents. When incompatible development occurs near an installation or training area, affected parties within the community may seek relief through political channels that could restrict, degrade, or eliminate capabilities necessary to perform the defense mission. In the early 1970s, the Department of Defense (DoD) established the AICUZ Program. The goal of the program is to protect the health, safety, and welfare of those living and working near air installations while sustaining the Air Force's operational mission. The Air Force accomplishes this goal by promoting proactive, collaborative planning for compatible development to sustain mission and community objectives.

The AICUZ Program recommends that local land use agencies incorporate noise zones, Clear Zones (CZs), Accident Potential Zones (APZs), and Hazards to Aircraft Flight Zones (HAFZs) associated with military operations into local community planning programs to maintain the airfield's operational requirements while minimizing the impact to residents in the surrounding community. Cooperation between military planners and community-based counterparts serves to increase public awareness of the importance of air installations and the need to address mission requirements and associated noise and risk factors in the public planning process. As the communities that surround airfields grow and develop, the Air Force has the responsibility to communicate and collaborate with local governments on land use planning, zoning, and similar matters that could affect the installation's operations or missions. Likewise, the Air Force has a responsibility to understand and communicate potential impacts that new and changing missions may have on the local community.



1.2 Scope and Authority

1.2.1 Scope

This AICUZ Study uses projected air operations. Westover ARB does not expect changes to the current mission. The amount of flight operations is projected to be consistent over the next five to ten years. However, for planning purposes, this study factors in the potential addition of aircraft not currently based at the installation including the KC-46A. The Air Force Reserve Command (AFRC) provides Westover ARB's CZs, APZs, and noise zones associated with the airfield's runways to the local communities, along with recommendations for compatible land use near the installation for incorporation into comprehensive plans, zoning ordinances, subdivision regulations, building codes, and other related documents.

1.2.2 Authority

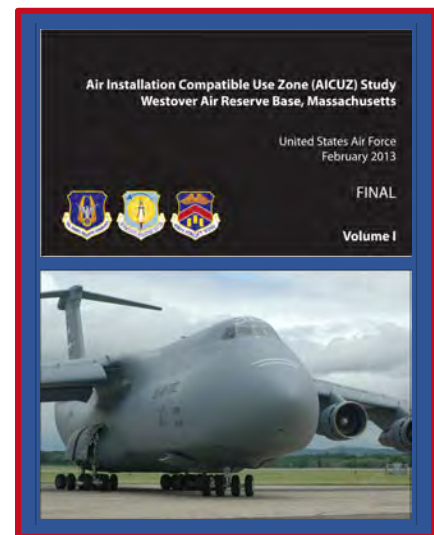
Authority for the Air Force AICUZ Program lies in two documents:

- Air Force Instruction (AFI) 32-1015, *Integrated Installation Planning*, implements Department of Defense Instruction (DoDI) 4165.57, *Air Installations Compatible Use Zones*, and applies to all Air Force installations with active runways located in the United States and its territories. This AFI lays down the program objectives and responsibilities.
- Air Force Handbook (AFH) 32-7084, *AICUZ Program Manager's Guide*, provides installation AICUZ Program Managers with specific guidance concerning the organizational tasks and procedures necessary to implement the AICUZ Program. It is written in a "how to" format and includes the land use compatibility tables used in AICUZ studies.

1.3 Previous AICUZ Efforts and Related Studies

Previous studies relevant to this AICUZ Study include:

- Federal Aviation Regulations (FAR) Part 150 Noise Compatibility Study for Westover Metropolitan Airport (2018);
- Westover Air Reserve Base Joint Land Use Study (DoD and PVPC 2018);
- KC-46A Third Main Operating Base (MOB 3) Beddown Environmental Impact Statement (EIS) (Air Force 2017);
- Westover Air Reserve Base AICUZ Study (Air Force 2013); and
- Westover Air Reserve Base/ Westover Metropolitan Airport Joint Land Use Study Update (DoD and PVPC 2004).





1.4 Changes that Require an AICUZ Study Update

This 2020 Westover ARB AICUZ Study replaces the 2013 AICUZ Study. It provides the installation's flight tracks, CZs, APZs, and noise contour information, presenting the most accurate representation of current military activities at Westover ARB. With this information, the AICUZ Program allows surrounding communities to consider both current and potential activities when making land use decisions.

As the DoD aircraft fleet mix and training requirements change over time, the resulting flight operations change as well. These changes can affect noise contours and necessitate an AICUZ Study update. Additionally, non-operational changes, such as noise modeling methods and a local community's land use, may also require the need for an update. The primary changes occurring since the previous Westover ARB AICUZ Study that necessitate this update include:

- Changes to noise contours;
- Upgrade of new engine platforms; Starting in 2017, Westover ARB upgraded the C-5Ms aircraft with new, quieter, fuel-efficient engines;
- Potential introduction of new KC-46A aircraft;
- Increase in flight operations from the 2013 AICUZ baseline;
- Changes in AICUZ AFI. AFI 32-1015, Integrated Installation Planning, and AFH 32-7084 were published since the previous 2013 AICUZ Study; and
- Changes in off-installation land use and development trends.



2.0 Westover ARB, Massachusetts

Westover ARB is a joint-use military and civilian airfield, shared with the Westover Metropolitan Airport. It is operated under a joint-use agreement, with the DoD hosting the Westover Metropolitan Development Corporation (WMDC), a nonprofit industrial development corporation established in 1974 to oversee the civilian operations at Westover Airport and to undertake development of surplus land from the former Westover Air Force Base (AFB).



2.1 Location

Westover ARB, located in Hampden County in the Pioneer Valley of Massachusetts, is the nation's largest ARB in land mass and is home to more than 5,000 military and civilian workers. The installation consists of approximately 2,500 acres of land in the City of Chicopee and Town of Ludlow, and is adjacent to the Towns of South Hadley, Granby, and Springfield (Figure 2-1). The civilian airport is part of the Westover Industrial Parks that abuts Westover ARB on approximately 1,300 acres of land formerly owned by the military. Westover ARB is uniquely positioned closer to North Atlantic Treaty Organization countries in Europe than the next nearest logistics base, which affords the base high strategic value for our nation.

2.2 History

Westover Field was created by a war-readiness appropriation signed by President Franklin D. Roosevelt in 1939 and opened on April 6, 1940. It was assigned to the United States Army (Army) Northeast Air District. It was named Westover Air Force Base in June 1948, after the Air Force's creation as a separate service and became instrumental in waging the Cold War. As a Military Air Transport Service base, Westover was home to the Atlantic Division and a large air transport wing of C-124 and C-54 transports.

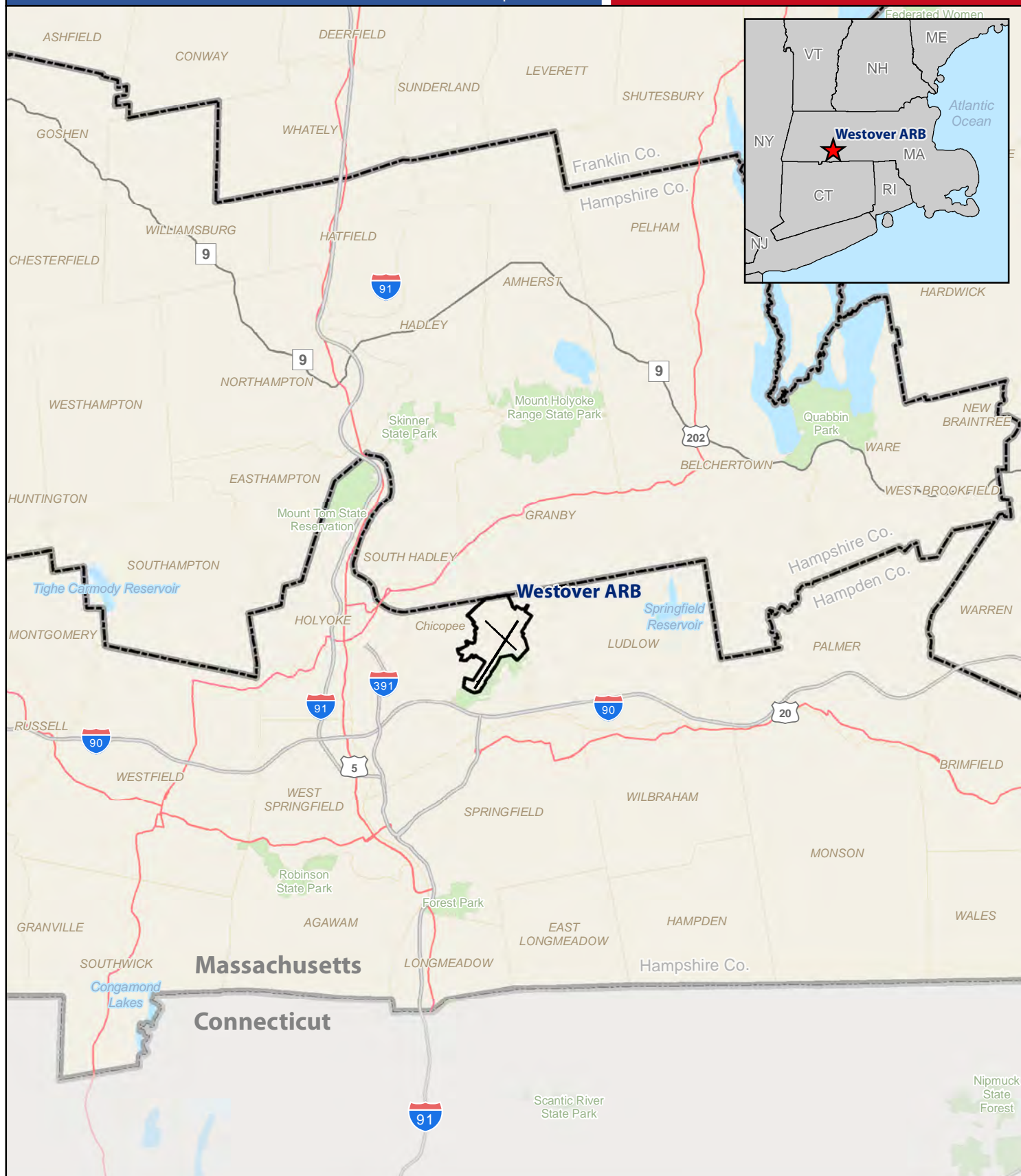
On April 1, 1955, the 4050th Air Refueling Wing, flying KC-97 tankers, took over operations of the base from the Military Air Transport Service. The next year, Strategic Air Command's (SAC) 99th Bombardment Wing, Heavy took up residence at Westover, operating the B-52C and B-52D Stratofortress bombers (The Patriot 1998).



Figure 2-1

Westover Air Reserve Base
Air Installations Compatible Use Zones

Regional Setting



Legend

- Interstate
- U.S. Highway
- State Route
- Airfield Runway
- City Boundary
- County Boundary
- Installation Boundary
- Park/Recreation Area
- State Boundaries
- Waterbody

0 5 10 Miles





As a former SAC B-52 and KC-135 base and former home to Headquarters, 8th Air Force, Westover was one of the Soviet Union's top targets during the Cold War. SAC constructed a secret underground bunker several miles away in Amherst, Massachusetts, to support the 8th Air Force and coordinate Westover's operations in the event of a nuclear war.

While SAC operations were the primary Air Force operation, the Air Defense Command had a large presence on the base throughout the 1950s and early 1960s. As many as three fighter interceptor squadrons were housed at the base in 1958. The last fighter unit left Westover in 1963.

Westover was an operational base for the Air Force during the Korean Conflict, Vietnam War, and Cold War. An armada of bombers and tankers stood ready in the "Christmas Tree" formation at the base's alert facility to scramble if a conflict broke out with the Soviet Union. In 1973, the last Vietnam War veterans stepped onto Westover's tarmac. In 1974, the base was realigned as a joint-use civilian/military airfield.

The base was turned over to the AFRC on May 19, 1974. From that time until October 1987, the 439th Tactical Airlift Wing operated C-130 Hercules and C-123 Provider aircraft. The wing converted to C-5As in 1987 and the unit eventually became designated as the 439th Airlift Wing, also known as the "Patriot Wing".



January 1985 –
eight (8) C-5
Galaxies are
granted to
Westover

When Saddam Hussein ordered Iraqi troops to invade the neighboring country of Kuwait on August 2, 1990, C-5A aircrews from Westover immediately volunteered to rush troops and supplies to the region. On August 22, 1990, the 337th Military Airlift Squadron was officially activated and proceeded to fly hundreds of missions in support of Operations Desert Shield and Desert Storm. In 1992, aircraft from the 439th were used to fly food, medical supplies, and clothing to the new Commonwealth of Independent States in the former Soviet Union. In August 1992, Westover C-5s ferried supplies, vehicles, and personnel to Homestead AFB, Florida, to assist in the relief efforts following Hurricane Andrew.

Between April 16 and May 16, 1999, Westover C-5 aircrews from the 337th Airlift Squadron completed five missions in support of Operation Allied Force — the air war in Kosovo — to various sites in Europe. Members of the 439th Airlift Wing participated in Aerospace Expeditionary Force missions during the final quarter of 1999.

Since 2001, thousands of Airmen from Westover have deployed to support the Global War on Terror. At the height of the wars in Iraq and Afghanistan, the base had more than 1,200 people deployed in the theater.

By February 2002, the number of activated Westover men and women had reached 1,150. Members of the 439th Airlift Wing found themselves deployed to more than 20 countries



around the globe. While most of the members of the 439th Airlift Wing were demobilized by October 2002, the 439th Security Forces Squadron entered its second year of activation, tasked with around-the-clock security of Westover. When Operation Iraqi Freedom kicked off in early February 2003, nearly 1,000 members of the 439th were again called to active duty.

As part of the 2005 Base Realignment and Closure decisions, Westover has expanded significantly over the past decade. The expansion included approximately 1,000 soldiers assigned to an Army Reserve Training Battalion made up of Army units scattered across Massachusetts, as well as approximately 450 United States Navy (Navy) Seabees. The addition of these two tenant units increased base population 40 percent. In June 2006, the 439th Airlift Wing began its conversion to the newer C-5B models. The 439th was the first and only all-reserve unit to be equipped with the B-models. In December 2006, the Air Force selected Westover as one of three military bases to operate a regional isochronal maintenance inspection area for the C-5s.

At the end of 2009, the Patriot Wing had more than 20 reservists deployed worldwide. Westover's aerial port squadrons processed more than 2,100 passengers and more than 1.2 million pounds of cargo. Aircrews flew more than 4,600 hours and hauled more than 16,200 tons of cargo. In the summer of 2010, the wing took part in surge of C-5 operations in support of Afghanistan operations and Operation New Dawn in Iraq. The following year brought natural disaster devastation to Japan as a tsunami killed thousands of people. C-5s aircrews flew humanitarian support missions in 2011 as part of the relief effort to that country.

Operation Enduring Freedom staging operations kept 337th Airlift Squadron crews busy in 2012, and in the late fall, humanitarian operations again made headlines following the devastation of Superstorm Sandy.



The 439th Airlift Wing's deployment commitments sent about 10 percent of its Airmen to Southwest Asia throughout 2016. More than 250 Airmen suited to go "out the door" in more than a dozen career fields including security forces, logistics readiness, force support, intelligence, civil engineering, public affairs, chaplain, and maintenance.

In 2018, Westover welcomed new C-5M Super Galaxy cargo planes to the base, representing an investment of around \$720 million by the Air Force as part of their C-5 Modernization Program. This modernization program also made the C-5 aircraft quieter, enhanced

reliability and maintainability, reduced cost of ownership, and increased operational capability.



2.3 Mission

The host unit of Westover ARB is the 439th Airlift Wing assigned to the AFRC. The Command utilizes Westover ARB for its largest cargo aircraft, the C-5M Super Galaxy aircraft. The wing's flying unit, the 337th Airlift Squadron, supports a specialized mission that involves transporting outsized and oversized cargo and supporting the Air Mobility Command's Rapid Global Mobility mission to provide surge capacity to the expeditionary Air Force



C-5 Cargo Bay

during any rapid deployment to Europe, the Middle East, and elsewhere. The 439th is capable of providing worldwide air movement of troops, supplies, equipment, and medical patients. Support units provide communications, engineering, logistical, medical, and security requirements. The wing is also responsible for the management of aircraft maintenance and all assigned Air Force combat support real property, equipment, and supplies. The peacetime mission of Westover ARB includes recruiting and training of personnel to assure mission readiness. Westover ARB also serves as a Federal Emergency Management Agency-staging base during national emergencies.

2.4 Host and Tenant Organizations

2.4.1 Air Force Reserve Command

439th Airlift Wing

The 439th Airlift Wing (Patriot Wing) is a unit of the AFRC. The wing is assigned to Westover ARB, Massachusetts, as the host unit and reports to 4th Air Force at March ARB, California. The 439th Airlift Wing operates eight C-5M Super Galaxy aircraft and supports the Air Mobility Command's worldwide airlift mission. The 337th Airlift Squadron is the wing's flying unit. The wing is comprised of the following groups:

- 439th Operations Group;
- 439th Maintenance Group; and
- 439th Mission Support Group.



The 439th Airlift Wing has five priorities: readiness; recruiting; retention; one standard, quality of life improvement; and facility improvement. The wing provides worldwide air movement of troops, supplies, equipment, and medical patients. Support units provide communications, engineering, logistical, medical, and security requirements. The peacetime mission includes recruiting, training, and supervision of personnel to assure



mission readiness. The wing is also responsible for the management of aircraft maintenance and all real property, equipment, and supplies.

2.4.2 Other DoD Reserve Units

Westover ARB is also home to other Reserve units from the various other DoD branches and associate organizations, providing mission-critical facilities, infrastructure, and property to support their mission responsibilities. These tenants include the U.S. Army Reserve's 226th Transportation Company, and the U.S. Marine Corps Forces Reserve's Marine Air Support Squadron Six and the 4th Marine Aircraft Wing Reserve Training Center.



2.4.3 Commercial and General Aviation



Westover Metropolitan Airport is the civilian component of the Westover ARB. The facilities are owned and managed by the non-profit WMDC. The airport is operated under a joint-use agreement with the DoD. Established in 1974, the property has been operated as a public-use, Federal Aviation Administration (FAA) Certified Class 1 air carrier regional civilian airport serving large aircraft, including public and private charters. The airport has a 14,600-square-foot passenger terminal and over 300,000 square feet of hangar space. The WMDC has acquired over 1,300 acres adjacent to the airfield and has developed them into three industrial parks. Over 50 companies have located in the industrial parks.

2.5 Airfield Environment

The airfield (Figure 2-2) includes, but is not limited to, aircraft hangars for maintenance and storage, aircraft parking ramps and taxiways, two hard surface runways, assorted office buildings, and support facilities. The two runways (the main runway and the crosswind runway) are oriented to a magnetic heading. The main runway, Runway 05/23, is a north-south runway that is 11,598 feet long and 300 feet wide. Runway 15/33 is the crosswind runway and is 7,082 feet long and 150 feet wide.

A runway is typically used in both directions, depending on the direction of the arrival or departure. Each direction is labeled as a separate runway number based on its magnetic heading, divided by 10, and rounded to a whole number.

Operational, airspace safety and environmental constraints, as well as a variety of other factors, determine runway utilization, which the study discusses in Section 3.5. For example, the Air Force has to comply with FAA opposite direction operations policy that applies to the use of one runway for two-directional traffic.

Figure 2-2



Legend

- Airfield Runway
- City Boundary
- County Boundary
- Installation Boundary

0 0.25 0.5
Mile





2.6 Local Economic Impacts

The military provides direct, indirect, and induced economic benefits to local communities through jobs and wages. Benefits include employment opportunities and increases in local business revenue, property sales, and tax revenue.

The 439th Airlift Wing added almost \$195 million to the community in fiscal year 2019 (from Oct. 1, 2018, to Sept. 30, 2019). The number represents a slight increase from the previous year. Table 2-1 represents the total economic impact that the wing has had from 2013 to 2019.



Local Construction project along the flight line

“Despite declining military budgets, it is important to remember that Westover’s operations with the Air Force Reserve and our joint partners continue to be a major contributor to the Western Massachusetts economy,” said Col. Scott Durham, the former 439th Airlift Wing commander.

Table 2-1. Grand Total Economic Impact by Year

Year	Economic Impact (Millions of Dollars)
2019	\$194.7
2018	\$194.5
2017	\$212.5
2016	\$197.2
2015	\$221.1
2014	\$220.8
2013	\$224.9

Source: The Patriot 2018; Air Force 2019

Westover ARB received \$13.6 million in construction funding in 2019 and \$13.1 million in 2018. A large portion of the 2018 construction funding was used to renovate the Base Hangar. Additional construction funds were also received for the Avionics Building, DC Hangar and the Security Forces parking lots.

The total base payroll was nearly \$119 million in 2019. Westover ARB’s presence created an estimated 806 indirect jobs at an average salary of more than \$50,000 per year. The value of estimated jobs created in 2019 was \$42.5 million. The total number of base Air Force employees (active duty, Air Force Reserve, Air National Guard and civilians) was 2,884 in 2019.



The economic figures and personnel counts do not include the base's 28 tenant units, including ten Army units and three Marine units, which together employ about 1,700 people, mainly reservists.

The total economic impact also does not include the numbers from the Great New England Air and Space Show that Westover ARB hosts periodically. The University of Massachusetts reported that the 2018 air show generated \$4.3 million for the local economy.

Additionally, on September 20, 2018, Westover ARB welcomed the last of its eight new C-5M Super Galaxy cargo airplanes to the base. The new Super Galaxies replace the C5-B Galaxies the Air Force phased out 18 months previously. The new airplanes represent an investment of around \$720 million by the DoD.

Tables 2-2 through 2-7 provide summaries of personnel for Westover ARB; the economic impact of the installation; military and civilian payroll; and construction, contracts, and expenditures for materials, equipment, and supplies for the fiscal year 2019.

Table 2-2. Total Military Personnel and Dependents by Classification and Housing (Total Persons)

Classification	Off-installation Residents
Active Duty	112
Active Guard Reserve	81
Non-Extended Active Duty Reserves	1,877
Grand Total	2,070

Table 2-3. Total Civilian Personnel by Appropriated and Non-Appropriated Funds (Total Persons)

Appropriated Fund Civilians	Amount
General Schedule	374
Federal Wage Board	242
Other	1
Sub-Total	617
Non-Appropriated Fund AF Civilians	Amount
Civilian Non-appropriated Fund	44
Civilian Base Exchange	11
Contract Civilians	140
Private Business	2
Sub-Total	197
Grand Total	814

Source: Air Force 2019



Table 2-4. Annual Military Payroll by Category and Housing Location (Millions of Dollars)

Classification	Off-installation Residents
Active Duty	\$6.60
Active Guard Reserve	\$5.10
Non-Extended Active Duty Reserves	\$31.20
Grand Total	\$42.90

Table 2-5. Annual Civilian Payroll by Appropriated and Non-Appropriated Funds (Millions of Dollars)

Appropriated Fund Civilians	Amount
General Schedule	\$40.20
Federal Wage Board	\$26.40
Other	\$0.08
Sub-Total	\$66.70
Non-Appropriated Fund AF Civilians	Amount
Civilian Non-appropriated Fund	\$1.13
Civilian Base Exchange	\$0.37
Contract Civilians	\$7.83
Sub-Total	\$9.30
Grand Total	\$76.0

Source: Air Force 2019

Table 2-6. Summary of Construction, Contracts, and Expenditures for Materials, Equipment and Supplies (Millions of Dollars)

Expense Category	Amount
Base Exchange	\$0.10
Health (TRICARE)	\$0.86
Education (tuition assistance and impact aid)	\$0.27
Temporary Duty	\$1.60
Other Materials, Equipment, Supplies and Services	\$6.87
Operation and Maintenance Minor Construction	\$13.59
Service Contracts	\$9.96
Grand Total Annual Expenditure	\$33.25

Source: Air Force 2019



Table 2-7. Estimated Number and Dollar Value (Millions of Dollars) of Indirect Jobs Created

Classification	Amount
Active Duty Military	46
Active Guard Reserve/Trainees	313
Civilians	447
Total of Indirect Jobs Created	806
Average Annual Pay	Amount
Local Community	\$0.05
Estimated Annual Dollar Value of Jobs Created	\$42.5

Source: Air Force 2019



3.0 Aircraft Operations

Aircraft operations are the primary source of noise associated with a military air installation. The level of noise exposure relates to a number of variables, including the aircraft type, engine power setting and afterburner use, altitude flown, direction of the aircraft, flight track, temperature, relative humidity, frequency, and time of operation (day/night). This chapter discusses the military aircraft based at or transient to Westover ARB, the civilian aircraft that use the Westover Metropolitan Airport, the types and number of operations conducted at the airfield, and the runways and flight tracks used to conduct the operations.

3.1 Aircraft Types

There are two primary types of military aircraft operating at Westover ARB: cargo and tanker aircraft. Aircraft permanently based at Westover ARB are the most common aircraft conducting flight operations at the installation. Aircraft that are not permanently assigned to the installation but conduct operations from the installation on an occasional basis, are referred to as “transient” aircraft. Below are brief descriptions of assigned and transient aircraft at Westover ARB, and the two most common civilian aircraft to use Westover Metropolitan Airport.

3.1.1 *Permanently Assigned Aircraft*

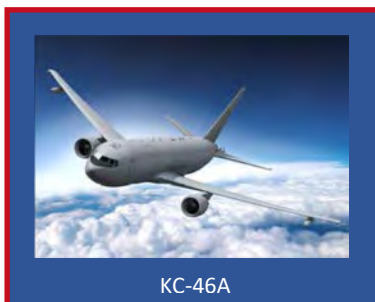
The C-5M Super Galaxy is a heavy-cargo transport designed to provide strategic airlift for deployment and supply of combat and support forces. As the largest aircraft in the Air Force inventory, its primary mission is to transport cargo and personnel. The C-5M is a modernized version of the legacy C-5 and can take off and land on relatively short runways. Both the nose and rear doors open, allowing ground crews to simultaneously load and off-load cargo from both ends, reducing cargo transfer times.



C-5M

3.1.2 *Potential Future Aircraft*

The KC-46A is not currently based at Westover ARB; however, there is a potential for the aircraft to utilize the airfield in the future. Therefore, the aircraft was included in the AICUZ and noise modeling for planning purposes. The KC-46A is capable of accomplishing multi-role missions. By trading fuel for cargo, it is able to carry up to 18 standard cargo pallets with a total palletized cargo payload of up to 65,000 pounds, with a far greater cargo area contour than the KC-135. In normal operations, the KC-46A can be configured to carry 58 passengers and be capable of providing urgent Aeromedical Evacuation, transporting up to 50 medical patients. The aircraft is capable of



KC-46A



operating in day-night and adverse weather conditions over vast distances to enable deployment, employment, sustainment, and redeployment of U.S., Joint, Allied, and Coalition Forces.

3.1.3 *Transient Aircraft*

The A-10A Thunderbolt II is a twin-engine aircraft designed for close air support against a wide range of ground targets, including tanks and armored vehicles. The A-10A combines a large, diverse weapons payload, long loiter times, austere airfield capability, maneuverability, and wide combat radius.



A-10A



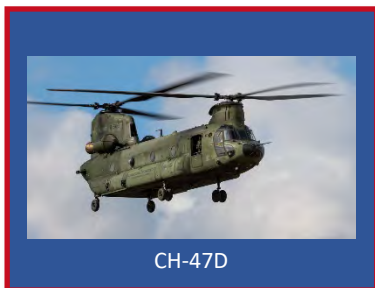
C-130J

The C-130J Hercules primarily performs the tactical portion of the airlift mission. The aircraft is capable of operating from rough, dirt strips and is the prime transport for airdropping troops and equipment into hostile areas. Basic and specialized versions of the C-130J airframe perform a diverse number of roles, including airlift support, Antarctic ice resupply, aeromedical missions, weather reconnaissance, aerial spray missions, firefighting duties for the U.S. Forest Service and natural disaster relief missions. The C-130J can accommodate a wide variety of oversized cargo, including everything from utility helicopters and six-wheeled armored vehicles to standard palletized cargo and military personnel.

The C-21A is a twin turbofan-engine aircraft used for passenger and cargo airlift. In addition, the aircraft is capable of transporting one litter or five ambulatory patients for aeromedical evacuation operations. The C-21A can carry eight passengers and 42 cubic feet of cargo.



C-21A



CH-47D

The CH-47D Chinook is a twin-engine, tandem rotor helicopter designed for transportation of cargo, troops, and weapons during day, night, visual, and instrument conditions. The CH-47D is equipped with an air-to-air refueling probe. The Chinook can accommodate a wide variety of internal payloads, including vehicles, artillery pieces, 33 to 44 troops, or 24 litters plus two medical attendants.



The F-16A Fighting Falcon, is a compact, multi-role fighter aircraft. It is highly maneuverable and has proven itself in air-to-air combat and air-to-surface attack. It provides a relatively low-cost, high-performance weapon system.



F-16A



KC-10A

The KC-10A Extender is an Air Mobility Command advanced tanker and cargo aircraft designed to provide increased global mobility for U.S. armed forces. Although the KC-10A's primary mission is aerial refueling (as pictured), it can combine the tasks of a tanker and cargo aircraft by refueling fighters and simultaneously carry the fighter support personnel and equipment on overseas deployments. The KC-10A is also

capable of transporting litter and ambulatory patients using patient support pallets during aeromedical evacuations.

The KC-135 Stratotanker has been the mainstay of the U.S. Air Force tanker fleet for some 50 years. The aircraft is a medium-range refueling tanker capable of cargo and aeromedical evacuation support. The Stratotanker is capable of transporting up to 36,000 pounds of palletized cargo. The tanker, designated as the KC-135R is 96 percent quieter than the KC-135A.



KC-135R



UH-60A

The UH-60 Black Hawk helicopter is the Army's primary medium-lift utility transport and air assault aircraft. It is a twin-engine medium-lift utility helicopter. The A model was designed to carry 11 combat troops in addition to a crew of three (pilot, co-pilot, crew chief) and was intended to serve in utility, air assault, medevac, command and control, and reconnaissance roles.



3.1.4 Civilian Aircraft



Beech Super King Air 200

The Beech Super King Air 200 is the most common civilian-use aircraft to operate at the airport. This aircraft contains a turboprop engine (i.e., propeller engine) making it more fuel efficient than the average jet engine aircraft. The Beech 200 is certificated for flight into known icing conditions. The aircraft is also well suited to the varying demands of air traffic control. Because of relatively high landing-gear and flap speeds (209 and 230 miles per hour, respectively), this sleek machine can slow down in a hurry and fly the pattern with slower, single-engine aircraft.

The Pilatus PC-12 is another turboprop airplane and the second-most common to operate at the airport. It offers maximum versatility for most travel profiles. The turbine reliability of the Pratt & Whitney PT6A engine provides a safe, powerful, and extremely efficient means of travel for the most impressive load/passenger configurations.



Pilatus PC-12

3.2 Pre-flight and Maintenance Operations

Maintenance is an integral part of any flying operation and requires a dedicated team of professionals to ensure that units can meet their flying requirements. Two key tasks in maintaining aircraft are low- and high-powered engine maintenance runs. “Pre-flight runups” refer to aircraft engine checks conducted immediately prior to takeoff. Pre-flight runups are conducted on the runway ends or within designated areas. To perform various tests or repairs, runups are also conducted when an aircraft is parked on the ground and the engine is running. Maintenance runup operations (i.e., aircraft engine maintenance) are conducted along the flight line at designated areas on aprons and ramps, or in hangers, to functionally check the operation of engines or other aircraft systems (Figure 3-1).



C-5 Engine Maintenance



Aircraft maintainers may conduct engine maintenance runs at power settings ranging from idle to maximum power. Maintainers typically conduct low- to mid-range-powered engine maintenance runs on aircraft parking ramps or just outside of maintenance hangars. High-powered engine maintenance runs are typically conducted outside at the East Ramp and North Ramp to minimize the noise output of the base in consideration for the surrounding communities. Noise associated with these operations is included in the noise analysis for the Westover ARB noise contours.

Westover ARB does not typically conduct engine runs between 10:00 p.m. and 7:00 a.m.; however, depending on mission necessity, maintenance engine runs could occur during nighttime hours.

Figure 3-1

Westover Air Reserve Base
Air Installations Compatible Use Zones

Engine Runup Locations



Legend

- ▲ Runup Location
- Installation Boundary
- Airfield Runway
- City Boundary
- County Boundary

0 0.25 0.5
Mile





3.3 Flight Operations

Flight activities, including where aircraft fly, how high they fly, how many times they fly over a given area, and the time of day they operate, must be fully evaluated to understand the relationship of flight operations and land use. This chapter discusses typical flight operations for aircraft based at or visiting Westover ARB.



C-5s lined up on runway

Each time an aircraft crosses over a runway threshold (the beginning or ending of a runway's useable surface) to either takeoff, practice an approach, or land, it is counted as a single flight operation. For example, a departure counts as a single operation as does an arrival. As another example, when an aircraft conducts a pattern (a departure followed by an immediate return) it counts as two operations because the aircraft crosses both the approach (i.e., arrival) and departure ends of the runway during the pattern.

This AICUZ Study considers operations from Westover ARB, including both based and transient military aircraft, and general commercial and civilian aircraft associated with Westover Metropolitan Airport. The following list highlights typical operations utilized during normal or increased flight operations. Each flight track utilized is designed to maximize flight operations and, when possible, minimize the effects of noise.

- **Takeoff:** When a pilot positions an aircraft on the runway and the engine power is set to facilitate movement and eventual flight.
- **Departure:** For the purpose of air traffic sequencing, separation, noise abatement, compliance with avoidance areas, and overall safety of flight, aircraft follow specific ground tracks and altitude restrictions as they depart the airfield's immediate airspace.
- **Straight-In Arrival:** An aircraft performing a straight-in arrival aligns with the runway extended centerline and begins a gradual descent for landing. This type of approach enables an aircraft to maintain a smooth, stable, and steady approach and requires no additional maneuvering.
- **Pattern Work:** Pattern work refers to traffic pattern training where the pilot performs takeoffs and landings in quick succession by taking off, flying the pattern, and then landing. A closed pattern consists of two portions, a takeoff/departure and an approach/landing; a complete closed pattern is counted as two operations because the aircraft crosses over a runway threshold twice, once on departure and once on arrival. Traffic pattern training is demanding and utilizes all of the basic flying maneuvers a pilot learns—takeoffs, climbs, turns, climbing turns, descents, descending turns, and straight and level landings.



- **Low Approach:** A low approach is an approach to a runway that does not result in a landing, but rather a descent towards the runway (usually below 500 feet above ground level [AGL]) followed by a climb-out away from the airfield. Pilots perform low approaches for a number of reasons, including practicing to avoid potential ground obstructions (e.g., vehicles, debris, stray animals).
- **Touch-and-Go (T&G):** A T&G landing pattern is a training maneuver that involves landing on a runway and taking off again without coming to a full stop. Usually, the pilot then circles the airfield in a defined pattern, known as a circuit, and repeats the maneuver.
- **Radar Approach:** Radar approaches are instrument approaches performed with active assistance from ATC during poor weather conditions. These include precision approach radar (PAR), instrument landing system (ILS), and the Tactical Air Navigation Aid (TACAN) system. ATC personnel direct the aircraft toward the runway centerline. Once established on the centerline, pilots use aircraft instruments to maintain runway alignment and adherence to altitude restrictions until the pilot is able to acquire visual sight with the runway environment. Pilots often practice this type of approach to maintain proficiency.

3.4 Annual Aircraft Operations

Total annual operations account for each departure and arrival, including those conducted as part of a pattern operation. Figure 3-2 provides the number of aircraft operations at Westover ARB over a five-year period, to include based and transient military aircraft, as well as civilian aircraft. There were 21,206 annual flight operations in 2019 compared to 25,719 annual operations in 2013. The slight decrease in annual operations was due to a reduction in transient aircraft. Other aircraft operations affiliated with civilian flight activities associated with Westover Metropolitan Airport also increased.

The aircraft operations utilized in the noise modeling are presented and discussed in Section 4.4.2, AICUZ Planning Contours.

**Figure 3-2. Summary of Westover ARB Flight Operations for Calendar Years 2015 – 2019**

3.4.1 Projected Annual Operations

Table 3-1 presents the projected operations that were modeled for the Westover ARB 2020 AICUZ noise contours. More detail regarding the noise contours at Westover ARB can be found in Section 4.0, Aircraft Noise. The based and transient military and civil aircraft flight operations involve a variety of departure, arrival, and closed pattern procedures. The total number of modeled aircraft projected operations (including transient military and civil aircraft) at Westover ARB for fiscal year 2023 operations is 21,249 annual operations (which included arrivals, departures, and closed pattern operations). The projected operations include the potential for the KC-46A aircraft to utilize Westover ARB.



Table 3-1. Projected Annual Aircraft Flight Operations Modeled for 2020 AICUZ Noise Contours (Planning Contours for CY 2023)

Aircraft	Arrivals	Departures	Closed Patterns ³	Total
Based/Projected Aircraft¹				
C-5M/KC-46A	768	768	7,220	8,756
Transient Aircraft¹				
A-10A	3	3	0	6
C-12	2	2	0	4
C-130J	530	530	530	1,590
C-17	31	31	0	62
C-21A	535	535	0	1,070
C-23	31	31	341	403
C-5A	113	113	0	226
CH-47D	108	108	1,296	1,512
F-15A	15	15	0	30
F-16A	246	246	0	492
KC-10A	10	10	120	140
KC-135R	24	24	288	336
UH-60A	123	123	2,460	2,706
Sub Total (Based + Transient)	2,539	2,539	12,255	17,333
Civilian Aircraft²				
Beech Super King Air 350	138	138	0	276
Boeing 737-400	44	44	0	88
Beech 200 Super King	322	322	0	644
Cessna Excel/XLS	49	49	0	98
Dassault Falcon 2000	49	49	0	98
Gulfstream IV/G400	106	106	0	212
Gulfstream V/G500	99	99	0	198
BAe HS 125/700-800/Hawker 800	78	78	0	156
Pilatus PC-12	156	156	0	312
Cirrus SR 22	70	70	0	140
Various Others	847	847	0	1,694
Sub Total (Civilian)	1,958	1,958	0	3,916
Grand Total (Based + Transient + Civilian)	4,497	4,497	12,255	21,249

Notes:

¹ Based and Transient Aircraft operation derived from 2016 KC-46A MOB3 EIS and during the 2020 AICUZ Data Collection and Validation process.

² The civilian aircraft with the top ten annual operations at WMA are listed in this table. The sub and grand total operations account for all civilian aircraft, including those not listed.

³ Each "closed pattern operation" consists of two total operations: one arrival and one departure.



3.5 Runway Utilization and Flight Tracks

3.5.1 Runway Utilization

The frequency with which aircraft utilize a runway involves a variety of factors including, but not limited to:

- Airfield environment (layout, lights, runway length);
- Direction of prevailing winds;
- Location of natural terrain features (rivers, lakes, mountains, and other features);
- Bird and wildlife activity;
- Number of aircraft in the pattern; and/or
- Preference of a runway for the purpose of safety and noise abatement.

ATC personnel establish the runway in use. Aviation planners adjust the pattern procedures accordingly to maximize air traffic flow efficiency. Table 3-2 lists how frequently each runway at Westover ARB is used by all based and transient military aircraft.

**Table 3-2. Current Runway Usage and Flight Routing for All Military Aircraft**

Runway Direction	Arrival (%)	Departure (%)	Closed Patterns (%)
Runway 15 (arriving from the west and/or departing to the east)	2%	3%	3%
Runway 33 (arriving from the east and/or departing to the west)	2%	3%	11%
Runway 05 (arriving from the south and/or departing to the north)	38%	36%	22%
Runway 23 (arriving from the north and/or departing to the south)	58%	58%	64%

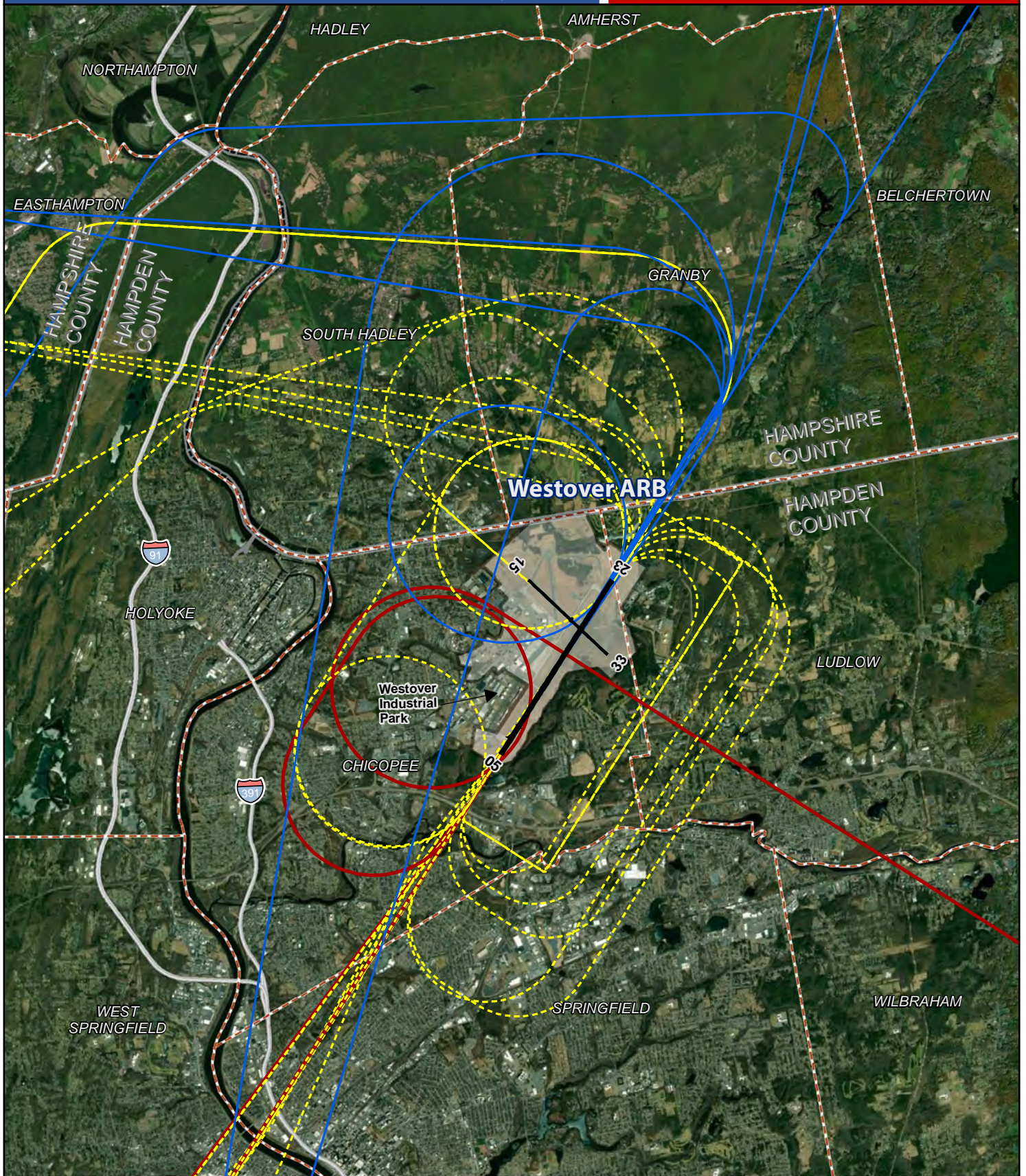
Note: Runway distribution percentages are based on the C-5M and KC-46 modeled utilization.

Source: United States Air Force Reserve Command May 2020

3.5.2 Flight Tracks

Each runway has designated flight tracks that provide for the safety, consistency, and control of an airfield. Flight tracks depict where aircraft fly in relation to an airfield. They are for departures, arrivals, and for pattern work procedures, and are designated for each runway to facilitate operational safety, noise abatement, aircrew consistency, and the efficient flow of air traffic within the tower's controlled airspace. Aircraft flight tracks are not set "highways in the sky." While we show flight tracks as lines on the map, they are actually bands. Aircraft de-confliction, configuration, pilot technique, takeoff weight, and wind all affect the actual path taken on any given flight. Figure 3-3 through 3-6 presents the flight tracks for Westover ARB.

Figure 3-3



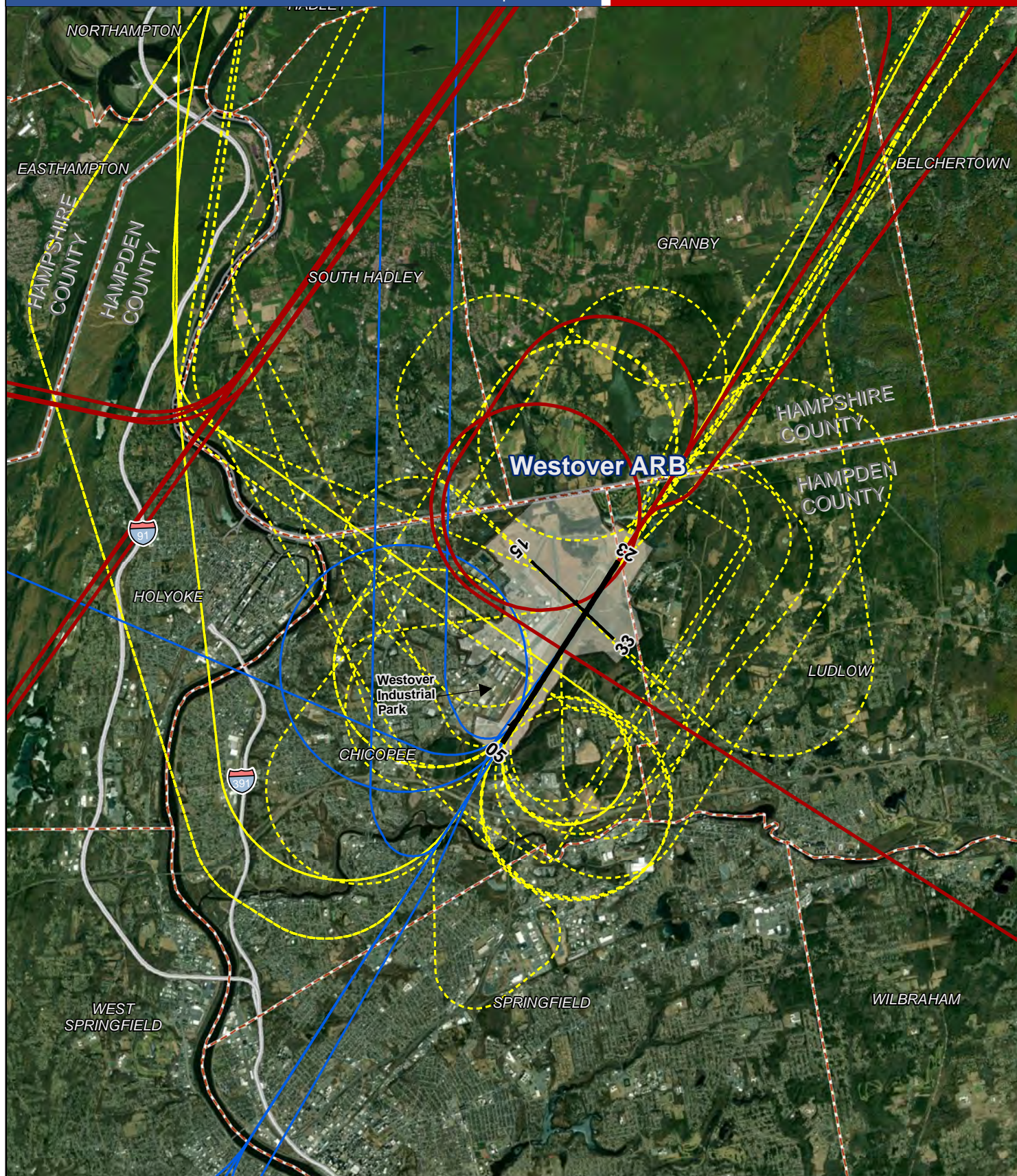
Legend

- | | | |
|-----------------------|--------------------|-----------------------------|
| Airfield Runway | Interstate Highway | Arrival |
| City Boundary | State/U.S. Highway | Closed Pattern Flight Track |
| County Boundary | | Departure Flight Track |
| Installation Boundary | | |

0 1 2 Miles



Figure 3-4



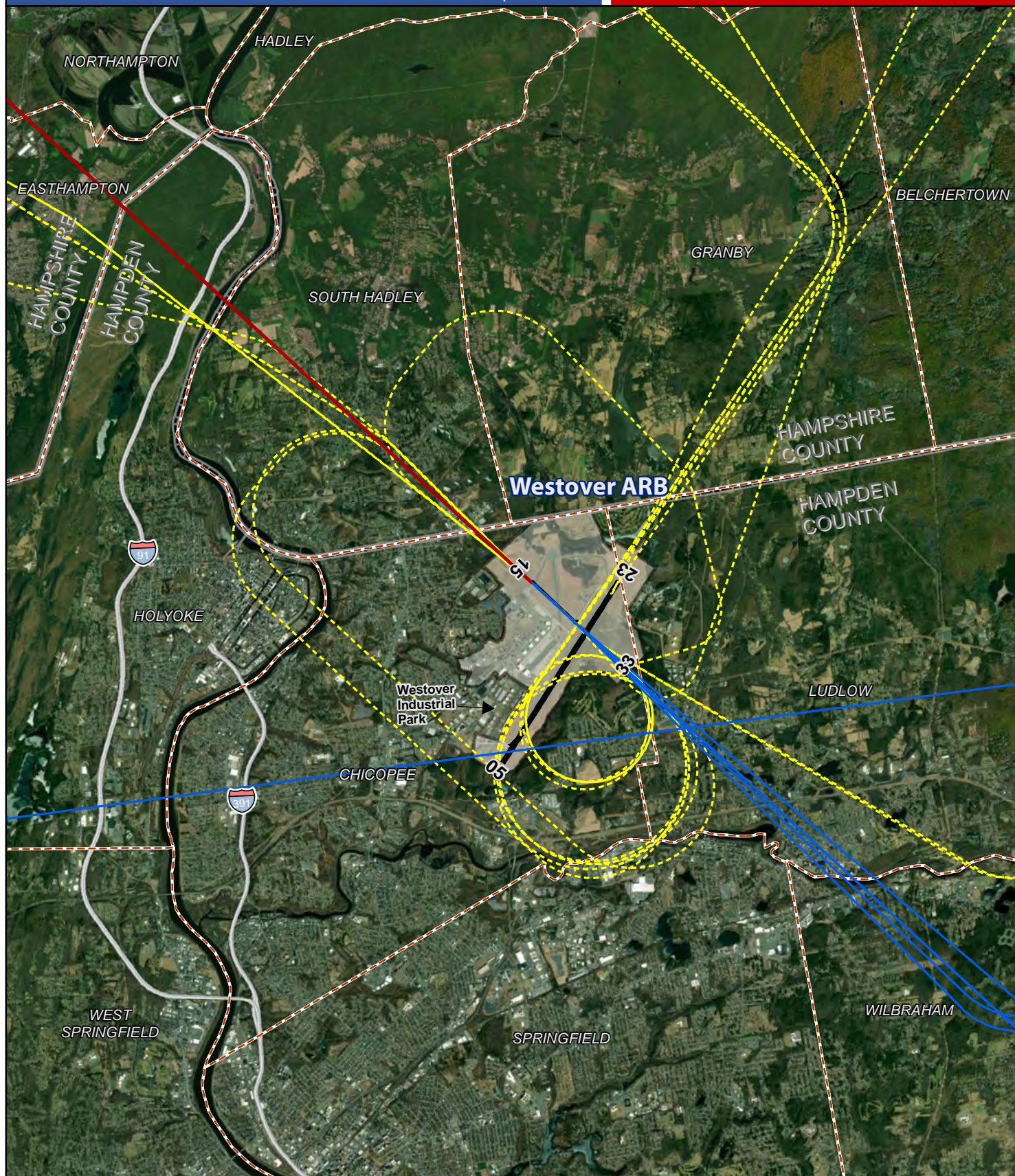
Legend

- | | | |
|-----------------------|------------------------|-----------------------------|
| Airfield Runway | Interstate Highway | Arrival Flight Track |
| City Boundary | State/U.S. Highway | Closed Pattern Flight Track |
| County Boundary | Departure Flight Track | |
| Installation Boundary | | |

0 1 2 Miles



Figure 3-5



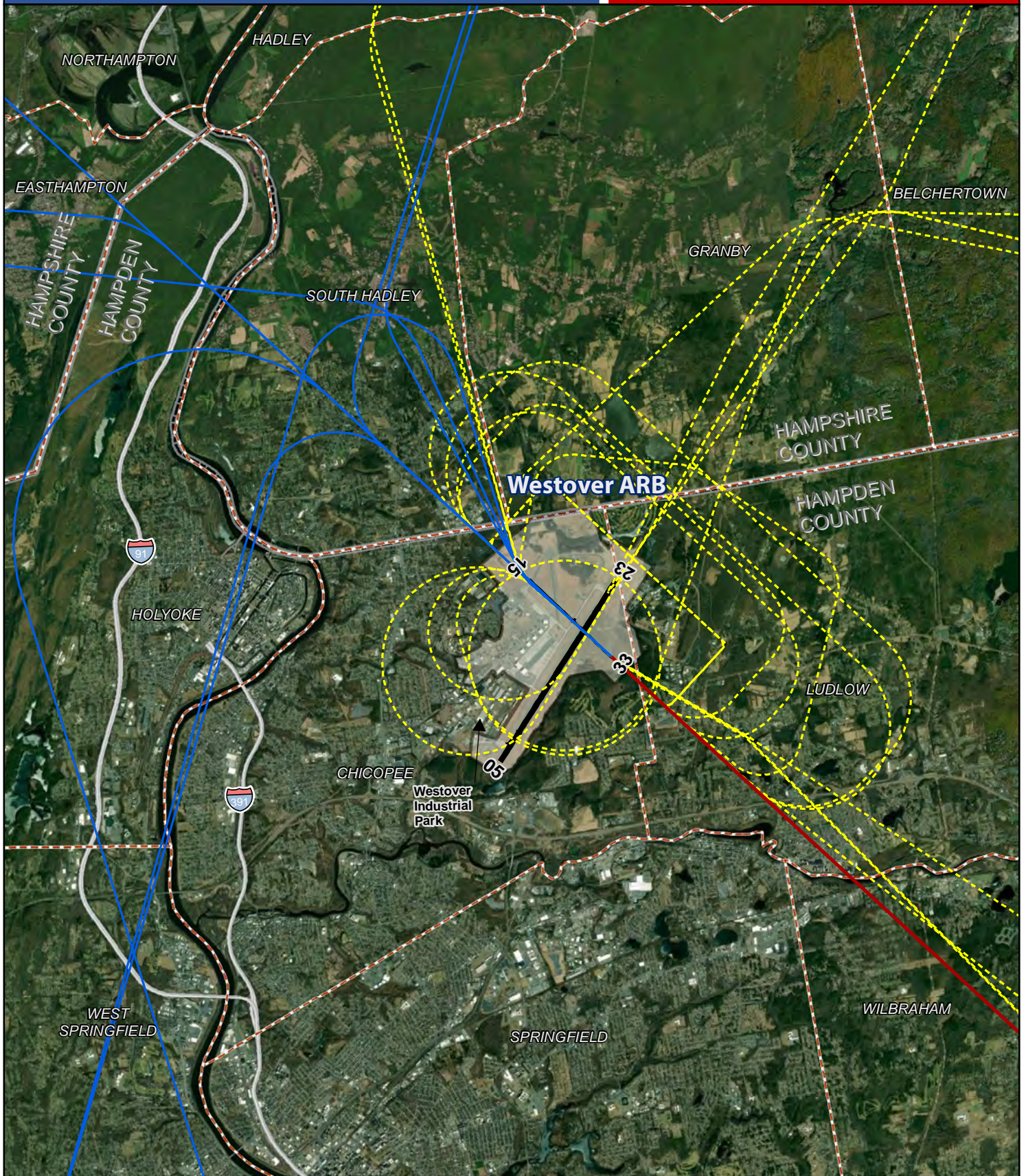
Legend

- | | | |
|-----------------------|--------------------|-----------------------------|
| Airfield Runway | Interstate Highway | Arrival Flight Track |
| City Boundary | State/U.S. Highway | Closed Pattern Flight Track |
| County Boundary | | Departure Flight Track |
| Installation Boundary | | |

0 1 2 Miles



Figure 3-6



Legend

- | | | |
|-----------------------|------------------------|-----------------------------|
| Airfield Runway | Interstate Highway | Arrival Flight Track |
| City Boundary | State/U.S. Highway | Closed Pattern Flight Track |
| County Boundary | Departure Flight Track | |
| Installation Boundary | | |

0 1 2
Miles





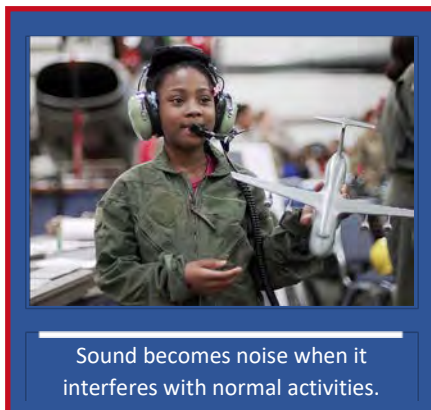
4.0 Aircraft Noise

How an installation manages aircraft noise can play a key role in shaping its relationship with neighboring communities. Ideally, aircraft noise and its management should be key factors in local land use planning. Because noise from aircraft may affect areas around the installation, the Air Force has defined noise zones using the guidance provided in the Air Force Handbook (AFH 32-7084) *The AICUZ Program Manager's Guide*.



While the level of noise produced by aircraft may have a direct effect on communities in proximity to military air installations, other factors also influence the noise impact. An airfield's layout (its buildings, parking ramps, and runways), type of aircraft, natural terrain features, weather phenomena, and daily activities all influence the levels of noise that the community experiences.

4.1 What is Sound/Noise?



Sound consists of vibrations in the air. A multitude of sources can generate these vibrations, including roadway traffic, barking dogs, radios—or aircraft operations. We call these vibrations compression waves. Just as a pebble dropped into a pond generates ripples, the compression waves—formed of air molecules pressed together—radiate out, decreasing with distance. If these vibrations reach your eardrum at a certain rate and intensity, you perceive it as sound. When the sound is unwanted, we refer to it as noise. Generally, sound becomes

noise to a listener when it interferes with normal activities. Sound has three components: intensity, frequency and duration.

- **Intensity** or loudness relates to sound pressure change. As the vibrations oscillate back and forth, they create a change in pressure on the eardrum. The greater the sound pressure change, the louder it seems.
- **Frequency** determines how we perceive the pitch of the sound. Low-frequency sounds are characterized as rumbles or roars, while sirens or screeches typify high-frequency sounds. We measure sound frequency in cycles per second or hertz (Hz). While human hearing ranges go from 20 to 20,000 Hz, we hear best in the range of 1,000 to 4,000 Hz. For environmental noise, we use A-weighting, which focuses on this range, to best represent human hearing. While we may refer



to A-weighted decibels as “dBA,” if only the weighting is being discussed, the “A” is generally dropped.

- **Duration** is the length of time one can detect the sound.

4.2 How Sound is Perceived

The loudest sounds that the human ear can comfortably hear are a trillion times higher in intensity than those of sounds we barely hear. Because such large numbers become awkward to use, we measure noise in decibels (dB), which uses a logarithmic scale.

Figure 4-1 is a chart of A-weighted sound levels from common sources. A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. Normal speech has a sound level of approximately 60 dB. Sound levels above 120 dB can cause discomfort inside the ear, while sound levels above 130 dB we feel as pain.

Figure 4-1. Typical A-weighted Sound Levels of Common Sounds

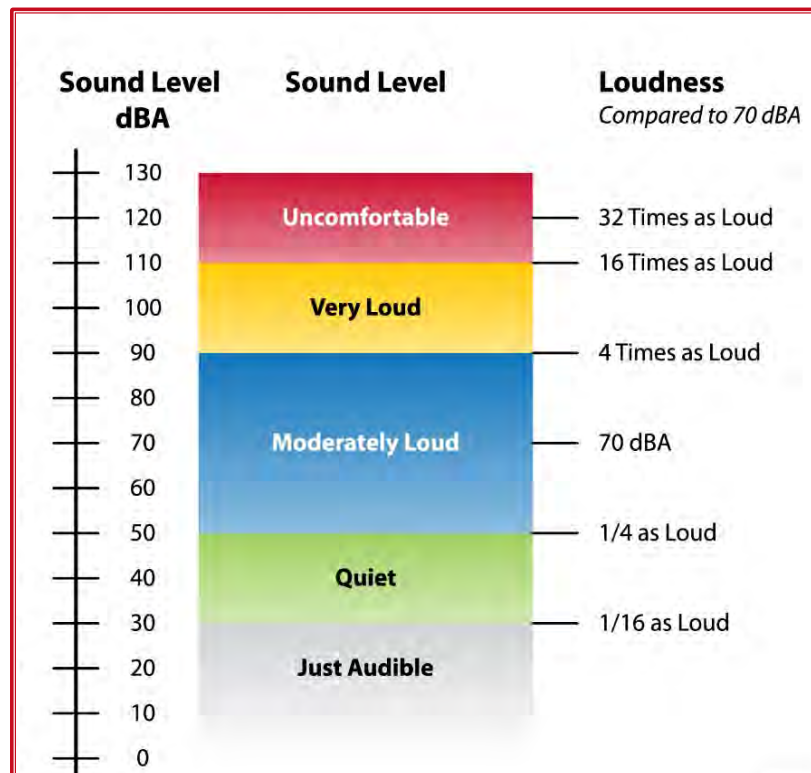


Table 4-1 shows the subjective responses with change in (single-event) sound level. While noise energy doubles or halves with every 3-dB change, we do not perceive all this noise energy. It takes a 10-dB increase or decrease for our ears to perceive a doubling or halving of loudness.

**Table 4-1. Subjective Response to Changes in Sound Level**

Change in Sound Level	Change in Loudness
10 dB	Twice or half as Loud
5 dB	Quite Noticeable
3 dB	Barely Perceptible
1 dB	No Noticeable Change

4.3 The Day-Night Average Sound Level

When people hear an aircraft fly overhead, they may pose the question, “How loud was that?” While we may often find ourselves concerned over the loudness of a sound, there are other dimensions to the sound event that draw our interest. For instance, does one overflight draw the same interest as two separate overflights—or 20? Also, does the 30-second runup of engines prior to takeoff draw the same interest as a 30-minute maintenance run? Additionally, is an overflight more noticeable at 2:00 p.m. or at 2:00 a.m., when the ambient noise is low and most people are sleeping?

The length and number of events—the total noise energy—combined with the time of day that a noise event takes place play key roles in our perception of noise. To reflect these concerns, the Air Force uses a metric called the “Day-Night Average Sound Level” (DNL). The United States Environmental Protection Agency (EPA) created DNL for use throughout the United States.

DNL, when used as a metric for aircraft noise, represents the accumulation of noise energy from all aircraft noise events in a 24-hour period. Additionally, for all operations between 10:00 p.m. and 7:00 a.m., DNL adds a 10-dB penalty to each event to account for the intrusiveness of nighttime operations. As is implied in its name, the DNL represents the noise energy present in a daily period. However, because aircraft operations at military airfields fluctuate from day to day, the Air Force typically bases DNL on a year’s worth of operations and represents the annual average daily aircraft events.

DNL is not a level heard at any given time but represents long-term exposure. Scientific studies have found a correlation between the percentages of groups of people highly annoyed by sounds and the level of average noise exposure measured in DNL.

4.3.1 Noise Contours

The DoD develops noise contours to assess the compatibility of aircraft operations with surrounding land uses. Noise contours connect points of equal value, just as contours on topographic maps connect points of equal elevation. This AICUZ Study presents the historical 2013 AICUZ noise contours and the 2020 AICUZ planning noise contours. The Air Force utilizes NOISEMAP, the DoD standard model for assessing noise exposure from military aircraft operations at air installations. Noise contours, when overlaid on local land use maps, can help to identify areas of incompatible land use and assist communities in planning for future development around an air installation.



4.3.2 AICUZ Planning Contours

This AICUZ Study provides future year planning noise contours. Long-range planning by local land use authorities involves strategies that influence present and future uses of land. Due to the long-range nature of this planning, the Air Force provides planning contours—noise contours based on reasonable projections of future missions and operations. AICUZ studies using planning contours provide a description of the long-term aircraft noise environment for projected aircraft operations that is more consistent with the planning horizon used by state, tribal, regional, and local planning bodies. Chapter 6 discusses land use and recommendations for addressing incompatibility issues within Westover ARB's noise contours.

The Air Force develops planning contours on the best available, realistic, long-range projections of unclassified estimates of future mission requirements. This includes reasonable projections of future operations based on trends in operational tempo, retirement of legacy aircraft, new aircraft entering the inventory, future operations associated with the civilian airport, and other factors.

These long-range projections are not commitments of future operations. Inclusion of planning contours in the AICUZ Study does not eliminate the need to conduct appropriate environmental analysis if an assumption used in the development of the planning contours becomes a proposed Air Force action.

Assumptions included in the Westover ARB planning contours include:

- Upgraded C-5Ms aircraft with new and quieter engines;
- Potential introduction of new KC-46A aircraft;
- Increased air operations from the 2013 AICUZ baseline;
- Increased utilization of airfield by transient aircraft;
- Increased civilian aircraft operations associated with Westover Metropolitan Airport; and
- The understanding that **99 percent** of operations take place during the daytime (defined as taking place from 7:00 a.m. to 10:00 p.m.) and only **1 percent** occur during the nighttime (defined as taking place from 10:00 p.m. to 7:00 a.m.).

The airfield's operational tempo over time and the projected operations utilized in the noise modeling to develop the planning noise contours are presented in Section 3.0, Aircraft Operations, and detailed in Table 3-1.

Westover ARB Noise Contours

The 2020 Westover ARB AICUZ noise contours are based on planning contours for the planning year [2023] (Figure 4-2). The vast majority of the 2020 planning noise contours remain within the installation boundary. The 65 dB DNL contours extend just beyond the northeast boundary of the installation approximately 500 yards, within Hampden County



and the Town of Ludlow. The 65 dB DNL contour also stretches slightly outside the installation boundary to the southwest installation approximately 300 yards west, within the City of Chicopee. The 70 to 84 dB DNL contours extend slightly beyond the installation boundary on the western side adjacent to the flight line overlaying the civilian airport and industrial area. Figure 4-3 shows a comparison of the 2020 AICUZ and the 2013 AICUZ noise contours. The 2020 planning contours are approximately 60 percent smaller than the 2013 AICUZ noise contours. Quieter than the previous models, the upgraded C-5M engines are the main contributor to the reduction.

Table 4-2 presents the off-installation land acreage and estimated population within the planning contours. The Air Force generates population estimates on U.S. 2017 Census block-level data, using a geometric proportion method to determine the estimated population within the contour bands. This method assigns population based on the portion of a census block that falls within the contour. The population across each census block is assumed to be evenly distributed.

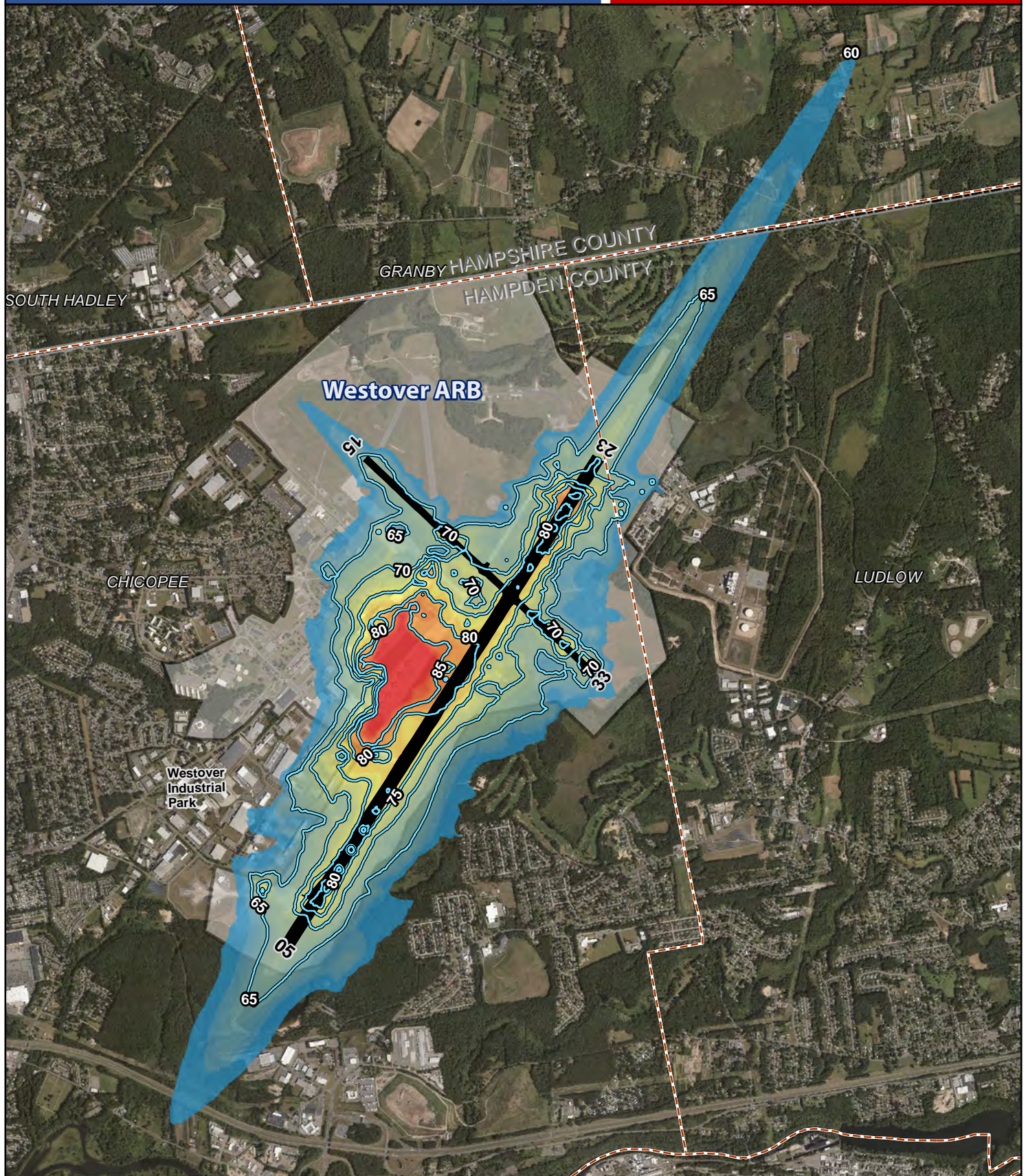
The noise exposure to the public is minimal with only 103 acres of 65 and greater dB DNL impacted, of which the majority is open areas and not within densely populated areas. Approximately 80 percent of the off-installation area falls within the 65 to 69 dB DNL noise zones. Only 3.5 acres and no people are within the high noise exposure levels of the 75+ dB DNL noise zone. Exposure to high noise zones associated with air operations at Westover ARB is mostly limited to the areas directly adjacent to the airfield within sparsely populated areas of the community.

Table 4-2. Off-installation Land Area and Estimated Population within Noise Zones for the 2020 AICUZ Noise Contours at Westover ARB

Noise Zone (dB DNL)	Acres	Estimated Population
65-69	82.64	8
70-74	16.81	2
75-79	2.45	0
80-84	1.05	0
85+	0	0
Total (65+)	102.95	10

Source: U.S. Census Bureau Block Group 2017 ACS Five-year Estimates

Figure 4-2



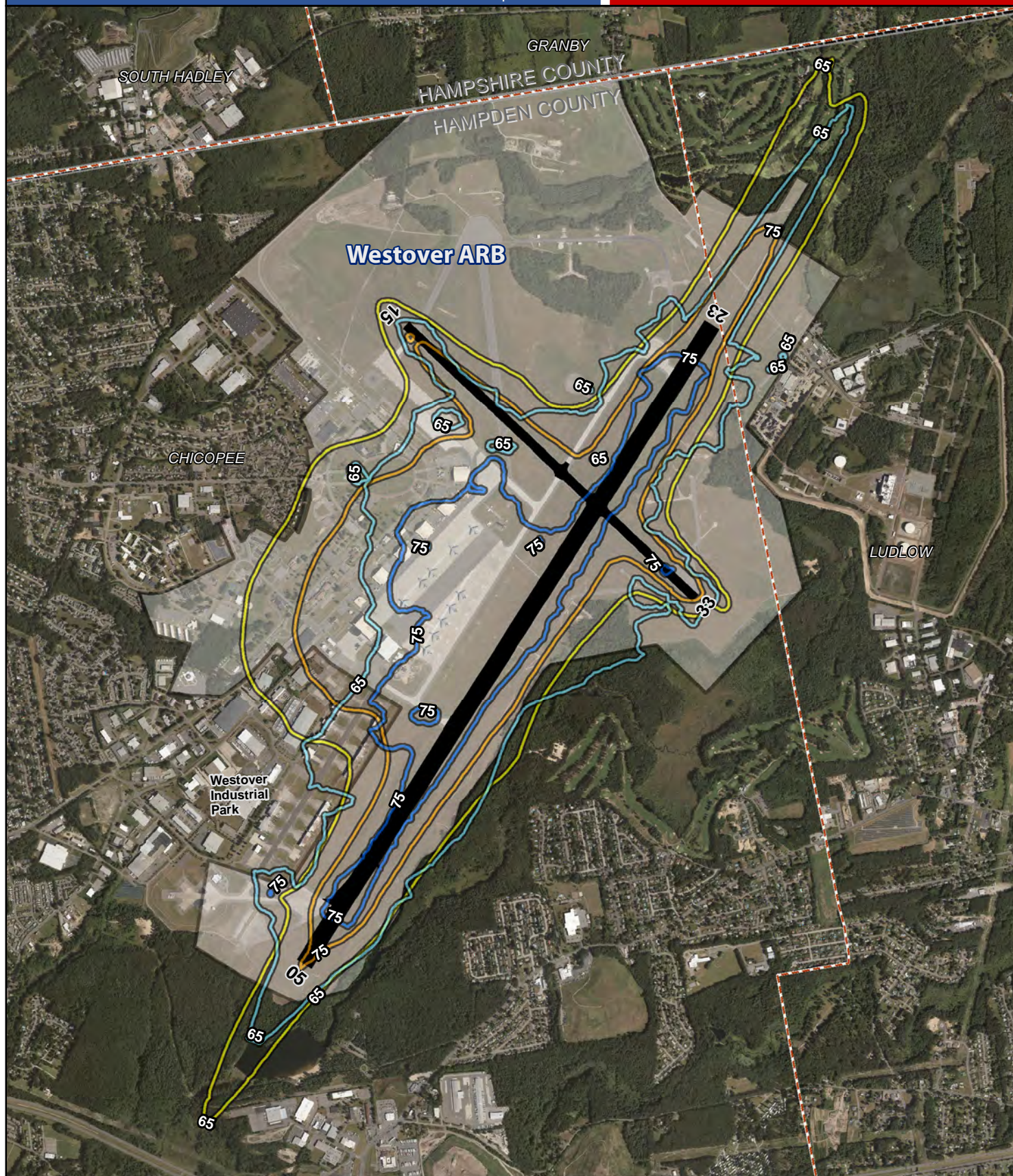
Legend

- Airfield Runway
- City Boundary
- County Boundary
- Installation Boundary
- Noise Contour (2020 AICUZ)
- Noise Gradient (dB)
 - 60
 - 75
 - 85

0 0.5 1 Mile



Figure 4-3



Legend

- Airfield Runway
- City Boundary
- County Boundary
- Installation Boundary

Noise Contours

- 65 db (2020 AICUZ)
- 75 db (2020 AICUZ)
- 65 db (2013 AICUZ)
- 75 db (2013 AICUZ)

0 0.5 1 Mile





4.4 Noise Abatement

The Air Force recognizes that noise from military operations may cause concern for people living near military installations.

For this reason, the Air Force has established a noise program aimed at reducing and controlling the emission of noise and vibrations associated with the use of military aircraft, weapon systems, and munitions while maintaining operational requirements. The result is the implementation of various strategies, techniques, and procedures, documented under the Westover ARB Noise Abatement Program, that are aimed at protecting the installation's neighbors and structures from the harmful effects of noise and vibrations.



The Air Force has established a noise program aimed at reducing and controlling the emission of noise and vibrations.

Westover ARB noise abatement procedures include the following:

- All aircraft avoid flying over housing and densely populated areas as much as possible;
- Flight operations and instrument approaches are conducted at times when individuals are normally awake. These activities are not scheduled between 10:00 p.m. and 7:00 a.m. During this time, only mission-essential aircraft arrivals and departures are conducted;
- Aircraft maintenance engine runup locations have been designated in such a way to minimize noise for people in the surrounding communities, as well as for those on base. Activities are not performed between 10:00 p.m. and 7:00 a.m., except for high-priority mission requirements;
- Westover ARB personnel are active members in the communities surrounding the airfield and continuously engage with stakeholders to establish open communication and resolution of noise issues; and
- Installation leadership periodically reviews flight operations and their potential impact on surrounding communities. This requirement facilitates the planning, designation, and establishment of flight tracks over sparsely populated areas and/or waterways, as often as practicable, to balance operational safety and reduce noise exposure levels in surrounding communities.

4.5 Noise Complaints

At times, military operations may generate noise complaints. The Air Force evaluates all noise complaints to ensure future operations, when possible, do not generate



unacceptable noise. Concerned citizens are encouraged to contact the Westover ARB Public Affairs (PA) Office with any noise complaints. Please contact the PA Office at (413) 557-2020.

When noise complaints are filed with the base, a Noise Complaint Worksheet is filled out for review and noise tracking purposes. This worksheet includes the caller's information, a description of the event and the aircraft involved, and comments from on-base reviewers, including public affairs and flying units.

Westover ARB also posts information on the installation website, including alerts about upcoming aircraft operations that are able to be shared publicly:

- **Website** (www.westover.afrc.af.mil);
- **Facebook** (<https://www.facebook.com/Westover.Patriot/>); and
- **Twitter** (<http://twitter.com/439Westover>).



5.0 Community and Aircraft Safety

Community and aircraft safety is paramount to the Air Force, and is a shared responsibility between the Air Force and the surrounding communities, with each playing a vital role in its success. Cooperation between the Air Force and the community results in strategic and effective land use planning and development. As such, the Air Force has established a flight safety program and has designated areas of accident potential around its air installations to assist in preserving the health, safety, and welfare of residents living near its airfield. This AICUZ Study provides the information needed, in part, to reach this shared safety goal. Identifying safety issues assists the community in developing land uses compatible with airfield operations.



As part of the AICUZ Program, the Air Force defines areas of accident potential, imaginary surfaces, and hazards to aircraft flight.

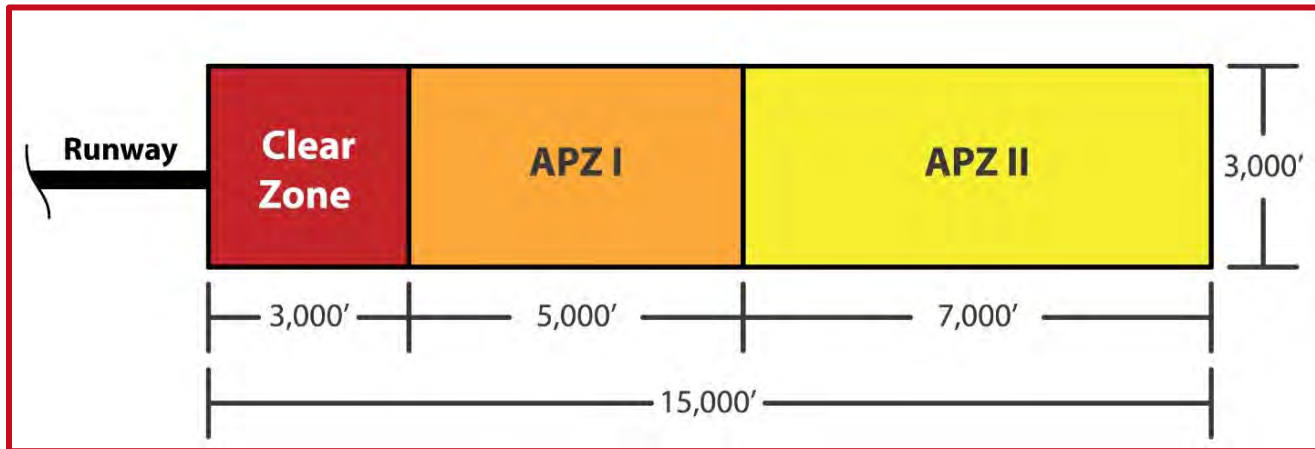
5.1 Clear Zones and Accident Potential Zones

In the 1970s and 1980s, the military conducted studies of historical accident and operations data throughout the military. The studies showed that most aircraft mishaps occur on or near the runway, diminishing in likelihood with distance from the runway. Based on these studies, the DoD identified Clear Zones (CZ) and Accident Potential Zone (APZs) as areas where an aircraft accident is most likely to occur if an accident were to take place; however, it should be noted that CZs and APZs are not predictors of accidents. The studies identified three areas that, because of accident potential, planners should consider for density and land use restrictions: the CZ, the APZ I, and the APZ II. The CZs and APZs for Class B runways are described in the bullets below and are depicted on Figure 5-1:

- **Clear Zone:** At the end of all active DoD runways is an area known as the “Clear Zone.” The CZ for Class B runways has an area of 3,000 feet square centered on the end of the runway. All active runways have CZs and should remain undeveloped.
- **APZ I:** Beyond the CZ is APZ I. APZ I is 3,000 feet in width and 5,000 feet in length along the extended runway centerline.
- **APZ II:** APZ II is the rectangular area beyond APZ I. APZ II is 3,000 feet in width by 7,000 feet in length along the extended runway centerline.



Figure 5-1. Runway Clear Zones and Accident Potential Zones for Class B Runways



While the APZs extend outward from the ends of the runway along the extended runway centerline, the installation may add a curved APZ when over 80 percent of the operations follow a curved arrival or departure path.

Within the CZ, the only compatible land uses with military aircraft operations and defense missions are undeveloped lands and certain right-of-way and agricultural uses. For this reason, it is the Air Force's policy, where possible, to acquire real property interests in land within the CZ to ensure incompatible development does not occur. Within APZ I and APZ II, a variety of land uses are compatible; however, higher density uses (e.g., schools, apartments, places of worship) and more intense uses (e.g., office buildings, strip malls) should be restricted because of the greater safety risk in these areas. Chapter 6 discusses land use and recommendations for addressing incompatibility issues within APZs for each runway.

Westover ARB has two runways, 05/23 and 15/33, with four CZ and APZ combinations. Figure 5-2 depicts the CZs and APZs for each runway end at Westover ARB. There are no changes in the CZs or APZs from the 2013 AICUZ. Table 5-1 tabulates the off-installation land acreage and estimated population within the CZs and APZs. It is important to note that portions of the CZs and APZs extend beyond the installation boundary and overlay approximately 3,600 acres. The APZs off Runway 15 to the northwest overlay areas of the City of Chicopee and the Town of South Hadley. The CZ associated with this runway end extends slightly outside the installation boundary. The APZs off Runway 23 to the northeast overlay areas of the Hampshire County and the Town of Ludlow. Runway 33 CZ and APZs extend southeast overlaying areas within the Town of Ludlow. Lastly, the CZ and APZs off Runway 05 extend southwest overlaying the Chicopee State Park and areas within the City of Chicopee. A complete land use compatibility analysis of APZs and recommendations for addressing incompatibility issues are presented in Chapter 6 and 7.



Table 5-1. Off-installation Land Area and Estimated Population within the Clear Zones and Accident Potential Zones

Zone	Acres	Population
CZ	287.04	23
APZ I	1,369.29	145
APZ II	1,928.96	414
Total	3,585.29	582

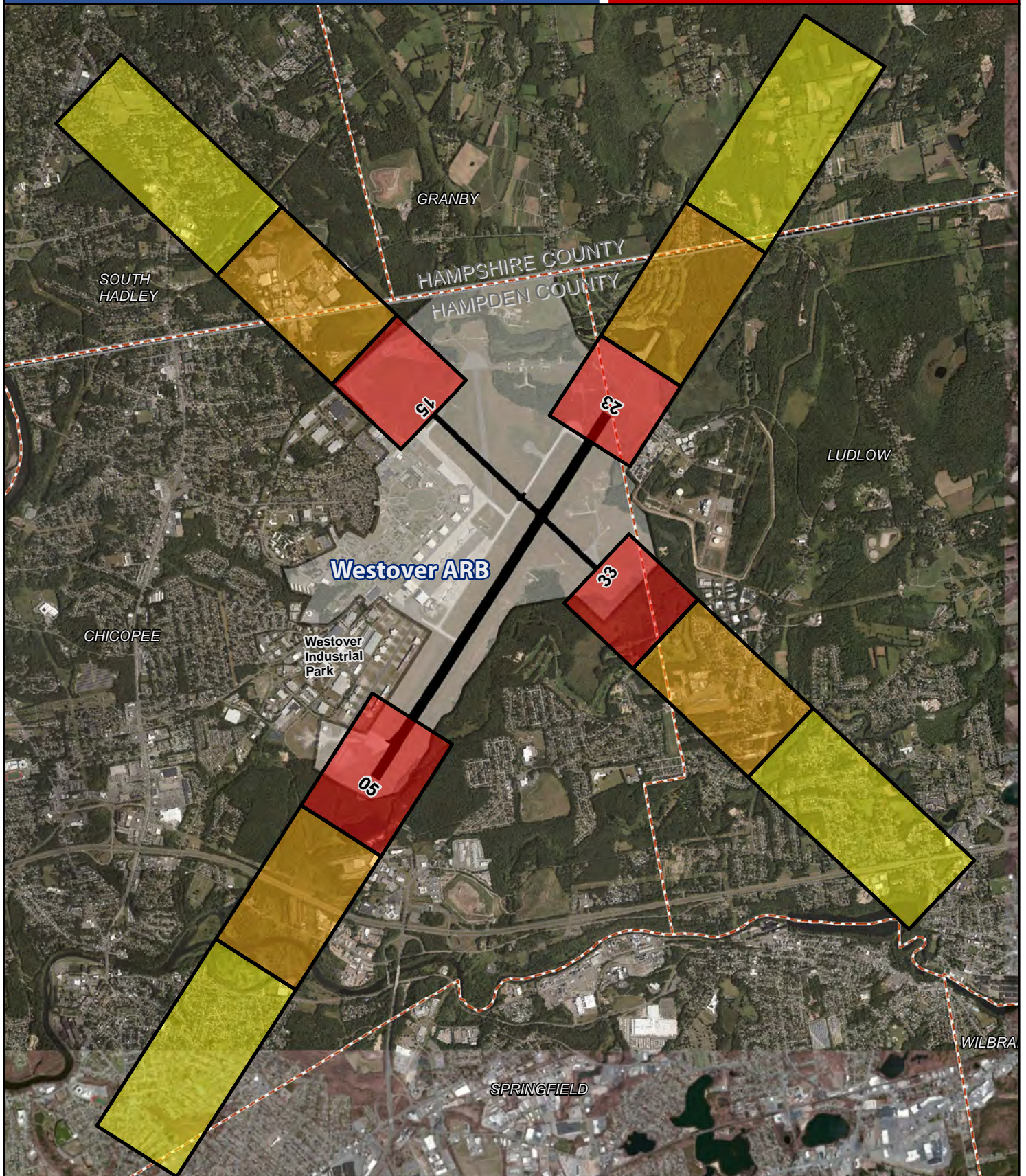
Source: U.S. Census Bureau Block Group 2017 ACS Five-year Estimates

5.1.1 Runway 05 Displaced Threshold Clear Zones and Accident Potential Zones

Each runway has a pair of CZs and APZs, one for each runway end. In a typical bi-directional runway layout, the arrival end of one runway coincides with the departure end of the other and the CZs and APZs are superimposed on each other. At Westover ARB, the arrival end CZ for Runway 23 and the departure end CZ for Runway 05 are collocated in exactly the same location (i.e. the CZs and APZ off the end of Runway 23). However, this is not the case on the Runway 05 end which are offset 1,200 feet from the Runway 23 departure CZs. When these two sets of zones are overlapped, the resulting CZs is 3,000 feet wide and 4,200 feet long. In order to ensure the maximum safety and compatibility with the community land uses, the CZ and APZs need to be based on the most restrictive boundary that extends off base which is the departure end of Runway 23. Therefore, the CZ and APZs off the end of Runway 05 are consistent with that approach and match what was presented in the 2013 AICUZ.

The analysis of the displaced threshold for Runway 05 was documented in the 1995 Environmental Impact Statement, Concerning Management of Military Air Operations and Extension of Hours of Civil Air Operations at Westover ARB. (Record of Decision dated August 8, 1995).

Figure 5-2



Legend

- Airfield Runway
- City Boundary
- County Boundary
- Installation Boundary
- Clear Zone
- Accident Potential Zone I
- Accident Potential Zone II

0 0.5 1
Mile





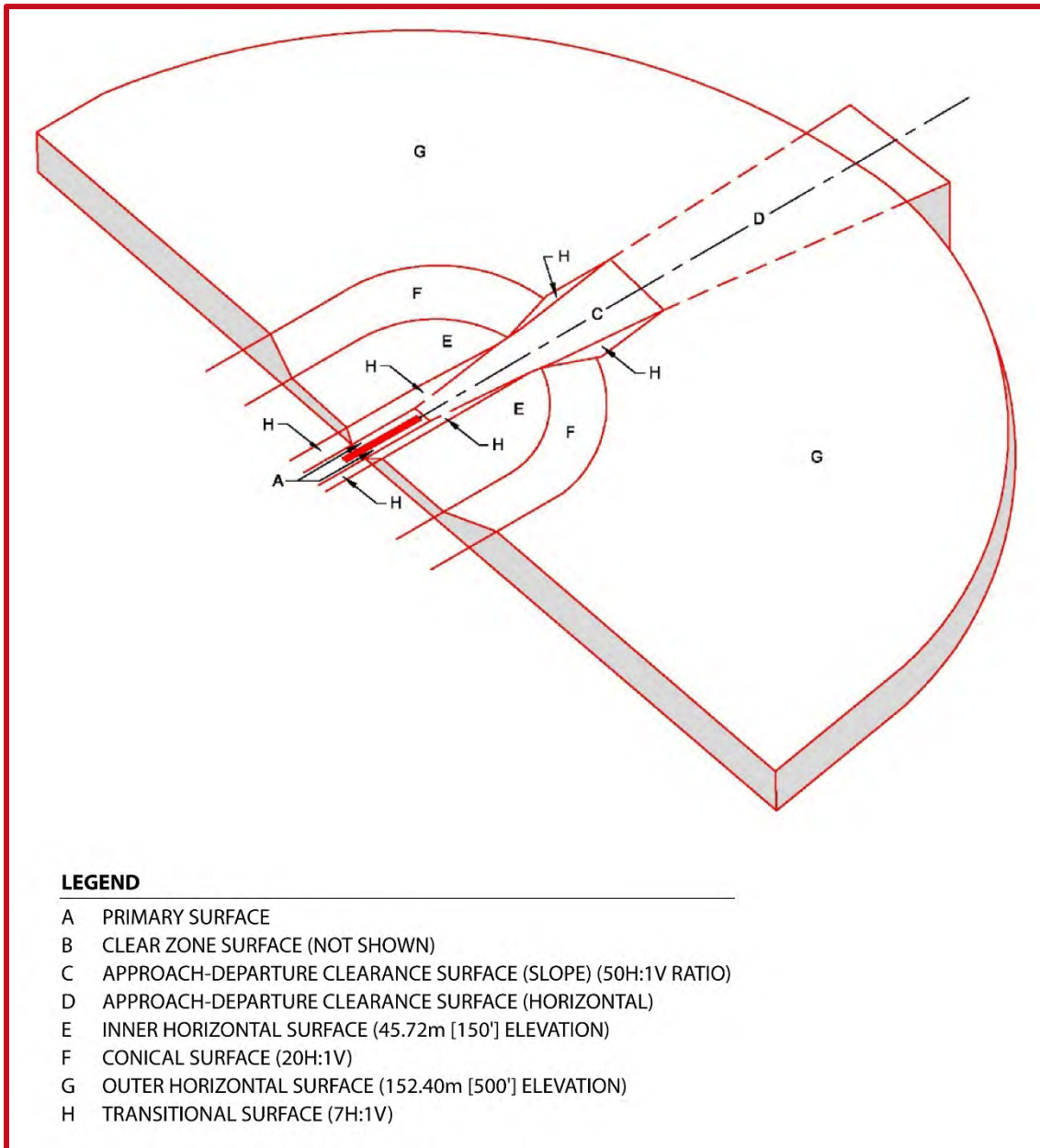
5.2 Imaginary Surfaces

The DoD and FAA identify a complex series of imaginary planes and transition surfaces that together define the airspace needed to remain free of obstructions around an airfield. Obstruction-free imaginary surfaces form a complex bowl around the airfield to ensure safe flight approaches, departures, and pattern operations. Obstructions include natural terrain and man-made features, such as buildings, towers, poles, wind turbines, cell towers, and other vertical obstructions to airspace navigation.

There are different imaginary surfaces for fixed-wing runways (depending on type of aircraft supported by the runway) and rotary-wing runways/helipads. An illustration of the imaginary surfaces for typical Class B fixed-wing runways like those at Westover ARB is depicted on Figure 5-3. Table 5-2 provides brief descriptions for each of these surfaces. In general, the Air Force does not permit aboveground structures on the primary surface (located on base), and height restrictions apply to transitional surfaces and approach and departure surfaces. Height restrictions are more stringent for areas closer to the runway and flight paths.



Figure 5-3. Imaginary Surfaces and Transition Planes for Class B Fixed-Wing Runways



Source: DoD, Unified Facilities Criteria (UFC) 3-260-01, 2019



Figure 5-4 depicts the actual runway airspace imaginary surfaces specific to Westover ARB's Class B runway. As noted above, each runway has assigned imaginary surfaces; therefore, since Westover ARB has two runways, imaginary surfaces are applied to each runway, resulting in overlapping surfaces. The southern portion of the imaginary surfaces extends out over the City of Chicopee and Springfield and Towns of Ludlow, and Wilbraham, all within Hampden County. The northern portion extends within the unincorporated areas of Hampshire County, the Towns of South Hadley, Belchertown, Granby, and the City of Northampton. The eastern portion of the imaginary surfaces extends out over the cities of Holyoke and Easthampton.

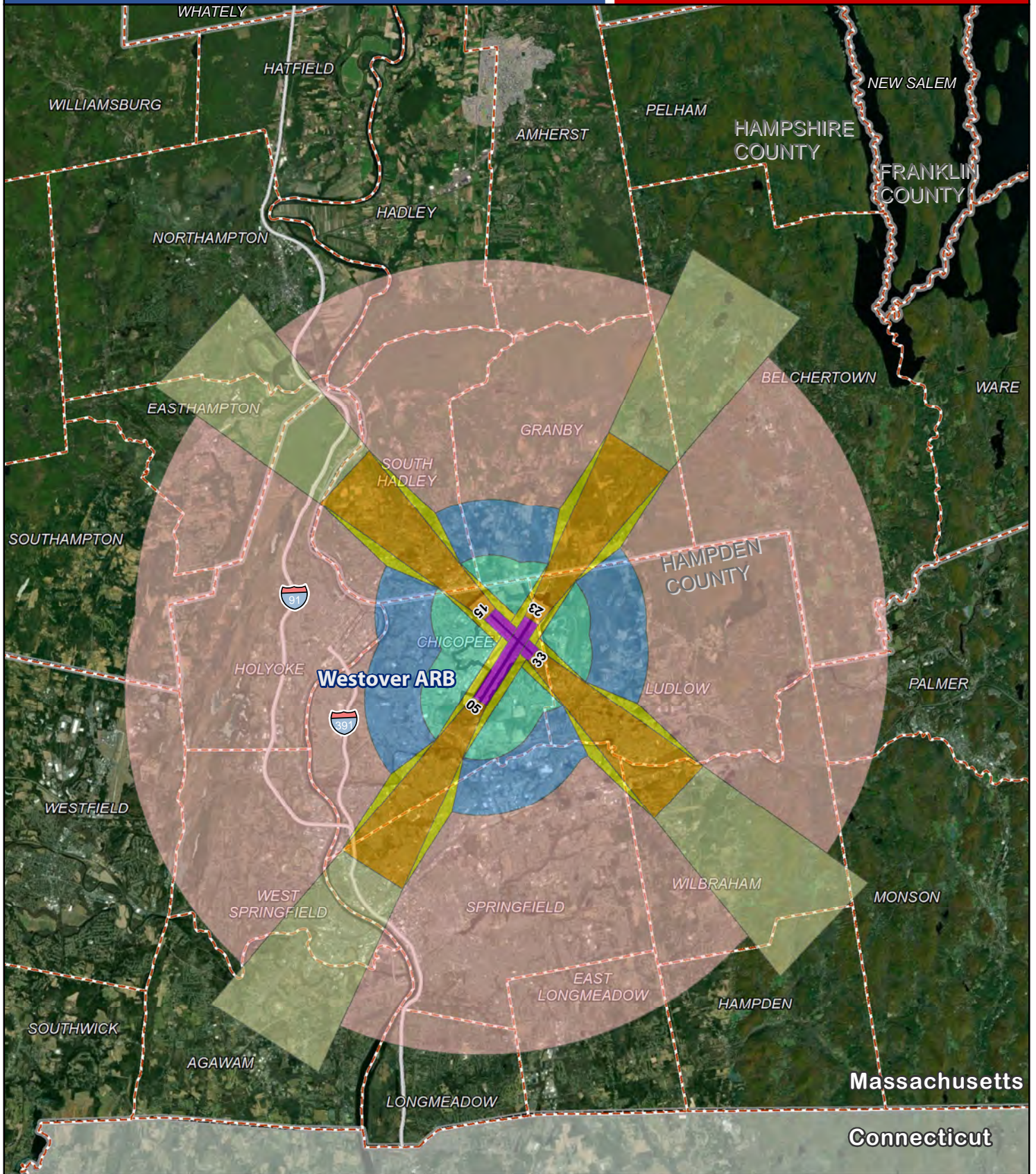
Table 5-2. Descriptions of Imaginary Surfaces for Military Airfields with Class B Runways

Primary Surface	An imaginary surface symmetrically centered on the runway, extending 200 feet beyond each runway end that defines the limits of the obstruction clearance requirements near the landing area. The width of the primary surface is 2,000 feet, or 1,000 feet on each side of the runway centerline.
Approach-Departure Clearance Surface	An imaginary surface symmetrically centered on the extended runway centerline, beginning as an inclined plane (glide angle) at the end of the primary surface (200 feet beyond each end of the runway), and extending for 50,000 feet. The slope of the approach-departure clearance surface is 50:1 until it reaches an elevation of 500 feet above the established airfield elevation. It then continues horizontally at this elevation to a point 50,000 feet from the starting point. The width of this surface at the runway end is 2,000 feet, flaring uniformly to a width of 16,000 feet at the end.
Inner Horizontal Surface	This imaginary surface is an oval plane at a height of 150 feet above the established airfield elevation. The inner boundary intersects with the approach-departure clearance surface and the transitional surface. The outer boundary is formed by scribing arcs with a radius of 7,500 feet from the centerline of each runway end and interconnecting these arcs with tangents.
Conical Surface	An inclined imaginary surface extending outward and upward from the outer periphery of the inner horizontal surface for a horizontal distance of 7,000 feet to a height of 500 feet above the established airfield elevation. The slope of the conical surface is 20:1. The conical surface connects the inner and outer horizontal surfaces.
Outer Horizontal Surface	An imaginary surface that is located 500 feet above the established airfield elevation and extends outward from the outer periphery of the conical surface for a horizontal distance of 30,000 feet.
Transitional Surface	An imaginary surface that starts at the lateral edges of the primary surface and the approach-departure clearance surface. It continues outward and upward at a 7:1 slope until it connects with the inner horizontal, the conical, and the outer horizontal surfaces.

Figure 5-4

Westover Air Reserve Base
Air Installations Compatible Use Zones

Runway Airspace Imaginary Surfaces and Transition Planes



Legend

- Airfield Runway
- City Boundary
- County Boundary
- Installation Boundary

- Interstate Highway
- State/U.S. Highway

Airfield Imaginary Surface

- Primary Surface
- Approach/Departure Clearance Surface (Horizontal)
- Approach/Departure Clearance Surface (50:1)
- Conical Surface
- Inner Horizontal Surface
- Outer Horizontal Surface
- Transitional Surface

0 3 6 Miles





5.3 Hazards to Aircraft Flight Zone

Certain land uses and activities pose potential hazards to flight. To ensure land uses and activities are examined for compatibility, the Air Force has identified a HAFZ. The HAFZ is defined as the area within the imaginary surfaces that are shown on Figure 5-4. Please note that the area and shape of the HAFZ may change with the encroachment issue at hand. For instance, issues related to bird/wildlife aircraft strike hazards may follow natural boundaries, encompass local bodies of water, and extend along flight paths. Unlike noise zones and safety zones, the HAFZ does not have recommended land use compatibility tables. Instead, it is a Consultation Zone recommending that project applicants and local planning bodies consult with the Air Force to ensure the project is compatible with Air Force operations. These land use and activity compatibility considerations include:

- **Height:** Tall objects can pose significant hazards to flight operations or interfere with navigational equipment (including radar). Heights of structures and trees are restricted in these HAFZ, and the FAA evaluates proposed construction to mitigate impacts. The city/county agencies are also involved with approvals of permits for construction, and should require developers to submit calculations showing that projects meet the height restriction criteria of 14 Code of Federal Regulations (CFR) 77.17 for the specific airfield described in the AICUZ Study. City and county agencies may also consider requiring a “Determination of No Hazard” issued by the FAA for any tall objects within this zone.
- **Visual Interference:** Industrial or agricultural sources of smoke, dust, and steam in the airfield vicinity can obstruct a pilot’s vision during takeoff, landing, or other periods of low-altitude flight. Close coordination between the installation and landowners can often mitigate these concerns. For example, irrigating before plowing can greatly reduce dust concerns.
- **Light Emissions:** Bright lights, either direct or reflected, in the airfield vicinity can impair a pilot’s vision, especially at night. A sudden flash from a bright light causes a spot or “halo” to remain at the center of the visual field for a few seconds or more, rendering a person virtually blind to all other visual input. This is particularly dangerous for pilots at night when the flash can diminish the eye’s adaptation to darkness. The eyes partially recover from this adaptation in a matter of minutes, but full adaptation typically requires 40 to 45 minutes. Specific examples of light emissions that can interfere with the safety of nearby aviation operations include:
 - Lasers that emit in the visible spectrum, which can be potentially harmful to a pilot’s vision during both day and night.
 - The increasing use of energy-efficient LED lighting, which poses potential conflicts in areas where pilots use night vision goggles (NVGs). NVGs can exaggerate the brightness of these lights, interfering with pilot vision.



- The use of red LED lights to mark obstructions, which can produce an unintended safety consequence because red LED lights are not visible on most NVG models, rendering them invisible to NVG users in the area.
- **Bird/Wildlife Aircraft Strike Hazard (BASH):** Wildlife represents a significant hazard to flight operations. Birds, in particular, are drawn to different habitat types found in the airfield environment, including hedges, grass, brush, forest, water, and even the warm pavement of the runways. Due to the speed of the aircraft, collisions with wildlife can happen with considerable force. Although most bird and animal strikes do not result in crashes, they cause structural and mechanical damage to aircraft as well as loss of flight time.

Most aircraft collisions occur below 2,000 feet. To reduce the potential of a BASH incident, the Air Force recommends that land uses that attract birds not be located near installations with an active air operations mission. These land uses include:

- Waste disposal operations;
- Wastewater treatment facilities;
- Transfer stations;
- Landfills;
- Golf courses;
- Wetlands;
- Storm water ponds; and
- Dredge disposal sites.

Birds and raptors in search of food or rodents will flock to landfills, increasing the probability of BASH occurrences near these facilities. One can also use design modifications to reduce the attractiveness of these types of land uses to birds and other wildlife.

- **Radio Frequency/Electromagnetic Interference (EMI):** The American National Standards Institute defines EMI as any electromagnetic disturbance that interrupts, obstructs, or otherwise degrades or limits the effective performance of electronics/electrical equipment.
 - EMI can be induced intentionally, as in forms of electronic warfare, or unintentionally, as a result of spurious emissions and responses, such as high-tension line leakage and industrial machinery. In addition, EMI may be caused by atmospheric phenomena, such as lightning or precipitation static.



- New generations of military aircraft are highly dependent on complex electronic systems for navigation and critical flight and mission-related functions. Consequently, communities should use care when siting any activities that create EMI. Many of these sources are low-level emitters of EMI. However, when combined, they have an additive quality.
 - EMI also affects consumer devices, such as cell phones, FM radios, television reception, and garage door openers. In some cases, the source of interference occurs when consumer electronics use frequencies set aside for military use.
- **Drones/Unmanned Aircraft Systems (UAS):** The use of drones near military airfields poses a serious flight safety hazard due to the potential for a mid-air collision between military aircraft and small- to medium-sized drones. The FAA maintains specific guidance about where drones (i.e., UAS) can be flown. Currently, non-DoD drone operations are not permitted within certain zones surrounding military bases. Additional restrictions are in place around airports, sports stadiums, and security-sensitive areas.

In order to assist UAS users in obtaining FAA approval to operate within controlled airspace, specifically around airports, the FAA implemented UAS facility maps that identify a zone of notification around the airfield. The maps serve to inform UAS users of area restrictions and minimize the requests submitted to the local air traffic control and Westover ARB.



6.0 Land Use Compatibility Analysis

CZs, APZs, and noise zones, shown on Figure 6-1, and the HAFZ (previously shown on Figure 5-4) make up the overall AICUZ footprint for an air installation and is the basis for Westover ARB's land use compatibility analysis. The AICUZ footprint defines the minimum recommended area within which land use controls are needed and requested to enhance the health, safety, and welfare of those living or working near a military airfield and to preserve the flying mission. The AICUZ footprint, combined with the guidance and recommendations set forth in the AICUZ Study, are the fundamental tools necessary for the planning process to achieve overall land use compatibility. The Air Force recommends that local and regional governments adopt the AICUZ noise zones, CZs, APZs, and HAFZ into planning studies, regulations, and processes to best guide compatible development around installations.

6.1 Land Use Compatibility Guidelines and Classifications

In an effort to establish long-term compatibility for lands within the vicinity of military air installations, the DoD has created land use compatibility recommendations based on the Federal Highway Administration's (FHA) Standard Land Use Coding Manual (SLUCM). These guidelines are used by DoD personnel for on-installation planning and for engaging with the local community to foster compatible land use development off-installation. Table A-1 of Appendix A shows the suggested land use compatibility guidelines within the CZs and APZs. Table A-2 of Appendix A provides land use compatibility recommendations within noise zones for aircraft noise.

6.1.1 Suggested Land Use Compatibility for Noise

As discussed in Section 4.1, What is Sound/Noises?, DNL metrics present reliable measures of community sensitivity to aircraft noise. The guidelines recommend that noise-sensitive land uses (e.g., houses, places of worship, schools) be placed outside high noise zones. For land use planning purposes in AICUZ studies, noise contours 65 to <75 dB DNL are an area of moderate impact where some land use controls are recommended. Noise contours greater than 75 dB DNL are the most impacted area where the greatest degree of compatible land use controls are recommended.

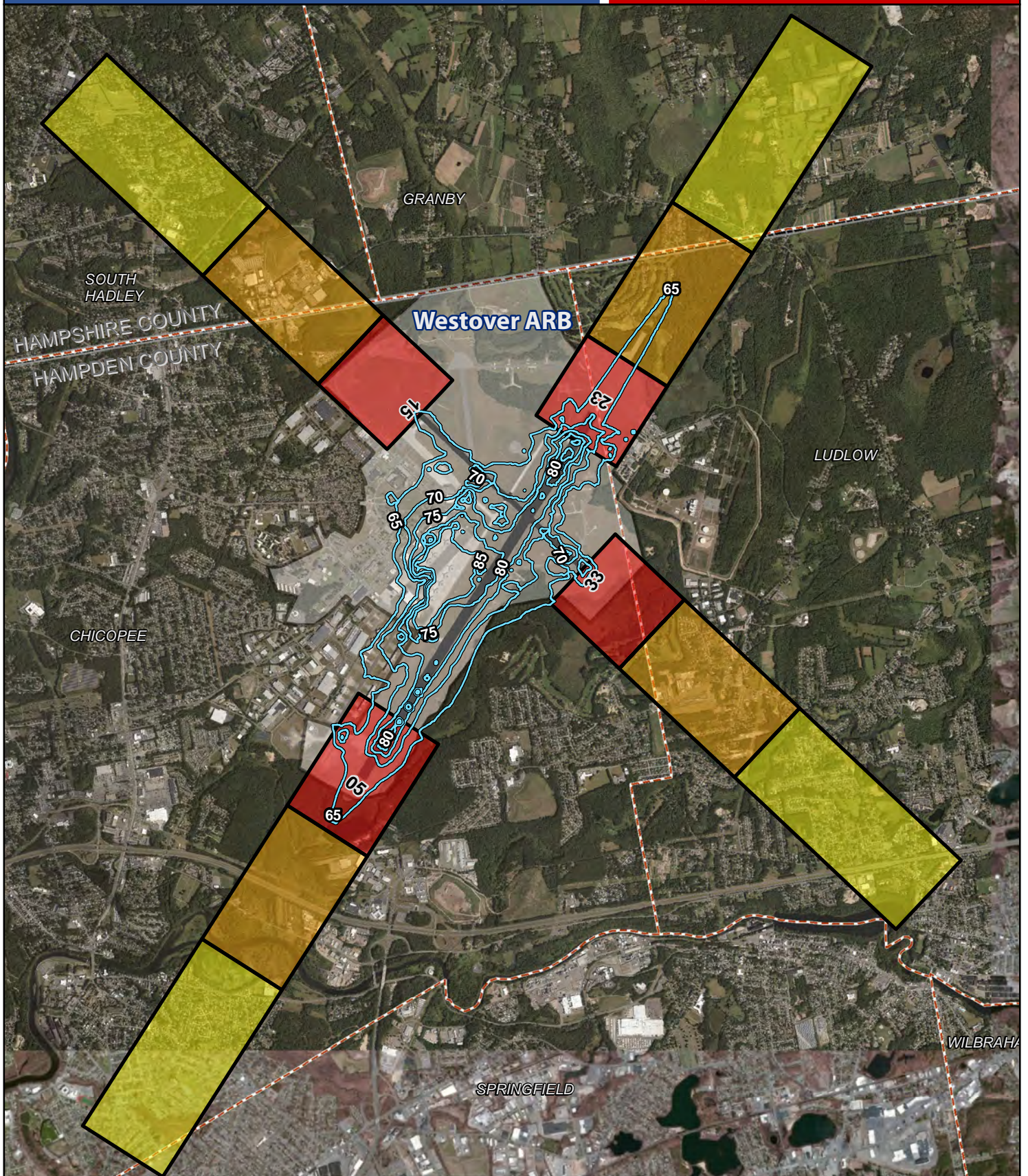
6.1.2 Suggested Land Use Compatibility for Accident Potential Zones

As discussed in Section 5.0, Community and Aircraft Safety, the Air Force has designated areas of accident potential around its air installations to assist in preserving the health, safety, and welfare of residents living near its airfield. Although the likelihood of an accident is remote, the guidelines recommend that people-intensive uses (e.g., apartments, theaters, shopping centers, sports arenas) should not be placed in CZs or APZs.

Figure 6-1

Westover Air Reserve Base
Air Installations Compatible Use Zones

Composite AICUZ Footprint: 2020 AICUZ Noise Contours,
Clear Zones, and Accident Potential Zones



Legend

- Airfield Runway
- City Boundary
- County Boundary
- Installation Boundary
- Noise Contour (2020 AICUZ)
- Clear Zone
- Accident Potential Zone I
- Accident Potential Zone II

0 0.5 1 Miles





6.2 Planning Authorities, Stakeholders, and Policies

Development and control of land use outside the installation are beyond the jurisdiction of the Air Force. Therefore, this land is regulated by state and local land use planning authorities, ordinances, and regulations. This section presents information for each governing body that specifically coordinates with Westover ARB regarding planning policies, regulations, and stakeholder groups.

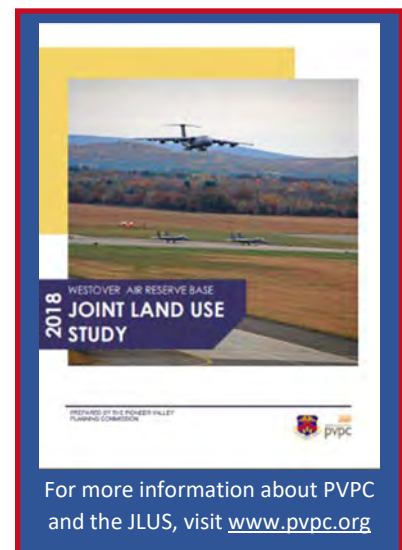
6.2.1 Pioneer Valley Planning Commission



The Pioneer Valley Planning Commission (PVPC) is the regional public planning agency serving the planning, policy, development, and service needs of the region's 43 cities and towns, including the municipalities surrounding Westover ARB. PVPC is responsible for increasing communication, cooperation, and coordination among all levels of government, as well as the private business and civic sectors, in order to benefit the Pioneer Valley region. The PVPC works with the local towns and cities to assist in their planning and development as needed.

The PVPC develops long-range regional transportation plans and regional land use plans to include sustainable communities' strategy and growth forecasts, land use, regional transportation improvement programs.

The PVPC released its latest update to their regional land use plan, "Valley Vision 4: The Regional Land Use Plan for the Pioneer Valley," in 2013, which provides specific tools and actions to address land use equity issues and empower local governments to address environmental justice more effectively through land use planning and zoning. With the plan, there are opportunities to identify and implement innovative strategies and actions that will encourage higher-density, transit-oriented development in identified locations.



PVPC worked with Westover ARB, Westover Metropolitan Airport and the surrounding communities of Chicopee, Springfield, South Hadley, Ludlow and Granby to update their Joint Land Use Study (JLUS) in 2018. The development of the JLUS was a cooperative land-use planning effort to identify existing and potential incompatibilities between military operations and the surrounding communities. The initiative represents an ongoing and proactive effort by the surrounding communities to work with the base to help preserve the flying mission and guide development in a manner to safeguard the public. The recommendations developed from the JLUS provide the policy framework to support adoption and implementation of compatible development near the installation.



6.2.2 The City of Chicopee



The lands southeast of Westover ARB are in the incorporated areas of Chicopee, and the development and use of these lands are controlled by the City of Chicopee's land use policies and plans. The City of Chicopee represents the majority of the jurisdiction overlaid by the Westover ARB AICUZ footprint. The local planning authorities for the City of Chicopee are the City Council and the Planning and Zoning Boards.

Land use management in the City of Chicopee is led by the Planning and Development Department. The Department was established "...to administer governmental and municipal functions and responsibilities in the field of city planning; to coordinate efforts directed toward the future development of the city; to assure its continued improvement, consistent with its physical, social and economic conditions and resources..." (from Chicopee City Code Chapter 75). Departmental responsibilities include administrative work for the Planning Board, which oversees city planning and zoning ordinances. The Department acts as adviser to the Mayor, City Council, Zoning and Planning Boards, municipal departments, and all municipal boards and commissions on planning-related matters. The City of Chicopee does not have a Master Plan in place, but are currently in the process of developing one, as well as updating their land use data. Once completed, the Master Plan will outline goals, objectives, principles, and standards to serve as the primary implementation tool for the physical control of and development within Chicopee.

For more information regarding the City of Chicopee Planning Policies and Zoning Bylaws, visit www.chicopeema.gov

6.2.3 The Town of Ludlow



The Town of Ludlow is located directly east of the installation and is overlaid by the AICUZ footprint. Planning and zoning oversight for the Town of Ludlow is performed by the Town's six-member Planning Board. The Town's current Master Plan was adopted in December 2011. The plan provides guidance to the Town's staff, boards, advisory committees, and professional consultants on town development. The Town's Master Plan outlines goals and strategies for implementation and for the adoption of zoning regulations and land use policies to serve as the primary tools for the physical control and development of the town. The Town's zoning bylaw established an Aircraft Flight Overlay District to prohibit certain uses within the Westover ARB APZs. The Overlay District prohibits the development of adult care facilities, schools, hospitals, daycare centers, auditoriums, places of worship, and concert halls within the Westover ARB's CZs and APZs.



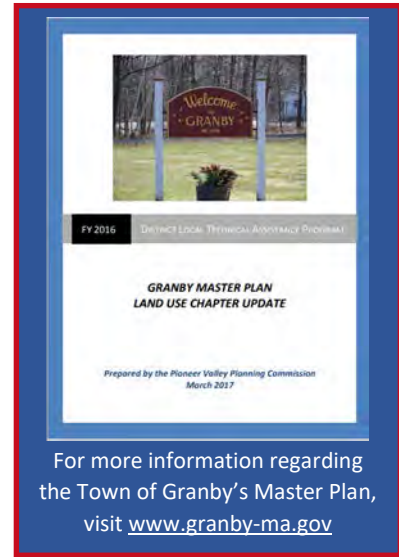
For more information regarding the Town of Ludlow's Master Plan, visit www.ludlow.ma.us



6.2.4 The Town of Granby



The Town of Granby is located north of the installation and is overlaid by the AICUZ footprint. Planning and zoning oversight for the Town is performed by the Town's five-member Planning Board and the Zoning Board of Appeals, with support by the PVPC planning authority. The Town's Master Plan was adopted in 2014 with an update to the Land Use (Chapter 10) in 2016. Land use and development is controlled by the Granby Zoning Bylaw, the Subdivision Regulations, and the Massachusetts Wetlands Protection Act (Town of Granby 2020). The Boards are responsible for implementation and processing amendments to the zoning bylaws. The Building Inspector is responsible for the enforcement of the Town's zoning bylaws and is appointed on an annual basis. The bylaw consists of two components: the zoning map, which divides the town into various geographic zoning and Overlay Districts and the bylaw, which details the regulations applying to each of those districts.



For more information regarding the Town of Granby's Master Plan, visit www.granby-ma.gov

6.2.5 The Town of South Hadley



The Town of South Hadley is located northwest of the installation and is overlaid by the AICUZ footprint. The Town of South Hadley's planning authorities are their Planning and Conservation Department and their Planning Board. The South Hadley Planning Board is an elected five-member board with one additional person being appointed jointly by the Select Board and Planning Board to serve as an associate member. Planning Department staff primarily provide staff support to the South Hadley Planning Board. However, they also provide limited assistance to the Zoning Board of Appeals; Open Space Committee; Community and Economic Development Commission; Rise of the Falls Facilitation Group; and other various boards, committees, and departments (Town of South Hadley n.d.). The Planning Department works with the community to create policy documents that guide current and future development actions, such as the Town's Master Plan. The latest plan was adopted in August 2010. As with the other municipalities, land use and development is controlled by the Town's zoning bylaw and subdivision regulations.

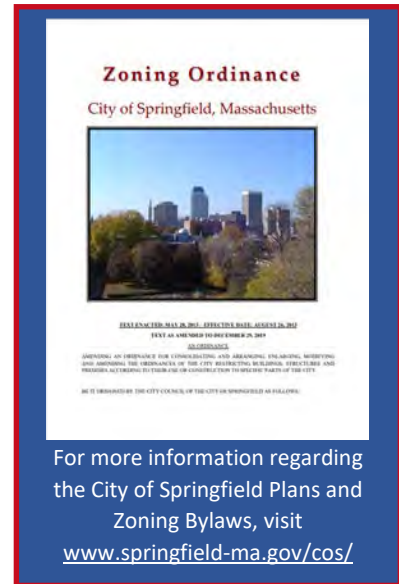
For more information regarding the Town of South Hadley Planning Policies and Zoning Bylaws, visit www.ma-southhadley.civicplus.com/



6.2.6 The City of Springfield



The City of Springfield is located southwest of the installation and is only overlaid by a small portion of the AICUZ footprint. City planning for the City of Springfield is administered by the City's Office of Planning and Economic Development. The office works to create a climate in Springfield that is conducive to growing and attracting businesses in order to strengthen and revitalize the City's neighborhoods and communities and to stabilize and transform the City's physical, social, and economic environment (City of Springfield 2020). Specifically, the office provides planning support, technical assistance, coordination, and advisory services to city officials, boards, and committees on issues involving land use planning, zoning, economic development, open space land preservation, smart growth, and historic preservation (City of Springfield 2020). The Department is responsible for administering their various Development Plans and Zoning Ordinances. Springfield is the most populated out of the neighboring communities and their land use policies have the potential to impact the area's growth and development.



6.2.7 Massachusetts Military Asset and Security Strategy Task Force

Massachusetts created the Massachusetts Military Asset and Security Strategy Task Force (MASS-TF) in 2012 by Executive Order 541 to protect and expand missions, jobs, and economic investments at and surrounding Massachusetts' military installations. Housed within the Office of the Governor and supported by the Executive Office of Housing and Economic Development and MassDevelopment, the MASS-TF coordinates among the military installations to maximize their efficiency (MassDevelopment n.d.). The MASS-TF works with federal, state, and local officials; industry representatives; and non-profit leaders to align efforts to strengthen the state's military bases, including Westover ARB. One of the projects initiated by the MASS-TF was the Westover Airport Business Plan in 2014. The business plan helped identify short- and long-term economic development opportunities to guide future land use decisions that would support the community and the Westover ARB.





6.2.8 Westover Metropolitan Development Corporation



As previously discussed, the WMDC operates an adjacent civilian airport facility and industrial area to Westover ARB and currently has an agreement with the Air Force for joint use of the airfield. WMDC is a quasi-public development corporation that manages day-to-day operations of the Westover Metropolitan Airport, the maintenance of the industrial parks, and the continuing development of the commercial and industrial area. The Airport Master Plan (updated in 2014) lays out the long-term 2025 development plans for the airport. The plan considers the needs and demands of airport tenants' and users' short-term, intermediate, and long-range airport requirements and determines future financial requirements. The WMDC also sponsored the development of noise exposure maps and a Noise Compatibility Program under the 14 CFR Part 150 program completed in 2018.



6.3 Land Use and Proposed Development

The land use compatibility analysis performed as part of this AICUZ study evaluates existing and future land uses and zoning near Westover ARB to determine compatibility conditions. Existing land use is assessed to determine current land use activity, while zoning and future development plans are used to project potential compatibility concerns. Land use and zoning geographic information system (GIS) data utilized were obtained from the Massachusetts Bureau of Geographic Information (MASS GIS) for existing land use, as directed by the local planning authorities and from the JLUS datasets for zoning. Additionally, local management plans, policies, ordinances, and zoning regulations (discussed previously) were evaluated to determine the type and extent of land use allowed in specific areas.

MASS GIS and the Massachusetts Property Type Classification Codes were evaluated to ensure an actual account of land use activity, regardless of conformity to zoning classifications or designated planning or permitted uses. Additionally, local management plans, policies, ordinances, and zoning regulations were evaluated to determine the type and extent of existing and future land use in specific areas.

In order to analyze the compatibility of nearby land uses surrounding Westover ARB, the use of each parcel of land is characterized into use categories. Shown below are broad use categories as defined by the FHA SLUCM tables (Appendix A). The SLUCM reflects generic land use categories for illustrating a basic and high-level understanding of land use compatibility across some common land use types. While the specific categories used by each local government may vary, these generalized categories provide a starting point for each analysis.



- **Residential:** Designations and zoning for family and personal living including rural/low-density development and medium-density and high-density towers. Types of units include but are not limited to single-family detached dwellings (SFDs), duplex, triplex and quadplexes, mobile homes or manufactured housing, apartment buildings and condominiums.
- **Manufacturing:** Including food, textile and apparel manufacturing, household goods and trades manufacturing (metals, stones, clays, glass, plastic and rubber, etc.).
- **Transportation, Communication, and Utilities:** Including public and private transportation uses (road, rail, air, marine); parking infrastructure; communication uses (cell towers, relay towers, etc.); public, semi-public, and private utilities (power stations, power transmission lines, substations, wastewater treatment plants, solid waste disposal facilities, etc.).
- **Trade:** Including wholesale trade, retail trade (neighborhood, community, regional and super-regional: food, transportation, home furnishings, etc.); financial services; personal and professional services; medical services; government and educational services; and religious activities.
- **Cultural, Entertainment, and Recreational:** Including cultural activity uses, nature exhibits, public assembly, indoor auditoriums and outdoor amphitheaters, outdoor sports, amusements, and recreational activities, parks, etc.
- **Resource Production and Extraction:** Including farm and livestock agriculture, forestry and fishing activities, resource mining, etc.
- **Other:** Including undeveloped land and water areas.

Typical municipal governments have land or zoning codes that differ slightly from the FHA SLUCM categories. Local land and zoning codes commonly, but not always categorize land use around the following broad categories. It then falls upon the base planner to rectify the discrepancies between the DOD's use of SLUCM standards and all of the relevant local jurisdiction's land use typologies in order to provide a meaningful analysis. Broad land use categories include:

- **Residential:** Designations and zoning for family and personal living including rural/low-density development (large-lot SFDs, and mobile and manufactured housing, etc.); medium-density developments (small-lot SFDs, duplexes, triplexes, and quadplexes etc.); and high-density developments (apartment complexes, condominiums and residential towers, etc.).
- **Retail, Service, and Commercial:** Including food establishments, entertainment, indoor recreation, retail sales and personal services, vehicle sales and services, big box establishments, strip malls, and hotels and lodging.
- **Commercial Office:** Including professional office uses (medical, financial, administrative, etc.).



- **Industrial:** Including manufacturing uses (textiles, food, printing, chemicals, professional, etc.); light industrial uses (vehicle storage, sign making, craftsman and skilled trades like carpentry and welding, etc.); heavy industrial uses (asphalt and concrete batching, wrecking and salvage yards, petrochemical refineries, heavy equipment, seaports, etc.); warehousing and freight uses; and waste-related industries.
- **Public, Civic, and Institutional:** Including school uses (primary, secondary, and post-secondary); day care centers; hospitals; government uses (fire and rescue, police, libraries); places of worship; and parks and open land (passive and active, natural features, such as wetlands, floodplains, forests, etc.).
- **Agricultural:** Including crop, livestock and poultry farming uses, forestry and timber farming uses, and aquaculture uses.
- **Mixed Use:** A blend of multiple uses (residential, commercial, office, cultural, institutional, and/or industrial, etc.) may be proposed.
- **Transportation / Utility:** Includes rights-of-way uses and major and minor utility uses (water utilities, sewage and waste utilities, electric utilities, etc.).
- **Tax Exempt:** Includes open land, such as land designated as forest, agriculture/horticulture, or parks and recreational.

Appendix A, Land Use Compatibility Tables, provides further description on the SLUCM land use categories along with notes on recommended compatible uses for Westover ARB surrounding jurisdictions.

6.3.1 Existing Land Uses Surrounding Westover ARB

Land use surrounding Westover ARB features a broad range of land use types with varying densities. Based on recent MASS GIS data, the majority of the existing land uses directly adjacent to the installation is a mix of Agricultural, Industrial, and Parks and Recreation. Residential is the predominate land use within the broader AICUZ footprint. Several transportation corridors surround Westover ARB including railroads, Interstate (I-) 90, I-391, and I-291, and smaller U.S. and state highways. Figure 6-2 illustrates the existing land uses surrounding Westover ARB. As previously noted, Westover ARB's AICUZ footprint and HAFZ overlay areas of the City of Chicopee, Town of Ludlow, Town of South Hadley, Town of Granby, and the City of Springfield. The existing land use within each jurisdiction are described below.

City of Chicopee

The land areas south and west of Westover ARB are located within the City of Chicopee (Figure 6-2). Based on the MASS GIS data, the majority of the existing land uses within the AICUZ footprint are Residential uses ranging from detached Single-family residential to medium-density Multi-family residential uses. There are Industrial and Parks and Recreation uses adjacent to the base boundary to the south. The Parks and Recreation uses contain open natural areas south of the end of Runway 05. The Slate Conservation



Area and Chicopee Memorial State Park is just south of the Base at the end of Runway 05 within the CZ.

The land uses within Runway 05 APZs overlapping the City of Chicopee include limited Agricultural, Institutional, and Industrial uses along I-90. Residential is the most prevalent use within APZ II in the Chicopee Falls area, with a mix of Single and Multi-family uses. There are some Commercial and Mixed-Use land uses intermixed. In addition, there are multiple churches within this same area. Churches, places of worship, and other types of gathering places are important in the analysis because public assembly locations are considered people-intensive land uses.

The land directly west of the base in Chicopee is mostly Public and Industrial uses associated with the Westover Metropolitan Industrial Parks and Airport facilities. Also, there are lands that are Undesignated, but are associated with airport hangar facilities. The 65- to 69-dB DNL and 70- to 74-dB DNL noise zones extend beyond the base boundary and impact this area. The CZ and APZ I of Runway 15 overlap a small portion of the City of Chicopee and consists almost entirely of Industrial, Public, and Vacant open space with minimal Residential land use along Old Lyman Road. There are some limited Institutional uses associated with churches in this area as well.

The land on the southwest boundary of the base near the end of Runway 33 within Chicopee includes Parks and Recreation uses associated with Chicopee Country Club Golf Course. The CZ of Runway 33 overlaps a small segment of the golf course but contains no habitable buildings or structures. Single-family Residential, Industrial and Institutional uses (i.e., schools) are located just south along Burnett Road.

Areas of specific land use compatibility concerns within the City of Chicopee impacted by the Westover ARB AICUZ footprint are further evaluated in Section 6.4, Land Use Compatibility Concerns.

Town of Ludlow

The land areas east of Westover ARB are located within the Town of Ludlow (Figure 6-2). Based on the MASS GIS data, the majority of the existing land uses within Ludlow overlapped by the AICUZ footprint are Residential and Parks and Recreation uses adjacent to the base boundary. The tip of the 65 dB DNL noise contour at the Runway 23 end extends just into Ludlow and consists of Parks and Recreational designated uses. This area is also overlaid by APZ I. The Parks and Recreation uses contain open natural areas associated with the Westover Conservation Area, Wade Pond and the Westover Golf Course. There is a small area of Residential use within APZ I and II, along West Street where the town borders Granby.

The lands southeast of the base, at the end of Runway 33 and extending towards I-90, are within the Town of Ludlow's most densely developed area. Directly adjacent to the base, Parks and Recreation uses contain open natural areas within the CZ near Colley Brook Creek. Most of APZ I and all of APZ II at the end of Runway 33 are within the Town of Ludlow. Single-family and Multi-family Residential, Industrial, Commercial, Recreational,



Mixed-Use, and Institutional land uses all exist within APZ I along Burnett Road and Holyoke Street. The land uses within APZ II are mostly Residential land use. The Residential uses range from Single-family dwellings to medium/high-density Multi-family uses. There are Commercial and Industrial uses primarily located adjacent to I-90. Typical Commercial uses include “big box” retail uses, restaurants, auto repair shops, and retail supporting the nearby residential areas. In addition, there are Institutional uses, such as churches and schools located within this same area. Churches, places of worship, schools, and other types of gathering places are important in the analysis because public assembly locations are considered people-intensive land uses.

Areas of specific land use compatibility concerns within the Town of Ludlow impacted by the Westover ARB AICUZ footprint are further evaluated in Section 6.4, Land Use Compatibility Concerns.

Town of Granby

The Town of Granby is located north of Westover ARB and overlaid by APZ I and II of the AICUZ footprint at the Runway 23 end (Figure 6-2). Granby is the most rural of the communities surrounding the base. Based on the MASS GIS data, the majority of the existing land uses within this area are Single-family Residential and Agriculture. A small portion of APZ I extends within the town boundary along East Street, and includes some Residential developments and Vacant parcels. Agriculture and Single-family Residential uses along Taylor Street and around the Red Fire Farm area are the dominant land use within APZ II.

Areas of specific land use compatibility concerns within the Town of Granby impacted by the Westover ARB AICUZ footprint are further evaluated in Section 6.4, Land Use Compatibility Concerns.

Town of South Hadley

The land areas northwest of Westover ARB are located within the Town of South Hadley (Figure 6-2). Based on the MASS GIS data, the majority of the existing land uses within South Hadley overlapped by the AICUZ footprint are Public, Industrial, and Single-family Residential uses. A portion of APZ I and all of APZ II off of the end of Runway 15 are in South Hadley. APZ I in South Hadley contains primarily Industrial land uses associated with industrial park and self-storage buildings near the landfill. There are also Public and Vacant open spaces with minimal Residential land use along Old Lyman Road. The APZ II off of Runway 15 contains Residential, Open Space, Institutional, and some Commercial land uses. Residential uses include Single-family dwellings and Multi-family developments. Commercial uses are primarily located along Route 202, near the intersection of Highway 33, including the Big Y World supermarket and other Commercial retailers supporting the nearby residential areas. The Public uses in this area are mainly associated with the Black Stevens Conservation Area and Notre Dame Cemetery. In addition, there are Institutional uses, such as churches and schools (Plains Elementary) located within this same area.



Areas of specific land use compatibility concerns within the Town of South Hadley impacted by the Westover ARB AICUZ footprint are further evaluated in Section 6.4, Land Use Compatibility Concerns.

City of Springfield

The City of Springfield is south of Westover ARB and minimally impacted by the AICUZ footprint. A small portion of the city's boundary is within the southeastern edge of APZ II off the Runway 05 end. The land uses within this area include Commercial and Residential uses near the intersection of Richard Street and St. James Avenue. Springfield is over a mile south of the base and beyond the extent of the 2020 AICUZ noise zones.

Areas of specific land use compatibility concerns within the City of Springfield impacted by the Westover ARB AICUZ footprint are further evaluated in Section 6.4, Land Use Compatibility Concerns.

Westover Air Reserve Base

This map illustrates the existing land use within the Westover ARB (Archaeological Research Boundary) and its surrounding area. The map is color-coded to represent different land use types, as defined in the legend. The Westover ARB is outlined in red, and the proposed development area is outlined in yellow. The map also shows the locations of South Hadley, Chicopee, Springfield, Ludlow, and Granby, as well as the boundaries of Hampshire County and Hampden County. The map includes a legend for existing land use, a scale bar, and a north arrow.

Existing Land Use Legend:

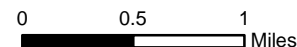
- Agriculture (Green)
- Commercial Business (Red)
- Commercial Office (Brown)
- Commercial Retail (Pink)
- Forest/Conservation (Light Green)
- Industrial (Purple)
- Institutional (Blue)
- Mixed Use (Magenta)
- Single Family Residential (Yellow)
- Multi-Family Residential (Orange)
- Other/Undesignated (Light Orange)
- Parks and Recreation (Light Green)
- Public/Government (Dark Green)
- Transportation (Grey)
- Utility (Black)
- Vacant/Open Space (Light Grey)
- Water (Blue)

 Airfield Runway
  Parcel Boundary
  Clear Zone

 City Boundary
  Noise Contour (2020 AICUZ)
  Accident Potential Zone I

 County Boundary
  Accident Potential Zone II

 Installation Boundary





6.3.2 Zoning Surrounding Westover ARB

As previously mentioned, the zoning bylaws are used by local governments to control the physical development of land and the type of uses to which individual properties may be utilized for future development. The characteristics of the zoning districts are similar to the existing land use patterns and have been combined into one figure. Although the lands are regulated by several different zoning districts under the various local governments with specific regulations, they are largely similar. Figure 6-3 depicts the current zoning in the vicinity of Westover ARB. Generalized zoning data was provided by the Pioneer Valley Planning Commission through the JLUS datasets.

City of Chicopee

Chicopee has eight zoning districts that fall within the AICUZ footprint (Figure 6-3). These include four Residential districts, a Business district and three Industrial districts. However, as discussed previously these were generalized to align with Air Force SLUCM categories. For example, the three Industrial districts were grouped under one Industrial category. Based on the Chicopee Zoning Bylaws, residential development is allowed at various densities with the four Residential Districts: Single-family Residential, Two-family Residential, Multi-family Residential, and Mobile Homes. The Business District allows range of commercial business uses mainly along transportation corridors and high-traffic areas.

The City of Chicopee zoning districts within the AICUZ footprint are mostly Industrial, Agriculture and Residential, especially within the APZs. The majority of the zoning within the CZs and APZ I of the end of Runway 15 and 33 are a mix of Agriculture and Industrial. Various residential zoning districts are prevalent within APZ II of Runway 05 end, which include Single-family Residential, Two-family Residential, and Multi-family Residential zoning. There are pockets of Business District along I-90 corridor, Beauchamp Terrace, and East Street. The land within the city impacted by the off-base noise contours is almost entirely within the Industrial District within the WMDC development area.

Town of Ludlow

The Town of Ludlow has multiple zoning districts that fall within the AICUZ footprint (Figure 6-3). These include Residential, Agriculture, Business, Industrial and two Overlay Districts. Based on the Ludlow Zoning Bylaws, residential development is allowed at various densities with the Residential Districts: Single-family Residential, Two-family Residential, and Multi-family Residential. The Business District allows for a range of light commercial business uses mainly along transportation corridors and commercial areas supporting the nearby residential areas. The City enacted two Aircraft Flight Overlay Zoning Districts, which correspond to Westover ARB's CZs and APZs that overlay the Town's jurisdiction. These Overlay Districts prohibit certain people-intensive uses, such as hospitals, auditoriums, concert halls, schools, and churches/places of worship.



The Town's zoning districts within the AICUZ footprint are mostly Industrial, Agriculture and Residential, especially within the APZs. The majority of the zoning within the CZs and APZ I of the end of Runway 33 are a mix of Agriculture and Industrial with a Business District near the intersection of Holyoke Street and West Street. Various residential zoning districts are prevalent within APZ II of Runway 33 end which include mostly Single-family Residential with Multi-family Residential zoning clustered around the Big Y Commercial Development and I-90 corridor. The land within the town boundaries impacted by the off-base noise contours of the end of Runway 23 is entirely within the Agriculture District. The Agricultural Zone allows for Single-family residences.

Town of Granby

The Town of Granby has three zoning districts that influence land development within the AICUZ footprint (Figure 6-3). These include a Single-family Residential District and two Overlay Districts. The APZ I and II off the end of Runway 23 are entirely within the Single-family Residential District, which allows residential development at a minimum density of one unit per acre. There are two Overlay Districts within the Granby APZs, the Floodplain and Agriculture Preservation Overlay Districts. The Agricultural District is designed to promote agricultural uses and allows for the development of open space residential development, which encourages clustering residential uses in order to protect farmland and other natural resources.

Town of South Hadley

The Town of South Hadley has eight zoning districts that influence land development within the AICUZ footprint (Figure 6-3). These zoning districts include: two residential districts, Single-family Residential and Multi-family Districts; four Business Districts; one Industrial District; and an Overlay District. The zoning districts within APZ I off the end of Runway 15 end are mostly Industrial. The vast majority of the zoning within the APZ II is Single-family Residential District. The Business District allows a range of commercial business uses along Highways 202 and 33. The Overlay District, the Newton Street Smart Growth District, is on the northern edge of the APZ II. The district's allowed uses are designed to promote redevelopment at a village scale, with a mix of uses and higher-density residential development.

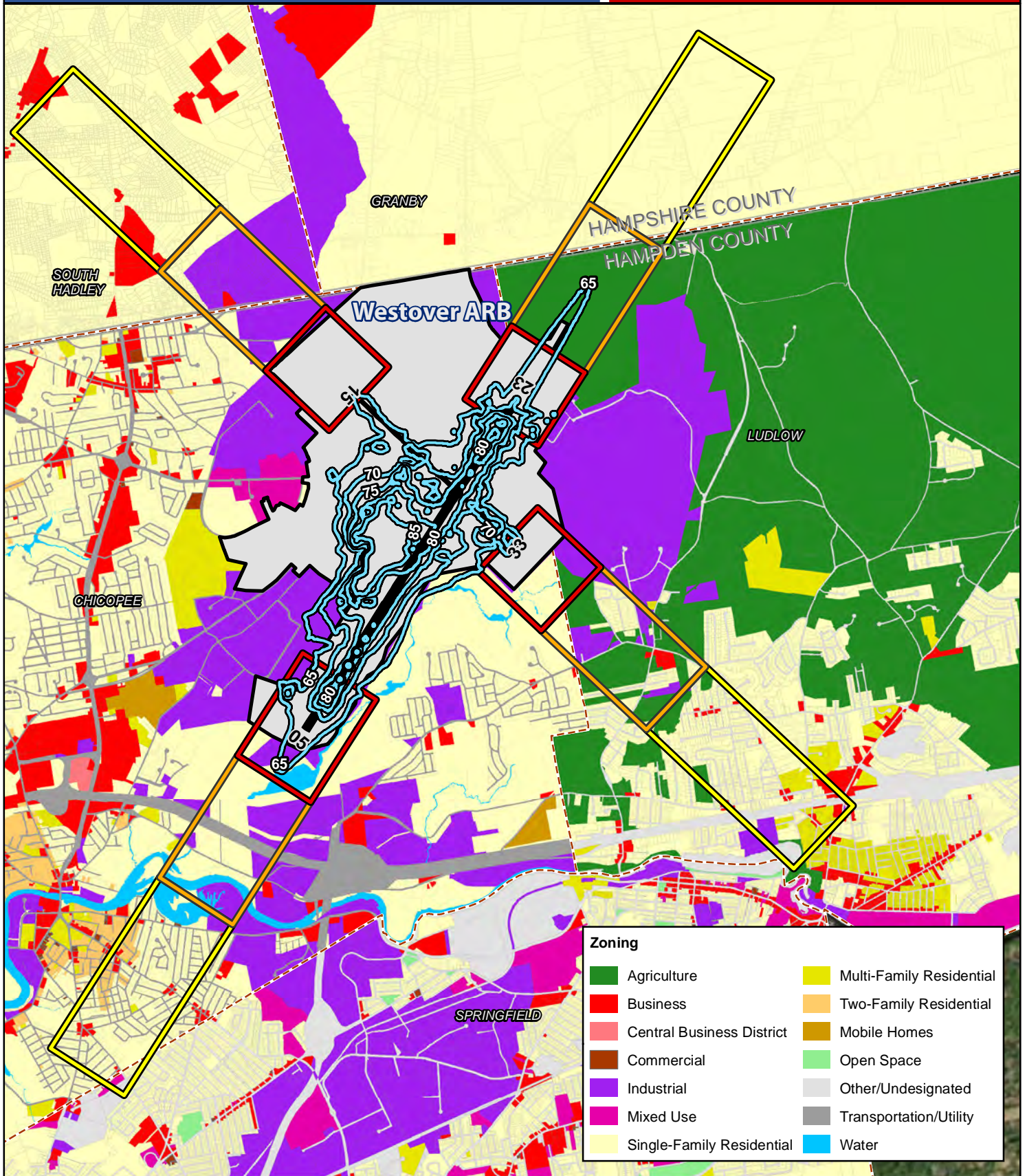
City of Springfield

The City of Springfield is minimally impacted by the Westover ARB AICUZ footprint (Figure 6-3). A small portion of the city's boundary is within the southeastern edge of APZ II off the Runway 05 end. There are only two zoning districts within the City that overlay APZ II (Figure 6-3). These include Single-family Residential and a Mixed-Use District that support low-density Single-family Residential dwellings and a mixture of commercial and public facilities.

Figure 6-3

Westover Air Reserve Base
Air Installations Compatible Use Zones

Zoning and 2020 AICUZ Noise Contours,
Clear Zones, and Accident Potential Zones



Legend

- | | | |
|-----------------------|----------------------------|----------------------------|
| Airfield Runway | Parcel Boundary | Clear Zone |
| City Boundary | Noise Contour (2020 AICUZ) | Accident Potential Zone I |
| County Boundary | | Accident Potential Zone II |
| Installation Boundary | | |

0 0.5 1 Miles





6.4 Land Use Compatibility Concerns

Certain land uses are incompatible with APZs and noise zones, while other land uses may be compatible or compatible under certain conditions (i.e., with restrictions). The Air Force has developed land use compatibility recommendations for Clear Zone, APZs and noise zones to foster land use compatibility. These recommendations, found in AFH 32-7084, serve as guidelines for both the placement of APZs and noise zones and land use around military air installations. The guidelines recommend that noise-sensitive land uses (e.g., houses, places of worship, schools) be placed outside high noise zones, and that people-intensive uses (e.g., apartments, theaters, shopping centers, sports arenas) should not be placed in APZs.

Land use describes how land is developed and managed, and is characterized by the dominant function occurring within an area. To compare land use consistently across jurisdictions, this analysis uses generalized land use classifications illustrating land use compatibility across common land use types. These generalized land use categories are not exact representations of the local community's land use designations, but combine similar land uses like those introduced in Section 6.3, Land Use and Proposed Development. The generalized land use categories utilized in the study are a balance between the local community's land use designations presented in their local plans, maps, and ordinances with adjustments to better align with the SLUCM standards utilized by the AFRC.

The land use compatibility analysis for Westover ARB is based on the Air Force Land Use Compatibility Guidelines (Tables A-1 and A-2 of Appendix A), which utilize the SLUCM standards to provide generalized land use classifications. Table 6-1 provides generalized compatibility guidelines for the SLUCM categories. Land use compatibility falls into one of four categories: Compatible; Compatible with Restrictions; Incompatible; and Incompatible with Exceptions. Incompatible land use may require incorporation of noise attenuation measures into the design and construction of structures and further evaluation and may require density limitations for land in APZs or other modifications in order to be deemed compatible.

**Table 6-1. Generalized Land Use Categories and Noise/Safety Compatibility**

Generalized Land Use Category ³	Noise Zone (dB DNL)						Accident Potential Zones		
	<65	65-69	70-74	75-79	80-84	85+	CZ	APZ I	APZ II
Residential	Yes	No ¹	No ¹	No	No	No	No	No	No ¹
Commercial	Yes	Yes	Yes ²	Yes ²	No	No	No	Yes ²	Yes ²
Industrial	Yes	Yes	Yes	Yes	Yes ²	No	No	Yes ²	Yes ²
Public/Quasi-Public/Institutional	Yes	Yes ²	Yes ²	Yes ²	No	No	No	No	Yes ²
Parks and Recreation	Yes	Yes ²	Yes ²	No	No	No	No	Yes ²	Yes ²
Open/Agriculture/Low Density	Yes	Yes ²	Yes ²	Yes ²	Yes ²	Yes ²	No	Yes ²	Yes ²
Undesignated	Yes	No	No	No	No	No	No	No	No

Notes:

Yes: Compatible

No: Incompatible

No¹: Incompatible with exceptions.Yes²: Compatible with restrictions.

This generalized table demonstrates the land compatibility guidelines. Refer to Appendix A for a more detailed SLUCM breakdown to utilize in determining land use compatibility.



6.4.1 Existing Land Use Compatibility Concerns

Westover ARB's 2020 AICUZ noise contours and APZs overlay areas off the installation pose a compatibility concern with certain types of land uses. For analysis purposes, the compatible concerns for Westover ARB were divided into two main discussions provided below: Compatibility Concerns within Noise Contours and Compatibility Concerns within APZs.

Compatibility Concerns within Noise Contours

The 2020 AICUZ noise contours that extend off the installation include 65 to 84-dB DNL noise contours. While the majority of the impacted areas are on Air Force land, there are limited areas of the local community located within these noise zones directly adjacent to the installation boundary. As shown in Table 6-2, there are a total of 102.95 acres of off-base land uses within the Westover noise contours. Land uses impacted by the noise contours include Industrial, Public/Government, Parks and Recreation and Other/Undesignated. As illustrated on Figure 6-4, the majority of existing land uses within the noise contours are considered compatible lands. The areas identified as compatible with restrictions within 65 to 84 dB DNL are mostly the Other/Undesignated uses within the higher noise contours along the southwest flight line installation boundary. This area is associated with the WMDC industrial park and, based on aeriels, the noise contours overlay hangar-type facilities and open space. The Parks and Recreation uses impacted by the 65 to 74-dB DNL contours are associated with the Chicopee Memorial State Park, the Westover Conservation Area, and the Westover Golf Course. These areas are considered compatible, but buildings and/or structures should limit people-intensive activities. Appropriate Noise Level Reduction (NLR) design and construction standards should be incorporated into any structures sited in high noise zones. Noise concerns and complaints are inherent to military operations. While noise contours and land use recommendations are based on average annoyance responses of a population, the sound associated with aircraft operations can extend beyond the plotted DNL noise contours. As a result, complaints can arise from outside the plotted noise contours. However, overall, the highest noise levels are concentrated at the source at Westover ARB and decrease considerably just beyond the base boundary.

**Table 6-2. Off-installation Existing Land Use Acreage Compatibility within AICUZ Noise Zones**

Designation	Generalized Land Use Category ³	Noise Zone (dB DNL) (acres)					Total
		65-69	70-74	75-79	80-84	85+	
Compatible	Industrial	0.06	--	--	--	--	.06
	Public/Government	11.24	0.23 ²	--	--	--	11.47
	Parks and Recreation	46.06	0.18 ²	--	--	--	46.24
	Other/Undesignated	25.28 ²	16.40 ²	2.45 ²	1.05 ²	--	45.19
Incompatible	n/a ^(A)	--	--	--	--	--	--
Subtotals	Compatible	82.64	16.81	2.45	1.05	--	102.95
	Incompatible^A	--	--	--	--	--	--
TOTAL		82.64	16.81	2.45	1.05	--	102.95

Notes:

All contour areas on-installation are excluded from the counts.

^(A) There are no existing land uses within Westover ARB 2020 Noise Contours that are deemed incompatible.

¹ Incompatible with exceptions.

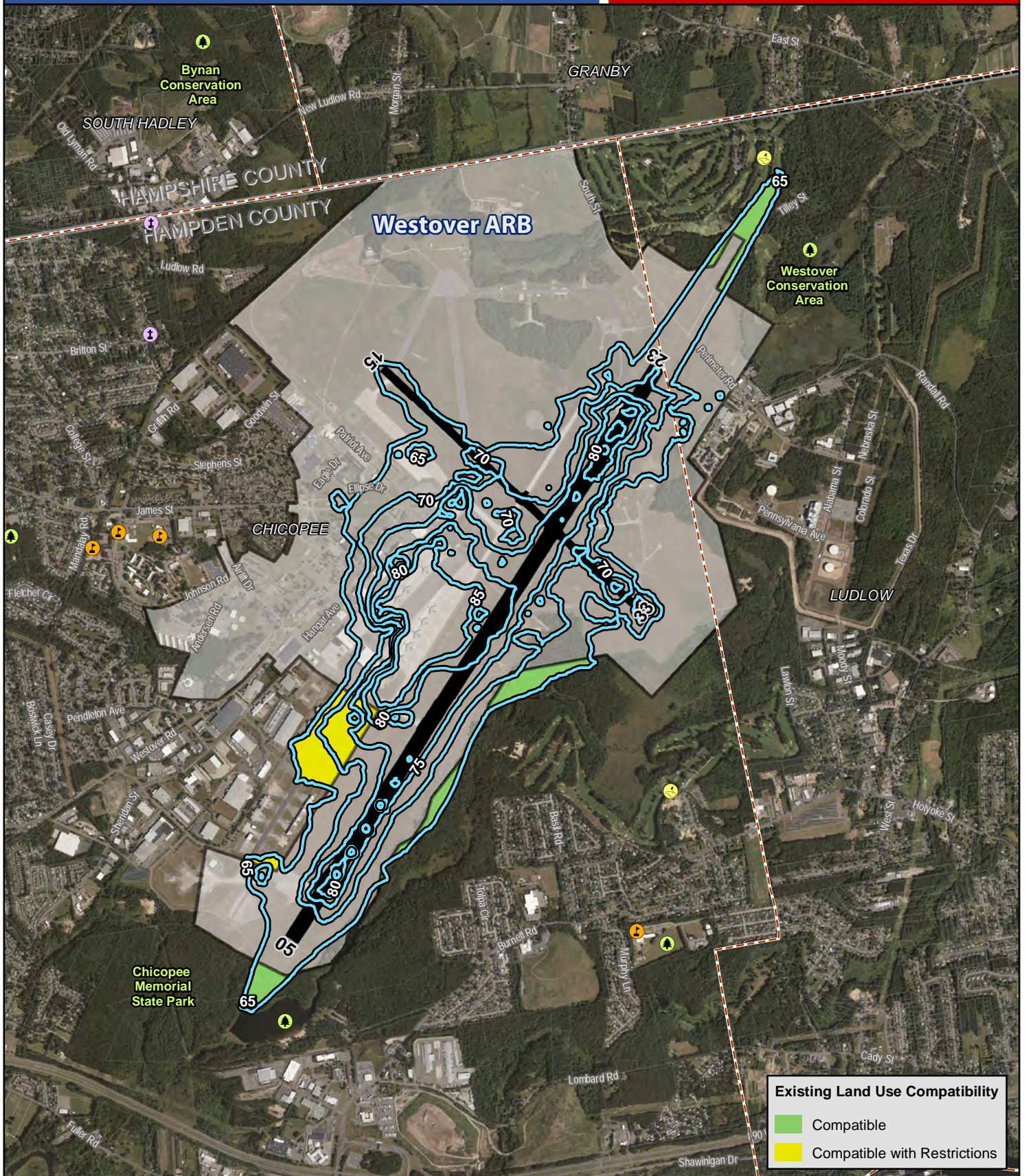
² Compatible with restrictions.

³ Refer to Appendix A for more details on Air Force land use compatibility recommendations.

Figure 6-4

Westover Air Reserve Base
Air Installations Compatible Use Zones

Incompatible Existing Land Use within Noise Contours





Compatibility Concerns within APZs

As illustrated on Figure 6-6, the 2020 AICUZ CZs and APZs for Westover ARB extend off the installation and pose a compatibility concern with certain types of land uses. As shown in Table 6-3, there are a total of 687 acres of land use within the CZs and APZs that are deemed incompatible or incompatible with exceptions.

The majority of the off-base lands within the CZs are off the end of Runway 05 and 33. A small piece of the Runway 05 CZ (northwest CZ) extends off base, but the use is considered compatible since it is an open natural space with no structures. Approximately 232 acres of existing land use are deemed incompatible within the CZs. The CZ for Runway 05 (south CZ) extends over Parks and Recreation uses associated with the Slate Conservation Area, and Chicopee Memorial State Park just south of the base (Figure 6-5). There are buildings and structures within the state park, including bath houses, picnic areas, restrooms, beaches, trails, and park offices, that are within the CZs. The CZ for Runway 33 (east CZ) extends over Parks and Recreation uses associated with the Chicopee Country Golf Club. The areas impacted do not include club house facilities, only the open green areas. Most land uses in the CZs, especially people-intensive land uses, are considered incompatible with military aircraft operations, and the CZs should remain free of any structure or potential obstructions per Air Force AICUZ compatibility guidelines.

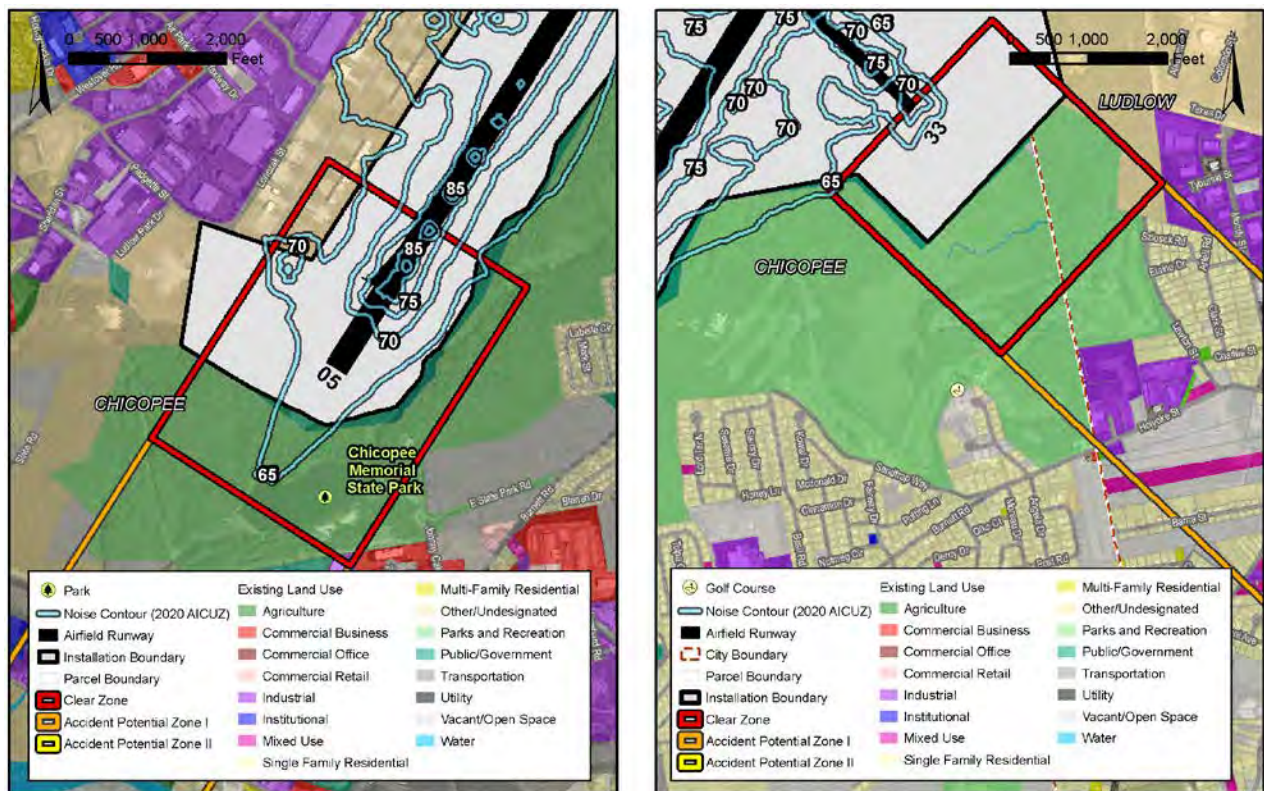
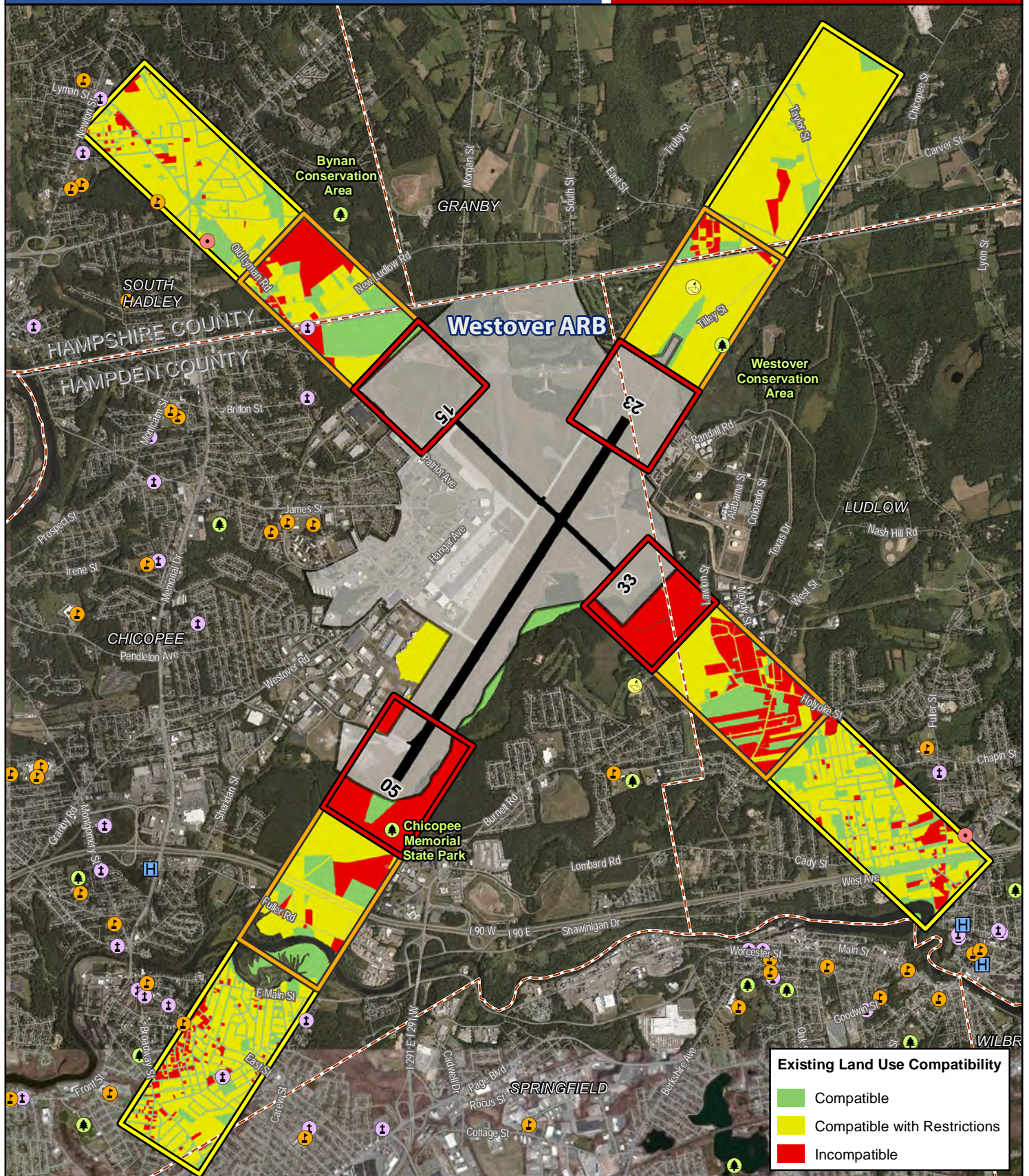


Figure 6-5. Clear Zones of Runway 05 and 33 end with Existing Land Use

Figure 6-6

Westover Air Reserve Base
Air Installations Compatible Use Zones

Incompatible Existing Land Use within
Clear Zones and Accident Potential Zones





The dominant incompatible land uses within APZ I are Single-family and Multi-family Residential. Approximately 161 acres of Residential uses are within Westover ARB's APZ I for all runway ends. The main areas include the Single-family and Multi-family Residential land uses within APZ I of Runway end 33 along Burnett Road, Lawton Street, and Holyoke Street (Figure 6-8). The residential units including mostly traditional "stick-built" homes with limited mobile homes (including RV parks). Others areas of incompatibility with APZ I include a small area of Single-family Residential uses within the Town of Granby along Sherwood Drive off of East Street. There are also Single-family Residential land uses along Old Lyman Road that fall within APZ I of Runway 15 (Figure 6-7). There are Institutional uses such as churches located within this same area. Residential uses within APZ I are considered an incompatible land use per AICUZ Instruction recommendations and should be prohibited. Churches are considered people-intensive land uses and are incompatible within APZ I.

There are approximately 110 acres of land uses designated as Public/Government that are deemed incompatible with exceptions per AICUZ Instructions (Table 6-3). Public and government facilities and/or services are incompatible; however, public lands utilized for passive recreational activities and/or are open natural areas are considered compatible as long as they are low intensity and have no playgrounds. The incompatibility with exceptions of the Commercial and Mixed-Use land uses within APZ I are dependent on density and intensity of uses (Refer to Appendix A for more detail).

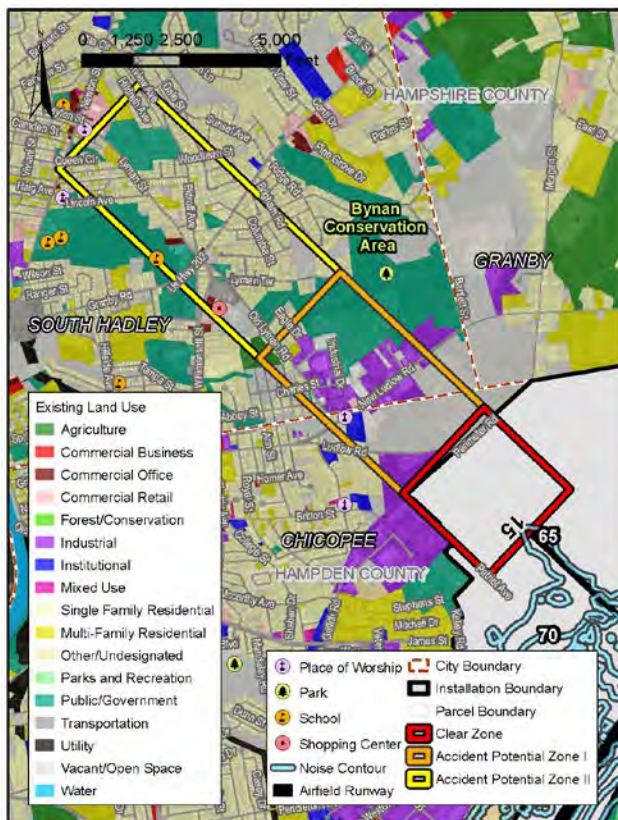


Figure 6-7. APZ I and II of Runway 15 end with Existing Land Use

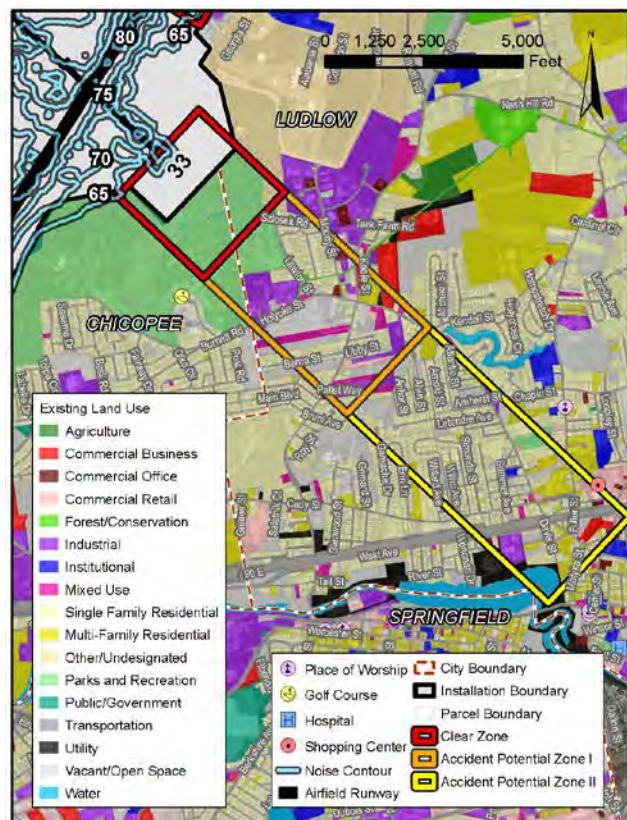


Figure 6-8. APZ I and II of Runway 33 end with Existing Land Use



The APZ II zones for Westover ARB overlay approximately 1,883 acres of land within the various jurisdictions surrounding the base. The dominant land uses within APZ II are Single-family and Multi-family Residential uses. Single-family uses within APZ II are compatible with restrictions as long as they do not exceed 2 dwelling units per acre (Du/Ac) in density. However, it should be noted many of the Single-family developments surrounding Westover ARB are above the recommended density level. There are a total of approximately 118 acres of Multi-family Residential uses and 4.2 acres of Institutional uses (i.e., schools, hospitals, and churches) within APZ II deemed incompatible per Air Force Instructions. Areas include the APZ II of the end of Runway 33 extending within the Town of Ludlow where clusters of Multi-family uses are located near the I-90 corridor and the Big Y Market. These include large Multi-family apartment complexes (e.g., Waters Edge). Incompatible uses within APZ II of Runway 15 are the Residential uses within South Hadley, including Single-family dwellings and Multi-family developments along Lyman Street that exceed 2 Du/Ac in density. There are additional Multi-family uses (portion of the Stoney Brook Condos) around the Woodlawn Shopping Center that fall within APZ II. In addition, there are Institutional uses such as churches and schools (i.e., Plains School) located within this same area. Other areas of concern regarding compatibility within APZ II of Runway 05 include the mix of Single-family and Multi-family Residential uses in the Chicopee Falls area (Figure 6-10). This area is heavily developed and considered incompatible or compatible with restrictions. There are community parks and churches throughout the area. Residential uses exceeding 2 Du/Ac in density within APZ II are considered incompatible. Churches, places of worship, schools, and other types of gathering places are considered people-intensive land uses and incompatible within APZs.

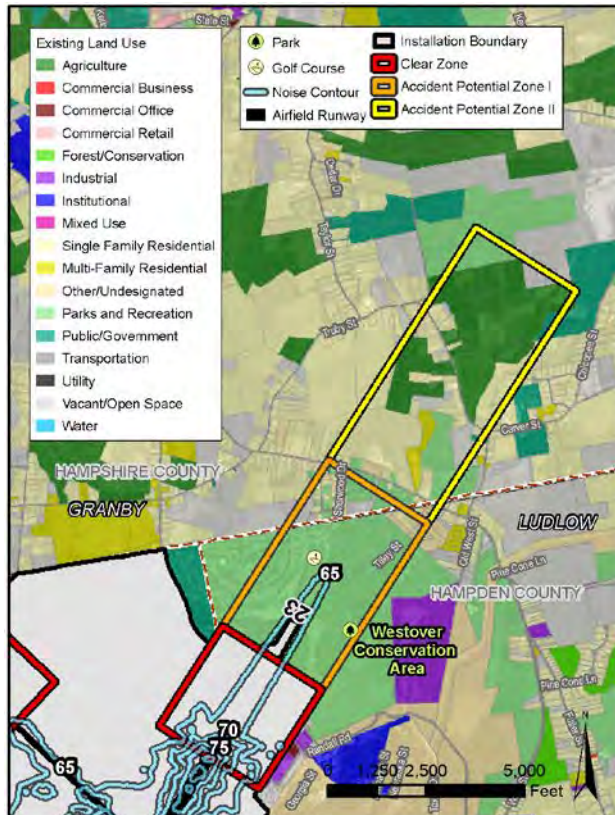


Figure 6-9. APZ I and II of Runway 23 end with Existing Land Use

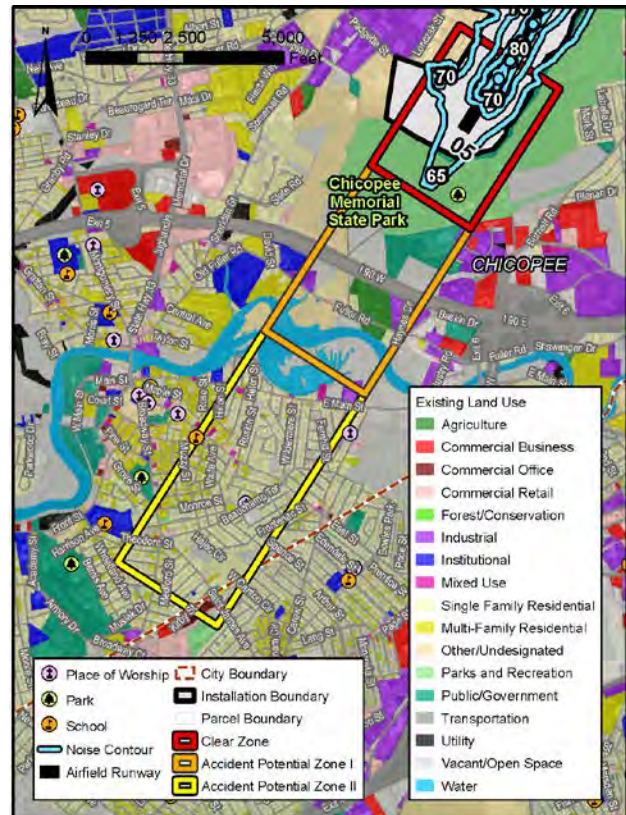


Figure 6-10. APZ I and II of Runway 05 end with Existing Land Use



Table 6-3. Off-installation Existing Land Use Acreage Compatibility within Clear Zones/Accident Potential Zones

Designation	Generalized Land Use Category ³	CZ	APZ I	APZ II	Total
Compatible	Agriculture	--	27.31 ²	205.25 ²	232.56
	Single-family Residential	--	--	859.44 ^{2(A)}	859.44
	Multi-family Residential	--	--	--	--
	Commercial Business	--	--	6.53 ²	6.53
	Commercial Office	--	--	8.46 ²	8.46
	Commercial Retail	--	--	25.13 ²	25.13
	Industrial	--	163.47 ²	20.37 ²	183.84
	Institutional	--	--	--	--
	Mixed Use	--	--	9.96 ²	9.96
	Public/Government	--	--	114.66 ²	114.66
	Parks and Recreation	--	411.84 ²	76.52 ²	488.36
	Forest/Conservation	--	2.41	--	2.41
	Vacant/Open Space	9.72	276.18	170.94	456.84
	Utility	--	0.74 ²	6.55	7.29
	Transportation	0.25 ²	78.57 ²	246.84	325.66
	Other/Undesignated	--	48.70 ²	10.80 ²	59.5
Incompatible	Agriculture	--	--	--	--
	Single-family Residential	--	151.96	--	151.96
	Multi-family Residential	--	9.09	117.32	126.41
	Commercial Business	0.05	7.96 ¹	--	8.01
	Commercial Office	--	2.79 ¹	--	2.79
	Commercial Retail	--	8.92 ¹	--	8.92
	Industrial	4.38	--	--	4.38
	Institutional	--	8.27	4.21	12.48
	Mixed Use	--	21.59 ¹	--	21.59
	Public/Government	14.36	109.65 ¹	--	123.77
	Parks and Recreation	218.37	--	--	205.91
	Forest/Conservation	--	--	--	--
	Vacant/Open Space	--	--	--	--
	Utility	--	--	--	--
	Transportation	--	--	--	--
	Other/Undesignated	8.37	--	--	8.04
Subtotals	Compatible	9.97	1,009.22	1,761.45	2,780.64
	Incompatible	245.53	320.23	121.53	687.29
TOTAL		255.50	1,329.45	1,882.98	3,467.93

Notes:

All contour areas on-installation are excluded from the counts.

^(A) Single family Residential uses should not exceed the recommended density limits of 2 Du/Ac within APZ II.

¹ Incompatible with exceptions

² Compatible with restrictions

³ Refer to Appendix A for more details on Air Force land use compatibility recommendations.



6.4.2 Future Compatibility Concerns

Future development of land is outlined in local land use plans and regulations that are developed and adopted by the local authorities. These plans include zoning maps and development plans that identify what land use type and intensity will be allowed in specific areas. Allowed uses within the various zoning districts are potentially incompatible in certain noise contours and APZs. Based on the overall zoning and future plans available, development around Westover ARB is expected to follow current development trends of medium- to high-density Residential, Commercial, and Industrial land uses. Future development in Vacant/Undeveloped areas is anticipated to be similar to the type and mix of land uses, with predominantly Residential development and supporting community Commercial development, as well. The City of Chicopee and Towns of Ludlow and South Hadley are largely built-out, and these cities/towns cannot expand due to shared jurisdictional boundaries with each other and neighboring communities. Based on zoning, the primary source of future compatibility concerns within the 2020 AICUZ APZ would most likely be from redevelopment of in-fill of vacant parcels for Single-family and Multi-family Residential dwellings, as well as other people-intensive Commercial land uses, such as shopping centers, public assembly areas, restaurants, churches, and schools. The areas with the greatest potential for development that may result in an increase in Residential development and density are within the APZs of Runway 23 within Towns of Ludlow and Granby. These areas include some Vacant and Agriculture lands that are projected for Single-family Residential, which indicates possible density increases for those areas. Redevelopment opportunities within the AICUZ footprint exist primarily for Commercial and Multi-family projects. The land areas most likely to experience new Commercial developments with Mixed- Use Residential are along the transportation corridors and interchanges where existing infrastructure and services are present (Figure 6-11).

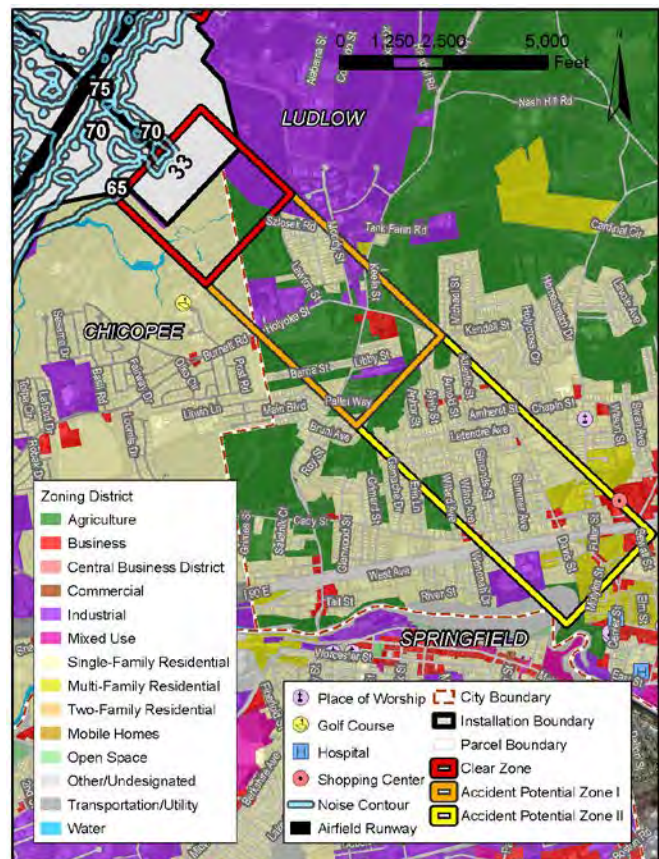


Figure 6-11. APZ I and II of Runway 33 end with Zoning



Potentially future compatibility concerns are highlighted below.

- Runway 33 CZs, APZ I and II: Increased recreational uses and activities within the CZs; increased Residential densities with in-fill development; potential increase in Multi-family development within APZ II near I-90 corridor within Town of Ludlow.
- Runway 05 CZs, APZ I and II: Increased recreational uses and activities at the Chicopee State Park within the CZs and 65 to 69-dB DNL noise zones; increased residential densities with in-fill development within APZs within the City of Chicopee.
- Runway 23 APZ I and II: Increased recreational uses and activities within the APZ I and 65-69 dB DNL noise zones within the Town of Granby; however, the community's economic development is focused mainly on the Route 202 corridor.
- Runway 15 APZ I and II: Increased residential densities with in-fill development (Figure 6-12). Potential increase in Mixed-Use Residential and Multi-family developments within APZ II (e.g., the former Big Y Shopping Center, a mixed-use development on Newton Street, South Hadley). This proposed mixed-use development is sited within Runway 15 APZ II. The development plan includes a three-story, mixed-use development on approximately 1.58 acres on the north edge of APZ II. The project was previously stalled because project did not qualify for Chapter 40B Department of Housing and Urban Development (HUD) tax credits. Chapter 40B HUD Tax Credit Incentive is a state statute that enables the local Zoning Boards of Appeals to approve affordable housing developments under flexible rules if at least 20 to 25 percent of the units have long-term affordability restrictions. This program has resulted in past proposed projects within Westover ARB's AICUZ footprint that pose a compatibility concern. Similar actions and redevelopment areas should be monitored to ensure Air Force guidance is considered.

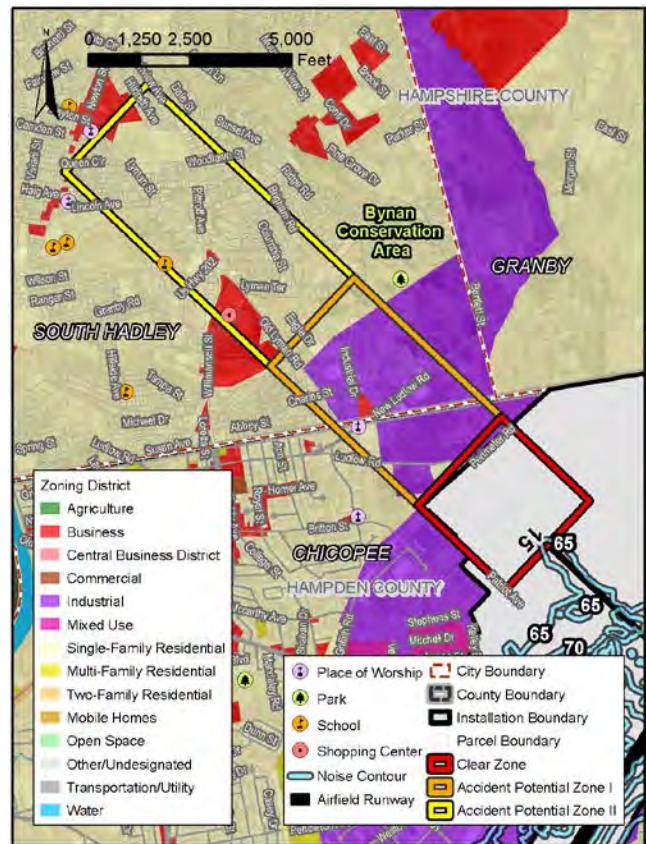


Figure 6-12. APZ I and II of Runway 15 end with Zoning



The Air Force's Land Use Compatibility Guidelines found within AFH 32-7084 recommend compatible land uses within noise contours, CZs, and APZs. Incompatible land uses are discouraged by the DoD through community outreach and education; however, enacting compatible development and reducing incompatibilities is the purview of local jurisdictions.



7.0 Implementation

Implementation of the AICUZ Study must be a joint effort between Westover ARB and the surrounding communities. This AICUZ Study provides the best source of information to ensure land use planning decisions made by local municipalities are compatible with a future installation presence. This chapter discusses the roles of all partners in the collaborative planning process.

7.1 Military Role

The goal of the AICUZ Program is to assist local, regional, state, and federal officials in protecting the public health, safety, and welfare by promoting long-term land use compatible with military operations; and to protect Air Force operational capability from the effects of incompatible land use. This program helps mitigate noise and safety concerns for the surrounding communities and advises these communities about potential impacts from flight operations on the safety, welfare, and quality of life of their citizens. The Air Force promotes compatible partnerships between its installations and surrounding communities by being a good neighbor.

Westover ARB is responsible for flight safety, noise abatement, and participation in existing local jurisdictional land use planning processes as part of its AICUZ Program responsibilities. Air Force policy and guidance requires that installation leadership periodically review existing practices for flight operations and evaluate these factors in relationship to populated areas and other local situations.

Westover ARB will:

- Ensure that, wherever possible, air operations planners route flights over sparsely populated areas to reduce the exposure of lives and property to a potential accident.
- Periodically review existing traffic patterns, instrument approaches, weather conditions, and operating practices and evaluate these factors in relationship to populated areas and other local conditions. The purpose of this review is to limit, reduce, and control the impact of noise from flying operations on surrounding communities.
- Continue the various community forums and collaboration between the installation and surrounding stakeholders to discuss land use and other issues of concern.
- Continue to hold land use planning meetings to provide a forum for agencies to meet and discuss future development and to address issues that may surface because of new proposals.
- Continue to participate in and provide input on the joint land use study (JLUS) efforts.



- Provide copies of the 2020 AICUZ Study to local, county, and regional planning departments and zoning administrators to aid in the planning process and provide copies of the AICUZ Study to appropriate state and federal agencies.
- The installation will continue to pursue funding sources through existing federal government programs, such as DoD's Readiness and Environmental Protection Integration, for acquisition of private property within the CZ and APZs.
- The installation will continue to pursue opportunities to work within AICUZ limitations to develop renewable energy and/or resiliency projects.
- The installation will continue to coordinate renewable/resiliency projects with regional planning departments and zoning managers.

Preparation and presentation of this Westover ARB AICUZ Study is one phase in continuing Air Force participation in the local planning process. The Air Force recognizes that, as the local community updates its land use plans, Westover ARB must be ready to provide additional input, as needed.

7.2 Westover Metropolitan Development Corporation/Joint Civilian Use Partner Roles

The Westover ARB will continue to work with the WMDC under the Joint Use Agreement and will work to strengthen the existing relationship. The WMDC can help promote policies and regulations that prohibit development that may interfere with both civilian and base flight operations and training. Other recommendations for the WMDC include the following:

- Continue to solicit consultation with Westover ARB on proposed plans related to the Westover Metropolitan Airport operations and economic development actions related to the adjacent industrial parks.
- Continue to participate in the various meetings and working groups with Westover ARB representatives to discuss land use and mission concerns and major development proposals that could affect both civilian and military flight operations.
- Continue to be a valuable advocate for Westover ARB within the community and encourage local planning authorities to implement the recommendations presented in this 2020 AICUZ Study, as well as the implementation of the JLUS.
- Continue to pursue aviation easements for lands within the Westover ARB AICUZ footprint. Continue coordination with Westover ARB on working with property owners of the remaining privately held CZ parcels to purchase additional easements.



7.3 Commonwealth/Regional Roles

The AFRC can work with the state and regional planning authority. The MASS-TF can help promote state-wide regulations that prohibit development that may interfere with or compromise flight operations and training. The MASS-TF advises state and local officials on defense-related issues and provides financial assistance through grants and loans. The MASS-TF can sponsor the development of various master plans and economic studies with recommendations regarding policies and plans to support the long-term military mission viability, including best methods for communities to enhance their relationship with military installations and economic development. The MASS-TF also provides the installations with an effective avenue to communicate and coordinate with state legislators.

The regional planning commission, PVPC, can help control incompatible growth by continuing to aid and support local governments in the development of policies, plans, and regulations necessary for the physical and economic expansion of the region. PVPC served as the JLUS sponsor to develop and implement the Westover ARB JLUS through a Department of Defense Office of Economic Adjustment (OEA) grant. JLUSs have been conducted at different times throughout the region surrounding Westover ARB. The Westover ARB JLUS was developed to incorporate common strategies between the various jurisdictions in the area. The PVPC can help promote and facilitate the update to the Westover ARB JLUS to ensure the future compatibility between public and private land uses in their member communities. The periodic reviews and updates to the surrounding jurisdiction local plans offer an opportunity to revise the AICUZ-specific information within them and implement targeted zoning and land use controls to prevent future incompatibility.

Recommendations from the JLUS that are connected to the AICUZ program's goals and policies included (PVPC 2018):

- **Municipal Master Plans:** Incorporate Westover ARB JLUS related concerns into local master plans. The Town of South Hadley and City of Chicopee are updating their master plans over the next couple of years and should include consideration of the location CZs and APZs, and potential related conflicts, into local planning efforts. These concerns should be highlighted in all appropriate plans, including corridor plans, neighborhood plans, open space and recreation plans, economic development plans, and any other plans that are impacted by the proximity to Westover ARB.
- **Municipal Maps:** Request that communities highlight CZs and APZs on all applicable town maps. This will help to communicate the location of these areas of concern to the larger community. Residents, businesses, and developers should be aware of these locations and of potential conflicts with Westover ARB's operations.
- **Aircraft Flight Overlay Districts:** Establish new zoning Overlay Districts modeled on Ludlow's example. This zoning district, which is designed to prohibit large



congregations of people, covers both APZs and CZs. State legislation is needed to restrict certain uses, such as churches, places of worship, and schools. Communities should request special legislation to limit these uses. This recommendation also includes the consideration of an overarching legislative change to allow the restriction of certain uses within areas of concern related to any military installation in Massachusetts.

- **Avigation Easements:** Local jurisdictions should consider purchasing Avigation Easements at appropriate locations to ensure continued access of aircraft. These easements are especially important in all CZs that contain privately held land. WMDC purchased Avigation Easements on ten properties in the vicinity of the base between 2008 and 2013. Westover ARB will work with property owners of the remaining privately held CZ parcels to purchase additional easements.
- **Work with the Massachusetts Department of Conservation and Recreation:** Westover ARB shall work with the Department of Conservation and Recreation to address compatibility issues with Chicopee State Park. Consideration will be given to the purchase of avigation easements and to tree removal that will address problem trees in flight paths.
- **Deed Notification (i.e., Real Estate Disclosures):** Consider requesting notification in deeds or other disclosure before title transfer of properties within APZs. Notification of the base location and flight paths at the time of property transfer would ensure that Westover ARB neighbors are aware of potential compatibility concerns. There are multiple ways this could be done, including partnering with the Realtor's Association of the Pioneer Valley to encourage notification, considering state legislation that would be needed to require notification in deeds, asking the local communities to add APZs to their assessor's data (supplemental field), and requesting that property owners notify renters.
- **Joint Westover ARB/Community Meetings:** Recommend that Westover ARB and the surrounding communities meet regularly, once or twice per year. This recommendation is designed to keep communication channels open between Westover ARB and the communities to discuss challenges and implementation. Consider the development of a Memorandum of Understanding to guide coordination and scheduling moving forward. Include invitations to the general public or establish separate public meetings.

7.4 Local Government Role

The role of the local government is to enact planning, zoning, and development principles and practices that are compatible with the installation and protect the installation's mission. The residents of the surrounding community have a long history of working with personnel from Westover ARB. Adoption of the following recommendations during the revision of relevant land use planning or zoning regulations will strengthen this relationship, increase the health and safety of the public, and protect the integrity of the installation's flying mission:



- Local government planners continue to consider AICUZ policies and guidelines when developing or revising city comprehensive plans and use AICUZ overlay maps and Air Force Land Use Compatibility Guidelines (see Appendix A) to evaluate existing and future land use proposals. The Town of South Hadley and City of Chicopee are in the process of updating their master plans. They should take this opportunity to include consideration of the recommended guidelines for uses with Westover ARB's AICUZ footprint and potential related actions into local planning efforts.
- Continue to solicit consultation with Westover ARB on new development applications or "changed use of property" to afford the Air Force with an opportunity to assess those applications for potential impacts on defense missions. Notification and coordination for development applications for property located within the HAFZ Consultation Zone of Westover ARB has been a valuable procedure for minimizing potential incompatible development within the AICUZ footprint.
- Modify the existing zoning bylaws and overlay ordinances to reflect the revised 2020 AICUZ footprint to incorporate compatible land uses outlined in the AICUZ Study.
- Local government and county planners should establish procedures to consult on land use matters within overlapping extra-territorial jurisdictions near Westover ARB. Local governments review their capital improvement plan, infrastructure investments, and development policies to ensure they do not encourage incompatible land use patterns near Westover ARB, with particular emphasis on utility extension and transportation planning.
- Local governments implement height and obstruction ordinances that reflect current Air Force and 14 CFR 77 requirements, presented in this study as HAFZs.
- Fair disclosure ordinances be enacted to require disclosure to the public for those AICUZ items that directly relate to military operations at Westover ARB.
- Where allowed, local governments should require real estate disclosure for individuals purchasing or leasing property within noise zones or CZs/APZs.
- Continue to monitor, modify, and enforce the building/residential codes to ensure that any new construction near Westover ARB has the recommended noise level reduction measures incorporated into the design and construction of structures.
- Government planning bodies continue to monitor proposals for tall structures, such as wind turbines and communication towers, to ensure that new construction does not pose a hazard to navigable airspace around Westover ARB. Where appropriate, coordinate with the FAA on the height of structures.
- Local government land use plans and ordinances are updated to reflect the 2019 AICUZ footprint and recommendations for development in CZs/APZs and noise zones.



- Local governments continue to consult with Westover ARB on planning and zoning actions that have the potential to affect installation operations.
- Continue to encourage and promote Air Force leadership to be ex officio members on boards, commissions, and regional councils addressing long-range development and other planning policies.
- Continue to participate in the various working group of city, county, and Westover ARB representatives to discuss land use concerns and major development proposals that could affect military operations.

7.5 Community Role

Neighboring residents and installation personnel have a long-established history of working together for the mutual benefit of the Westover ARB mission and local community. Adoption of the following recommendations will strengthen this relationship, protect the health and ensure the safety of the public, and help protect the integrity of the installation's defense mission:

- **Real Estate Professionals and Brokers:**
 - Know where noise zones and CZs/APZs encumber land near the air installation and invite installation representatives to brokers' meetings to discuss the AICUZ Program with real estate professionals.
 - Utilize Real Estate Disclosers to notify all prospective buyers of properties within areas greater than 65 dB DNL or within the CZs/APZs .
 - Require the local Realtor's Multiple Listing Service to disclose noise zones and CZs/APZs for all listings.
- **Developers:**
 - Know where the noise zones and CZs/APZs encumber land near the air installation; consult with Westover ARB on proposed developments within the AICUZ footprint.
 - Participate in local discussions regarding existing zoning ordinances and subdivision regulations to support the compatible land uses outlined in this AICUZ Study through implementation of a zoning Overlay District based on noise contours and CZs/APZs.
- **Local Citizens:**
 - Participate in local forums with the installation to learn more about the installation's missions.
 - Become informed about the AICUZ Program and learn about the program's goals, objectives, and value in protecting the public's health, safety, and welfare.



- When considering property purchases, ask local real estate professionals, city planners, and installation representatives about noise and accident potential.

While the installation and community are separated by a fence, it is recognized that Westover ARB activities and operations may affect the community. Likewise, community activities and development decisions can affect Westover ARB's ability to complete its local hometown mission. The local military and community goals can be mutually achieved through a combination of collaborative planning and partnerships, open communication, and close relationships. The AICUZ Study can provide a foundation on which related communication can be based to ensure that the community and its hometown military installation can continue to coexist for many years.

Questions about the Westover ARB AICUZ Program may be directed to the installation PA Office at (413) 557-2020 or email at 439aw.pa@us.af.mil.

Westover ARB also posts information on the installation website, including alerts about upcoming aircraft operations that are able to be shared publicly:

- Website: www.westover.afrc.af.mil ;
- Facebook: <https://www.facebook.com/Westover.Patriot/>; and
- Twitter: <http://twitter.com/439Westover>.



8.0 References

- City of Springfield. 2020. "Office of Planning & Economic Development." Accessed April 22, 2020. <https://www.springfield-ma.gov/planning/>.
- Department of Defense (DoD) Office of Economic Adjustment and Pioneer Valley Planning Commission (PVPC). 2004. Westover Air Reserve Base/ Westover Metropolitan Airport Joint Land Use Study Update.
- _____. 2018. Westover Air Reserve Base Joint Land Use Study, December 2018.
- MassDevelopment. n.d. "Military Asset and Security Strategy Task Force." Accessed April 25, 2020. <https://www.massdevelopment.com/what-we-offer/key-initiatives/defense-sector/masstf>.
- Pioneer Valley Planning Commission (PVPC). 2014. Valley Vision 4: The Regional Land Use Plan for the Pioneer Valley, February 2014.
- _____. 2018. Westover Air Reserve Base Joint Land Use Study. Springfield, MA. December 2018.
- The Patriot. 1998. "Westover excels on history test." Westover Flyer, Volume 25, Number 11.
- _____. 2018. "End of a Patriot Era, The stories of Westover for 44 years. Beginning a new Patriot Era, Final upgraded C-5M lands at Westover, makes USAF history." Volume 49, Number 4.
- United States Air Force (Air Force). 2013. Air Installation Compatible Use Zone (AICUZ) Study. Westover Air Reserve Base, Massachusetts, Volume 1.
- _____. 2017. KC-46A Third Main Operating BASE (MOB 3) Beddown Environmental Impact Statement (EIS), Volume 1.
- _____. 2019. Westover Air Reserve Base Economic Impact Assessment, October 2019.
- United States Air Force Reserve Command. 2020. Final Westover Air Reserve Base 2020 AICUZ Noise Modeling Operational Data prepared by Blue Ridge Research and Consulting, LLC, May 2020.
- Town of Granby. 2020. Permitting Guide. Accessed April 22, 2020. https://www.granby-ma.gov/sites/granbypma/files/uploads/200123_final_granby_permitting_guide.pdf
- Town of South Hadley. n.d. "Planning Board." Accessed April 22, 2020. <https://www.southhadley.org/864/Planning-Board>.
- U.S. Census Bureau. 2017. 2020 - 2017 ACS 5-Year Data Profiles. Accessed April 22, 2020. <https://www.census.gov/programs-surveys/acs/news/data-releases.2017.html>.



This page left intentionally blank.



Appendix A. Land Use Compatibility Tables

Table A-1. Land Use Compatibility Recommendations in APZs and CZs

SLUCM NO.	LAND USE NAME	CLEAR ZONE Recommendation ¹	APZ-I Recommendation ¹	APZ-II Recommendation ¹	DENSITY Recommendation ¹
10	Residential				
11	Household Units				
11.11	Single units: detached	N	N	Y ²	Maximum density of 2 Du/Ac
11.12	Single units: semi-detached	N	N	N	
11.13	Single units: attached row	N	N	N	
11.21	Two units: side-by-side	N	N	N	
11.22	Two units: one above the other	N	N	N	
11.31	Apartments: walk-up	N	N	N	
11.32	Apartment: elevator	N	N	N	
12	Group quarters	N	N	N	
13	Residential hotels	N	N	N	
14	Mobile home parks or courts	N	N	N	
15	Transient lodgings	N	N	N	
16	Other residential	N	N	N	
20	Manufacturing³				
21	Food and kindred products; manufacturing	N	N	Y	Maximum FAR 0.56 IN APZ II
22	Textile mill products; manufacturing	N	N	Y	Maximum FAR 0.56 IN APZ II
23	Apparel and other finished products; products made from fabrics, leather and similar materials; manufacturing	N	N	N	
24	Lumber and wood products (except furniture); manufacturing	N	Y	Y	Maximum FAR of 0.28 in APZ I & 0.56 in APZ II
25	Furniture and fixtures; manufacturing	N	Y	Y	Maximum FAR of 0.28 in APZ I & 0.56 in APZ II
26	Paper and allied products; manufacturing	N	Y	Y	Maximum FAR of 0.28 in APZ I & 0.56 in APZ II


Table A-1. Land Use Compatibility Recommendations in APZs and CZs

SLUCM NO.	LAND USE NAME	CLEAR ZONE Recommendation ¹	APZ-I Recommendation ¹	APZ-II Recommendation ¹	DENSITY Recommendation ¹
27	Printing, publishing, and allied industries	N	Y	Y	Maximum FAR of 0.28 in APZ I & 0.56 in APZ II
28	Chemicals and allied products; manufacturing	N	N	N	
29	Petroleum refining and related industries	N	N	N	
30	Manufacturing³ (continued)				
31	Rubber and miscellaneous plastic products; manufacturing	N	N	N	
32	Stone, clay, and glass products; manufacturing	N	N	Y	Maximum FAR 0.56 in APZ II
33	Primary metal products; manufacturing	N	N	Y	Maximum FAR 0.56 in APZ II
34	Fabricated metal products; manufacturing	N	N	Y	Maximum FAR 0.56 in APZ II
35	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks	N	N	N	
39	Miscellaneous manufacturing	N	Y	Y	Maximum FAR of 0.28 in APZ I & 0.56 in APZ II
40	Transportation, communication, and utilities^{3, 4}				
41	Railroad, rapid rail transit, and street railway transportation	N	Y ⁶	Y	Maximum FAR of 0.28 in APZ I & 0.56 in APZ II
42	Motor vehicle transportation	N	Y ⁶	Y	Maximum FAR of 0.28 in APZ I & 0.56 in APZ II
43	Aircraft transportation	N	Y ⁶	Y	Maximum FAR of 0.28 in APZ I & 0.56 in APZ II
44	Marine craft transportation	N	Y ⁶	Y	Maximum FAR of 0.28 in APZ I & 0.56 in APZ II
45	Highway and street right-of-way	Y ⁵	Y ⁶	Y	Maximum FAR of 0.28 in APZ I & 0.56 in APZ II


Table A-1. Land Use Compatibility Recommendations in APZs and CZs

SLUCM NO.	LAND USE NAME	CLEAR ZONE Recommendation ¹	APZ-I Recommendation ¹	APZ-II Recommendation ¹	DENSITY Recommendation ¹
46	Automobile parking	N	Y ⁶	Y	Maximum FAR of 0.28 in APZ I & 0.56 in APZ II
47	Communication	N	Y ⁶	Y	Maximum FAR of 0.28 in APZ I & 0.56 in APZ II
48	Utilities ⁷	N	Y ⁶	Y ⁶	Maximum FAR of 0.28 in APZ I & 0.56 in APZ II
48.5	Solid waste disposal (landfills, incinerators, etc.)	N	N	N	
49	Other transportation, communication, and utilities	N	Y ⁶	Y	See Note 6 below
50	Trade				
51	Wholesale trade	N	Y	Y	Maximum FAR of 0.28 in APZ I & .56 in APZ II
52	Retail trade – building materials, hardware and farm equipment	N	Y	Y	See Note 8 below
53	Retail trade – including, discount clubs, home improvement stores, electronics superstores, etc.	N	N	Y	Maximum FAR of 0.16 in APZ II
53	Shopping centers- Neighborhood, Community, Regional, Super-regional ⁹	N	N	N	
54	Retail trade – food	N	N	Y	Maximum FAR of 0.24 in APZ II
55	Retail trade – automotive, marine craft, aircraft, and accessories	N	Y	Y	Maximum FAR of 0.14 in APZ I & 0.28 in APZ II
56	Retail trade – apparel and accessories	N	N	Y	Maximum FAR of 0.28 in APZ II
57	Retail trade – furniture, home, furnishings and equipment	N	N	Y	Maximum FAR of 0.28 in APZ II
58	Retail trade – eating and drinking establishments	N	N	N	
59	Other retail trade	N	N	Y	Maximum FAR of 0.16 in APZ II



Table A-1. Land Use Compatibility Recommendations in APZs and CZs

SLUCM NO.	LAND USE NAME	CLEAR ZONE Recommendation ¹	APZ-I Recommendation ¹	APZ-II Recommendation ¹	DENSITY Recommendation ¹
60	Services¹⁰				
61	Finance, insurance and real estate services	N	N	Y	Maximum FAR of 0.22 in APZ II
62	Personal services	N	N	Y	Office uses only. Maximum FAR of 0.22 in APZ II.
62.4	Cemeteries	N	Y ¹¹	Y ¹¹	
63	Business services (credit reporting; mail, stenographic, reproduction; advertising)	N	N	Y	Maximum FAR of 0.22 in APZ II
63.7	Warehousing and storage services ¹²	N	Y	Y	Maximum FAR of 1.0 in APZ I; 2.0 in APZ II
64	Repair Services	N	Y	Y	Maximum FAR of 0.11 APZ I; 0.22 in APZ II
65	Professional services	N	N	Y	Maximum FAR of 0.22 in APZ II
65.1	Hospitals, nursing homes	N	N	N	
65.1	Other medical facilities	N	N	N	
66	Contract construction services	N	Y	Y	Maximum FAR of 0.11 APZ I; 0.22 in APZ II
67	Government Services	N	N	Y	Maximum FAR of 0.24 in APZ II
68	Educational services	N	N	N	
68.1	Child care services, child development centers, and nurseries	N	N	N	
69	Miscellaneous Services	N	N	Y	Maximum FAR of 0.22 in APZ II
69.1	Religious activities (including places of worship)	N	N	N	
70	Cultural, entertainment and recreational				
71	Cultural activities	N	N	N	
71.2	Nature exhibits	N	Y ¹³	Y ¹³	
72	Public assembly	N	N	N	
72.1	Auditoriums, concert halls	N	N	N	
72.11	Outdoor music shells, amphitheaters	N	N	N	
72.2	Outdoor sports arenas, spectator sports	N	N	N	

**Table A-1. Land Use Compatibility Recommendations in APZs and CZs**

SLUCM NO.	LAND USE NAME	CLEAR ZONE Recommendation ¹	APZ-I Recommendation ¹	APZ-II Recommendation ¹	DENSITY Recommendation ¹
73	Amusements – fairgrounds, miniature golf, driving ranges; amusement parks, etc.	N	N	Y ²⁰	
74	Recreational activities (including golf courses, riding stables, water recreation)	N	Y ¹³	Y ¹³	Maximum FAR of 0.11 in APZ I; 0.22 in APZ II
75	Resorts and group camps	N	N	N	
76	Parks	N	Y ¹³	Y ¹³	Maximum FAR of 0.11 in APZ I; 0.22 in APZ II
79	Other cultural, entertainment and recreation	N	Y ¹¹	Y ¹¹	Maximum FAR of 0.11 in APZ I; 0.22 in APZ II
80	Resource production and extraction				
81	Agriculture (except live-stock)	Y ⁴	Y ¹⁴	Y ¹⁴	
81.5,81.7	Agriculture-Livestock farming, including grazing and feedlots	N	Y ¹⁴	Y ¹⁴	
82	Agriculture related activities	N	Y ¹⁵	Y ¹⁵	Maximum FAR of 0.28 in APZ I; 0.56 in APZ II, no activity which produces smoke, glare, or involves explosives
83	Forestry activities ¹⁶	N	Y	Y	Maximum FAR of 0.28 in APZ I; 0.56 in APZ II, no activity which produces smoke, glare, or involves explosives
84	Fishing activities ¹⁷	N ¹⁷	Y	Y	Maximum FAR of 0.28 in APZ I; 0.56 in APZ II, no activity which produces smoke, glare, or involves explosives

**Table A-1. Land Use Compatibility Recommendations in APZs and CZs**

SLUCM NO.	LAND USE NAME	CLEAR ZONE Recommendation ¹	APZ-I Recommendation ¹	APZ-II Recommendation ¹	DENSITY Recommendation ¹
85	Mining activities ¹⁸	N	Y ¹⁸	Y ¹⁸	Maximum FAR of 0.28 in APZ I; 0.56 in APZ II, no activity which produces smoke, glare, or involves explosives
89	Other resource production or extraction	N	Y	Y	Maximum FAR of 0.28 in APZ I; 0.56 in APZ II, no activity which produces smoke, glare, or involves explosives
90	Other				
91	Undeveloped land	Y	Y	Y	
93	Water areas ¹⁹	N ¹⁹	N ¹⁹	N ¹⁹	

1. A “Yes” or a “No” designation for compatible land use is to be used only for general comparison. Within each, uses exist where further evaluation may be needed in each category as to whether it is clearly compatible, normally compatible, or not compatible due to the variation of densities of people and structures. In order to assist air installations and local governments, general suggestions as to FARs are provided as a guide to density in some categories. In general, land use restrictions that limit occupants, including employees, of commercial, service, or industrial buildings or structures to 25 an acre in APZ I and 50 an acre in APZ II are considered to be low density. Outside events should normally be limited to assemblies of not more than 25 people an acre in APZ I, and maximum assemblies of 50 people an acre in APZ II. Recommended FARs are calculated using standard parking generation rates for various land uses, vehicle occupancy rates, and desired density in APZ I and II. For APZ I, the formula is $FAR = 25 \text{ people an acre} / (\text{Average Vehicle Occupancy} \times \text{Average Parking Rate} \times (43560/1000))$. The formula for APZ II is $FAR = 50 / (\text{Average Vehicle Occupancy} \times \text{Average Parking Rate} \times (43560/1000))$.
2. The suggested maximum density for detached single-family housing is two Du/Ac. In a planned unit development (PUD) of single-family detached units, where clustered housing development results in large open areas, this density could possibly be increased slightly provided the amount of surface area covered by structures does not exceed 20 percent of the PUD total area. PUD encourages clustered development that leaves large open areas.
3. Other factors to be considered: Labor intensity, structural coverage, explosive characteristics, air-pollution, electronic interference with aircraft, height of structures, and potential glare to pilots.
4. No structures (except airfield lighting and navigational aids necessary for the safe operation of the airfield when there are no other siting options), buildings, or aboveground utility and communications lines should normally be located in Clear Zone areas on or off the air installation. The Clear Zone is subject to the most severe restrictions.
5. Roads within the graded portion of the Clear Zone are prohibited. All roads within the Clear Zone are discouraged, but if required, they should not be wider than two lanes and the rights-of-way should be fenced (frangible) and not include sidewalks or bicycle trails. Nothing associated with these roads should violate obstacle clearance criteria.



6. No aboveground passenger terminals and no aboveground power transmission or distribution lines. Prohibited power lines include high-voltage transmission lines and distribution lines that provide power to cities, towns, or regional power for unincorporated areas.
7. Development of renewable energy resources, including solar and geothermal facilities and wind turbines, may impact military operations through hazards to flight or electromagnetic interference. Each new development should to be analyzed for compatibility issues on a case-by-case basis that considers both the proposal and potentially affected mission.
8. Within SLUCM Code 52, maximum FARs for lumberyards (SLUCM Code 521) are 0.20 in APZ-I and 0.40 in APZ-11; the maximum FARs for hardware, paint, and farm equipment stores, (SLUCM Code 525), are 0.12 in APZ I and 0.24 in APZ II.
9. A shopping center is an integrated group of commercial establishments that is planned, developed, owned, or managed as a unit. Shopping center types include strip, neighborhood, community, regional, and super-regional facilities anchored by small businesses, a supermarket or drug store, discount retailer, department store, or several department stores, respectively.
10. Ancillary uses such as meeting places, auditoriums, etc. are not recommended.
11. Chapels, houses of worship, and other land uses of public gatherings are incompatible within APZ I or APZ II.
12. Big box home improvement stores are not included as part of this category.
13. Facilities must be low intensity, and provide no playgrounds, etc. Facilities such as club houses, meeting places, auditoriums, large classes, etc., are not recommended.
14. Activities that attract concentrations of birds creating a hazard to aircraft operations should be excluded.
15. Factors to be considered: labor intensity, structural coverage, explosive characteristics, and air pollution.
16. Lumber and timber products removed due to establishment, expansion, or maintenance of Clear Zone lands owned in fee will be disposed of in accordance with applicable DoD guidance.
17. Controlled hunting and fishing may be permitted for the purpose of wildlife management.
18. Surface mining operations that could create retention ponds that may attract waterfowl and present bird/wildlife aircraft strike hazards (BASH), or operations that produce dust or light emissions that could affect pilot vision are not compatible.
19. Naturally occurring water features (e.g., rivers, lakes, streams, wetlands) are pre-existing, nonconforming land uses. Naturally occurring water features that attract waterfowl present a potential BASH. Actions to expand naturally occurring water features or construction of new water features should not be encouraged. If construction of new features is necessary for storm water retention, such features should be designed so that they do not attract waterfowl.
20. Amusement centers, family entertainment centers or amusement parks designed or operated at a scale that could attract or result in concentrations of people, including employees and visitors, greater than 50 people per acre at any given time are incompatible in APZ II.


Table A-2. Recommended Land Use Compatibility for Noise Zones

LAND USE			SUGGESTED LAND USE COMPATIBILITY			
SLUCM NO.	LAND USE NAME	DNL or CNEL 65-69	DNL or CNEL 70-74	DNL or CNEL 75-79	DNL or CNEL 80-84	DNL or CNEL 85+
10	Residential					
11	Household units	N ¹	N ¹	N	N	N
11.11	Single units: detached	N ¹	N ¹	N	N	N
11.12	Single units: semidetached	N ¹	N ¹	N	N	N
11.13	Single units: attached row	N ¹	N ¹	N	N	N
11.21	Two units: side-by-side	N ¹	N ¹	N	N	N
11.22	Two units: one above the other	N ¹	N ¹	N	N	N
11.31	Apartments: walk-up	N ¹	N ¹	N	N	N
11.32	Apartment: elevator	N ¹	N ¹	N	N	N
12	Group quarters	N ¹	N ¹	N	N	N
13	Residential hotels	N ¹	N ¹	N	N	N
14	Mobile home parks or courts	N	N	N	N	N
15	Transient lodgings	N ¹	N ¹	N ¹	N	N
16	Other residential	N ¹	N ¹	N	N	N
20	Manufacturing					
21	Food and kindred products; manufacturing	Y	Y ²	Y ³	Y ⁴	N
22	Textile mill products; manufacturing	Y	Y ²	Y ³	Y ⁴	N
23	Apparel and other finished products; products made from fabrics, leather, and similar materials; manufacturing	Y	Y ²	Y ³	Y ⁴	N
24	Lumber and wood products (except furniture); manufacturing	Y	Y ²	Y ³	Y ⁴	N
25	Furniture and fixtures; manufacturing	Y	Y ²	Y ³	Y ⁴	N
26	Paper and allied products; manufacturing	Y	Y ²	Y ³	Y ⁴	N
27	Printing, publishing, and allied industries	Y	Y ²	Y ³	Y ⁴	N
28	Chemicals and allied products; manufacturing	Y	Y ²	Y ³	Y ⁴	N
29	Petroleum refining and related industries	Y	Y ²	Y ³	Y ⁴	N
30	Manufacturing (continued)					
31	Rubber and misc. plastic products; manufacturing	Y	Y ²	Y ³	Y ⁴	N
32	Stone, clay and glass products; manufacturing	Y	Y ²	Y ³	Y ⁴	N
33	Primary metal products; manufacturing	Y	Y ²	Y ³	Y ⁴	N
34	Fabricated metal products; manufacturing	Y	Y ²	Y ³	Y ⁴	N


Table A-2. Recommended Land Use Compatibility for Noise Zones

LAND USE			SUGGESTED LAND USE COMPATIBILITY			
SLUCM NO.	LAND USE NAME	DNL or CNEL 65-69	DNL or CNEL 70-74	DNL or CNEL 75-79	DNL or CNEL 80-84	DNL or CNEL 85+
35	Professional scientific, and controlling instruments; photographic and optical goods; watches and clocks	Y	25	30	N	N
39	Miscellaneous manufacturing	Y	Y ²	Y ³	Y ⁴	N
40	Transportation, communication and utilities					
41	Railroad, rapid rail transit, and street railway transportation	Y	Y ²	Y ³	Y ⁴	N
42	Motor vehicle transportation	Y	Y ²	Y ³	Y ⁴	N
43	Aircraft transportation	Y	Y ²	Y ³	Y ⁴	N
44	Marine craft transportation	Y	Y ²	Y ³	Y ⁴	N
45	Highway and street right-of-way	Y	Y	Y	Y	N
46	Automobile parking	Y	Y	Y	Y	N
47	Communication	Y	25 ⁵	30 ⁵	N	N
48	Utilities	Y	Y ²	Y ³	Y ⁴	N
49	Other transportation, communication and utilities	Y	25 ⁵	30 ⁵	N	N
50	Trade					
51	Wholesale trade	Y	Y ²	Y ³	Y ⁴	N
52	Retail trade – building materials, hardware and farm equipment	Y	25	30	Y ⁴	N
53	Retail trade – including shopping centers, discount clubs, home improvement stores, electronics superstores, etc.	Y	25	30	N	N
54	Retail trade – food	Y	25	30	N	N
55	Retail trade – automotive, marine craft, aircraft and accessories	Y	25	30	N	N
56	Retail trade – apparel and accessories	Y	25	30	N	N
57	Retail trade – furniture, home, furnishings and equipment	Y	25	30	N	N
58	Retail trade – eating and drinking establishments	Y	25	30	N	N
59	Other retail trade	Y	25	30	N	N
60	Services					
61	Finance, insurance and real estate services	Y	25	30	N	N
62	Personal services	Y	25	30	N	N
62.4	Cemeteries	Y	Y ²	Y ³	Y ^{4,11}	Y ^{6,11}
63	Business services	Y	25	30	N	N
63.7	Warehousing and storage	Y	Y ²	Y ³	Y ⁴	N


Table A-2. Recommended Land Use Compatibility for Noise Zones

LAND USE			SUGGESTED LAND USE COMPATIBILITY			
SLUCM NO.	LAND USE NAME	DNL or CNEL 65-69	DNL or CNEL 70-74	DNL or CNEL 75-79	DNL or CNEL 80-84	DNL or CNEL 85+
64	Repair services	Y	Y ²	Y ³	Y ⁴	N
65	Professional services	Y	25	30	N	N
65.1	Hospitals, other medical facilities	25	30	N	N	N
65.16	Nursing homes	N ¹	N ¹	N	N	N
66	Contract construction services	Y	25	30	N	N
67	Government services	Y ¹	25	30	N	N
68	Educational services	25	30	N	N	N
68.1	Child care services, child development centers, and nurseries	25	30	N	N	N
69	Miscellaneous Services	Y	25	30	N	N
69.1	Religious activities (including places of worship)	Y	25	30	N	N
70	Cultural, entertainment and recreational					
71	Cultural activities	25	30	N	N	N
71.2	Nature exhibits	Y ¹	N	N	N	N
72	Public assembly	Y	N	N	N	N
72.1	Auditoriums, concert halls	25	30	N	N	N
72.11	Outdoor music shells, amphitheaters	N	N	N	N	N
72.2	Outdoor sports arenas, spectator sports	Y ⁷	Y ⁷	N	N	N
73	Amusements	Y	Y	N	N	N
74	Recreational activities (including golf courses, riding stables, water recreation)	Y	25	30	N	N
75	Resorts and group camps	Y	25	N	N	N
76	Parks	Y	25	N	N	N
79	Other cultural, entertainment and recreation	Y	25	N	N	N
80	Resource production and extraction					
81	Agriculture (except live- stock)	Y ⁸	Y ⁹	Y ¹⁰	Y ^{10,11}	Y ^{10,11}
81.5, 81.7	Agriculture-Livestock farming including grazing and feedlots	Y ⁸	Y ⁹	N	N	N
82	Agriculture related activities	Y ⁸	Y ⁹	Y ¹⁰	Y ^{10,11}	Y ^{10,11}
83	Forestry activities	Y ⁸	Y ⁹	Y ¹⁰	Y ^{10,11}	Y ^{10,11}
84	Fishing activities	Y	Y	Y	Y	Y
85	Mining activities	Y	Y	Y	Y	Y
89	Other resource production or extraction	Y	Y	Y	Y	Y

1. General

- ^a. Although local conditions regarding the need for housing may require residential use in these zones, residential use is discouraged in DNL 65-69 and strongly discouraged in DNL 70-74. The absence of viable alternative development options should be determined and an evaluation should be conducted locally



prior to local approvals indicating that a demonstrated community need for the residential use would not be met if development were prohibited in these zones. Existing residential development is considered as pre-existing, non-conforming land uses.

- b. Where the community determines that these uses must be allowed, measures to achieve outdoor to indoor NLR of at least 25 decibels (dB) in DNL 65-69 and 30 dB in DNL 70-74 should be incorporated into building codes and be considered in individual approvals; for transient housing, an NLR of at least 35 dB should be incorporated in DNL 75-79.
 - c. Normal permanent construction can be expected to provide an NLR of 20 dB, thus the reduction requirements are often stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation, upgraded sound transmission class ratings in windows and doors, and closed windows year round. Additional consideration should be given to modifying NLR levels based on peak noise levels or vibrations.
 - d. NLR criteria will not eliminate outdoor noise problems. However, building location, site planning, design, and use of berms and barriers can help mitigate outdoor noise exposure particularly from ground level sources. Measures that reduce noise at a site should be used wherever practical in preference to measures that only protect interior spaces.
 2. Measures to achieve NLR of 25 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.
 3. Measures to achieve NLR of 30 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.
 4. Measures to achieve NLR of 35 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.
 5. If project or proposed development is noise sensitive, use indicated NLR; if not, land use is compatible without NLR.
 6. Buildings are not permitted.
 7. Land use is compatible provided special sound reinforcement systems are installed.
 8. Residential buildings require an NLR of 25.
 9. Residential buildings require an NLR of 30.
 10. Residential buildings are not permitted.
 11. Land use that involves outdoor activities is not recommended, but if the community allows such activities, hearing protection devices should be worn when noise sources are present. Long-term exposure (multiple hours per day over many years) to high noise levels can cause hearing loss in some unprotected individuals.



This page left intentionally blank.



Appendix B. Westover ARB AICUZ Land Use Compatibility Matrix

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
F_363485_2881169	Multi-Family Residential	ResA	Residential A	no	no	yes	no	no	no	no	No	1.073
F_363485_2881169	Parks and Recreation	ResA	Residential A	no	no	yes	no	no	no	no	No	0.016
F_363485_2881169	Transportation	ResA	Residential A	no	no	yes	no	no	no	no	No	0.001
F_363622_2880690	Commercial Retail	BusA	Business A	no	no	yes	no	no	no	no	Yes2	1.098
F_363622_2880690	Transportation	BusA	Business A	no	no	yes	no	no	no	no	Yes2	0.025
F_363765_2877860	Commercial Retail	B1	Business B-1	no	no	yes	no	no	no	no	Yes2	1.176
F_363765_2877860	Parks and Recreation	B1	Business B-1	no	no	yes	no	no	no	no	Yes2	0.015
F_363765_2877860	Vacant/Open Space	B1	Business B-1	no	no	yes	no	no	no	no	Yes2	0.018
F_364064_2880440	Multi-Family Residential	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.003
F_364064_2880440	Single Family Residential	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	1.393
F_364064_2880440	Vacant/Open Space	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.005
F_364342_2878645	Commercial Office	B1	Business B-1	no	no	yes	no	no	no	no	Yes2	2.836
F_364342_2878645	Commercial Retail	B1	Business B-1	no	no	yes	no	no	no	no	Yes2	0.040
F_364342_2878645	Vacant/Open Space	B1	Business B-1	no	no	yes	no	no	no	no	Yes2	0.001
F_364360_2878085	Parks and Recreation	I2	Industrial 2	no	no	yes	no	no	no	no	Yes2	1.236
F_364360_2878085	Vacant/Open Space	I2	Industrial 2	no	no	yes	no	no	no	no	Yes2	0.003
F_364389_2880154	Single Family Residential	ResA	Residential A	no	no	yes	no	no	no	no	Yes	0.035
F_364389_2880154	Vacant/Open Space	ResA	Residential A	no	no	yes	no	no	no	no	Yes	2.759
F_364447_2879821	Single Family Residential	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	1.134
F_364447_2879821	Transportation	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.007
F_364514_2883055	Institutional	ResA	Residential A	no	no	yes	no	no	no	no	No	1.036
F_364514_2883055	Transportation	ResA	Residential A	no	no	yes	no	no	no	no	No	0.019
F_364609_2879598	Multi-Family Residential	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.022
F_364609_2879598	Single Family Residential	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	1.328
F_364609_2879598	Transportation	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.006
F_364797_2878598	Parks and Recreation	I2	Industrial 2	no	no	yes	no	no	no	no	Yes	0.006
F_364797_2878598	Vacant/Open Space	I2	Industrial 2	no	no	yes	no	no	no	no	Yes	1.135
F_365057_2885184	Industrial	ResA	Residential A	no	no	yes	no	no	no	no	n/a	0.005
F_365057_2885184	Industrial	ResA	Residential A	no	yes	no	no	no	no	no	n/a	0.032
F_365057_2885184	Other/Undesignated	ResA	Residential A	no	no	yes	no	no	no	no	n/a	0.209
F_365057_2885184	Other/Undesignated	ResA	Residential A	no	yes	no	no	no	no	no	n/a	0.813
F_365057_2885184	Transportation	ResA	Residential A	no	no	yes	no	no	no	no	n/a	0.003
F_365057_2885184	Vacant/Open Space	ResA	Residential A	no	no	yes	no	no	no	no	n/a	7.957
F_365057_2885184	Vacant/Open Space	ResA	Residential A	no	yes	no	no	no	no	no	n/a	29.934
F_365057_2885184	Water	ResA	Residential A	no	no	yes	no	no	no	no	n/a	0.108
F_365057_2885184	Water	ResA	Residential A	no	yes	no	no	no	no	no	n/a	0.131
F_365206_2879716	Commercial Retail	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.006
F_365206_2879716	Multi-Family Residential	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.003
F_365206_2879716	Other/Undesignated	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.000
F_365206_2879716	Public/Government	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.018
F_365206_2879716	Single Family Residential	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	14.494
F_365206_2879716	Transportation	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.004
F_365234_2881234	Multi-Family Residential	ResC	Residential C	no	no	yes	no	no	no	no	No	1.239
F_365234_2881234	Transportation	ResC	Residential C	no	no	yes	no	no	no	no	No	0.019
F_365255_2879324	Multi-Family Residential	R1	Residential 1	no	no	yes	no	no	no	no	Yes2	0.020
F_365255_2879324	Single Family Residential	R1	Residential 1	no	no	yes	no	no	no	no	Yes2	0.975
F_365255_2879324	Transportation	R1	Residential 1	no	no	yes	no	no	no	no	Yes2	0.001
F_365255_2879324	Vacant/Open Space	R1	Residential 1	no	no	yes	no	no	no	no	Yes2	0.000
F_365553_2879968	Single Family Residential	ResA	Residential A	no	no	yes	no	no	no	no	Yes	0.078
F_365553_2879968	Vacant/Open Space	ResA	Residential A	no	no	yes	no	no	no	no	Yes	1.736
F_365755_2881085	Transportation	ResA	Residential A	no	no	yes	no	no	no	no	Yes	0.040
F_365755_2881085	Vacant/Open Space	ResA	Residential A	no	no	yes	no	no	no	no	Yes	4.064
F_365801_2880035	Single Family Residential	ResA	Residential A	no	no	yes	no	no	no	no	Yes	0.000
F_365801_2880035	Vacant/Open Space	ResA	Residential A	no	no	yes	no	no	no	no	Yes	1.508
F_365970_2882557	Single Family Residential	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	1.130
F_365970_2882557	Transportation	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.001
F_366112_2882283	Single Family Residential	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	1.782
F_366112_2882283	Transportation	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.022
F_366112_2882283	Vacant/Open Space	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.005

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
F_366562_2883996	Agriculture	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.116
F_366562_2883996	Commercial Business	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.005
F_366562_2883996	Commercial Retail	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.060
F_366562_2883996	Industrial	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.184
F_366562_2883996	Industrial	ResA	Residential A	yes	no	no	no	no	no	no	Yes2	0.015
F_366562_2883996	Institutional	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.020
F_366562_2883996	Institutional	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.003
F_366562_2883996	Mixed Use	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.030
F_366562_2883996	Multi-Family Residential	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.491
F_366562_2883996	Multi-Family Residential	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.003
F_366562_2883996	Other/Undesignated	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.054
F_366562_2883996	Other/Undesignated	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.098
F_366562_2883996	Parks and Recreation	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.003
F_366562_2883996	Public/Government	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.000
F_366562_2883996	Public/Government	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.011
F_366562_2883996	Public/Government	ResA	Residential A	yes	no	no	no	no	no	no	Yes2	0.004
F_366562_2883996	Single Family Residential	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	2.824
F_366562_2883996	Single Family Residential	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.109
F_366562_2883996	Transportation	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	84.792
F_366562_2883996	Transportation	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	36.442
F_366562_2883996	Transportation	ResA	Residential A	yes	no	no	no	no	no	no	Yes2	0.235
F_366562_2883996	Vacant/Open Space	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.184
F_366562_2883996	Vacant/Open Space	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.071
F_366562_2883996	Water	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.003
F_367204_2886151	Other/Undesignated	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	12.097
F_367204_2886151	Water	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	6.598
F_367213_2884399	Industrial	Water	Water	no	no	yes	no	no	no	no	Yes	0.010
F_367213_2884399	Mixed Use	Water	Water	no	no	yes	no	no	no	no	Yes	0.015
F_367213_2884399	Multi-Family Residential	Water	Water	no	no	yes	no	no	no	no	Yes	0.005
F_367213_2884399	Other/Undesignated	Water	Water	no	yes	no	no	no	no	no	Yes	0.037
F_367213_2884399	Single Family Residential	Water	Water	no	no	yes	no	no	no	no	Yes	0.060
F_367213_2884399	Vacant/Open Space	Water	Water	no	no	yes	no	no	no	no	Yes	0.104
F_367213_2884399	Vacant/Open Space	Water	Water	no	yes	no	no	no	no	no	Yes	0.234
F_367213_2884399	Water	Water	Water	no	no	yes	no	no	no	no	Yes	34.240
F_367213_2884399	Water	Water	Water	no	yes	no	no	no	no	no	Yes	33.015
F_367378_2886935	Industrial	Ind	Industrial	no	yes	no	no	no	no	no	Yes2	3.571
F_367378_2886935	Institutional	Ind	Industrial	no	yes	no	no	no	no	no	Yes2	0.000
F_367378_2886935	Single Family Residential	Ind	Industrial	no	yes	no	no	no	no	no	Yes2	0.000
F_367378_2886935	Transportation	Ind	Industrial	no	yes	no	no	no	no	no	Yes2	0.027
F_367378_2886935	Vacant/Open Space	Ind	Industrial	no	yes	no	no	no	no	no	Yes2	0.011
F_367669_2884103	Mixed Use	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	1.945
F_367669_2884103	Transportation	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.015
F_367669_2884103	Vacant/Open Space	ResA	Residential A	no	no	yes	no	no	no	no	Yes2	0.006
F_367671_2889275	Other/Undesignated	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	7.454
F_367671_2889275	Transportation	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.050
F_367846_2887090	Industrial	ResA	Residential A	no	yes	no	no	no	no	no	Yes	0.015
F_367846_2887090	Other/Undesignated	ResA	Residential A	no	yes	no	no	no	no	no	Yes	0.006
F_367846_2887090	Single Family Residential	ResA	Residential A	no	yes	no	no	no	no	no	Yes	0.042
F_367846_2887090	Vacant/Open Space	ResA	Residential A	no	yes	no	no	no	no	no	Yes	6.618
F_367852_2886818	Other/Undesignated	ResA	Residential A	no	yes	no	no	no	no	no	No	0.027
F_367852_2886818	Single Family Residential	ResA	Residential A	no	yes	no	no	no	no	no	No	1.876
F_367852_2886818	Transportation	ResA	Residential A	no	yes	no	no	no	no	no	No	0.015
F_367852_2886818	Vacant/Open Space	ResA	Residential A	no	yes	no	no	no	no	no	No	0.000
F_367882_2886066	Other/Undesignated	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	6.651
F_367882_2886066	Vacant/Open Space	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.013
F_367882_2886066	Water	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.000
F_368020_2884071	Industrial	IPUD2	Industrial Garden Planned Unit - De	no	no	yes	no	no	no	no	Yes	0.010
F_368020_2884071	Transportation	IPUD2	Industrial Garden Planned Unit - De	no	no	yes	no	no	no	no	Yes	0.020
F_368020_2884071	Vacant/Open Space	IPUD2	Industrial Garden Planned Unit - De	no	no	yes	no	no	no	no	Yes	3.248

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
F_368174_2886774	Other/Undesignated	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	8.093
F_368174_2886774	Transportation	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.031
F_368297_2886374	Other/Undesignated	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	2.208
F_368297_2886374	Transportation	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.021
F_368386_2885853	Agriculture	ResA	Residential A	no	yes	no	no	no	no	no	Yes	0.001
F_368386_2885853	Other/Undesignated	ResA	Residential A	no	yes	no	no	no	no	no	Yes	0.001
F_368386_2885853	Vacant/Open Space	ResA	Residential A	no	yes	no	no	no	no	no	Yes	4.041
F_368386_2885853	Water	ResA	Residential A	no	yes	no	no	no	no	no	Yes	0.047
F_368419_2884063	Industrial	IPUD2	Industrial Garden Planned Unit - De	no	no	yes	no	no	no	no	Yes2	5.004
F_368419_2884063	Industrial	IPUD2	Industrial Garden Planned Unit - De	no	yes	no	no	no	no	no	Yes2	1.575
F_368419_2884063	Transportation	IPUD2	Industrial Garden Planned Unit - De	no	no	yes	no	no	no	no	Yes2	0.032
F_368419_2884063	Vacant/Open Space	IPUD2	Industrial Garden Planned Unit - De	no	no	yes	no	no	no	no	Yes2	0.004
F_368419_2884063	Vacant/Open Space	IPUD2	Industrial Garden Planned Unit - De	no	yes	no	no	no	no	no	Yes2	0.005
F_368572_2886296	Agriculture	ResA	Residential A	no	yes	no	no	no	no	no	No	0.004
F_368572_2886296	Single Family Residential	ResA	Residential A	no	yes	no	no	no	no	no	No	2.379
F_368572_2886296	Transportation	ResA	Residential A	no	yes	no	no	no	no	no	No	0.015
F_368887_2885784	Agriculture	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	2.048
F_368887_2885784	Vacant/Open Space	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.010
F_368887_2885784	Water	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.014
F_368991_2887613	Public/Government	ResA	Residential A	no	yes	no	no	no	no	no	Yes	0.003
F_368991_2887613	Transportation	ResA	Residential A	no	yes	no	no	no	no	no	Yes	1.319
F_368991_2887613	Vacant/Open Space	ResA	Residential A	no	yes	no	no	no	no	no	Yes	20.371
F_369062_2885612	Agriculture	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	1.205
F_369062_2885612	Water	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.010
F_369092_2886315	Agriculture	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	19.118
F_369092_2886315	Industrial	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.003
F_369092_2886315	Single Family Residential	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.016
F_369092_2886315	Transportation	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.058
F_369215_2885525	Agriculture	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	1.276
F_369215_2885525	Single Family Residential	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.012
F_369215_2885525	Water	ResA	Residential A	no	yes	no	no	no	no	no	Yes2	0.010
F_369391_2885393	Single Family Residential	ResA	Residential A	no	yes	no	no	no	no	no	No	2.473
F_369391_2885393	Vacant/Open Space	ResA	Residential A	no	yes	no	no	no	no	no	No	0.013
F_369391_2885393	Water	ResA	Residential A	no	yes	no	no	no	no	no	No	0.010
F_369531_2904842	Institutional	ResA	Residential A	no	yes	no	no	no	no	no	No	7.215
F_369531_2904842	Other/Undesignated	ResA	Residential A	no	yes	no	no	no	no	no	No	0.055
F_369531_2904842	Single Family Residential	ResA	Residential A	no	yes	no	no	no	no	no	No	0.081
F_369531_2904842	Transportation	ResA	Residential A	no	yes	no	no	no	no	no	No	0.008
F_369531_2904842	Vacant/Open Space	ResA	Residential A	no	yes	no	no	no	no	no	No	0.068
F_369621_2885350	Single Family Residential	ResA	Residential A	no	yes	no	no	no	no	no	No	1.130
F_369621_2885350	Vacant/Open Space	ResA	Residential A	no	yes	no	no	no	no	no	No	0.001
F_369621_2885735	Industrial	Ind	Industrial	no	yes	no	no	no	no	no	Yes2	1.102
F_369621_2885735	Transportation	Ind	Industrial	no	yes	no	no	no	no	no	Yes2	0.017
F_369674_2886047	Industrial	Ind	Industrial	no	yes	no	no	no	no	no	Yes2	1.490
F_369674_2886047	Transportation	Ind	Industrial	no	yes	no	no	no	no	no	Yes2	0.006
F_369717_2886309	Industrial	Ind	Industrial	no	yes	no	no	no	no	no	Yes2	2.694
F_369717_2886309	Transportation	Ind	Industrial	no	yes	no	no	no	no	no	Yes2	0.005
F_369911_2903997	Industrial	ResA	Residential A	no	yes	no	no	no	no	no	No	0.002
F_369911_2903997	Single Family Residential	ResA	Residential A	no	yes	no	no	no	no	no	No	1.475
F_370136_2885915	Industrial	Ind	Industrial	no	yes	no	no	no	no	no	Yes2	3.564
F_370136_2885915	Transportation	Ind	Industrial	no	yes	no	no	no	no	no	Yes2	0.011
F_370205_2904402	Transportation	Ind	Industrial	no	yes	no	no	no	no	no	Yes	0.006
F_370205_2904402	Vacant/Open Space	Ind	Industrial	no	yes	no	no	no	no	no	Yes	0.984
F_370235_2905070	Vacant/Open Space	Ind	Industrial	no	yes	no	no	no	no	no	Yes	3.358
F_370278_2887569	Industrial	Ind	Industrial	no	yes	no	no	no	no	no	No1	0.019
F_370278_2887569	Public/Government	Ind	Industrial	no	yes	no	no	no	no	no	No1	35.755
F_370278_2887569	Transportation	Ind	Industrial	no	yes	no	no	no	no	no	No1	0.016
F_370278_2887569	Vacant/Open Space	Ind	Industrial	no	yes	no	no	no	no	no	No1	0.100
F_370359_2886953	Transportation	ResA	Residential A	no	yes	no	no	no	no	no	Yes	0.057

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
F_370359_2886953	Vacant/Open Space	ResA	Residential A	no	yes	no	no	no	no	no	Yes	14.768
F_370559_2905205	Vacant/Open Space	Ind	Industrial	no	yes	no	no	no	no	no	Yes	2.045
F_370642_2903378	Industrial	Ind	Industrial	no	yes	no	no	no	no	no	Yes2	20.777
F_370642_2903378	Industrial	Ind	Industrial	yes	no	no	no	no	no	no	Yes2	3.908
F_370642_2903378	Public/Government	Ind	Industrial	yes	no	no	no	no	no	no	Yes2	0.092
F_370642_2903378	Single Family Residential	Ind	Industrial	no	yes	no	no	no	no	no	Yes2	0.002
F_370642_2903378	Vacant/Open Space	Ind	Industrial	yes	no	no	no	no	no	no	Yes2	0.000
F_370907_2892534	Other/Undesignated	IPUD1	Industrial Garden Planned Unit - De	no	no	no	no	yes	no	no	Yes2	0.034
F_370907_2892534	Other/Undesignated	IPUD1	Industrial Garden Planned Unit - De	no	no	no	yes	no	no	no	Yes2	2.510
F_370907_2892534	Other/Undesignated	IPUD1	Industrial Garden Planned Unit - De	yes	no	no	no	no	no	no	Yes2	0.332
F_370907_2892534	Public/Government	IPUD1	Industrial Garden Planned Unit - De	no	no	no	no	yes	no	no	Yes2	0.007
F_370907_2892534	Public/Government	IPUD1	Industrial Garden Planned Unit - De	no	no	no	yes	no	no	no	Yes2	0.035
F_370907_2892534	Public/Government	IPUD1	Industrial Garden Planned Unit - De	yes	no	no	no	no	no	no	Yes2	0.023
F_371363_2902401	Public/Government	IPUD1	Industrial Garden Planned Unit - De	yes	no	no	no	no	no	no	Yes	0.003
F_371363_2902401	Vacant/Open Space	IPUD1	Industrial Garden Planned Unit - De	yes	no	no	no	no	no	no	Yes	1.377
F_371459_2887956	Industrial	Ind	Industrial	no	yes	no	no	no	no	no	Yes2	2.348
F_371459_2887956	Industrial	Ind	Industrial	yes	no	no	no	no	no	no	Yes2	0.440
F_371459_2887956	Transportation	Ind	Industrial	no	yes	no	no	no	no	no	Yes2	0.012
F_371684_2904932	Institutional	Ind	Industrial	no	yes	no	no	no	no	no	Yes	0.020
F_371684_2904932	Public/Government	Ind	Industrial	yes	no	no	no	no	no	no	Yes	0.082
F_371684_2904932	Transportation	Ind	Industrial	no	yes	no	no	no	no	no	Yes	0.133
F_371684_2904932	Transportation	Ind	Industrial	yes	no	no	no	no	no	no	Yes	0.015
F_371684_2904932	Vacant/Open Space	Ind	Industrial	no	yes	no	no	no	no	no	Yes	70.145
F_371684_2904932	Vacant/Open Space	Ind	Industrial	yes	no	no	no	no	no	no	Yes	7.853
F_372195_2894218	Other/Undesignated	IPUD1	Industrial Garden Planned Unit - De	no	no	no	no	no	no	yes	Yes2	1.054
F_372195_2894218	Other/Undesignated	IPUD1	Industrial Garden Planned Unit - De	no	no	no	no	no	yes	no	Yes2	2.446
F_372195_2894218	Other/Undesignated	IPUD1	Industrial Garden Planned Unit - De	no	no	no	no	yes	no	no	Yes2	16.371
F_372195_2894218	Other/Undesignated	IPUD1	Industrial Garden Planned Unit - De	no	no	no	yes	no	no	no	Yes2	22.759
F_374510_2897401	Commercial Business	ResA	Residential A	yes	no	no	no	no	no	no	(blank)	0.004
F_374510_2897401	Industrial	ResA	Residential A	no	yes	no	no	no	no	no	(blank)	0.001
F_374510_2897401	Industrial	ResA	Residential A	yes	no	no	no	no	no	no	(blank)	0.017
F_374510_2897401	Other/Undesignated	ResA	Residential A	no	yes	no	no	no	no	no	(blank)	0.001
F_374510_2897401	Parks and Recreation	IPUD1	Industrial Garden Planned Unit - De	no	no	no	no	yes	no	no	(blank)	0.005
F_374510_2897401	Parks and Recreation	IPUD1	Industrial Garden Planned Unit - De	no	no	no	yes	no	no	no	(blank)	6.325
F_374510_2897401	Parks and Recreation	IPUD1	Industrial Garden Planned Unit - De	yes	no	no	no	no	no	no	(blank)	28.822
F_374510_2897401	Parks and Recreation	ResA	Residential A	no	no	no	no	yes	no	no	(blank)	0.170
F_374510_2897401	Parks and Recreation	ResA	Residential A	no	no	no	yes	no	no	no	(blank)	20.638
F_374510_2897401	Parks and Recreation	ResA	Residential A	no	yes	no	no	no	no	no	(blank)	65.230
F_374510_2897401	Parks and Recreation	ResA	Residential A	yes	no	no	no	no	no	no	(blank)	112.958
F_374510_2897401	Public/Government	IPUD1	Industrial Garden Planned Unit - De	no	no	no	no	yes	no	no	(blank)	0.222
F_374510_2897401	Public/Government	IPUD1	Industrial Garden Planned Unit - De	no	no	no	yes	no	no	no	(blank)	11.203
F_374510_2897401	Public/Government	IPUD1	Industrial Garden Planned Unit - De	yes	no	no	no	no	no	no	(blank)	12.284
F_374510_2897401	Public/Government	ResA	Residential A	no	yes	no	no	no	no	no	(blank)	0.145
F_374510_2897401	Public/Government	ResA	Residential A	yes	no	no	no	no	no	no	(blank)	1.874
F_374510_2897401	Transportation	ResA	Residential A	no	yes	no	no	no	no	no	(blank)	0.003
F_374510_2897401	Vacant/Open Space	IPUD1	Industrial Garden Planned Unit - De	yes	no	no	no	no	no	no	(blank)	0.063
F_374510_2897401	Vacant/Open Space	ResA	Residential A	no	yes	no	no	no	no	no	(blank)	0.075
F_374510_2897401	Water	ResA	Residential A	yes	no	no	no	no	no	no	(blank)	0.099
F_374949_2881822	Commercial Office	B2	Business B-2									0.006
F_374949_2881822	Commercial Retail	B2	Business B-2									0.005
F_374949_2881822	Multi-Family Residential	B2	Business B-2									0.003
F_374949_2881822	Single Family Residential	B2	Business B-2									0.033
F_374949_2881822	Transportation	B2	Business B-2									2.712
F_374949_2881822	Vacant/Open Space	B2	Business B-2									0.009
F_374949_2881822	Water	B2	Business B-2									0.107
F_379706_2893693	Parks and Recreation	ResA	Residential A	no	yes	no	no	no	no	no	No	21.298
F_379706_2893693	Parks and Recreation	ResA	Residential A	yes	no	no	no	no	no	no	No	36.114
F_379706_2893693	Water	ResA	Residential A	yes	no	no	no	no	no	no	No	0.000
M_110389_887016	Public/Government	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	5.117

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
M_110675_887585	Public/Government	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	2.418
M_110675_887585	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.223
M_110675_887585	Transportation	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.011
M_110675_887585	Vacant/Open Space	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.001
M_110750_887877	Commercial Retail	GB	General Business	no	no	yes	no	no	no	no	Yes2	2.214
M_110750_887877	Public/Government	GB	General Business	no	no	yes	no	no	no	no	Yes2	0.020
M_110750_887877	Single Family Residential	GB	General Business	no	no	yes	no	no	no	no	Yes2	0.012
M_110953_887919	Commercial Retail	GB	General Business	no	no	yes	no	no	no	no	No	0.004
M_110953_887919	Multi-Family Residential	GB	General Business	no	no	yes	no	no	no	no	No	3.789
M_110953_887919	Public/Government	GB	General Business	no	no	yes	no	no	no	no	No	0.017
M_110985_887090	Public/Government	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	8.373
M_110985_887090	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.005
M_110985_887090	Vacant/Open Space	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.000
M_111054_887162	Public/Government	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.000
M_111054_887162	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	1.778
M_111054_887162	Vacant/Open Space	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.021
M_111067_887478	Public/Government	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	3.279
M_111067_887478	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.022
M_111067_887478	Transportation	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.012
M_111067_887478	Vacant/Open Space	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.007
M_111109_886918	Commercial Office	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.004
M_111109_886918	Public/Government	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	7.065
M_111140_887013	Public/Government	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.013
M_111140_887013	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	2.004
M_111140_887013	Vacant/Open Space	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.015
M_111148_887110	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	1.107
M_111196_887095	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	1.108
M_111202_886724	Public/Government	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	7.048
M_111202_886724	Transportation	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.003
M_111243_887637	Public/Government	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	33.115
M_111243_887637	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.067
M_111243_887637	Transportation	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.053
M_111243_887637	Vacant/Open Space	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.009
M_111249_887212	Multi-Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	No	1.008
M_111249_887212	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	No	0.000
M_111249_887212	Transportation	R5	Single Family Residential R5	no	no	yes	no	no	no	no	No	0.005
M_111252_887277	Multi-Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes	0.011
M_111252_887277	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes	0.004
M_111252_887277	Vacant/Open Space	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes	1.244
M_111274_886946	Commercial Office	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.014
M_111274_886946	Other/Undesignated	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	1.727
M_111274_886946	Public/Government	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.007
M_111274_886946	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.012
M_111309_887174	Multi-Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	No	1.562
M_111309_887174	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	No	0.013
M_111309_887174	Transportation	R5	Single Family Residential R5	no	no	yes	no	no	no	no	No	0.003
M_111336_887249	Multi-Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.017
M_111336_887249	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	2.627
M_111336_887249	Transportation	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.000
M_111342_886881	Commercial Office	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	1.656
M_111342_886881	Public/Government	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.037
M_111412_886560	Public/Government	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	3.981
M_111412_886560	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.007
M_111424_886749	Public/Government	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	9.118
M_111424_886749	Transportation	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.039
M_111469_887134	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	1.401
M_111479_887231	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	1.266
M_111494_887081	Multi-Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.007
M_111494_887081	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	1.329

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
M_111498_887023	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	1.077
M_111532_886980	Single Family Residential	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	1.046
M_111532_886980	Vacant/Open Space	R5	Single Family Residential R5	no	no	yes	no	no	no	no	Yes2	0.002
M_111556_886407	Commercial Office	LB	Limited Business									1.017
M_111556_886407	Commercial Retail	LB	Limited Business									0.019
M_111567_886892	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	1.084
M_111567_886892	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.007
M_111599_887025	Public/Government	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	3.229
M_111599_887025	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.025
M_111599_887025	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.007
M_111599_887025	Vacant/Open Space	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.007
M_111601_886726	Public/Government	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	0.016
M_111601_886726	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	0.002
M_111601_886726	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	0.006
M_111601_886726	Vacant/Open Space	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	1.474
M_111610_886320	Commercial Retail	LB	Limited Business									4.685
M_111610_886320	Vacant/Open Space	LB	Limited Business									0.032
M_111612_886832	Agriculture	R3	Single Family Residential R3	no	yes	no	no	no	no	no	Yes	0.001
M_111612_886832	Commercial Office	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	0.014
M_111612_886832	Commercial Retail	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	0.003
M_111612_886832	Industrial	R3	Single Family Residential R3	no	yes	no	no	no	no	no	Yes	0.250
M_111612_886832	Multi-Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	0.119
M_111612_886832	Other/Undesignated	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	0.003
M_111612_886832	Other/Undesignated	R3	Single Family Residential R3	no	yes	no	no	no	no	no	Yes	0.007
M_111612_886832	Public/Government	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	0.160
M_111612_886832	Public/Government	R3	Single Family Residential R3	no	yes	no	no	no	no	no	Yes	0.025
M_111612_886832	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	1.629
M_111612_886832	Single Family Residential	R3	Single Family Residential R3	no	yes	no	no	no	no	no	Yes	0.129
M_111612_886832	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	51.150
M_111612_886832	Transportation	R3	Single Family Residential R3	no	yes	no	no	no	no	no	Yes	12.501
M_111612_886832	Vacant/Open Space	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	0.601
M_111612_886832	Vacant/Open Space	R3	Single Family Residential R3	no	yes	no	no	no	no	no	Yes	0.080
M_111654_886853	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	1.077
M_111654_886853	Vacant/Open Space	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.039
M_111662_886474	Commercial Office	LB	Limited Business									0.012
M_111662_886474	Commercial Retail	LB	Limited Business									0.027
M_111662_886474	Public/Government	LB	Limited Business									0.001
M_111662_886474	Transportation	LB	Limited Business									7.150
M_111662_886474	Vacant/Open Space	LB	Limited Business									0.019
M_111674_886085	Agriculture	LB	Limited Business									0.006
M_111674_886085	Single Family Residential	LB	Limited Business									1.423
M_111674_886085	Vacant/Open Space	LB	Limited Business									0.000
M_111692_886891	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	1.580
M_111696_887059	Public/Government	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.029
M_111696_887059	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	1.960
M_111696_887059	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.011
M_111795_886355	Vacant/Open Space	LB	Limited Business									1.393
M_111796_886232	Commercial Retail	LB	Limited Business									0.002
M_111796_886232	Single Family Residential	LB	Limited Business									0.000
M_111796_886232	Vacant/Open Space	LB	Limited Business									8.410
M_111802_886143	Single Family Residential	LB	Limited Business									0.028
M_111802_886143	Vacant/Open Space	LB	Limited Business									1.109
M_111802_887237	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	3.017
M_111802_887237	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.006
M_111888_886371	Public/Government	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.034
M_111888_886371	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	1.411
M_111888_886371	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.005
M_111892_886418	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	1.151
M_111892_886418	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.004

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
M_111917_886156	Agriculture	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	0.016
M_111917_886156	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	0.014
M_111917_886156	Vacant/Open Space	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	1.511
M_111942_885993	Agriculture	LB	Limited Business									7.512
M_111942_885993	Single Family Residential	LB	Limited Business									0.015
M_111942_885993	Transportation	LB	Limited Business									0.005
M_111942_885993	Vacant/Open Space	LB	Limited Business									0.023
M_111991_886618	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	1.472
M_111991_886618	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.012
M_111999_886368	Public/Government	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	7.508
M_111999_886368	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.015
M_112038_886625	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	1.440
M_112038_886625	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.010
M_112046_886219	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	1.142
M_112056_886313	Public/Government	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	3.338
M_112056_886313	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.021
M_112056_886313	Vacant/Open Space	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.035
M_112079_885804	Transportation	R3	Single Family Residential R3	no	yes	no	no	no	no	no	Yes	0.000
M_112079_885804	Vacant/Open Space	R3	Single Family Residential R3	no	yes	no	no	no	no	no	Yes	1.220
M_112084_886630	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	2.034
M_112084_886630	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.012
M_112117_886224	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	1.129
M_112126_886344	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	0.015
M_112126_886344	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	0.026
M_112126_886344	Vacant/Open Space	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	1.889
M_112137_886101	Industrial	R3	Single Family Residential R3	no	yes	no	no	no	no	no	No	0.011
M_112137_886101	Multi-Family Residential	R3	Single Family Residential R3	no	yes	no	no	no	no	no	No	0.011
M_112137_886101	Single Family Residential	R3	Single Family Residential R3	no	yes	no	no	no	no	no	No	1.725
M_112137_886101	Transportation	R3	Single Family Residential R3	no	yes	no	no	no	no	no	No	0.000
M_112138_885796	Single Family Residential	R3	Single Family Residential R3	no	yes	no	no	no	no	no	Yes	0.019
M_112138_885796	Transportation	R3	Single Family Residential R3	no	yes	no	no	no	no	no	Yes	1.274
M_112138_885796	Vacant/Open Space	R3	Single Family Residential R3	no	yes	no	no	no	no	no	Yes	0.540
M_112158_886654	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	2.385
M_112158_886654	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.005
M_112160_886180	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	No	0.608
M_112160_886180	Single Family Residential	R3	Single Family Residential R3	no	yes	no	no	no	no	no	No	0.663
M_112160_886180	Transportation	R3	Single Family Residential R3	no	yes	no	no	no	no	no	No	0.001
M_112179_886280	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	1.176
M_112179_886280	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.010
M_112188_886001	Industrial	R3	Single Family Residential R3	no	yes	no	no	no	no	no	No	0.022
M_112188_886001	Multi-Family Residential	R3	Single Family Residential R3	no	yes	no	no	no	no	no	No	1.985
M_112188_886001	Single Family Residential	R3	Single Family Residential R3	no	yes	no	no	no	no	no	No	0.000
M_112188_886001	Transportation	R3	Single Family Residential R3	no	yes	no	no	no	no	no	No	0.005
M_112188_886443	Public/Government	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	2.015
M_112209_885929	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	1.164
M_112209_885929	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.023
M_112214_886223	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	No	0.327
M_112214_886223	Single Family Residential	R3	Single Family Residential R3	no	yes	no	no	no	no	no	No	0.712
M_112214_886223	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	No	0.002
M_112214_886223	Transportation	R3	Single Family Residential R3	no	yes	no	no	no	no	no	No	0.005
M_112214_886611	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	1.436
M_112214_886611	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes2	0.011
M_112250_886153	Industrial	R3	Single Family Residential R3	no	yes	no	no	no	no	no	No	0.016
M_112250_886153	Single Family Residential	R3	Single Family Residential R3	no	yes	no	no	no	no	no	No	1.098
M_112250_886153	Transportation	R3	Single Family Residential R3	no	yes	no	no	no	no	no	No	0.004
M_112253_885877	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes	0.000
M_112253_885877	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes	0.006
M_112253_885877	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes	1.036
M_112260_886485	Public/Government	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.012

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
M_112260_886485	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	1.253
M_112272_886799	Single Family Residential	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	0.017
M_112272_886799	Transportation	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	0.035
M_112272_886799	Vacant/Open Space	R3	Single Family Residential R3	no	no	yes	no	no	no	no	Yes	12.571
M_112294_885813	Commercial Business	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.020
M_112294_885813	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	1.051
M_112294_885813	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.008
M_112303_886494	Public/Government	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.009
M_112303_886494	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	1.048
M_112303_886494	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.002
M_112306_886033	Industrial	R3	Single Family Residential R3	no	yes	no	no	no	no	no	Yes2	4.671
M_112306_886033	Multi-Family Residential	R3	Single Family Residential R3	no	yes	no	no	no	no	no	Yes2	0.009
M_112306_886033	Single Family Residential	R3	Single Family Residential R3	no	yes	no	no	no	no	no	Yes2	0.005
M_112306_886033	Transportation	R3	Single Family Residential R3	no	yes	no	no	no	no	no	Yes2	0.022
M_112325_885754	Commercial Business	GI	General Industrial	no	yes	no	no	no	no	no	No1	1.391
M_112325_885754	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	No1	0.022
M_112350_886501	Public/Government	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	0.013
M_112350_886501	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	0.001
M_112350_886501	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	1.436
M_112356_885666	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.975
M_112356_885666	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.008
M_112356_885666	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.007
M_112372_885897	Commercial Business	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.000
M_112372_885897	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	5.768
M_112372_885897	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.006
M_112390_886053	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes	0.000
M_112390_886053	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes	0.023
M_112390_886053	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes	2.310
M_112392_885759	Commercial Business	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.002
M_112392_885759	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	1.249
M_112392_885759	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.015
M_112420_885645	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	1.761
M_112420_885645	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.001
M_112420_885645	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.006
M_112422_886625	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	2.869
M_112422_886625	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.019
M_112422_886625	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.001
M_112440_885805	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	1.656
M_112440_885805	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.007
M_112469_885950	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	1.558
M_112475_886070	Public/Government	GI	General Industrial	no	yes	no	no	no	no	no	Yes	0.005
M_112475_886070	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes	0.015
M_112475_886070	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes	2.088
M_112477_885660	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	1.549
M_112478_885869	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	1.052
M_112495_885754	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.988
M_112495_885754	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.018
M_112495_885754	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.002
M_112515_885570	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	2.111
M_112515_885570	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.017
M_112535_885667	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	1.486
M_112570_885846	Public/Government	GI	General Industrial	no	yes	no	no	no	no	no	No1	2.333
M_112570_885846	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	No1	0.003
M_112570_885846	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	No1	0.017
M_112586_885751	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes	0.011
M_112586_885751	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes	0.001
M_112586_885751	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes	1.000
M_112591_886118	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	No1	0.069
M_112591_886118	Public/Government	GI	General Industrial	no	no	yes	no	no	no	no	No1	8.105

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
M_112591_886118	Public/Government	GI	General Industrial	no	yes	no	no	no	no	no	No1	66.233
M_112591_886118	Single Family Residential	GI	General Industrial	no	no	yes	no	no	no	no	No1	0.008
M_112591_886118	Single Family Residential	GI	General Industrial	no	yes	no	no	no	no	no	No1	0.013
M_112591_886118	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	No1	0.000
M_112591_886118	Vacant/Open Space	GI	General Industrial	no	no	yes	no	no	no	no	No1	0.005
M_112591_886118	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	No1	0.069
M_112631_885579	Commercial Retail	GB	General Business	no	yes	no	no	no	no	no	No1	1.017
M_112631_885579	Industrial	GB	General Business	no	yes	no	no	no	no	no	No1	0.008
M_112631_885579	Transportation	GB	General Business	no	yes	no	no	no	no	no	No1	0.012
M_112632_885652	Commercial Retail	GB	General Business	no	yes	no	no	no	no	no	Yes2	0.021
M_112632_885652	Industrial	GB	General Business	no	yes	no	no	no	no	no	Yes2	3.216
M_112632_885652	Transportation	GB	General Business	no	yes	no	no	no	no	no	Yes2	0.021
M_112722_885644	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes	0.039
M_112722_885644	Public/Government	GI	General Industrial	no	yes	no	no	no	no	no	Yes	0.001
M_112722_885644	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes	0.015
M_112722_885644	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes	6.398
M_112756_885718	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	3.326
M_112756_885718	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.018
M_112756_885718	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.018
M_112784_885573	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	2.059
M_112784_885573	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.000
M_112827_885831	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	10.263
M_112827_885831	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.037
M_112827_885831	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.014
M_112835_885963	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes	0.029
M_112835_885963	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes	1.425
M_112852_885994	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	1.476
M_112852_885994	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.006
M_112852_885994	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.009
M_112879_885607	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	2.831
M_112879_885607	Other/Undesignated	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.001
M_112879_885607	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.024
M_112912_885928	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	1.054
M_112912_885928	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.009
M_112956_885999	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	1.191
M_112956_885999	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.008
M_112956_885999	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.011
M_112970_885846	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	1.616
M_112970_885846	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.010
M_112970_885846	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.005
M_112974_886087	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	No1	0.027
M_112974_886087	Public/Government	GI	General Industrial	no	yes	no	no	no	no	no	No1	3.462
M_113001_885929	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes	0.012
M_113001_885929	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes	0.009
M_113001_885929	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes	0.992
M_113035_885663	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	10.838
M_113035_885663	Other/Undesignated	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.033
M_113035_885663	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.058
M_113044_885869	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	1.046
M_113044_885869	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.021
M_113076_885955	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	4.051
M_113076_885955	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.019
M_113076_885955	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.009
M_113243_886086	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	1.932
M_113243_886086	Transportation	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.011
M_113252_885901	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	1.542
M_113252_885901	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes2	0.029
M_113367_885795	Industrial	GI	General Industrial	no	yes	no	no	no	no	no	Yes	0.031
M_113367_885795	Other/Undesignated	GI	General Industrial	no	yes	no	no	no	no	no	Yes	0.111

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
M_113367_885795	Vacant/Open Space	GI	General Industrial	no	yes	no	no	no	no	no	Yes	17.175
M_115934_885502	Other/Undesignated	A	Agriculture	no	no	no	yes	no	no	no	Yes2	0.004
M_115934_885502	Other/Undesignated	A	Agriculture	no	yes	no	no	no	no	no	Yes2	0.010
M_115934_885502	Other/Undesignated	A	Agriculture	yes	no	no	no	no	no	no	Yes2	0.000
M_115934_885502	Parks and Recreation	A	Agriculture	no	no	no	yes	no	no	no	Yes2	19.098
M_115934_885502	Parks and Recreation	A	Agriculture	no	yes	no	no	no	no	no	Yes2	272.766
M_115934_885502	Parks and Recreation	A	Agriculture	yes	no	no	no	no	no	no	Yes2	0.282
M_115934_885502	Public/Government	A	Agriculture	yes	no	no	no	no	no	no	Yes2	0.000
M_115992_886051	Other/Undesignated	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes	0.004
M_115992_886051	Parks and Recreation	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes	0.042
M_115992_886051	Single Family Residential	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes	0.007
M_115992_886051	Transportation	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes	0.001
M_115992_886051	Vacant/Open Space	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes	6.327
M_116150_881785	Industrial	IA	TBD	no	yes	no	no	no	no	no	Yes2	7.034
M_116150_881785	Parks and Recreation	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.028
M_116150_881785	Transportation	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.056
M_116172_882324	Industrial	A	Agriculture	no	yes	no	no	no	no	no	Yes2	0.178
M_116172_882324	Other/Undesignated	A	Agriculture	yes	no	no	no	no	no	no	Yes2	0.013
M_116172_882324	Parks and Recreation	A	Agriculture	no	yes	no	no	no	no	no	Yes2	32.822
M_116172_882324	Parks and Recreation	A	Agriculture	yes	no	no	no	no	no	no	Yes2	18.709
M_116172_882324	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	Yes2	0.189
M_116172_882324	Transportation	A	Agriculture	no	yes	no	no	no	no	no	Yes2	0.013
M_116172_882324	Vacant/Open Space	A	Agriculture	yes	no	no	no	no	no	no	Yes2	0.001
M_116172_882324	Water	A	Agriculture	yes	no	no	no	no	no	no	Yes2	0.000
M_116192_881955	Industrial	IA	TBD	no	yes	no	no	no	no	no	Yes2	10.348
M_116192_881955	Single Family Residential	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.013
M_116192_881955	Transportation	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.020
M_116192_881955	Vacant/Open Space	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.012
M_116197_882988	Industrial	IC	TBD	no	yes	no	no	no	no	no	No	0.000
M_116197_882988	Other/Undesignated	IC	TBD	no	yes	no	no	no	no	no	No	2.537
M_116197_882988	Other/Undesignated	IC	TBD	yes	no	no	no	no	no	no	No	8.027
M_116197_882988	Parks and Recreation	IC	TBD	no	yes	no	no	no	no	no	No	0.008
M_116197_882988	Parks and Recreation	IC	TBD	yes	no	no	no	no	no	no	No	21.370
M_116197_882988	Public/Government	IC	TBD	yes	no	no	no	no	no	no	No	0.000
M_116197_882988	Single Family Residential	IC	TBD	no	yes	no	no	no	no	no	No	0.019
M_116197_882988	Transportation	IC	TBD	no	yes	no	no	no	no	no	No	0.008
M_116197_882988	Vacant/Open Space	IC	TBD	yes	no	no	no	no	no	no	No	0.001
M_116294_881759	Industrial	IA	TBD	no	yes	no	no	no	no	no	Yes	0.002
M_116294_881759	Transportation	IA	TBD	no	yes	no	no	no	no	no	Yes	0.025
M_116294_881759	Vacant/Open Space	IA	TBD	no	yes	no	no	no	no	no	Yes	1.395
M_116318_886022	Other/Undesignated	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes	0.002
M_116318_886022	Parks and Recreation	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes	0.018
M_116318_886022	Transportation	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes	0.000
M_116318_886022	Vacant/Open Space	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes	1.130
M_116362_882026	Single Family Residential	RA	Residential/Agriculture	no	yes	no	no	no	no	no	No	1.548
M_116362_882026	Transportation	RA	Residential/Agriculture	no	yes	no	no	no	no	no	No	0.003
M_116397_881980	Industrial	A	Agriculture	no	yes	no	no	no	no	no	No	0.054
M_116397_881980	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	No	2.859
M_116397_881980	Transportation	A	Agriculture	no	yes	no	no	no	no	no	No	0.000
M_116429_881918	Commercial Retail	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.017
M_116429_881918	Forest/Conservation	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.003
M_116429_881918	Industrial	IA	TBD	no	yes	no	no	no	no	no	Yes2	6.410
M_116429_881918	Single Family Residential	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.007
M_116429_881918	Transportation	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.007
M_116429_881918	Vacant/Open Space	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.001
M_116440_881829	Forest/Conservation	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.017
M_116440_881829	Industrial	IA	TBD	no	yes	no	no	no	no	no	Yes2	2.082
M_116440_881829	Transportation	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.015
M_116461_881625	Vacant/Open Space	A	Agriculture	no	yes	no	no	no	no	no	Yes	7.713

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
M_116474_882547	Industrial	IC	TBD	no	yes	no	no	no	no	no	Yes2	3.863
M_116474_882547	Single Family Residential	IC	TBD	no	yes	no	no	no	no	no	Yes2	0.044
M_116475_881355	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	No	1.731
M_116475_881355	Transportation	A	Agriculture	no	yes	no	no	no	no	no	No	0.014
M_116475_881355	Vacant/Open Space	A	Agriculture	no	yes	no	no	no	no	no	No	0.004
M_116477_881714	Industrial	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.005
M_116477_881714	Vacant/Open Space	A	Agriculture	no	yes	no	no	no	no	no	Yes	12.026
M_116480_882151	Single Family Residential	RA	Residential/Agriculture	no	yes	no	no	no	no	no	No	1.215
M_116480_882151	Transportation	RA	Residential/Agriculture	no	yes	no	no	no	no	no	No	0.014
M_116539_881827	Mixed Use	IA	TBD	no	yes	no	no	no	no	no	No1	1.107
M_116539_881827	Transportation	IA	TBD	no	yes	no	no	no	no	no	No1	0.063
M_116558_886065	Other/Undesignated	R2	Single Family Residential R2	no	yes	no	no	no	no	no	No	0.001
M_116558_886065	Parks and Recreation	R2	Single Family Residential R2	no	yes	no	no	no	no	no	No	0.009
M_116558_886065	Single Family Residential	R2	Single Family Residential R2	no	yes	no	no	no	no	no	No	1.050
M_116558_886065	Vacant/Open Space	R2	Single Family Residential R2	no	yes	no	no	no	no	no	No	0.001
M_116577_886582	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.007
M_116577_886582	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	3.195
M_116577_886582	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.002
M_116592_886458	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	1.132
M_116592_886458	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.013
M_116656_881294	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.042
M_116656_881294	Transportation	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.017
M_116656_881294	Vacant/Open Space	A	Agriculture	no	yes	no	no	no	no	no	Yes	5.299
M_116665_881141	Single Family Residential	RA	Residential/Agriculture	no	yes	no	no	no	no	no	No	1.718
M_116665_881141	Transportation	RA	Residential/Agriculture	no	yes	no	no	no	no	no	No	0.015
M_116665_881141	Vacant/Open Space	RA	Residential/Agriculture	no	yes	no	no	no	no	no	No	0.004
M_116676_886437	Other/Undesignated	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	3.476
M_116676_886437	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	1.910
M_116676_886437	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.009
M_116676_886437	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.056
M_116680_881426	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	No	5.096
M_116680_881426	Transportation	A	Agriculture	no	yes	no	no	no	no	no	No	0.045
M_116680_881426	Vacant/Open Space	A	Agriculture	no	yes	no	no	no	no	no	No	0.329
M_116705_886114	Other/Undesignated	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes	0.007
M_116705_886114	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	0.007
M_116705_886114	Parks and Recreation	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes	0.052
M_116705_886114	Vacant/Open Space	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	0.406
M_116705_886114	Vacant/Open Space	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes	5.291
M_116710_880708	Single Family Residential	A	Agriculture	no	no	yes	no	no	no	no	Yes	0.038
M_116710_880708	Vacant/Open Space	A	Agriculture	no	no	yes	no	no	no	no	Yes	8.863
M_116719_886206	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.879
M_116719_886206	Parks and Recreation	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes2	4.144
M_116719_886206	Vacant/Open Space	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.008
M_116719_886206	Vacant/Open Space	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes2	0.049
M_116724_881870	Commercial Office	A	Agriculture	no	yes	no	no	no	no	no	No	0.007
M_116724_881870	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	No	1.147
M_116724_881870	Transportation	A	Agriculture	no	yes	no	no	no	no	no	No	0.028
M_116741_886250	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	2.269
M_116741_886250	Parks and Recreation	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes2	3.157
M_116751_881535	Mixed Use	A	Agriculture	no	yes	no	no	no	no	no	No1	2.289
M_116751_881535	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	No1	0.054
M_116751_881535	Transportation	A	Agriculture	no	yes	no	no	no	no	no	No1	0.024
M_116751_881535	Vacant/Open Space	A	Agriculture	no	yes	no	no	no	no	no	No1	1.628
M_116783_881701	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.050
M_116783_881701	Transportation	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.008
M_116783_881701	Vacant/Open Space	A	Agriculture	no	yes	no	no	no	no	no	Yes	4.094
M_116794_881853	Commercial Office	IA	TBD	no	yes	no	no	no	no	no	No1	1.127
M_116794_881853	Transportation	IA	TBD	no	yes	no	no	no	no	no	No1	0.036
M_116816_881114	Industrial	A	Agriculture	no	no	yes	no	no	no	no	Yes2	2.579

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
M_116816_881114	Industrial	A	Agriculture	no	yes	no	no	no	no	no	Yes2	4.781
M_116816_881114	Mixed Use	A	Agriculture	no	no	yes	no	no	no	no	Yes2	0.044
M_116816_881114	Mixed Use	A	Agriculture	no	yes	no	no	no	no	no	Yes2	0.081
M_116816_881114	Single Family Residential	A	Agriculture	no	no	yes	no	no	no	no	Yes2	0.008
M_116816_881114	Vacant/Open Space	A	Agriculture	no	no	yes	no	no	no	no	Yes2	0.000
M_116816_881114	Vacant/Open Space	A	Agriculture	no	yes	no	no	no	no	no	Yes2	0.002
M_116816_882209	Commercial Office	IA	TBD	no	yes	no	no	no	no	no	Yes	0.022
M_116816_882209	Transportation	IA	TBD	no	yes	no	no	no	no	no	Yes	0.004
M_116816_882209	Vacant/Open Space	IA	TBD	no	yes	no	no	no	no	no	Yes	1.378
M_116828_886615	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.007
M_116828_886615	Multi-Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.037
M_116828_886615	Other/Undesignated	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.040
M_116828_886615	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.152
M_116828_886615	Parks and Recreation	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes2	0.035
M_116828_886615	Public/Government	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes2	0.003
M_116828_886615	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	57.351
M_116828_886615	Single Family Residential	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes2	0.055
M_116828_886615	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	5.361
M_116828_886615	Transportation	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes2	2.733
M_116828_886615	Vacant/Open Space	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.016
M_116828_886615	Vacant/Open Space	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes2	0.012
M_116848_887214	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.037
M_116848_887214	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	10.323
M_116857_882062	Forest/Conservation	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.011
M_116857_882062	Industrial	IA	TBD	no	yes	no	no	no	no	no	Yes2	1.313
M_116857_882062	Single Family Residential	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.011
M_116857_882062	Transportation	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.001
M_116861_881640	Mixed Use	A	Agriculture	no	yes	no	no	no	no	no	No1	6.356
M_116861_881640	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	No1	0.660
M_116861_881640	Transportation	A	Agriculture	no	yes	no	no	no	no	no	No1	0.014
M_116861_881640	Vacant/Open Space	A	Agriculture	no	yes	no	no	no	no	no	No1	13.529
M_116861_886263	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	1.032
M_116901_881870	Commercial Retail	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.017
M_116901_881870	Industrial	IA	TBD	no	yes	no	no	no	no	no	Yes2	1.237
M_116901_881870	Multi-Family Residential	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.001
M_116901_881870	Single Family Residential	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.001
M_116901_881870	Transportation	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.001
M_116901_881870	Vacant/Open Space	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.000
M_116906_886342	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.003
M_116906_886342	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	1.319
M_116906_886342	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.016
M_116912_882119	Commercial Office	IA	TBD	no	yes	no	no	no	no	no	Yes	0.002
M_116912_882119	Forest/Conservation	IA	TBD	no	yes	no	no	no	no	no	Yes	0.011
M_116912_882119	Industrial	IA	TBD	no	yes	no	no	no	no	no	Yes	0.000
M_116912_882119	Transportation	IA	TBD	no	yes	no	no	no	no	no	Yes	0.007
M_116912_882119	Vacant/Open Space	IA	TBD	no	yes	no	no	no	no	no	Yes	1.457
M_116919_886141	Other/Undesignated	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.000
M_116919_886141	Other/Undesignated	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes2	0.006
M_116919_886141	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	3.896
M_116919_886141	Parks and Recreation	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes2	4.571
M_116919_886141	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.032
M_116919_886141	Single Family Residential	R2	Single Family Residential R2	no	yes	no	no	no	no	no	Yes2	0.036
M_116940_881074	Mixed Use	A	Agriculture	no	no	yes	no	no	no	no	No1	2.273
M_116940_881074	Mixed Use	A	Agriculture	no	yes	no	no	no	no	no	No1	3.202
M_116940_881074	Single Family Residential	A	Agriculture	no	no	yes	no	no	no	no	No1	0.057
M_116940_881074	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	No1	0.061
M_116945_885997	Other/Undesignated	A	Agriculture	no	yes	no	no	no	no	no	Yes2	2.018
M_116945_885997	Parks and Recreation	A	Agriculture	no	yes	no	no	no	no	no	Yes2	0.030
M_116945_885997	Transportation	A	Agriculture	no	yes	no	no	no	no	no	Yes2	0.000

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
M_116962_881324	Commercial Retail	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.077
M_116962_881324	Industrial	IA	TBD	no	yes	no	no	no	no	no	Yes2	2.596
M_116962_881324	Single Family Residential	IA	TBD	no	yes	no	no	no	no	no	Yes2	0.001
M_116970_886230	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	2.609
M_116970_886230	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.015
M_116974_881179	Industrial	A	Agriculture	no	no	yes	no	no	no	no	No1	0.027
M_116974_881179	Industrial	A	Agriculture	no	yes	no	no	no	no	no	No1	0.091
M_116974_881179	Mixed Use	A	Agriculture	no	no	yes	no	no	no	no	No1	0.927
M_116974_881179	Mixed Use	A	Agriculture	no	yes	no	no	no	no	no	No1	3.829
M_116974_881179	Vacant/Open Space	A	Agriculture	no	no	yes	no	no	no	no	No1	0.000
M_116985_881956	Commercial Business	A	Agriculture	no	yes	no	no	no	no	no	No1	2.808
M_116985_881956	Transportation	A	Agriculture	no	yes	no	no	no	no	no	No1	0.033
M_116988_881677	Commercial Retail	BA	TBD	no	yes	no	no	no	no	no	Yes	0.007
M_116988_881677	Single Family Residential	BA	TBD	no	yes	no	no	no	no	no	Yes	0.009
M_116988_881677	Vacant/Open Space	BA	TBD	no	yes	no	no	no	no	no	Yes	3.132
M_116992_880859	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	2.843
M_116992_880859	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.014
M_116992_880859	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.003
M_117022_881367	Industrial	RA	Residential/Agriculture	no	yes	no	no	no	no	no	No	0.048
M_117022_881367	Single Family Residential	RA	Residential/Agriculture	no	yes	no	no	no	no	no	No	1.294
M_117022_881367	Vacant/Open Space	RA	Residential/Agriculture	no	yes	no	no	no	no	no	No	0.002
M_117036_886030	Multi-Family Residential	A	Agriculture	no	no	yes	no	no	no	no	No	0.004
M_117036_886030	Other/Undesignated	A	Agriculture	no	no	yes	no	no	no	no	No	0.016
M_117036_886030	Other/Undesignated	A	Agriculture	no	yes	no	no	no	no	no	No	0.068
M_117036_886030	Parks and Recreation	A	Agriculture	no	yes	no	no	no	no	no	No	0.012
M_117036_886030	Single Family Residential	A	Agriculture	no	no	yes	no	no	no	no	No	2.034
M_117036_886030	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	No	5.074
M_117044_881592	Mixed Use	BA	TBD	no	yes	no	no	no	no	no	Yes	0.006
M_117044_881592	Single Family Residential	BA	TBD	no	yes	no	no	no	no	no	Yes	0.008
M_117044_881592	Vacant/Open Space	BA	TBD	no	yes	no	no	no	no	no	Yes	1.260
M_117047_881038	Single Family Residential	A	Agriculture	no	no	yes	no	no	no	no	Yes2	2.439
M_117047_881038	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	Yes2	2.221
M_117047_881038	Transportation	A	Agriculture	no	no	yes	no	no	no	no	Yes2	0.001
M_117047_881038	Transportation	A	Agriculture	no	yes	no	no	no	no	no	Yes2	0.008
M_117047_881038	Vacant/Open Space	A	Agriculture	no	no	yes	no	no	no	no	Yes2	0.061
M_117057_881665	Commercial Retail	BA	TBD	no	yes	no	no	no	no	no	No1	1.000
M_117057_881665	Mixed Use	BA	TBD	no	yes	no	no	no	no	no	No1	0.007
M_117057_881665	Vacant/Open Space	BA	TBD	no	yes	no	no	no	no	no	No1	0.014
M_117073_881248	Industrial	A	Agriculture	no	no	yes	no	no	no	no	Yes	0.007
M_117073_881248	Mixed Use	A	Agriculture	no	no	yes	no	no	no	no	Yes	0.015
M_117073_881248	Mixed Use	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.062
M_117073_881248	Single Family Residential	A	Agriculture	no	no	yes	no	no	no	no	Yes	0.015
M_117073_881248	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.028
M_117073_881248	Transportation	A	Agriculture	no	no	yes	no	no	no	no	Yes	0.012
M_117073_881248	Vacant/Open Space	A	Agriculture	no	no	yes	no	no	no	no	Yes	3.703
M_117073_881248	Vacant/Open Space	A	Agriculture	no	yes	no	no	no	no	no	Yes	5.582
M_117079_881305	Commercial Retail	IA	TBD	no	no	yes	no	no	no	no	No1	0.719
M_117079_881305	Commercial Retail	IA	TBD	no	yes	no	no	no	no	no	No1	4.534
M_117079_881305	Single Family Residential	IA	TBD	no	yes	no	no	no	no	no	No1	0.018
M_117079_881305	Vacant/Open Space	IA	TBD	no	no	yes	no	no	no	no	No1	0.021
M_117079_881305	Vacant/Open Space	IA	TBD	no	yes	no	no	no	no	no	No1	0.086
M_117086_881865	Multi-Family Residential	A	Agriculture	no	yes	no	no	no	no	no	No	6.122
M_117086_881865	Transportation	A	Agriculture	no	yes	no	no	no	no	no	No	0.065
M_117086_881865	Utility	A	Agriculture	no	yes	no	no	no	no	no	No	0.010
M_117090_881455	Other/Undesignated	RA	Residential/Agriculture	no	yes	no	no	no	no	no	No	0.780
M_117090_881455	Single Family Residential	RA	Residential/Agriculture	no	yes	no	no	no	no	no	No	0.565
M_117090_881455	Transportation	RA	Residential/Agriculture	no	yes	no	no	no	no	no	No	0.001
M_117096_880673	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	1.131
M_117096_880673	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.051

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
M_117124_886959	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	17.501
M_117124_886959	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.054
M_117124_886959	Vacant/Open Space	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.061
M_117135_880833	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	0.009
M_117135_880833	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	1.035
M_117139_881635	Commercial Retail	BA	TBD	no	yes	no	no	no	no	no	No1	0.012
M_117139_881635	Mixed Use	BA	TBD	no	yes	no	no	no	no	no	No1	3.453
M_117139_881635	Single Family Residential	BA	TBD	no	yes	no	no	no	no	no	No1	0.025
M_117153_887310	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	10.390
M_117153_887310	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.001
M_117153_887310	Vacant/Open Space	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.004
M_117176_880929	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	0.009
M_117176_880929	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	2.023
M_117176_881652	Industrial	A	Agriculture	no	yes	no	no	no	no	no	No	0.010
M_117176_881652	Mixed Use	A	Agriculture	no	yes	no	no	no	no	no	No	0.003
M_117176_881652	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	No	1.128
M_117178_886545	Multi-Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	No	13.264
M_117178_886545	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	No	0.050
M_117178_886545	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	No	0.016
M_117178_886545	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	No	0.002
M_117196_881981	Commercial Business	A	Agriculture	no	yes	no	no	no	no	no	No1	3.726
M_117196_881981	Multi-Family Residential	A	Agriculture	no	yes	no	no	no	no	no	No1	0.000
M_117196_881981	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	No1	0.008
M_117196_881981	Transportation	A	Agriculture	no	yes	no	no	no	no	no	No1	0.036
M_117196_881981	Utility	A	Agriculture	no	yes	no	no	no	no	no	No1	0.000
M_117208_886264	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.016
M_117208_886264	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	4.899
M_117208_886264	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.017
M_117213_887149	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	9.372
M_117213_887149	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.058
M_117231_880968	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	1.344
M_117231_880968	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.005
M_117233_887523	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.001
M_117233_887523	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	2.064
M_117241_881489	Commercial Retail	A	Agriculture	no	no	yes	no	no	no	no	Yes2	0.005
M_117241_881489	Commercial Retail	A	Agriculture	no	yes	no	no	no	no	no	Yes2	0.019
M_117241_881489	Industrial	A	Agriculture	no	no	yes	no	no	no	no	Yes2	0.042
M_117241_881489	Industrial	A	Agriculture	no	yes	no	no	no	no	no	Yes2	7.066
M_117241_881489	Mixed Use	A	Agriculture	no	yes	no	no	no	no	no	Yes2	0.001
M_117241_881489	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	Yes2	0.004
M_117241_881489	Vacant/Open Space	A	Agriculture	no	yes	no	no	no	no	no	Yes2	0.001
M_117250_881742	Mixed Use	A	Agriculture	no	yes	no	no	no	no	no	No	0.006
M_117250_881742	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	No	1.006
M_117250_881742	Transportation	A	Agriculture	no	yes	no	no	no	no	no	No	0.017
M_117250_881742	Vacant/Open Space	A	Agriculture	no	yes	no	no	no	no	no	No	0.000
M_117259_886890	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	0.058
M_117259_886890	Vacant/Open Space	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	4.585
M_117262_880972	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	1.286
M_117263_886154	Other/Undesignated	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.018
M_117263_886154	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	1.204
M_117263_886154	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.005
M_117266_887445	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.020
M_117266_887445	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	3.933
M_117272_887076	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.065
M_117272_887076	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	5.099
M_117285_881707	Mixed Use	A	Agriculture	no	yes	no	no	no	no	no	No1	0.908
M_117285_881707	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	No1	0.009
M_117285_881707	Transportation	A	Agriculture	no	yes	no	no	no	no	no	No1	0.015
M_117285_881707	Vacant/Open Space	A	Agriculture	no	yes	no	no	no	no	no	No1	0.127

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
M_117298_886827	Multi-Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.023
M_117298_886827	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.039
M_117298_886827	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	5.414
M_117306_881587	Industrial	RA	Residential/Agriculture	no	yes	no	no	no	no	no	No	0.001
M_117306_881587	Single Family Residential	RA	Residential/Agriculture	no	yes	no	no	no	no	no	No	1.039
M_117323_886550	Multi-Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.007
M_117323_886550	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	20.638
M_117323_886550	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.039
M_117323_886550	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.003
M_117323_886550	Vacant/Open Space	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.005
M_117325_887340	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.006
M_117325_887340	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	3.532
M_117325_887340	Vacant/Open Space	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.028
M_117337_880290	Multi-Family Residential	A	Agriculture	no	no	yes	no	no	no	no	No	1.355
M_117337_880290	Single Family Residential	A	Agriculture	no	no	yes	no	no	no	no	No	0.000
M_117340_881187	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	1.040
M_117340_881187	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.004
M_117344_887598	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	1.680
M_117344_887598	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.007
M_117367_881213	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	0.009
M_117367_881213	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	1.136
M_117367_887230	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.002
M_117367_887230	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	1.578
M_117367_887230	Vacant/Open Space	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.029
M_117378_887544	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	2.101
M_117378_887544	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.006
M_117388_880293	Multi-Family Residential	A	Agriculture	no	no	yes	no	no	no	no	Yes2	0.001
M_117388_880293	Single Family Residential	A	Agriculture	no	no	yes	no	no	no	no	Yes2	2.128
M_117389_887143	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	4.135
M_117389_887143	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.037
M_117405_881223	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	0.007
M_117405_881223	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	0.005
M_117405_881223	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	1.202
M_117408_886929	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	0.019
M_117408_886929	Vacant/Open Space	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	1.225
M_117413_887600	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	0.002
M_117413_887600	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	0.049
M_117413_887600	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	0.001
M_117413_887600	Vacant/Open Space	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	1.524
M_117421_887480	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.030
M_117421_887480	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	2.590
M_117421_887480	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.005
M_117430_886263	Other/Undesignated	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.003
M_117430_886263	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	8.547
M_117432_887005	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	2.027
M_117432_887005	Vacant/Open Space	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.016
M_117447_880282	Single Family Residential	A	Agriculture	no	no	yes	no	no	no	no	Yes2	3.212
M_117449_886870	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	2.206
M_117449_887415	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	2.110
M_117449_887415	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.006
M_117463_886662	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	0.000
M_117463_886662	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	0.001
M_117463_886662	Vacant/Open Space	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	1.104
M_117467_887368	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	1.372
M_117467_887368	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.003
M_117481_881408	Multi-Family Residential	A	Agriculture	no	no	yes	no	no	no	no	No	5.044
M_117481_881408	Multi-Family Residential	A	Agriculture	no	yes	no	no	no	no	no	No	0.094
M_117481_881408	Single Family Residential	A	Agriculture	no	no	yes	no	no	no	no	No	0.004
M_117481_881408	Water	A	Agriculture	no	no	yes	no	no	no	no	No	0.040

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
M_117489_886713	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	1.777
M_117489_886713	Vacant/Open Space	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.034
M_117493_887272	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	1.850
M_117493_887272	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.003
M_117515_886519	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	0.016
M_117515_886519	Public/Government	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	0.003
M_117515_886519	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	0.005
M_117515_886519	Vacant/Open Space	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	10.365
M_117526_880423	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	0.018
M_117526_880423	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	2.813
M_117592_880745	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	0.023
M_117592_880745	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	1.469
M_117614_887801	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	9.776
M_117624_888015	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.130
M_117624_888015	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	19.362
M_117642_880744	Multi-Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.007
M_117642_880744	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	1.451
M_117642_880744	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.000
M_117642_886639	Public/Government	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.019
M_117642_886639	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	1.378
M_117678_881029	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	1.261
M_117678_881029	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.000
M_117696_887110	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	34.792
M_117696_887110	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.129
M_117696_887110	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.027
M_117777_881030	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	0.036
M_117777_881030	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	1.108
M_117815_888254	Parks and Recreation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	2.320
M_117827_880569	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	1.039
M_117830_887554	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	82.955
M_117830_887554	Public/Government	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.060
M_117830_887554	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.029
M_117830_887554	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.001
M_117830_887554	Vacant/Open Space	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.044
M_117873_880984	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	1.896
M_117873_880984	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.001
M_117873_886885	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.001
M_117873_886885	Public/Government	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.004
M_117873_886885	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	27.301
M_117873_886885	Transportation	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.023
M_117876_879731	Commercial Retail	IA	TBD	no	no	yes	no	no	no	no	Yes	0.001
M_117876_879731	Utility	IA	TBD	no	no	yes	no	no	no	no	Yes	1.291
M_117898_887790	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	26.493
M_117900_879600	Industrial	IA	TBD	no	no	yes	no	no	no	no	Yes	0.000
M_117900_879600	Utility	IA	TBD	no	no	yes	no	no	no	no	Yes	1.965
M_117900_879600	Water	IA	TBD	no	no	yes	no	no	no	no	Yes	0.019
M_117903_880510	Other/Undesignated	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	1.074
M_117903_880510	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.003
M_117903_880510	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.021
M_117934_879874	Commercial Office	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.002
M_117934_879874	Commercial Retail	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	1.006
M_117934_879874	Utility	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.010
M_117959_880585	Other/Undesignated	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.022
M_117959_880585	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	6.660
M_117959_880585	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.013
M_117959_880585	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.013
M_117962_880994	Industrial	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	2.375
M_117962_880994	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.004
M_117962_880994	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.045

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
M_117962_880994	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.004
M_118041_880877	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	0.008
M_118041_880877	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	0.017
M_118041_880877	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	2.231
M_118063_879814	Industrial	IA	TBD	no	no	yes	no	no	no	no	Yes2	9.606
M_118063_879814	Utility	IA	TBD	no	no	yes	no	no	no	no	Yes2	0.034
M_118080_880410	Institutional	RA	Residential/Agriculture	no	no	yes	no	no	no	no	No	1.641
M_118080_880410	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	No	0.010
M_118080_880410	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	No	0.048
M_118088_880909	Multi-Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.012
M_118088_880909	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	1.273
M_118147_880096	Mixed Use	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	1.028
M_118147_880096	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.001
M_118147_880096	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.021
M_118149_880889	Multi-Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	No	2.391
M_118149_880889	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	No	0.035
M_118197_879828	Industrial	RB	TBD	no	no	yes	no	no	no	no	No	0.001
M_118197_879828	Multi-Family Residential	RB	TBD	no	no	yes	no	no	no	no	No	1.055
M_118197_879828	Vacant/Open Space	RB	TBD	no	no	yes	no	no	no	no	No	0.023
M_118207_887882	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	0.068
M_118207_887882	Vacant/Open Space	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes	8.755
M_118219_879727	Industrial	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.000
M_118219_879727	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	4.434
M_118219_879727	Utility	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.052
M_118219_879727	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.003
M_118222_880791	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	2.487
M_118222_880791	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.009
M_118227_879901	Industrial	RB	TBD	no	no	yes	no	no	no	no	Yes	0.001
M_118227_879901	Single Family Residential	RB	TBD	no	no	yes	no	no	no	no	Yes	0.008
M_118227_879901	Transportation	RB	TBD	no	no	yes	no	no	no	no	Yes	0.078
M_118227_879901	Vacant/Open Space	RB	TBD	no	no	yes	no	no	no	no	Yes	2.170
M_118255_880571	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	2.000
M_118255_880571	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.006
M_118258_880379	Single Family Residential	RB	TBD	no	no	yes	no	no	no	no	Yes	0.069
M_118258_880379	Transportation	RB	TBD	no	no	yes	no	no	no	no	Yes	0.005
M_118258_880379	Vacant/Open Space	RB	TBD	no	no	yes	no	no	no	no	Yes	2.213
M_118260_880342	Multi-Family Residential	RB	TBD	no	no	yes	no	no	no	no	Yes2	0.014
M_118260_880342	Single Family Residential	RB	TBD	no	no	yes	no	no	no	no	Yes2	1.373
M_118260_880342	Transportation	RB	TBD	no	no	yes	no	no	no	no	Yes2	0.004
M_118260_880342	Vacant/Open Space	RB	TBD	no	no	yes	no	no	no	no	Yes2	0.002
M_118276_880630	Commercial Retail	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.013
M_118276_880630	Parks and Recreation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	4.432
M_118276_880630	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.147
M_118276_880630	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.005
M_118294_880314	Multi-Family Residential	RB	TBD	no	no	yes	no	no	no	no	Yes2	0.036
M_118294_880314	Single Family Residential	RB	TBD	no	no	yes	no	no	no	no	Yes2	1.563
M_118294_880314	Transportation	RB	TBD	no	no	yes	no	no	no	no	Yes2	0.006
M_118314_880759	Parks and Recreation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.050
M_118314_880759	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	2.797
M_118314_880759	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.009
M_118318_879807	Industrial	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	0.001
M_118318_879807	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	0.051
M_118318_879807	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	2.173
M_118322_880706	Parks and Recreation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	2.505
M_118322_880706	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.006
M_118338_880463	Multi-Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	No	3.668
M_118338_880463	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	No	0.002
M_118338_880463	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	No	0.004
M_118338_880463	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	No	0.093

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

PARCEL NUMBER	EXISTING LAND USE	ZONING		CZ/APZ			NOISE CONTOURS				Compatibility Based on Existing Land Use	ACREAGE
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
M_118356_880549	Multi-Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.034
M_118356_880549	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	4.346
M_118356_880549	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.010
M_118363_887457	Agriculture	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.000
M_118363_887457	Public/Government	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	4.760
M_118363_887457	Single Family Residential	R2	Single Family Residential R2	no	no	yes	no	no	no	no	Yes2	0.020
M_118402_880144	Multi-Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.007
M_118402_880144	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	1.604
M_118402_880144	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes2	0.013
M_118424_880306	Commercial Retail	RB	TBD	no	no	yes	no	no	no	no	No	0.005
M_118424_880306	Multi-Family Residential	RB	TBD	no	no	yes	no	no	no	no	No	7.730
M_118424_880306	Single Family Residential	RB	TBD	no	no	yes	no	no	no	no	No	0.019
M_118424_880306	Transportation	RB	TBD	no	no	yes	no	no	no	no	No	0.081
M_118424_880306	Vacant/Open Space	RB	TBD	no	no	yes	no	no	no	no	No	0.006
M_118445_879732	Multi-Family Residential	RB	TBD	no	no	yes	no	no	no	no	Yes2	0.025
M_118445_879732	Single Family Residential	RB	TBD	no	no	yes	no	no	no	no	Yes2	1.405
M_118445_879732	Transportation	RB	TBD	no	no	yes	no	no	no	no	Yes2	0.005
M_118467_879798	Multi-Family Residential	RB	TBD	no	no	yes	no	no	no	no	No	2.232
M_118467_879798	Single Family Residential	RB	TBD	no	no	yes	no	no	no	no	No	0.024
M_118492_880464	Multi-Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	0.085
M_118492_880464	Single Family Residential	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	0.010
M_118492_880464	Transportation	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	0.010
M_118492_880464	Vacant/Open Space	RA	Residential/Agriculture	no	no	yes	no	no	no	no	Yes	1.708
M_118513_879680	Multi-Family Residential	RB	TBD	no	no	yes	no	no	no	no	No	1.522
M_118513_879680	Transportation	RB	TBD	no	no	yes	no	no	no	no	No	0.009
M_118513_879680	Utility	RB	TBD	no	no	yes	no	no	no	no	No	0.001
M_118604_880358	Commercial Retail	RB	TBD	no	no	yes	no	no	no	no	No	0.015
M_118604_880358	Multi-Family Residential	RB	TBD	no	no	yes	no	no	no	no	No	1.356
M_118604_880358	Transportation	RB	TBD	no	no	yes	no	no	no	no	No	0.001
M_118604_880358	Vacant/Open Space	RB	TBD	no	no	yes	no	no	no	no	No	0.009
M_118648_879913	Commercial Business	RB	TBD	no	no	yes	no	no	no	no	Yes2	5.563
M_118648_879913	Commercial Office	RB	TBD	no	no	yes	no	no	no	no	Yes2	0.014
M_118648_879913	Commercial Retail	RB	TBD	no	no	yes	no	no	no	no	Yes2	0.010
M_118648_879913	Multi-Family Residential	RB	TBD	no	no	yes	no	no	no	no	Yes2	0.007
M_118648_879913	Single Family Residential	RB	TBD	no	no	yes	no	no	no	no	Yes2	0.028
M_118648_879913	Transportation	RB	TBD	no	no	yes	no	no	no	no	Yes2	0.015
M_118648_879913	Vacant/Open Space	RB	TBD	no	no	yes	no	no	no	no	Yes2	0.006
M_118788_880293	Commercial Retail	BA	TBD	no	no	yes	no	no	no	no	Yes2	4.649
M_118788_880293	Multi-Family Residential	BA	TBD	no	no	yes	no	no	no	no	Yes2	0.000
M_118788_880293	Single Family Residential	BA	TBD	no	no	yes	no	no	no	no	Yes2	0.023
M_118788_880293	Transportation	BA	TBD	no	no	yes	no	no	no	no	Yes2	0.069
M_118788_880293	Vacant/Open Space	BA	TBD	no	no	yes	no	no	no	no	Yes2	0.001
M_119888_878502	Mixed Use	(blank)	other/undesignated	no	no	yes	no	no	no	no	n/a	0.007
M_119888_878502	Multi-Family Residential	(blank)	other/undesignated	no	no	yes	no	no	no	no	n/a	0.000
M_119888_878502	Single Family Residential	(blank)	other/undesignated	no	no	yes	no	no	no	no	n/a	0.027
M_119888_878502	Transportation	(blank)	other/undesignated	no	no	yes	no	no	no	no	n/a	0.047
M_119888_878502	Utility	(blank)	other/undesignated	no	no	yes	no	no	no	no	n/a	3.180
M_119888_878502	Vacant/Open Space	(blank)	other/undesignated	no	no	yes	no	no	no	no	n/a	0.013
M_119888_878502	Water	(blank)	other/undesignated	no	no	yes	no	no	no	no	n/a	11.464
M_123478_879073	Commercial Business	A	Agriculture	no	no	yes	no	no	no	no	Yes	0.022
M_123478_879073	Commercial Business	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.015
M_123478_879073	Commercial Office	A	Agriculture	no	no	yes	no	no	no	no	Yes	0.050
M_123478_879073	Commercial Office	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.002
M_123478_879073	Commercial Retail	A	Agriculture	no	no	yes	no	no	no	no	Yes	0.070
M_123478_879073	Commercial Retail	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.005
M_123478_879073	Forest/Conservation	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.005
M_123478_879073	Industrial	A	Agriculture	no	no	yes	no	no	no	no	Yes	0.071
M_123478_879073	Industrial	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.038
M_123478_879073	Institutional	A	Agriculture	no	no	yes	no	no	no	no	Yes	0.036

Land Parcels within the 2020 AFC Westover AICUZ Footprint (Off-Base)

Parcel Number	Existing Land Use	Zoning	CZ/APZ			Noise Contours				Compatibility Based on Existing Land Use	ACREAGE	
Parcel ID	Existing Land Use - State Code	Zoning	Zoning Description	CZ	APZI	APZII	Noise 65-69 dB	Noise 70-74 dB	Noise 75-79 dB	Noise 80-84 dB	Compatibility Landuse	Sum of Sum of Acres
M_123478_879073	Mixed Use	A	Agriculture	no	no	yes	no	no	no	no	Yes	0.020
M_123478_879073	Mixed Use	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.034
M_123478_879073	Multi-Family Residential	A	Agriculture	no	no	yes	no	no	no	no	Yes	0.214
M_123478_879073	Multi-Family Residential	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.020
M_123478_879073	Other/Undesignated	A	Agriculture	no	no	yes	no	no	no	no	Yes	0.577
M_123478_879073	Other/Undesignated	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.621
M_123478_879073	Parks and Recreation	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.028
M_123478_879073	Single Family Residential	A	Agriculture	no	no	yes	no	no	no	no	Yes	1.602
M_123478_879073	Single Family Residential	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.507
M_123478_879073	Transportation	A	Agriculture	no	no	yes	no	no	no	no	Yes	85.053
M_123478_879073	Transportation	A	Agriculture	no	yes	no	no	no	no	no	Yes	21.358
M_123478_879073	Utility	A	Agriculture	no	no	yes	no	no	no	no	Yes	0.005
M_123478_879073	Vacant/Open Space	A	Agriculture	no	no	yes	no	no	no	no	Yes	0.188
M_123478_879073	Vacant/Open Space	A	Agriculture	no	yes	no	no	no	no	no	Yes	0.175
M_123478_879073	Water	A	Agriculture	no	no	yes	no	no	no	no	Yes	0.000
Grand Total												2,750.445