



PLANNING AND DEVELOPMENT SERVICES DEPARTMENT

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**TO:** City Plan Board **Item Number: 2**

**FROM:** Planning and Development Services Staff **DATE: September 26, 2013**

**SUBJECT:** **Petition PB-13-65 TCH.** Rod Smith, Esquire. Agent for East Gainesville Development Partners, LLC. Amend the Land Development Code Appendix F, Airport Hazard Zoning Restrictions, Table 1. Land Use Regulation Chart to eliminate the noise restrictions for residential development within the 65- 60dB DNL subzone.

**Recommendation:**

Staff recommends denial of this petition.

**Explanation:**

This is a request to amend Appendix F: Airport Hazard Zoning Regulations in the Land Development Code to delete a restriction that prohibits certain types of development (mainly residential in this case) within the Day-Night Average Sound Level (DNL) 65-60 subzone. The specific change that is requested is deletion of a sentence in footnote (1) of Table 1 (see Exhibit 1) in the Airport Hazard Zoning Regulations that states: Development shall only be allowed on isolated lots within neighborhoods or development that were constructed prior to December 3, 2009 (i.e., infill development lots). The applicant has indicated that the prohibition only applies to property owned by East Gainesville Development Partners LLC (EGDP) and would eliminate all reasonable use of approximately 180 acres in the middle of the Hatchet Creek development parcel.

The purpose of the Airport Hazardous Zoning Regulations is to provide both airspace protection and land use compatibility in relation to the normal operation of the public-use airport located within the city. The intent of the regulations is to protect the safety and welfare of citizens through development regulations that will reduce the potential land use conflicts with airport operations. It is also important that regulations protect the airport from incompatible land uses that may hamper the future growth and expansion of airport operations. It is generally accepted that aviation noise significantly affects large numbers of people throughout the United States. In a great number of instances, aircraft noise simply merges into the urban fabric with other uses in the environment such as buses, trucks, motorcycles, automobiles and construction noise. However, in locations closer to airports and aircraft flight tracks, aircraft noise becomes more of a concern.

When staff updated the Airport Hazard Zoning Regulations in 2009 staff relied upon the City's expert airport consultant recommendations, airport staff and consultant recommendations (including recommendations made in the airport's Part 150 Study), and the review of reports

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prepared by the Federal Aviation Administration (FAA), Transportation Research Board and Paul Schomer, Ph.D., P.E. For this petition staff reviewed the following reports:

Airport Cooperative Research Program (ACRP) Report 27: Enhancing Airport Land Use Compatibility (Volume 1: Land Use Fundamentals and Implementation Resources) 2010

California Airport Land Use Planning Handbook, October 2011

Florida Department of Transportation Airport Compatible Land Use Guidebook (2012)

ACRP Synthesis 16; Compilation of Noise Programs in Areas Outside DNL 65 (2009)

Gainesville-Alachua County Regional Airport Authority: Recommendation to Revise Airport Hazard Zoning Ordinance and Establish an Airport Environs Overlay Zone (2008)

Based on information reviewed by staff, staff could not find in compelling reason to change it's recommendation from 2009. The literature in staff's opinion confirms that the City of Gainesville made the right decision in 2009 to restrict new residential subdivisions within the DNL 60-65 subzone. ACRP Report 27 states: "Common practice is to use the land use compatibility guidelines found in the FAA's regulation 14CFR Part 150. For residential uses, FAR part 150 identifies DNL 65 dB as the upper limit of residential land use compatibility. While the limit was developed by the FAA in cooperation with other agencies, it has become increasingly clear that many local communities and local residents do not believe the DNL 65 sufficiently identifies levels that can be found acceptable." It is clear from all the literature that the 65DNL was adopted to reflect a compromise between what was environmentally desirable and technologically feasible at the time (1970's).

### **Best Practices**

It is often assumed that the DNL 65 is the best standard because the FAA uses this standard for planning purposes. However, several leading sources indicate that the actions leading to the adoption of the DNL 65 land use compatibility guidelines indicates that it was intended to be adjusted as industry needs changed (in particular, as technology improvements resulted in quieter aircraft). Federal noise policy has always recognized that land use compatibility decision should be made at the local level. The key point made throughout staff literature search is that it is easy to understand why the majority of local governments adopt the Part 150 guidelines because they are available to be copied and easily referenced, however, experts in the field have indicated that those guidelines are inadequate to protect either the public from the adverse effects of aircraft noise or the airport from community displeasure and activism that can limit airport growth and operations.

In a "White Paper: Assessment of Noise Annoyance", prepared by Paul Schomer, Ph.D., P.E., April 22, 2001, the following points were made:

1. Nearly all agencies and boards, standard setting bodies, and international organization that have cognizance over noise production sources use a DNL criterion value of 55 dB as the threshold for defining noise impact in urban residential areas. In fact, of this large number of agencies, boards, standards setting bodies, and international organization, only the Department of Defense and the FAA suggest a criterion value for DNL that is higher than 55 dB. *(The Department of Housing and Urban Development has no cognizance over noise sources. However, they term DNL levels from 65 dB to 75dB as “normally unacceptable” and DNL levels from 60 to 65 dB as “normally acceptable”. Level below 60 dB are termed “clearly acceptable” (HUD, 1985)*
2. The US Environmental Protection Agency (EPA, 1974) recommended the DNL metric of 55 dB as the “level requisite to protect health and welfare with an adequate margin of safety”. The USEPA recommends the criterion level of 55 DNL to other Federal Agencies.
3. Significant evidence exists to suggest that aircraft noise is more annoying than is road traffic noise for the same DNL level. Given that all major international bodies including the World Health Organization , the World Bank Group, and the Organization for Economic Co-operation and Development use the equivalent of DNL 55 dB as their criterion, or a yet lower level, the question is raised as to why only the aircraft sector in the United States espouses a higher DNL criterion level. Research has shown that aircraft noise is more annoying than the other forms of transportation noise, for this reason the ISO International Standard (ISO, 2000) recommends a 3 to 6 dB penalty for aircraft noise compared with road traffic noise.
4. For residential areas and other similarly noise sensitive land uses, noise impacts becomes significant in urban areas when the DNL exceeds 55 dB. In suburban areas where the population density is between 1250 and 5000 inhabitants per square mile (Gainesville is 2000 persons per square mile), noise impacts becomes significant when DNL exceeds 50 dB. And in rural area where population is less than 1250 inhabitants per square mile, noise impact becomes significant when DNL exceeds 45 dB.

#### Key issues

The applicant’s application raised several issues as to the impact of the Airport Hazard Zoning regulations on the EGDP property (Hatchet Creek). The applicant has indicated that the ordinance prohibition on residential development only applies to EGDP property, that it eliminates all reasonable use of approximately 180 acres of property in the middle of a proposed PUD.

*The Airport Hazard Zoning Regulations would apply to any property similarly situated within the 60-65 DNL subzone, it is true that the applicant’s property is the only property*

*within the subzone that is requesting residential development at this time. There are other properties within the same subzone located east of the airport. Policy 4.3.5 of the Future Land Use Element (Exhibit 2) of the Gainesville Comprehensive Plan clearly indicates that all reasonable use of the property has not been eliminated. Policy 4.3.5 (d)1.(b) clearly states that within the 60-75 DNL that: Non-residential (retail, office and accessory uses to residential ) development is allowed, as well as recreational facilities as accessory uses that are customarily and clearly incidental to a residential community, or park, open space, conservation, open space buffers and mitigation areas; except that on lands with an underlying land use designation of Industrial, the non-residential development shall be limited to certain Business Industrial (BI) zoning uses that are specified in the PD zoning ordinance.*

The applicant has stated that the City's regulation is extremely rare and that there is no factual or legal rationale for its adoption.

*In using the term "rare," the applicant is mischaracterizing a Gainesville regulation that is properly tailored to local conditions. "Rare" does not mean "inappropriate."*

*Federal data sources indicate there are about 14,000 airports in the U.S., of which about 5,000 have paved runways, and of which about 400 have regularly scheduled airline service. For all intents and purposes, every one of these airports represents a unique noise / land use compatibility situation, because of differences in factors such as their runway layouts; runway use patterns; aircraft activity levels; types of aircraft operating at the airport; the split between day and night operations; types of surrounding land uses and their proximity to runways, taxiways, and major flight corridors; weather conditions; housing construction; etc.*

*For these reasons, no two airports will ever have identical noise abatement programs and surrounding land use jurisdictions will adopt land use and development controls that reflect local conditions. It would be far rarer to find two airports with identical noise abatement and compatible land use programs.*

*In Part 150, the FAA presents land use compatibility guidelines as a function of Day-Night Average Sound Level (DNL) values. Those guidelines suggest that all land uses are compatible outside of DNL 65. However, the table includes a footnote that states the following:*

*The designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and perishable land uses and the relationship between specific properties and specific noise contours rests with the local land use authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses. [14 C.F.R. Part 150 "Airport Noise Compatibility Planning," Appendix A, Table 1, "Land Use Compatibility Planning with Yearly Day-Night Average Sound Levels."]*

*Consistent with this FAA guidance, the City of Gainesville undertook a proper legislative process to legally adopt land use control regulations that address local needs and conditions.*

*Exhibit 3 shows the flight path for runway 11 for arrival flights into the airport. The graphic shows the flight path going directly over and area that the applicant is proposing for residential development. The graphic also show the likely aircraft accident location patterns of runway 11, with a considerable problem area being the area of the proposed residential development. Exhibit 4 shows the height of aircraft on their approach profile to runway 11; the aircraft will be approximately 200 -250 feet above the ground as they descend over the proposed residential development in this area.*

*The responsibility for determining the acceptable, compatible land use and the relationship between specific properties and the specific noise contours rest with the local government, given this and the unique community situation it is staff's opinion that the current regulations are reasonable and appropriate.*

### **Issues related to aircraft noise in areas outside DNL 65**

ACRP Synthesis 16 Report conducted a survey of airports around the country the results are listed below and point to the reason why Gainesville addressed this issue in 2009, in order to avoid some of the problems other communities are having:

- *A majority of respondents (83%) indicated that noise issues outside the DNL 65 were, important, very important or critical to their airport operations.*
- *Eighty percent of respondents indicated that "community concerns" were the motivation for addressing noise outside DNL 65; 57% also indicated that "preventive planning" was a motivation.*
- *Almost three-quarters of the respondents (74%) indicated that more than 75% of their airport complaints come from people who live outside DNL65.*
- *The most frequent listed method of minimizing noise outside DNL 65 was operator education and outreach (74%), followed by noise abatement flight tracks (69%), preferential runway use programs (66%), noise abatement departure or arrival procedures(60%), and ground noise control(51%).*

There are also a number of existing and emerging reasons that airports operators may need or desire to take action to address noise outside the DNL 65 contour, include the following (ACRP Synthesis 16 Report):

- *Because of complaints from areas outside DNL 65.*
- *Airport have adopted local land use compatibility guidelines that apply to lower impact levels: Several jurisdictions have used DNL 60 in defining planning objectives and goals (Coffman Associates 2000)*
- *The existing noise compatibility program has matured and substantial complaints exist in areas outside the DNL 65 contour. A recent study conducted by the FAA's Center of Excellence for aviation noise and emissions research, concluded that significant complaints come from areas beyond the 65DNL.*

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- *Federal Policy is moving outside DNL65: The Joint Planning and Development Office has determined that noise must be aggressively addressed to meet the capacity requirements of the Next Generation Air Transportation System (NexGen). Recently, the FAA has identified target noise reduction, including a near-term target to maintain its current 4% annual reduction in the number of people exposed to DNL 65 or greater, and commensurate or greater reduction of the number of people exposed to DNL 55- 65.*
- Airports are required by court order: Two recent cases [Naples v.FAA (2005) and State of Minnesota et al. v.MAC (2007)] have determined that airports must address noise impacts beyond the current DNL 65 land use compatibility program.

### Summary

Based on a review of the literature, and the data regarding runway 11 having a major impact on the proposed residential area of the EGDP property, it is staff's opinion that the current regulation is appropriate. The applicant has not presented any information to show that noise from airplanes using runway 11 would not have a negative impact on the quality of life of potential residents of the proposed new subdivision. The City of Gainesville had to balance the needs of the community in reaching the decision to implement the current regulations. Through the review process in 2009 the City with the cooperation of Airport officials work together to develop the best approach for land use compatibility for the area. The City adopted a new noise zone map as part of the updated regulations that actually allowed more developable land for residential use than was previously allowed. The City also adopted a new land use and zoning category (Business Industrial) for designation on property that would be impacted by noise from airport operations, in order to provide reasonable and economic development opportunities for properties near the airport.

If is staff's recommendation that the current Airport Hazard Zoning Regulations not be amended as requested by the applicant. The basis for staff's recommendation is that the current regulations are consistent with Goal 9 and associated Objectives and Policies (Exhibit 5) and Policy 4.3.5 (Hatchet Creek PUD) (Exhibit 2), of the Future Land Use Element. Additionally the data regarding the runway 11, the information contained in petition PB-09-82TCH (Exhibit 6) and the most recent information that indicates that airports and communities must address aviation noise outside the DNL 65 are compelling reasons to deny the petition.

Respectfully submitted



Ralph Hilliard  
Planning Manager

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Attachments:

- Exhibit 1 Table 1. Airport Hazardous Zoning Regulations
- Exhibit 2 Hatchet Creek PUD Policy 4.3.5
- Exhibit 3 Runway 11 Accident Location Pattern
- Exhibit 4 Runway 11 Approach Profile
- Exhibit 5 Future Land Use Element, Goal 9 and associated objectives and polices
- Exhibit 6 Petition PB-09-82 TCH
- Exhibit 7 Airport Noise Zone Map
- Exhibit 8 Airport Hazard Zoning Ordinance 090384
- Exhibit 9 Applicant's Text Amendment Application