



**DEPARTMENT OF THE AIR FORCE**  
**HEADQUARTERS 633D AIR BASE WING**  
**JOINT BASE LANGLEY-EUSTIS VA**

**OFFICE OF THE COMMANDER**  
125 Mabry Avenue  
Joint Base Langley-Eustis VA 23665-2522

Mr. Bruce Sturk  
Director Federal Facilities Support  
City Manager's Office  
22 Lincoln St  
Hampton, VA 23669

Dear Mr. Sturk

We recently received an inquiry related to Westview Landings, a proposed 491-unit market-rate multi-family housing development on 38.33 acres located on the former Sarah Bonwell Hudgens Foundation lands (Atch 1). First, we would like to thank you for notifying JBLE-Langley of the proposal. As presented in our Air Installation Compatible Use Zone (AICUZ) study (June 2020), The Air Force makes recommendations regarding the development of off base facilities in areas exposed to high accident potential, high levels of noise and the construction of tall obstructions that could impact flight safety. The purpose of the AICUZ program is to protect the installation's operational capability and to promote the public health, safety and quality of life of private citizens by recommending land use planning compatible with the installation's flying mission.

After reviewing the plans and narrative for the subject property, JBLE-Langley offers the following input for your consideration.

- a. The Hampton-Langley Joint Land Use Study (JLUS), 2010, and JLUS Resilience Addendum, 2018, and the Virginia Regional JLUS Implementation Strategy, 2017, have committed to enabling the resilience and continuity of operations for JBLE-Langley. This is accomplished through adoption of land use regulations that will mitigate and minimize potential development with Accident Prevention Zones (APZ's) and in high noise areas in close proximity to the approach areas and runways of the JBLE-Langley airfield. City of Hampton Resolution 18-0314 endorsed the Hampton-Langley Air Force Base JLUS Addendum: Resiliency and Adaptation, dated August 2018, as it protects the mission of JBLE-Langley, encourages compatible land use around the base, and helps to sustain economic growth within the City and region.
- b. The JBLE-Langley North Flightline District Area Development Plan (ADP), currently under final draft review, includes the relocation of the 08 runway 1,100 LF to the west onto lands primarily owned by the City and/or JBLE, increasing installation operational resiliency and negating future potential adverse impacts to JBLE's mission from sea level rise and other climate change effects. This runway shift would require an additional Air Installation Compatible Use Zone (AICUZ)

study to evaluate Noise and Safety impacts in advance of the proposed relocation. It is a reasonable assumption that based on current maps (Atch 2) and the westward shift of the JBLE-Langley Runway Clear Zone and APZs, the current noise levels on and adjacent to the subject property would increase to the 70-75 Day Night Average Level (DNL) decibel (dB) range based on current noise levels. An additional consideration included in the ADP is the potential relocation of Runway 08/26 1000 LF north of the existing runway to mitigate against sea level rise and coastal flood events. If the former was implemented, the proposed Westview Landings would be negatively affected by the westward shift which appears to put the development site just inside or on the outer boundary of APZ I, increasing risk to potential occupants of the Westview Landings. More significantly, the development of Westview Landings would preclude the future relocation of the existing runway northward and westward, impacting the JBLE-Langley flying mission.

- c. The proposed Westview Landings is located in City of Hampton to the north of Peterborough Road and west of Thomas Nelson Road. The proposed development is nearly entirely in the R-11 zoning district (single family) allowing up to 4.84 dwellings per acre. The applicant is seeking to change the zoning from R-11 to M-3, allowing up to 20 dwellings per acre. Surrounding the site's location are mainly single family and institutional districts which are separated from the existing commercial area at the Big Bethel/Hampton Roads Parkway intersection by Interstate 64. The rezoning of the site would therefore be considered spot zoning and incompatible with the surrounding existing land uses. In addition, the proposed development site is immediately adjacent to the city's Langley Flight Approach District 5 (LFA-5). This district limits the concentration of people living in the area beneath the flight approach to prevent negative impacts on aircraft operations (City of Hampton Zoning Ordinance 2017). The proposed site is also immediately adjacent to APZ II designated in the 2020 JBLE (AICUZ) Study, Table A-1, Land Use Compatibility Recommendations in APZs and CZs (Atch 3) as, "Incompatible for residential development with exceptions". This is reflected in the City's land use regulations for LFA-5 as allowing a maximum of one residential structure per acre that may have two units if one is owner-occupied or a group home housing no more than eight residents. All other housing units including apartments, row housing, single units, semi-detached, and non-owner-occupied duplexes both side by side and one above the other are not recommended.
- d. The majority of the proposed development lies within the 65-70 dB DNL noise contour. Per the JBLE AICUZ Study, Table A-2: Recommended Land Use Compatibility for Noise Zones (Tab 2), there are no housing types recommended for Day-Night Average Sound Level (DNL) 65-69 and DNL 70-74 Noise Zones and it states, "...land use and related structures are not compatible and should be prohibited." Further, "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 land 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." If residential uses

were approved, noise attenuation measures would have to be incorporated into the design and construction and would require further evaluation to determine compatibility.”

- e. The JLUS adopted in October 2010 by the Hampton City Council and updated and amended in 2018, established the AICUZ overlay district to protect public health, safety and welfare and prevent encroachment that would degrade or jeopardize military operations. A Memorandum of Understanding between JBLE-Langley and the City of Hampton Virginia implemented the recommendations of the JLUS by providing a systematic procedure for responding to discretionary development applications for land lying within the City’s AICUZ Overlay Ordinance. Most importantly the MOU states that the City will, in considering a land use application package within APZ and noise zones of 70dB and higher, determine whether there exists an alternative reasonable use of the subject property that is deemed compatible in the AICUZ Overlay Ordinance. In considering this, the city can evaluate whether the proposed use can be shifted to an area for which the use is deemed compatible or consider the size of the property and the extent to which a portion of the property can reasonably be developed with a compatible use.

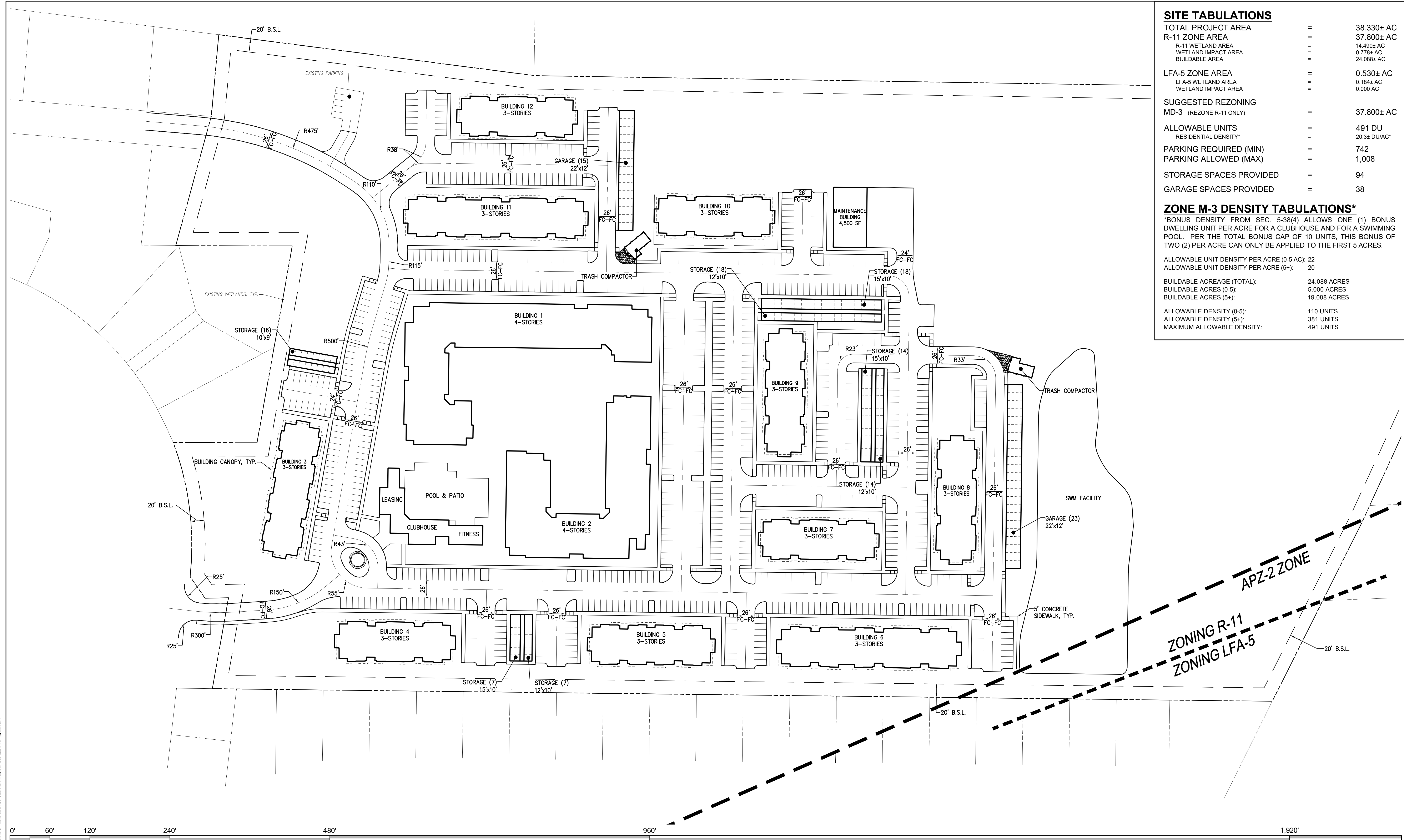
In closing, the construction of this residential project would signal a departure from established planning efforts aimed at improving the quality of life for those living near the base as well as safety for both Airmen and their neighbors outside the gate. Should you have any questions regarding this response, please contact my Base Civil Engineer, Lt Col Mike Askegren, at (757) 764-2025, michael.askegren@us.af.mil.

Sincerely

GREGORY S. BEAULIEU, Colonel, USAF  
Installation Commander, Joint Base Langley-Eustis

3 Attachments:

1. Westview Landings Site Plan and narrative
2. Site with AICUZ overlay
3. AICUZ Tables



**SITE TABULATIONS**

TOTAL PROJECT AREA	=	38.330± AC
R-11 ZONE AREA	=	37.800± AC
R-11 WETLAND AREA	=	14.490± AC
WETLAND IMPACT AREA	=	0.778± AC
BUILDABLE AREA	=	24.088± AC
LFA-5 ZONE AREA	=	0.530± AC
LFA-5 WETLAND AREA	=	0.184± AC
WETLAND IMPACT AREA	=	0.000 AC
SUGGESTED REZONING	=	
MD-3 (REZONE R-11 ONLY)	=	37.800± AC
ALLOWABLE UNITS	=	491 DU
RESIDENTIAL DENSITY*	=	20.3± DU/AC*
PARKING REQUIRED (MIN)	=	742
PARKING ALLOWED (MAX)	=	1,008
STORAGE SPACES PROVIDED	=	94
GARAGE SPACES PROVIDED	=	38
<b>ZONE M-3 DENSITY TABULATIONS*</b>		
*BONUS DENSITY FROM SEC. 5-38(4) ALLOWS ONE (1) BONUS DWELLING UNIT PER ACRE FOR A CLUBHOUSE AND FOR A SWIMMING POOL. PER THE TOTAL BONUS CAP OF 10 UNITS, THIS BONUS OF TWO (2) PER ACRE CAN ONLY BE APPLIED TO THE FIRST 5 ACRES.		
ALLOWABLE UNIT DENSITY PER ACRE (0-5 AC):	22	
ALLOWABLE UNIT DENSITY PER ACRE (5+):	20	
BUILDABLE ACREAGE (TOTAL):	24.088 ACRES	
BUILDABLE ACRES (0-5):	5.000 ACRES	
BUILDABLE ACRES (5+):	19.088 ACRES	
ALLOWABLE DENSITY (0-5):	110 UNITS	
ALLOWABLE DENSITY (5+):	381 UNITS	
MAXIMUM ALLOWABLE DENSITY:	491 UNITS	

## NARRATIVE STATEMENT

### **Rezoning Application for Westview Landing, LLC**

Westview Landing, LLC, a Virginia limited liability company (“Westview”) is the developer of certain real property, owned by Sarah Bonwell Hudgins Foundation, Inc., a Virginia corporation (“SBH”), located on off of Thomas Nelson Drive in the City of Hampton, Virginia (the “Property”), more particularly described on the attached Exhibit A, all of which is currently zoned R-11, with the exception of a small triangle in the southeast corner which is zoned LFA-5.

The Property consists of approximately 37.80 acres, however, only the southwesterly portion of the Property will be developed because of wetlands located on other portions of the Property. Therefore, after mitigation of impacted areas, the buildable area for the development is approximately 24.088 acres. Westview seeks to rezone the Property to permit the development and construction of a full market rate residential apartment community together with parking, landscaping and other associated amenities and improvements.

The community will consist of 10 buildings of 3 stories each; and 2 buildings of 4 stories each. However, notwithstanding the foregoing, in no event shall the entire development contain more than the number of residential dwelling units permitted by the MD-3 Zoning District.

There will be 5 different types of 3 story buildings with 5 different residential unit types:

- One Bedroom Standard will have 775 square feet of living area with one bath.
- One Bedroom Large will have 850 square feet of living area with one bath.
- Two Bedroom Standard will have 1,100 square feet of living area with two baths.
- Two Bedroom Large will have 1,175 square feet of living area with two baths.
- Three Bedroom Unit will have 1,400 square feet of living area with two baths.

There will be 2 different 4 story buildings adjacent to the clubhouse, pool, fitness center and open courtyard, with 5 different residential unit types:

- Studio Unit will have 600 square feet of living area with one bath.
- One Bedroom Standard will have 700 square feet of living area with one bath.
- One Bedroom Large will have 775 square feet of living area with one bath.
- Two Bedroom Standard will have 1,100 square feet of living area with two baths.
- Two Bedroom Large will have 1,175 square feet of living area with two baths.

Each unit in each building type is designed with a balcony or adjacent outdoor patio space. Community amenities shall include, but will not be limited to, clubhouse, swimming pool, fitness center, grilling areas, car wash areas, electric vehicle charging stations and dog/pet park. The development will have 809 parking spaces. In addition, there will be 38 enclosed garages and 94 storage spaces.

All buildings shall be constructed in substantial conformance with the elevations entitled “New Residential Development Westview Landing Apartments”, dated November 5, 2021 (three-story buildings, four-story buildings and clubhouse), and dated December 6, 2021 (maintenance building, storage building and garage building), prepared by Cox, Kliewer & Company, P.C., (the “Elevations”), copies of which are on file with the Community Development Department. The exteriors of all four (4) sides of the buildings will be constructed primarily of brick veneer with accents of fiber cement siding and prefabricated cellular PVC columns. Roofing will be architectural grade shingles. This high quality of exterior finish materials will retain their attractive appearance, minimize maintenance costs, and create a superior, energy efficient, weather tight envelope.

At current values, upon completion the development will have a fair market value of approximately \$55,000,000.00 resulting in real estate tax revenue to the City of approximately \$682,000.00 per year, plus

associated personal property tax revenue. The development will employ 11 to 12 permanent employees; and during construction will employ numerous contractors and subcontractors.

Although a small area in the southeast corner of the property is located within Langley Flight Approach Zone-5 and APZ-2, no buildings will be within this area. Similarly, only the southeasterly portion of the property currently is affected by aircraft noise levels of 70 dB DNL (decibels of day-night average sound level) which would call for sound attenuation. However, as the noise level contours are proposed to be modified by the City, all of the property will be in the 65 dB DNL, which will require only minor sound attenuation. When constructed, the applicant will incorporate sound attenuation features and materials that meet or exceed the City's requirements as provide in Article III of Chapter 22 of the Code of the City of Hampton.

The proposed new development is consistent with the Hampton Community Plan, as amended (the "Plan"). The Plan recognizes that land is a limited resource in the City and that its efficient use must be promoted. The development is an example of redeveloping a parcel of land that has been underutilized for many years and its prior use is no longer viable.

The proposed development will provide high quality and high value apartment residences for our citizens at an appropriate location for the proposed density. The development adjoins Thomas Nelson Community College and will provide easy access for working individuals who are also pursuing education at the College. This location also provides easy access not only to Hampton and Interstate 64, but also Newport News and York County. This location is centrally located to several military bases, NASA Research Facility, Sentara Careplex, Newport News Shipbuilding, Hampton Coliseum, Coliseum Central Business District, and Peninsula Town Center. This development will provide a desirable housing community that will attract a wide range of people to work, live, immerse, and invest themselves in Hampton.

The Community Plan emphasizes the importance of Hampton neighborhoods offering a mixture of different housing types that are attractive to a cross-section of our citizens. This development provides a mixture of unit types in order to meet the needs of our diverse citizenry with differing economic means. At this time and for the foreseeable future, there are an increasing number of families who are unable to purchase homes, and for whom renting is a better and frequently their only option. The numerous amenities which will be available to the residents will encourage interaction by the residents and a feeling of being a part of a quality community.

The development is consistent with the following statements and polices from the Plan:

1. "The ongoing aging of the city's housing stock and the growing demands for alternative housing types will continue to be important trends influencing land use and community design policies."
2. LU-CD Policy 3: "Encourage and maintain a diverse mix of housing type and values."
3. LU-CD Policy 7: "Safeguard the integrity of existing residential neighborhoods." (this development will impact very few residences due to its location and access.)
4. LU-CD Policy 11: "Promote high quality design and site planning that is compatible with surrounding development."
5. LU-CD Policy 31: "Encourage a mix of land uses that is appropriate for each district. Promote the efficient use of land and high quality urban design."
6. Housing and Neighborhoods Objective: "Promote a diverse mix of housing values, types, and choices to meet the needs of different income groups, ages, and household types and sizes."

7. HN Policy 4: “Support zoning requirements and other strategies that allow for increased housing mix and density in appropriate locations.”

The development also addresses and is consistent with the City’s resiliency goals in a number of ways:

- A. Unlike most of the City, the development’s location:
  - i. Is entirely outside of the 100 year floodplain,
  - ii. Is not located adjacent or near any waterway affected by sea level rise,
  - iii. Is rated Category 4 representing the least prone category for flooding, and
  - iv. Is on the extreme westerly edge of its watershed (the Southwest Branch of Back River).
  
- B. The location also provides quick and easy access to evacuation routes in the event of a major storm or flood event, as well as excellent access to emergency services since a fire station is immediately north of the property.
  
- C. More than 1/3 of the site will be left in its natural, undisturbed state, and as a wetland will enhance water quality for the surrounding area.
  
- D. The storm water retention facility for the development will exceed what is required by the City; and if appropriate, a backflow preventer or other similar device will be installed on the outflow.
  
- E. Significant landscaping and tree canopy will be provided to reduce any heat island effect and improve air quality.
  
- F. The development will include:
  - i. Low maintenance materials on building exteriors,
  - ii. Electric car charging stations, and
  - iii. Bicycle racks.

## Exhibit A

### Legal Descriptions

PARCEL ONE: LRSN 5000041

All that certain tract, piece or parcel of land situate, lying and being on the City of Hampton, Virginia, containing 8.591 acres, more or less, and designated as Parcel "A" on a certain plat attached to deed dated August 15, 1959, from Edmund T. Seymore, et ux to Robert L. Freeman, et als, duly of record in the Clerk's Office of the Circuit Court of the City of Hampton, Virginia, in Deed Book 285, Page 334, said plat being entitled "Plat Showing Property of E. T. Seymore Being Located on Big Bethel Road, Hampton, Virginia," dated August 19, 1959, and made by S. J. Glass & Associates, Engineers & Surveyors.

It Being the same property conveyed by deed dated June 9, 1967, from Robert L. Freeman and Dorothy C. Freeman, his wife, E. Fred Lowe, Jr. and Louise A. Lowe, his wife, C. Lear Ponton and Nora G. Ponton, his wife, and Pavilion Investment Co., a Virginia corporation, to Sarah Bonwell Hudgins Foundation, Inc., a Virginia corporation, recorded June 21, 1967 in the Clerk's Office of the Circuit Court of the City of Hampton, Virginia, in Deed Book 393, Page 744.

All that certain piece or parcel of land, lying and being in the City of Hampton, Virginia, and described as follows:

Beginning at a concrete monument located at the intersection of Thomas Nelson Drive and the 40' right-of-way to property of Sarah Bonwell Hudgins Foundation, Inc. Thence in an easterly 36.62' to a point. Thence S 10° 12'00" along a line a distance of 22.69'. Thence N 89° 27' 02" along a line a distance of 53.73'. Thence N 45° 26' 02" a distance of 29.66' to the point of beginning.

It being the same property conveyed by deed dated April 5, 1994 from Vivian Nadine Vest, widowed, to Sarah Bonwell Hudgins Foundation, Inc., recorded May 10, 1994 in the Clerk's Office of the Circuit Court of the City of Hampton, Virginia, in Deed Book 1106, Page 1864.

All that certain lot, piece or parcel of land situate, lying and being in the City of Hampton, Virginia, being a strip of land containing 0.63 acre, and more particularly described on that certain plat entitled, "Plat Showing Easement to be Granted by T. J. Dula to Peninsula Association for Retarded Children, Inc.", print of which is attached to the deed recorded in Deed Book 388, Page 134.

All that certain lot, piece or parcel of land situate, lying and being in the City of Hampton, Virginia, being a strip of land 20 feet in width, and more particularly described on that certain plat entitled, "Plat Showing Easement to be Granted by James S. D. Cumming to Peninsula Association for Retarded Children, Inc.", print of which is attached to the deed recorded in Deed Book 384, Page 342.

It Being the same property conveyed by deed dated May 1, 1967 from Peninsula Association For Retarded Children, Inc. to Sarah Bonwell Hudgins Foundation, Inc, recorded June 21, 1967 in the Clerk's Office of the Circuit Court of the City of Hampton, Virginia, in Deed Book 393, Page 742.

PARCEL TWO: LRSN 5000040

All that certain piece or parcel of land situate, lying and being in the City of Hampton, Virginia, containing 9.2206 acres, and shown on plat entitled "PLAT OF THE PROPERTY OF SARAH BONWELL HUDGINS FOUNDATION, INC. 9.2206ACRES, CITY OF HAMPTON, VIRGINIA", made by Pyle Engineering Company, dated July 27, 1967, which said plat is recorded as an attachment to deed recorded in Deed Book 396, Page 786.

It being the same property conveyed by deed dated August 3, 1967 from E. F. Hazelwood and Roberta B. Hazelwood, his wife, David G. Blaylock and Martha Lee Blaylock, his wife, and Robert C. Cutler and Allison Cutler, his wife, to Sarah Bonwell Hudgins Foundation, Inc., a Virginia corporation, recorded August 24, 1967 in the Clerk's Office of the Circuit Court of the City of Hampton, Virginia, in Deed Book 396, Page 786.



PARCEL THREE: LRSN 5000042

All that certain piece, parcel or tract of land situate, lying and being in the City of Hampton, Virginia, containing 19.61 acres, more or less, as shown on a certain plat entitled "Plat Showing Proposed Road & Portion of Property of Robert L. Freeman, et als, Being the Easterly Portion of Parcel "B", E. T. Seymore Property Located Near Big Bethel & Battle Roads, City of Hampton, Virginia," made by S. J. Glass & Associates, dated June 2, 1964, a print of which plat is recorded as an attachment to deed recorded in Deed Book 350, Page 554.

It being the same property conveyed by deed dated December 30, 1966 from The Peninsula Association of Retarded Children, Incorporated, a Virginia corporation, to Sarah Bonwell Hudgins Foundation, Inc., a Virginia corporation, recorded February 9, 1967 in the Clerk's Office of the Circuit Court of the City of Hampton, Virginia, in Deed Book 388, Page 511.

It also being the same property conveyed by deed dated June 26, 1964 from C. Lear Ponton and Nora C. Ponton, his wife, Robert L. Freeman and Dorothy C. Freeman, his wife, E. Fred Lowe, Jr. and Louise A. Lowe, his wife, and Pavilian Investment Co., a Virginia corporation, to Peninsula Association For Retarded Children, Inc., a Virginia corporation, recorded July 8, 1964 in the Clerk's Office of the Circuit Court of the City of Hampton, Virginia, in Deed Book 350, Page 554.

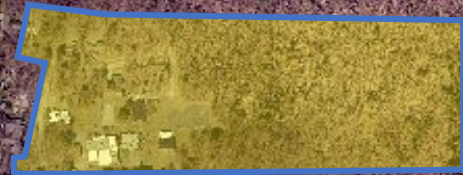
PARCEL FOUR: LRSN 5001596

All that certain lot, piece or parcel of land lying and being in the City of Hampton, Virginia, consisting of 0.4356 acres, and shown on the survey entitled, "PLAT SHOWING A PARCEL OF LAND CONTAINING 0.4356ACRES.", dated June 25, 1998, made by Johnson, Baird & Associates, Civil Engineering & Land Surveying, Hampton, Virginia, a copy of which is attached to deed recorded in Deed Book 1267, Page 2072.

It being the same property conveyed by deed dated December 7, 1998 from Vivian Nadine Vest, widow, to Sarah Bonwell Hudgins Foundation, Inc., a Virginia non-profit corporation, recorded December 11, 1998 in the Clerk's Office of the Circuit Court of the City of Hampton, Virginia, in Deed Book 1267, Page 2072.

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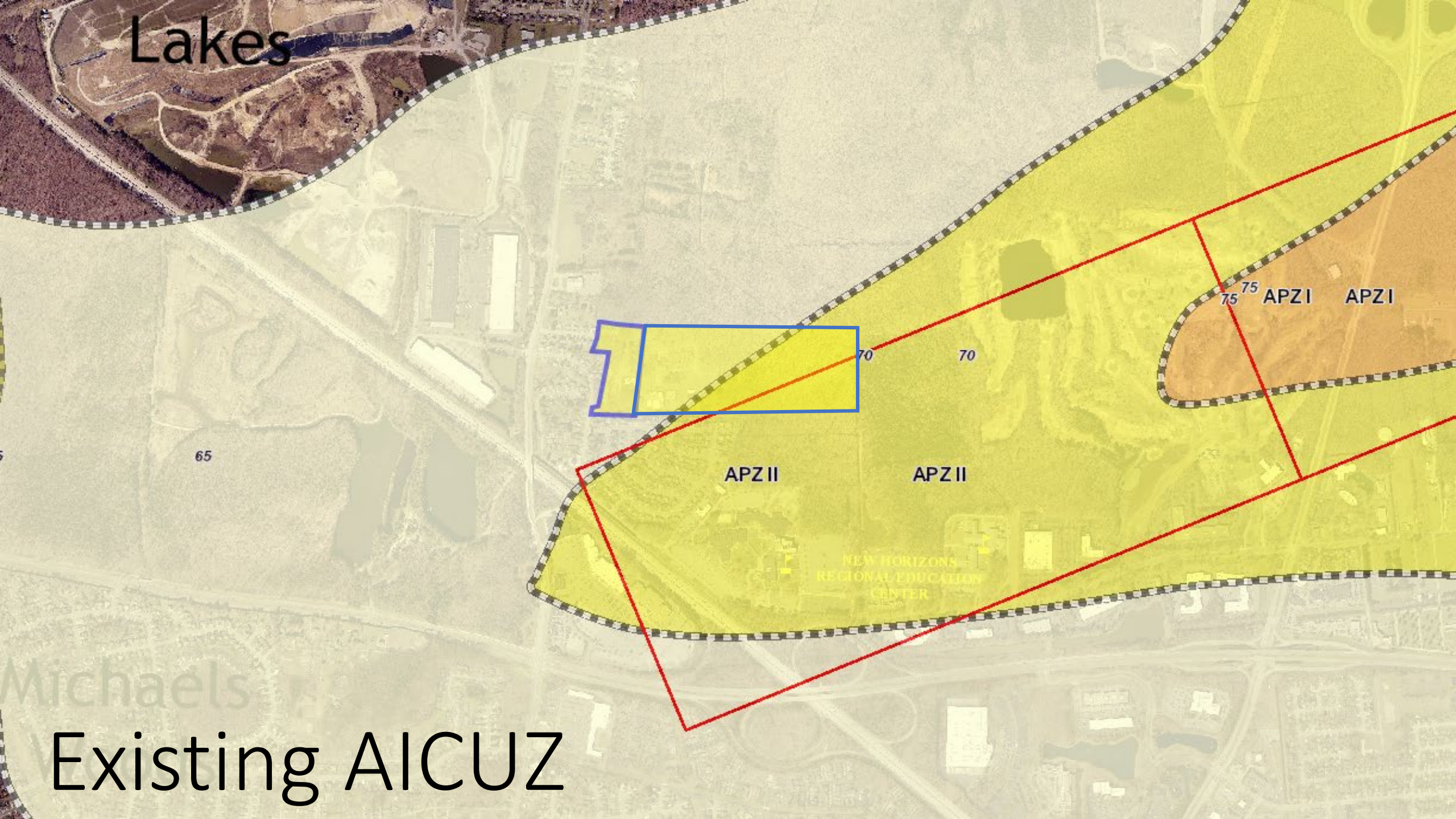
Lakes



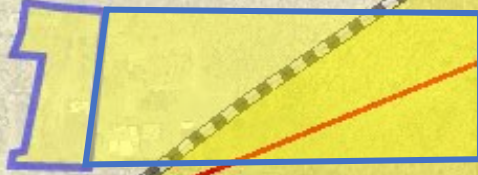
NEW HORIZONS  
REGIONAL EDUCATION  
CENTER

Michaels  
Woods Aerial

Lakes



65



70

70

75

75

APZI

APZI

APZII

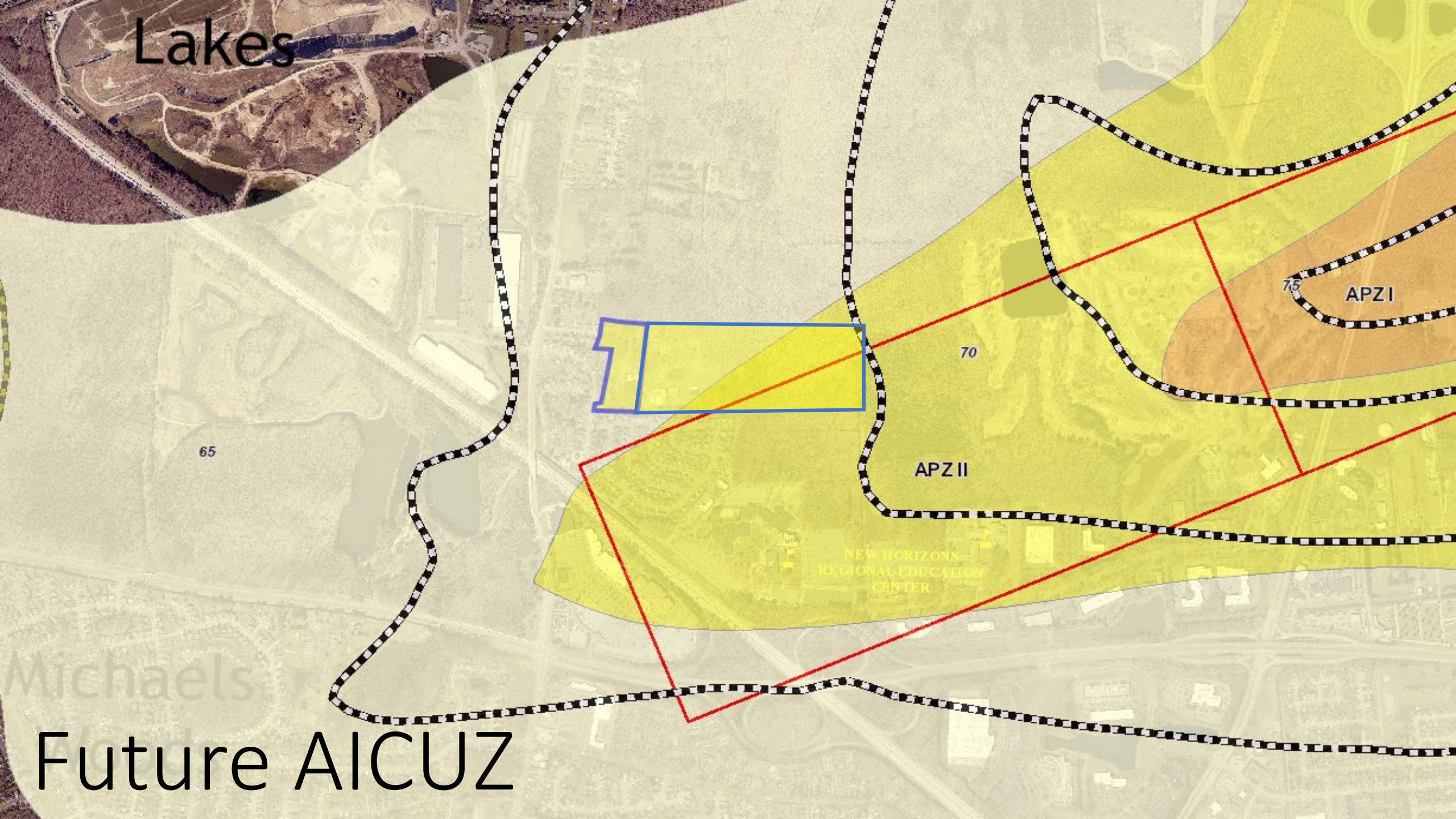
APZII

NEW HORIZONS  
REGIONAL EDUCATION  
CENTER

Michaels

Existing AICUZ

Lakes



1

70

APZ II

NEW HORIZONS -  
REGIONAL EDUCATION  
CENTER

75

APZ I

65

Michaels

Future AICUZ

## Joint Base Langley-Eustis

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### Air Installations Compatible Use Zones Study

#### KEY:

SLUCM – Standard Land Use Coding Manual, U.S. Department of Transportation.

Y (Yes) – Land use and related structures compatible without restrictions.

N (No) – Land use and related structures are not compatible and should be prohibited.

Y<sup>x</sup> – Yes with restrictions. The land use and related structures generally are compatible. However, see note(s) indicated by the superscript.

N<sup>x</sup> – No with exceptions. The land use and related structures are generally incompatible. However, see note(s) indicated by the superscript.

25, 30, or 35 – The numbers refer to noise level reduction (NLR) levels. NLR (outdoor to indoor) is achieved through the incorporation of noise attenuation into the design and construction of a structure. Land use and related structures are generally compatible; however, measures to achieve NLR of 25, 30, or 35 must be incorporated into design and construction of structures. However, measures to achieve an overall noise reduction do not necessarily solve noise difficulties outside the structure and additional evaluation is warranted. Also, see notes indicated by superscripts where they appear with one of these numbers.

DNL – Day-Night Average Sound Level.

CNEL – Community Noise Equivalent Level (normally within a very small decibel difference of DNL).

Ldn – Mathematical symbol for DNL.

#### NOTES:

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.

## Joint Base Langley-Eustis

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### Air Installations Compatible Use Zones Study

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.

**Table A-3. Recommended Land Use Compatibility for Small Arms Noise**

LAND USE		SUGGESTED LAND USE COMPATIBILITY	
SLUCM NO.	LAND USE NAME	Noise Zone II 87–104 dB Peak	Noise Zone III >104 dB Peak
<b>10</b>	<b>Residential</b>		
11	Household units	N <sup>1</sup>	N
11.11	Single units: detached	N <sup>1</sup>	N
11.12	Single units: semidetached	N <sup>1</sup>	N
11.13	Single units: attached row	N <sup>1</sup>	N
11.21	Two units: side-by-side	N <sup>1</sup>	N
11.22	Two units: one above the other	N <sup>1</sup>	N
11.31	Apartments: walk-up	N <sup>1</sup>	N
11.32	Apartment: elevator	N <sup>1</sup>	N
12	Group quarters	N <sup>1</sup>	N
13	Residential hotels	N <sup>1</sup>	N
14	Mobile home parks or courts	N	N
15	Transient lodgings	25	N
16	Other residential	N <sup>1</sup>	N
<b>20</b>	<b>Manufacturing</b>		
21	Food and kindred products; manufacturing	Y <sup>2</sup>	Y <sup>3</sup>
22	Textile mill products; manufacturing	Y <sup>2</sup>	Y <sup>3</sup>
23	Apparel and other finished products; products made from fabrics, leather, and similar materials; manufacturing	Y <sup>2</sup>	Y <sup>3</sup>
24	Lumber and wood products (except furniture); manufacturing	Y <sup>2</sup>	Y <sup>3</sup>
25	Furniture and fixtures; manufacturing	Y <sup>2</sup>	Y <sup>3</sup>
26	Paper and allied products; manufacturing	Y <sup>2</sup>	Y <sup>3</sup>
27	Printing, publishing, and allied industries	Y <sup>2</sup>	Y <sup>3</sup>
28	Chemicals and allied products; manufacturing	Y <sup>2</sup>	Y <sup>3</sup>
29	Petroleum refining and related industries	Y <sup>2</sup>	Y <sup>3</sup>
<b>30</b>	<b>Manufacturing (continued)</b>		
31	Rubber and misc. plastic products; manufacturing	Y <sup>2</sup>	Y <sup>3</sup>
32	Stone, clay and glass products; manufacturing	Y <sup>2</sup>	Y <sup>3</sup>
33	Primary metal products; manufacturing	Y <sup>2</sup>	Y <sup>3</sup>
34	Fabricated metal products; manufacturing	Y <sup>2</sup>	Y <sup>3</sup>
35	Professional scientific, and controlling instruments; photographic and optical goods; watches and clocks	25	35
39	Miscellaneous manufacturing	Y <sup>2</sup>	Y <sup>3</sup>
<b>40</b>	<b>Transportation, communication, and utilities</b>		
41	Railroad, rapid rail transit, and street railway transportation	Y <sup>2</sup>	Y <sup>3</sup>
42	Motor vehicle transportation	Y <sup>2</sup>	Y <sup>3</sup>
43	Aircraft transportation	Y <sup>2</sup>	Y <sup>3</sup>
44	Marine craft transportation	Y <sup>2</sup>	Y <sup>3</sup>
45	Highway and street right-of-way	Y <sup>2</sup>	Y <sup>3</sup>
46	Automobile parking	Y <sup>2</sup>	Y <sup>3</sup>
47	Communication	25	35

**Table A-3. Recommended Land Use Compatibility for Small Arms Noise**

LAND USE		SUGGESTED LAND USE COMPATIBILITY	
SLUCM NO.	LAND USE NAME	Noise Zone II 87–104 dB Peak	Noise Zone III >104 dB Peak
48	Utilities	Y <sup>2</sup>	Y
49	Other transportation, communication and utilities	25	35
<b>50</b>	<b>Trade</b>		
51	Wholesale trade	Y <sup>2</sup>	Y <sup>3</sup>
52	Retail trade – building materials, hardware and farm equipment	25	35
53	Retail trade – including shopping centers, discount clubs, home improvement stores, electronics superstores, etc.	25	35
54	Retail trade – food	25	35
55	Retail trade – automotive, marine craft, aircraft and accessories	25	35
56	Retail trade – apparel and accessories	25	35
57	Retail trade – furniture, home, furnishings and equipment	25	35
58	Retail trade – eating and drinking establishments	25	35
59	Other retail trade	25	35
<b>60</b>	<b>Services</b>		
61	Finance, insurance and real estate services	25	35
62	Personal services	25	35
62.4	Cemeteries	Y <sup>2</sup>	Y <sup>3</sup>
63	Business services	25	35
63.7	Warehousing and storage	Y <sup>2</sup>	Y <sup>3</sup>
64	Repair services	Y <sup>2</sup>	Y <sup>3</sup>
65	Professional services	25	N
65.1	Hospitals, other medical facilities	N	N
65.16	Nursing homes	N	N
66	Contract construction services	25	35
67	Government services	25	35
68	Educational services	35	N
68.1	Childcare services, child development centers, and nurseries	35	N
69	Miscellaneous Services	35	N
69.1	Religious activities (including places of worship)	35	N
<b>70</b>	<b>Cultural, entertainment, and recreational</b>		
71	Cultural activities	35	N
71.2	Nature exhibits	N	N
72	Public assembly	N	N
72.1	Auditoriums, concert halls	35	N
72.11	Outdoor music shells, amphitheaters	N	N
72.2	Outdoor sports arenas, spectator sports	N	N
73	Amusements	Y	N
74	Recreational activities (including golf courses, riding stables, water recreation)	N	N



**Table A-3. Recommended Land Use Compatibility for Small Arms Noise**

LAND USE		SUGGESTED LAND USE COMPATIBILITY	
SLUCM NO.	LAND USE NAME	Noise Zone II 87–104 dB Peak	Noise Zone III >104 dB Peak
75	Resorts and group camps	N	N
76	Parks	N	N
79	Other cultural, entertainment and recreation	N	N
<b>80</b>	<b>Resource production and extraction</b>		
81	Agriculture (except live- stock)	Y <sup>4</sup>	Y <sup>5</sup>
81.5, 81.7	Agriculture-Livestock farming including grazing and feedlots	Y <sup>4</sup>	N
82	Agriculture related activities	Y <sup>4</sup>	Y <sup>5</sup>
83	Forestry activities	Y <sup>4</sup>	Y <sup>5</sup>
84	Fishing activities	Y	Y
85	Mining activities	Y	Y
89	Other resource production or extraction	Y	Y

<sup>1</sup> General

- <sup>a</sup> Although local requirements for on- or off-base housing may require noise-sensitive land uses within Noise Zone II, such land use is generally not recommended. 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.
- <sup>b</sup> Where the community determines that these uses must be allowed, measures to achieve outdoor to indoor NLR of at least 30 decibels (dB) in Noise Zone II should be incorporated into building codes and be considered in individual approvals.
- <sup>c</sup> Normal permanent construction can be expected to provide an NLR of 20 dB, thus the reduction requirements are often stated as 10 dB over standard construction and normally assume mechanical ventilation, upgraded sound transmission class ratings in windows and doors, and closed windows year round.
- <sup>d</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> 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.

<sup>4</sup> Residential buildings require an NLR of 30.

<sup>5</sup> Residential buildings are not permitted.

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## Appendix B. Key Terms

**Aircraft Movement** – An aircraft movement is defined as any aircraft activity that requires air traffic control’s permission, even if the aircraft is just passing through the airfield’s airspace. This term is used at JBLE-Eustis.

**Day-Night Average Sound Level (DNL)** – DNL is a composite noise metric accounting for the sound energy of all noise events in a 24-hour period. In order to account for increased human sensitivity to noise at night, DNL includes a 10-dB penalty to events occurring during the acoustical nighttime period (10 p.m. through 7 a.m.). See section 4.3 for additional information.

**Decibel (dB)** – Decibel is the unit used to measure the intensity of a sound.

**Flight Profiles** – Flight profiles consist of aircraft conditions (i.e. altitude, speed, power setting, etc.) defined at various locations along each assigned flight track.

**Flight Track** – The flight track locations represent the various types of arrivals, departures, and closed patterns accomplished at air installations. The location for each track is representative for the specific track and may vary due to air traffic control, weather, and other reasons (e.g. one pilot may fly the on one side of the depicted track, while another pilot may fly slightly to the other side of the track).

**Operation** – An aircraft operation is defined as one takeoff or one landing. A complete closed pattern or circuit is counted as two operations because it has a takeoff component and a landing component. A sortie is a single military aircraft flight from the initial takeoff through the termination landing. The minimum number of aircraft operations for one sortie is two operations, one takeoff (departure) and one landing (approach).

**Peak Sound Pressure Level (Lpk)** – The un-weighted peak sound pressure level (Lpk) noise descriptor is used to describe the noise environment for small arms (.50 caliber and below) ranges. Because the noise zones for small arms are based on the loudest weapon and not the number of annual operations conducted at the range, if there are multiple weapon types being fired at one or multiple firing locations, the peak contours reflect the loudest level that occurs at each receiver location.

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## Appendix C. Comparison of Local and Generalized Land Use and Zoning in the AICUZ Footprint

**Table C-1. Comparison of Local and Generalized Land Use and Zoning Designations for Parcels within the Joint Base Langley-Eustis AICUZ Footprint**

Local Land Use or Zoning Designation	Generalized Land Use or Zoning Designation
Existing Land Use – Hampton Roads Planning Commission <sup>1</sup>	
Local Commercial	Commercial
Neighborhood Commercial	
Regional Commercial	
Light Industrial	Industrial
Heavy Industrial	
Utilities	
Public / Semi-Public	Institutional
Military	Military
Parks and Recreation	Parks, Open Space, Greenways
Resource Conservation	
Low Density Residential	Residential
Medium Density Residential	
Heavy Density Residential	
Rural Residential	
Undeveloped Land (vacant)	Vacant
Future Land Use – Hampton Roads Planning Commission <sup>2</sup>	
Local Commercial	Commercial
Neighborhood Commercial	
Light Industrial	Industrial
Public / Semi-Public	Institutional
Military	Military
Mixed Use Commercial / Residential	Mixed Use
Parks and Recreation	Parks, Open Space, Greenways
Resource Conservation	
Low Density Residential	Residential
Medium Density Residential	
Heavy Density Residential	
Rural Residential	

**Table C-1. Comparison of Local and Generalized Land Use and Zoning Designations for Parcels within the Joint Base Langley-Eustis AICUZ Footprint**

Local Land Use or Zoning Designation	Generalized Land Use or Zoning Designation
<b>Zoning – City of Hampton<sup>3</sup></b>	
Neighborhood Commercial	Commercial
Limited Commercial	
General Commercial	
Light Manufacturing	Mixed Use
Limited Manufacturing	
One Family Residential	Residential
Multifamily Residential	
<b>Zoning – City of Newport News<sup>4</sup></b>	
Military Eustis	DOD
Single Family	Residential
<b>Zoning – City of Poquoson<sup>5</sup></b>	
General Business	Institutional
Conservation	Parks, Open Space, and Greenways
Medium Density, Single Family Residential	Residential
<b>Zoning – York County<sup>6</sup></b>	
Low Density Single-Family Detached, Farming	Residential
Manufactured Homes	
Planned Development	

Notes:

- <sup>1</sup> Hampton Roads Planning District Commission. 2019. "Hampton Roads Existing Land Use." Shapefile geospatial data. Accessed online at: <http://www.hrgeo.org/datasets/hampton-roads-existing-land-use>. Accessed on August 20, 2019. Site last updated in 2019.
- <sup>2</sup> Hampton Roads Planning District Commission. 2019. "Hampton Roads Future Land Use." Shapefile geospatial data. Accessed online at: <http://www.hrgeo.org/datasets/hampton-roads-future-land-use>. Accessed on August 20, 2019. Site last updated in 2019.
- <sup>3</sup> City of Hampton Roads. 2019. "City of Hampton." Shapefile geospatial data. Accessed online at: <https://hampton.app.box.com/v/Zoning>. Accessed on September 16, 2019. Site last updated in 2019.
- <sup>4</sup> City of Newport News. 2019 "City of Newport News." Shapefile geospatial data.
- <sup>5</sup> City of Poquoson. 2019. "City of Poquoson." Shapefile geospatial data.
- <sup>6</sup> York County. 2019. "York County." Polygon Feature Class geospatial data.