18400 Von Karman Avenue Suite 800 Irvine, CA 92612 949.760.1121 Phone 949.720.0182 Fax

949.224.6292 Direct blichman@buchalter.com

October 5, 2022

VIA E-MAIL (CHAD.MAKOVSKY@PHOENIX.GOV)

Mr. Chad Makovsky Director of Aviation Services City of Phoenix - Aviation Department 2485 E. Buckeye Road Phoenix, AZ 85034

Dear Mr. Makovsky:

Thank you for your previous communications relating to the proposed Coyotes arena and Tempe Entertainment District. Please consider this letter as the City of Tempe's formal response. First, we would like to thank you for the clear communication you provided in the June 28, 2022 letter. As the City continues to negotiate with Bluebird Development, LLC, it is helpful to be able to inform the City Council that the City of Phoenix does not oppose the proposed Arizona Coyote's arena or Tempe Entertainment District site. As the Coyotes have assured you that they will mitigate any issues relating to the impact of their potential development, that only leaves the residential component for discussion. As set forth below, the relevant documents conclusively demonstrate that the planned residential development is fully compliant with the requirements of the applicable IGA and 1989 NCP.

I. Tempe's Plan for the Residential Component is Fully Compliant with the IGA and Other Applicable Regulations

While we appreciate your correcting the record of statements made by Bluebird Development, LLC, as a signatory party to the 1994 Intergovernmental Agreement (IGA) and the subsequent 1996 letter exchange which constitutes an exchange of understanding between Mayors Giuliano and Rimsza regarding its terms, Tempe can clearly state *multifamily residential* within the 65 DNL it is not a violation of the IGA. The fact that the 1996 letters include a discussion of both prohibiting all residential use in the land to be purchased by Tempe from the Bureau of Land Management (BLM), and the allowance for multifamily residential use in the 65 DNL with a prohibition on single family residential demonstrates that both Mayors, and staff of the respective cities, understood the difference between the two (2) types of residential product.

buchalter.com

Los Angeles Denver Napa Valley Orange County Portland Sacramento Salt Lake City San Diego San Francisco Scottsdale Seattle

Mr. Chad Makovsky October 5, 2022 Page 2

Tempe staff were also aware that the 1989 Noise Compatibility Plan (upon which the IGA is based, and which is noticeably absent from Sky Harbor's Part 150 Noise Compatibility Study webpage) specifically allows for residential within the 65 DNL so long as "measures to include outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB" are incorporated into building codes and considered for individual approvals. This is entirely consistent with the current guidance of the Federal Aviation Administration ("FAA") Order 5190.6B, Chap. 13, Table 1. Moreover, FAA unequivocally states that "No submittal of a map, or approval or disapproval, in whole or in part, of any map or program submitted under this part is a determination concerning the acceptability or unacceptability of the land use under Federal, State, or local law." *See* also FAA Order 5190.6B, Chap 13, Table 1; 14 CFR 150.5.

The City of Phoenix repeatedly points to the 1999 F.A.R. Part 150 Noise Compatibility Plan (NCP) and its recommendations that mixed use designations within the 65 DNL be amended to exclude residential, stating that the City of Tempe obligated itself to participate in and comply with the Plan.¹ But this is a fatal flaw. There is no such language in the IGA and the City of Tempe has in no way obligated itself to follow the *recommendations* provided by the 1999 NCP. In fact, Tempe could not have obligated itself to abide by recommendations that were not in existence at the time when the IGA was signed. For an agreement to exist between parties, there must be an offer, acceptance, consideration and terms sufficient so that the obligation created can be determined.

In short, it is fairly fundamental to conclude that, if the City of Phoenix wanted Tempe to agree to obligate itself to any of the 1999 recommendations, it should have made an offer to amend the IGA according to its terms. There is no evidence of any such offer, nor any acceptance or consideration. Thus, Tempe is not obligated to implement the 1999 NCP and/or *any-and-every future* F.A.R Part 150 NCP, no matter the language. Nor is there Federal regulation to the contrary. While Phoenix would benefit from this arrangement, the lack of a bargained for exchange (or any Federal mandate to the contrary) is obvious. By engaging in such a bargain, Tempe would have been allowing future F.A.R. Part 150 NCPs to dictate land uses in Tempe, including the uses along Tempe Town Lake, an amenity that the City spent millions of dollars and years of hard work to create.²

¹ Phoenix's contention that Tempe is bound to avoid "high concentrations of residential development" to the east of Sky Harbor and within Tempe should be amended to exclude residential use is within the 1999 NCP. (See p. 6-24). This was a *brand-new recommendation* and was not included in the 1989 NCP. Tempe repeatedly notified Phoenix and the FAA that it felt was underlying the 1996 letter exchanges and the long-standing national policy that multifamily could be a compatible land use in the 65 DNL. Tempe also strenuously objected to this policy in its letter of May 4, 2001 to the FAA of which Phoenix received a copy.

² Hayden Ferry Lakeside, located on the northeast corner of Mill Avenue and Rio Salado Parkway was under development at this time. The Preliminary PAD approved on November 25, 2017 provided 480 units of residential. The amended PAD, passed on February 4, 1999 provided for a 1.62 million square food mixed use development that

Mr. Chad Makovsky October 5, 2022 Page 3

A. The IGA

The IGA is an agreement wherein the City of Tempe promised not to oppose the construction of third runway included in the Master Plan and contemplated by the FAA's 1994 Record of Decision (ROD) issued on January 18, 1994 and subsequent amendment on September 13, 1994, in exchange for the City of Phoenix's promise never to request the FAA to abandon or modify the three noise mitigation measures contemplated and affirmed in the ROD. This includes the "One-DME" or "Four-DME" as it is often referred to, the "side step" procedure for westly approaches, and the equalization of departure procedures to the west of the airport. The term of the IGA is fifty (50) years. The FAA agreed to update the ROD to ensure that the City of Tempe could reasonably rely on FAA's ordinary practice not to initiate changes to noise abatement flight procedures on its own, without a request from an airport operator. The ROD is where these noise mitigation measures were formalized, but not where they were first conceived.³

The City of Tempe did not oppose the 3rd runway's construction. The FAA has modified some of the noise abatement measures, either due to safety concerns by the FAA or as the result of discussions between the cities of Tempe and Phoenix.⁴ The City of Phoenix installed noise and flight track monitoring systems to help determine whether specific aircrafts comply with the noise mitigation measures included in the IGA and the ROD.

In addition to these promises to each other, both cities agreed to a "Land Use" section which states:

Tempe and Phoenix agree to take all actions necessary, consistent with applicable laws and regulations, to implement the **land use management strategies recommended in the F.A.R. Part 150 Noise Compatibility Plan and Program.** Tempe, consistent with applicable laws and regulations, will take such measures as are necessary to ensure that new development undertaken in connection

included 380 units. Edgewater Condominium Towers opened in May of 2004.

https://www.bizjournals.com/phoenix/stories/2004/04/05/story3.html

³ In 1990, the Chief Pilots of America West and Southwest Airlines, along with George Sullivan, the Air Traffic Manager for Phoenix TRACON and Lewis Butler, the Air Traffic Manager for the Phoenix Tower signed a Letter of Agreement on March 21, 1990. This letter established initial departure procedures for the two airlines to reduce the noise print east of the airport.

⁴ According to Appendix A, Responses to Comments on the Final EIS from 2006- As a result of discussions between the City of Phoenix Department of Aviation and the City of Tempe (see FEIS, Appendix A, correspondence from City of Phoenix Aviation Department to Mayor Neil Giuliano, City of Tempe, June 18, 2001), it was understood by the City of Phoenix that Tempe would rather not have large turboprop aircraft fly the 4-DME procedure. Adherence to the 4-DME for these aircraft would significantly increase the noise exposure to Tempe residents. In addition, requiring large turboprop aircraft to follow the 4-DME procedures may also place all general aviation aircraft over Tempe. See https://www.skyharbor.com/docs/default-source/pdfs/faa-doc---appendix-a.pdf, see p. 2-38.

Mr. Chad Makovsky October 5, 2022 Page 4

to the Rio Salado project or in noise sensitive environs within its jurisdiction will be compatible with the noise levels predicted in the F.A.R. Part 150 Noise Compatibility Plan and Program.

Land Use Strategies. There are five (5) land use strategies recommended in the F.A.R. Part 150 NCP from 1989. The planning of the Rio Salado Project which was, at the time, fully encompassed in the 65 DNL noise contour, was fully under way in 1989. Then Mayor, Harry Mitchell, had announced the City's commitment to the vision and the City had adopted the Rio Salado Master Plan. In 1994, just three (3) months after the signing of the IGA, the City of Tempe has also passed a revision of the Redevelopment Plan for the University-Hayden Butte Project.⁵ This revision expanded the Redevelopment area from Hohokam Freeway along the Rio Salado riverbed to McClintock Drive. It also stated that the goal for Areas 1, 2 and 4 was to provide standard housing by encouraging and providing assistance for the construction of high-density housing.

Noise compatibility. In a nutshell, the second requirement of the Land Use section of the IGA, states that Tempe will take measures to make sure new development along the Rio Salado project will be compatible with the noise levels predicted in the Part 150. To be in compliance with this Section, Tempe would need to know which noise contour a proposed use would be located within and would then look to the Table of Land Use Compatibilities in the 1989 NCP and to 14 C.F.R. Part 150's Table 1 in Appendix A (see below). This provision does not disallow residential use, especially multifamily residential within the 65 DNL. It states only that Tempe would develop compatible with the noise levels predicted, which would allow for multifamily residential, with noise attenuation measures in place to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB. These requirements can be considered and required in an individual project approval.

Interpretation of Agreement. It is also important to note that IGA contains a subsection referring to the interpretation of the Agreement. It states that the agreement "shall be interpreted and construed as though drafted by both Phoenix and Tempe." It goes further to state that no interpretation of the IGA "shall be resolved by assertion of application of any rule or presumption that the language shall be construed against the drafting party." Thus, as both Tempe and Phoenix negotiated and drafted this Agreement, any ambiguity or question of intent or interpretation is to be construed as if the parties had drafted it jointly. Phoenix's interpretation that Tempe agreed to

⁵ The original Redevelopment Plan for the University- Hayden Butte Project was passed on March 22, 1973. It was updated to add additional areas on October 13, 1982. The basic goal included in the Statement of Development Objectives from the 1982 amendments was to "restore and transform the former commercial center of Tempe into a center containing the commercial, housing, governmental, cultural, recreational, educational and recreational activities vital to a city." The same objective is stated for the 1994 revision.

Mr. Chad Makovsky October 5, 2022 Page 5

no multifamily within the 65 DNL is totally unsupported, especially in light of the 1996 exchange of letters between Mayor Giuliano and Mayor Rimsza.

B. The 1989 Noise Compatibility Program

The 1989 Noise Compatibility Study was initiated by both the City of Tempe and City of Phoenix in January of 1987. As you know, land use planning decisions are within the purview of the local government. See e.g. FAA Order 5190.6B, section 20.2. While the 1989 F.A.R. Part 150 recommends five (5) specific land use management strategies: Noise Overlay Zoning, Fair Disclosure Policy, Comprehensive Planning, Planning Commission, and Soundproofing (Chapter 7 of the 1989 F.A.R. Part 150⁶); none required the City of Tempe to prohibit multifamily residential or mixed-use zoning within the Rio Salado Project. On the contrary, the 1989 F.A.R. Part 150 includes a Table 7I (below), listed under the first land use management strategy, Noise Overlay Zoning, that allows for multifamily residential with certain stipulations.

The rejected land use management strategies include: Large Lot Zoning (down zoning to achieve land use compatibility was determined to be politically unacceptable); the Transferring of Development Rights; Subdivision Regulations; Capital Improvements Programming; Fee Simple Purchase; Guaranteed Purchase; Land Banking; and Development Rights Purchase. Many of these land use strategies were rejected in part due to the City of Phoenix giving Nuestro Barrio, located just west of the airport in an area where noise levels were expected to be in the upper end of the Ldn 70-75 range and above, "a very high priority... to strengthening the remaining neighborhood." (Id. at 7-22).

It should be noted that in the Resolution passed by the Tempe City Council on February 23, 1989, which approved the submission of the F.A.R. Part 150 to the FAA, the Council included its positions on different aspects of the Plan, stating that it supported the submittal with the City's recommendations included. One such position was that the City take into consideration airport noise in the normal course of the planning and zoning process, stating that the "City of Tempe does not endorse a Noise Overlay Zoning District." It also stated that the City's General Plan would incorporate those elements of the Part 150 which the "City decides are compatible with its development goals." At this point in the Rio Salado Project, Tempe had announced that it was moving forward with the development of Tempe's stretch of the river and was hiring a full-time staff to implement the Rio Salado Plan which had been adopted.⁷

This history is not to say that the City of Tempe did not institute changes with regard to aviation issues. Within one year after the IGA, the City of Tempe created the Tempe Aviation

⁶ Chapter 7 of the 1989 NCP is available upon request.

⁷ https://www.tempe.gov/government/community-services/tempe-town-lake/fast-facts-coloring-book-slideshows-and-videos/historic-timeline

Mr. Chad Makovsky October 5, 2022 Page 6

Commission (TAVCO) to advise on aviation-related matters. It had included aviation issues in the General Plan 2020, adopted in December 1997, which contained the following objective:

Objective 4: Protect noise-sensitive areas in Tempe to the greatest extent possible.

It also includes these implementation strategies:

- 1. Resolve airport issues to promote and protect residential and commercial land uses in Tempe based on the current configuration and operation of Sky Harbor Airport.
- 2. Concurrently with the City of Phoenix implement acceptable land use measures as may be set forth in the Phoenix Sky Harbor Part 150 Noise Compatibility Plan.

The City of Tempe did not, and would not, have accepted a wholesale prohibition of multifamily residential development within the 65 DNL. As stated above, the City was moving forward with the development of the Rio Salado Project. Specifically, Table 6B in <u>Chapter 6 of the NCP</u> (p. 6-11) of the study, refers to Tempe's plan for a "major development program along the Rio Salado."

Land U								
		Noise Zones/Levels in Ldn						
SLUCM								
10	Residential							
11	Household Units							
11.11	Single-Units-detached	Y ¹ ,5	Y ¹ ,5	N				
11.12	Single-Units- semi-detached	Y ^{1,5}	Y ^{1,5}	N				
11.13	Single Units- attached row	y1.5	Y ^{1,5}	N				
11.21	Two Units side-by-side	Y1,5	Y1,5	N				
11.22	Two Units over-under	Y1,5	Y1,5	N				
11.31	Apartments - walk-up	Y1,5	Y1,5	N				
11.32	Apartments - elevator	¥1,5	Y1,5	N				
12	Group Quarters	Y1,5	¥1,5	N				
13	Residential Hotels	Y ¹ ,5	Y ¹ , ⁵	N				
14	Mobile Home in and out of Parks ⁶	N	N	N				
15	Transient Lodgings, Hotels, Motels	Y ¹ ,5	¥ ^{1,5}	¥ ^{3,5}				
16	Other Residential	Ý	Ŷ	N				

Mr. Chad Makovsky October 5, 2022 Page 7

TABLE 7I (continued) Land Use Compatibility Standards Phoenix Sky Harbor International Airport

NOTES FOR TABLE 71

1 All residences in the N-1 and N-2 Zones are marginally noise compatible. As a condition of issuance of a building permit, the builder of the dwelling shall soundproof to achieve a 25 dB reduction from outdoor noise levels (NLR) in the N-1 Zone and a 30 dB NLR in the N-2 Zone. All such soundproofed residential units should be provided with heating, cooling, and ventilation systems capable of permitting closed windows and doors year round. An avigation easement for noise also shall be provided to the City of Phoenix.

Soundproofing will not eliminate outdoor noise problems. However, building location and 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 which 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. Motels and hotels in Ldn 75 contour must achieve NLR of 35 in all areas.
- 4 Land use compatible provided special sound amplification system is installed.
- 5 A noise easement and non-suit covenant should be provided to the City of Phoenix for all new residential development and other specified noise-sensitive uses.
- 6 Includes mobile homes and recreational vehicles as defined in the Phoenix Zoning Ordinance.

Federal compatible land use guidelines are included in Table 1 of Appendix A of 14 C.F.R. part 150. It is notable that the guidance above on land use compatibility has not changed.⁸

⁸ Chapter 13 of the FAA Airport Compliance Manual, Order 5196.6B from 2009, which ensures airport sponsors will be in compliance with their federal obligations also includes Table 1. <u>https://www.faa.gov/documentlibrary/media/order/5190_6b.pdf</u> see p. 196.



Mr. Chad Makovsky October 5, 2022 Page 8

June 2021

DRAFT FOR PUBLIC REVIEW AND COMMENT AC 150/5190-4B

Table 2-1. Land Use Compatibility with Yearly Day-Night Average Sound Levels (DNL)

	Yearly Day-Night Average Sound Level (DNL) in Decibels						
Land Use	Below 65	COLUMN AND A REPORT OF	70-75			Over 85	
Residential			Constant of the		2.555100770		
Residential, other than mobile homes and transient	Y	N(1)	N(1)	N	N	N	
Mobile home parks	Y	N	N	N	N	N	
Transient lodgings	Y	N(1)	N(1)	N(1)	N	N	
Public Use							
Schools	Y	N(1)	N(1)	N	N	N	
Hospitals and nursing homes	Y	25	30	N	N	N	
Churches, auditoriums, & concert halls	Y	25	30	N	N	N	
Government services	Y	Y	25	30	N	N	
Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)	
Parking	Y	Y	Y(2)	Y(3)	Y(4)	N	
Commercial Use			0110-011			11112	
Offices, business and professional	Y	Y	25	30	N	N	
Wholesale/Retail -bldg matrls/hardware/farm equip.	Y	Y	Y(2)	Y(3)	Y(4)	N	
Retail trade – general	Y	Y	25	30	N	N	
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N	
Communication	Y	Y	25	30	N	N	
Manufacturing & Production						11112	
Manufacturing – general	Y	Y	Y(2)	Y(3)	Y(4)	N	
Photographic and optical	Y	Y	25	30	N	N	
Agricultural (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)	
Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N	
Mining and fishing	Y	Y	Y	Y	Y	Y	
Recreational	-11						
Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N	
Outdoor music shells, amphitheaters	Y	N	N	N	N	N	
Nature exhibits and zoos	Y	Y	N	N	N	N	
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N	
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N	

Note: 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 permissible land uses and the relationship between specific properties and specific noise contours rests with the local 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.

Key: Y (yes) = Land use and related structures compatible without restrictions.

N (no) = Land use and related structures are not compatible and should be prohibited.

25, 30, 35 = Land use and related structures generally compatible; measures to achieve Noise Level Reduction of 25, 30, 35 dB must be incorporated into design and construction of structure.

Notes:

(1) = Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus the reduction requirements are often stated as 5, 10, or 15 dB over standard construction and assume mechanical ventilation and closed windows year-round. However, the use of NLR criteria will not eliminate outdoor noise problem.

(2) = Measures to achieve NLR 25 dB 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 30 dB 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 35 dB 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) = Land use compatibility provided special sound reinforcement systems are installed.

(6) = Residential buildings require an NRL of 25 dB.

(7) = Residential buildings require an NRL of 30 dB.

(8) = Residential building not permitted.

Source: 14 CFR Part 150, Appendix A, Table 1 (as published in 1984).

Mr. Chad Makovsky October 5, 2022 Page 9

C. The FAA Position on Noise Mitigation Measures

As set forth, three (3) mitigation measures were memorialized in the IGA—the "One-DME" or "Four-DME" as it is often referred to, the "side step" procedure for westerly approaches, and the equalization of departure procedures to the west of the airport. (See ROD, p.15).⁹ These measures were also agreed to by the FAA in the 1994 Record of Decision.¹⁰

For the "One-DME," the FAA agreed to the continued use of this procedure for easterly departures, meant to minimize aircraft noise impacts over Tempe, in the Environmental Impact Statement (FEIS) predating the 1994 Record of Decision, the 1994 Record of Decision (ROD) itself, and a Memorandum of Agreement (MOA) with the Arizona State Historic Preservation Officer (SHIPO) and the Advisory Council on Historic Preservation (ACHP). The ROD states, "substantial modification or deletion of the Standard Instrument Departure Procedures commonly known as the 'One-DME' departure procedure will not occur without full compliance with FAA Order 1050.1D *Policies and Procedures for Considering Environmental Impacts* (now FAA Order 1050.1F). A "substantial modification" means a change that results in a 1.5 Ldn increase in noise over any noise sensitive area located within the 65 DNL. As set forth in the ROD, a change or abandonment of the 4-DME would require a full environmental analysis in accordance with the National Environmental Policy Act of 1969 and a public participation process. The FAA would have to coordinate with any affected community and the requirements of 36 C.F.R. Part 800 to take into account any effect of a change or abandonment on historic properties. (See ROD, p. 32).

In the City of Phoenix's presentation to the Tempe City Council on June 2, 2022, Dave Fitz, the Chief Executive Officer of Coffman Associates reiterated that the 4-DME is a highly effective noise mitigation measure and it still is when airplanes fly up the Rio Salado riverbed, avoiding most single family residential near the lake.

The FEIS and the ROD also provide for the continued equalization of departure procedures to the east and west, which attempts to "equalize" departing aircraft to the east and west over a 12-month period. The F.A.R. Part 150 program adopts an informal "side step" procedure for the west flow approaches.

Under the FAA Findings in the ROD, the agency acknowledged that City of Tempe opposed the development of the area, as that project "would conflict with their proposed Rio Salado Project" which is described as being "located along the Salt River in Tempe." (See ROD, p. 32) The FAA recognized that the Rio Salado Project "is intended to include residential, office, commercial and industrial development." (Id.) The City of Tempe was concerned about the noise

⁹ The One-DME or 4-DME was long discussed between Phoenix and Tempe.

¹⁰ A full copy of the Record of Decision is available upon request.

Mr. Chad Makovsky October 5, 2022 Page 10

from aircraft departing over to the east. The FAA noted that noise levels are intended to decrease with the required phase out of Stage II aircraft. (Id.)

The City of Tempe made comments on the MOA with the SHIPO and AHCP. Tempe opined that the Master Plan would mean that the FAA must or will abandon the One-DME. The FAA stated that as it has "stated in numerous documents that the FAA has demonstrated no desire to abandon the One-DME departure protocol."

In response, ACHP added a stipulation to the MOA that "modification or deletion" of the One-DME was not part of the undertaking, and that it would take a full analysis in accordance with NEPA and that the "FAA would follow the Procedures described in 36 CFR Part 800 to take into account the effects of any proposed modification of the One DME procedures on historic properties." See added MOA provision included at the request of ACHP. (ROD, p. 32-33).

The ROD concludes with Decisions and Orders from the FAA Regional Administrator. He ordered the preparation and publication of new Standard Instrument Departure Procedures, the implementation of air traffic control and airspace management procedures which include the continued use of the "so-called One-DME and the runway equalization noise abatement measures as well as the implementation of the stipulations contained in the MOA. (See ROD, p. 36).

The City of Tempe can provide further historical documentation showing the noise mitigation measures—4-DME, side step and equalization—were discussed or formalized before the IGA was signed by Tempe and Phoenix. In addition, any substantial modification or abandonment of at least the 4-DME would require an extensive process by the FAA including a new environmental impact statement.

D. The 1996 Exchange of Letters between Mayor Giuliano and Mayor Rimsza

On March 29, 2006, Mayor Neil Giuliano wrote a letter to Phoenix Mayor, Skip Rimsza, to express the City's understanding of the terms of the IGA, making specific mention of certain land uses in the 65 DNL. To provide a context for the need for such a letter, below is the Memorandum to the Tempe City Council wherein this letter was approved.ⁱ The Memorandum clearly states that staff from both Phoenix and Tempe had worked on the terms of this letter exchange, which became known as the "5-Point Agreement." The FAA and BLM helped the two cities to broker this Agreement.¹¹ The BLM land that is referred to in the document was largely located on the west side of Priest Drive near Rio Salado Parkway.

¹¹ See the July 12, 2000 Coffman Associates response to the City of Tempe provided in the June 28, 2022 Letter to Andrew Ching.

Mr. Chad Makovsky October 5, 2022 Page 11

0112-07-03 AGENDA ITEM ILS#3 DATE 3-28-96 MEMORANDUM To: Mayor & Council Jan Schaefer From: Economic Development Administrator Agreement with City of Phoenix regarding Land Uses on Bureau of Land Management (BLM) Property in Rio Salado and certain Land Uses in the 65 DNL contour Re: Date: March 22, 1996 cc: Gary Brown Dave Brown Patrick Flynn As you know, the City of Tempe is in the process of purchasing land from BLM (see map attached) that is in the flight path of Sky Harbor Airport. Attached is a proposed letter and attachment from Mayor Giuliano to Mayor Rimsza that provides a way for Tempe to purchase the BLM land while addressing issues of concern to the City of Phoenix and Sky Harbor Airport. In order to proceed with the sale without protest from the City of Phoenix, and because it is important to the public interest to insure proper land use in perpetuity on this land, a restrictive covenant prohibiting residential land use on the BLM land has Restrictive Covenant is attached to the letter. If Council agrees, BLM will incorporate this language in the deed at the time of the sale to the City of Tempe. In addition, both cities have agreed that there are land use issues of concern in the 65 DNL contour in Phoenix and Tempe. The letter further proposes that both cities intend to proceed to the extent permitted by law, to prohibit any new single family residential zoning and develop and implement avigation (noise) easements for any new multi-family residential land use in the 65 DNL contour. Staff Recommendation: Staff recommends that the proposed letter of understanding be signed and sent to Mayor Rimsza. This agreement has been worked out over a period of months. It allows the sale of the BLM land in Rio Salado to proceed and indicates the intent of both cities to solve future land use issues within their own 65 DNL contours in a manner agreeable to both cities.

Mr. Chad Makovsky October 5, 2022 Page 12

On April 18, 1996, Mayor Rimza responded to the March 29th letter¹² to confirm the following:

Land uses in 65 DNL:

4. The Mayors intend to proceed with the development, to the extent permitted by law, of a land use restriction to prohibit any new single-family residential zoning, either for attached or detached dwelling units, within the 65 DNL contour line around Sky Harbor International Airport. "Single-family" use denotes allowing no more than one residential dwelling unit on a parcel of land; and

5. The Mayors intend to proceed with the development and implementation of avigation (noise) easements, to the extent that is allowed by law, for any new multi-family residential land use within the 65 DNL contour line. "Multi-family" use denotes allowing more than one residential dwelling unit on a parcel of land.

I welcome the spirit of cooperation exhibited by Tempe in our mutual efforts to maximize the benefits to our respective communities from the airport facilities serving our constituents.

Mayor

While the City of Phoenix attempts to portray this exchange as "informal" and states that it "nowhere states that multi-family is allowed," the exchange above is clear. The City of Tempe has not stated that this was a formal amendment to the IGA, but an exchange of the understanding of the key terms of the IGA, which clearly allows "new multifamily residential land use within the 65 DNL contour line."¹³ As Tempe's objection stated in 2000, the 5-point Agreement is in line with national policy of defining single family residential within the 65 DNL as incompatible but recognizing that multifamily could be compatible.¹⁴

¹² Signed copies of both letters can be provided upon request.

¹³ The City of Tempe and City of Phoenix often exchanged letters to come to express an understanding or come to an agreement, see footnote 4 as an example.

¹⁴ It is particularly ironic to note City of Phoenix's contradiction here that to be considered as an amendment to the IGA, the informal exchange of letters by former mayors would have needed approval by the Phoenix City Council (it was approved by the Tempe City Council at a public meeting), and then, in the next paragraph attempts to bind Tempe to the land use recommendations included the 1999 NCP, which was not conducted until 5 years after the signing of the IGA. If Phoenix wished to mandate the 1999 recommendations on Tempe, it should have amended the 1994 IGA.

Mr. Chad Makovsky October 5, 2022 Page 13

E. 1999 Noise Compatibility Program

The IGA called for the City of Phoenix to "submit to the FAA an update of the F.A.R. Part 150 Noise Compatibility Plan and Program" no later than the operation commencement date of the third runway for Sky Harbor. Sky Harbor and the City of Phoenix formally accepted the 1999 Noise Compatibility Program on September 20, 2000 and provided the document to the FAA in October 2000. After much comment from the City of Tempe, the FAA approved the Plan on September 7, 2001.

At the time of the 1999 NCP, the City of Phoenix and City of Tempe were not on the best terms with regard to the IGA. Tempe had filed a Notice of Claim against the City of Phoenix based on Phoenix's alleged breach of the IGA due to the 4-DME and Phoenix's adoption of a "exit-window-only gate. The Arizona Cardinals and Tempe were in discussions for a stadium to be located at the Papago Park Center. Thus, these issues had strained the relationship between the two cities, and unlike the 1989 NCP, the City of Tempe, while it had required an update of the F.A.R. Part 150 in the IGA (see Section 2), did not initiate the process as it had done in 1987, nor did it agree with the resulting 1999 document.

As you know, the City of Tempe had also notified the Coffman Associates of its objections to the 1999 NCP Land Use Alternatives. Tempe stated that it had long complied with and relied on the 5-point agreement and the national standards it adopted.¹⁵

F. The Impact of the Airport Noise and Capacity Act of 1990

Congress passed the Airport Noise and Capacity Act of 1990 ("ANCA") which required the phase out of noisier Stage II aircraft, which were to be replaced by the quieter Stage III aircraft. The phase out of Stage II aircraft was to take place by 2000, with only Stage III aircraft being permitted to fly after 2007. (ROD, p. 13). As the ROD stated, the impact of this legislation would substantially decrease the size of the 65 DNL and the number of individuals located within the contour. (Id.) The revised noise contours, consistent with the ANCA mandates, have yet to be disclosed by City of Phoenix.

At the time of the 1999 NCP, the City of Tempe questioned Coffman Associates, asking why it was using the outdated contour line. The phasing out of the noisier planes was to be largely complete by 2000 according to ANCA, but the City of Phoenix's noise contour maps have not shrunk substantially since the 1989 NCP.ⁱⁱ

¹⁵ See Coffman Associates' response, which was included in the June 28th letter.

Mr. Chad Makovsky October 5, 2022 Page 14

II. City of Phoenix's Contrary Claims in the June 28th Letter

A. Residential Development is not compatible with the noise levels in the 65 DNL.

The June 28th letter strongly argues that residential, even multifamily residential, would be prohibited in the 65 DNL noise contour. It is true that last month the FAA recently issued an <u>Advisory Circular</u>, AC 150/5190-4B, which attempts to include "residential use within airport noise contour" as a major incompatible land use. However, this Advisory Circular recognizes that where there are "instances where residential uses cannot be prevented near an airport," techniques, including "requiring developers to use sound-insulating building materials to minimize aircraft noise effects" can be used to minimize or mitigate the effects of the incompatible development. Section 2.3.1.3.

It is also interesting to note that the first letter, sent to Mr. Nicholas Wood dated September 20, 2021, who represents the Arizona Coyotes, does not make mention of the prohibition Phoenix asserts Tempe is bound to by the IGA.¹⁶ While it does also refer to the fact that FAA deems all residential development within the 65 DNL noise contour as an incompatible use that Sky Harbor is obligated to oppose, it also makes two recommendations to the Coyotes to ensure proper implementation of the FAA-related regulations, including:

- 1. Strict compliance with 14 C.F.R. Part 77 and 14 C.F.R. Part 150.
- 2. The inclusion in all residential sales/lease contracts a copy of the statutory airport disclosure map.

No mention was made of the prohibition of multifamily residential within the 65 DNL that Tempe allegedly agreed to in the IGA and the 1989 Noise Compatibility Study.

B. New Residential Uses in the 65 DNL violates FAA Guidance

The City of Tempe also disagrees that the FAA has determined the introduction of new residential uses in the 65 DNL is incompatible with airport operations. Phoenix has deliberately ignored the exception adopted by FAA which allows new residential uses if measures have been taken "to achieve outdoor to indoor Noise Level Reduction of at least 25 dB.¹⁷ Nevertheless, the June 28th letter claims that it is a "misunderstanding that the federal regulations have an exception for housing that is sound insulated." It further states that the FAA's noise program only applies sound insulation to existing residential, not new residential. (See Advisory Circular, Section 2.3.1.3, which makes an exception when residential uses cannot be prevented.) Neither the FAA nor the City of Phoenix have jurisdiction over the City of Tempe's land use planning decisions,

¹⁶ The City of Phoenix also sent a similar letter to the City of Tempe on September 24, 2021.

¹⁷ See 14 C.F.R. A150.101 (c).

Mr. Chad Makovsky October 5, 2022 Page 15

and the FAA cannot mandate that residential uses are prohibited without encountering a possible challenge under the Takings Clause of the 5th Amendment of the U.S. Constitution.

Moreover, the recently finalized Advisory Circulator, 150/5190-4B, makes it clear that, "Airports that accept federal grant money (*i.e.* Phoenix only) through the Airport Improvement Program (AIP) must comply with all FAA Grant Assurances," which includes Compatible Land Use. (Id. at 1-1.) This Advisory Circular also makes it clear that "land use planning and regulation is a power reserved to the states and political subdivisions."

The Circular further states, "Through federal grant assurances, airport sponsors and owners are obligated to pursue all reasonable and appropriate actions to secure and promote compatible land use and development within their local areas... Airports that are located within multiple jurisdictions or have no land use authority are expected to remain vigilant of incompatible development proposals within the airport environs, and take reasonable and appropriate action to mitigate incompatible land use and promote compatible development."¹⁸ The City of Phoenix has done its due diligence to caution and advise Tempe of its position with regard to the multifamily use within the Bluebird development and it is the City of Tempe's understanding that, in the absence of its receipt of federal funds, the FAA can take limited steps adverse to Tempe if the Project is built.

Finally, City of Tempe is aware that the <u>Final Policy on Part 150 Approval of Noise</u> <u>Mitigation Measures: Effect on the Use of Federal Grants for Noise Mitigation Projects</u> states that, "Beginning October 1, 1998, the FAA will approve under Part 150 only remedial noise mitigation measures for existing noncompatible development and only preventive noise mitigation measures in areas of potential new noncompatible development." Tempe thus acknowledges that, as the FAA said in its April 1, 2022 letter, the City of Tempe will not be "eligible for any federal funding assistance (Airport Improvement Program) from the FAA."

C. Noise Contour Maps Used for Development are Outdated and Inaccurate.

The City of Phoenix has stated on several occasions that the noise contour maps used by the Developer in their June 2nd presentation to the Tempe City Council were outdated and inaccurate. This may be well true, but the cause of this confusion lies with the City of Phoenix and their failure to have the FAA approve any subsequent noise contour map after the 1999 NCP. The

¹⁸ The City of Phoenix recently mailed out flyers to residents across the East Valley and the City of Phoenix and created a website asserting that they are "Protecting Tempe Neighborhoods" from overhead flights. Was this reasonable and appropriate? The flight paths (the 4-DME and the equalization procedure) are formalized in the ROD, both the FAA and the City of Phoenix know that it would require a full environmental analysis under NEPA and a public process. The City of Phoenix is engaging in political theatrics to allege that the FAA would somehow punish the City of Tempe and other cities across the East Valley by changing the flight paths to spread the noise from the overhead flights across a larger spectrum. The City of Tempe is not asking for a change to the flight path, it has only ever asked that Phoenix abide by the 4-DME formalized in the ROD.

Mr. Chad Makovsky October 5, 2022 Page 16

City of Phoenix provides only two FAA approved maps on their F.A.R. Part 150 website, one showing the noise contours in 1999 and the other, published with the 1999 NCP that predicts the noise contours in 2004.

The City of Phoenix has not provided the City of Tempe with updated maps. When asked, the City of Tempe's Planning Director, Ryan Levesque, stated that not only had he never been given an updated map of the noise contour for the 65 DNL, he has also never (to his knowledge) received communication from City of Phoenix or Sky Harbor stating an objection to multifamily residential. The Community Development Department does notify City of Phoenix when there is a proposed amendment to the General Plan land use or density maps and he has received communication when the height of the building has been an issue.¹⁹ His previous contact with the City of Phoenix, Randy Payne, used to contact him with issues but after Mr. Payne retired, Ryan Levesque largely stopped hearing from any Phoenix representative directly.

If the City of Phoenix had created new contour maps, as its letter states, that "benefitted Tempe and Phoenix by permitting both cities to develop more land uses," one has to ask why such a map was not shared with the City of Tempe's leadership or Community Development Department. Phoenix points to the recently approved <u>Comprehensive Asset Management Plan</u> (CAMP) as containing maps approved in 2019. This is the first the City of Tempe has heard of the new FAA approved noise contour map (which only shows the 65 DNL, not the 70 or 75 DNL), which is not on the City of Phoenix's F.A.R. Part 150 website, nor is it listed on the FAA's website listing the approved noise compatibility planning links.²⁰

This is not surprising as the CAMP is an asset management plan. The plan mentions residential land use once in its 469 pages, on page 2-54. The entirety of the subsection states:

2.5.4 OFF-AIRPORT LAND USE

Compatible land uses near the Airport generally include industrial and/or commercial land use, while incompatible land uses generally include residential areas, areas likely to pose wildlife hazards, and public facilities such as schools, hospitals, and places of worship. **Exhibit 2-15** illustrates the land uses surrounding the Airport.

There is no statement that the map included as Exhibit 2-15 with the 65 DNL from 2015, is approved by the FAA. The map also does not reflect the current uses of the property located within the City of Tempe. Tempe Beach Park is noted as "Agricultural and or Animal-Related" instead of its Recreational land use; the IDEA Campus with its commercial uses is missing; the

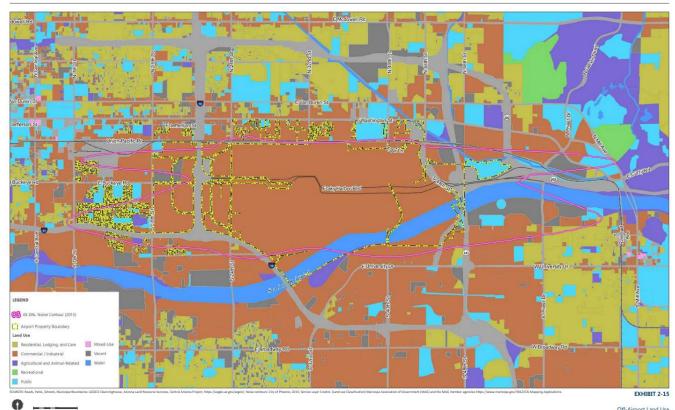
¹⁹ Ryan Levesque, the Planning Director in the Community Development Department would send notice of proposed changes to the General Plan to his Community Development counterparts at the City of Phoenix, including Alan Stephenson, the Deputy City Manager.

²⁰ The CAMP is not a F.A.R. Part 150 Noise Compatibility Study. The last Noise Compatibility Study completed by the City of Phoenix was in 1999. The FAA approved the NCP in September 2001.

Mr. Chad Makovsky October 5, 2022 Page 17

Tempe Center for the Arts is assigned a use of "Public" when it is zoned MU-4 (mixed-use) and finally, Papago Park Center, which is on the north side of Tempe Town Lake and largely within the 65 DNL is listed as vacant.

It is unclear how Tempe would have discerned that this map of the 2015 65 DNL contour map was approved by the FAA, when the underlying land uses are inaccurate. Especially when the CAMP



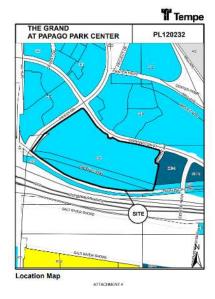
is not an FAA regulation on noise compatibility, it is not a FAA-issued guidance, and thus it is not instructive to the City of Tempe on this issue.

Nevertheless, and despite the absence of any approved noise contour maps to conform their position, Phoenix claims that all the residential multifamily developments approved by Tempe since 1994 in the 65 DNL to which Phoenix <u>did not object</u> (*see, e.g.*, five (5) multifamily residential projects north of 1st Street (west of the railroad tracks), seven (7) residential projects along Tempe Town Lake (two (2) on the south side and five (5) on the north side near Rural Road), and two (2) at Papago Park Center) were approved and built at a time when the 65 DNL had shrunk due to ANCA. Not having a current map of the noise contours, it is difficult to ascertain exactly how many multifamily projects were built in smaller 65 DNL contours as Phoenix has never specified the contours' dimensions. However, Tempe can say with a good deal of certainty that the following

Mr. Chad Makovsky October 5, 2022 Page 18

were built or approved within the original 65 DNL contours—Hayden Ferry Lakeside, which first included a residential component in 1997 (RFP was in 1994); Papago Park Center, now The Grand at Papago Park, in 2013 which includes hundreds of residential units; Grigio Apartments at Tempe Town Lake, which was the first apartment community (with 523 units) built along the north shore of the lake in 2007; and the old Peabody Hotel site, which was bought by Pier 202, LLC in 2006 with plans for 1,000 condos, without so much as a murmur from Phoenix about their residential use.

The City of Phoenix received appropriate notice about these developments like every citizen and especially being the airport owner and operator. To dive a bit deeper into one of the projects above, Papago Park Center (approved in 2013), is also where the Arizona Cardinals planned to build their new stadium before moving out to Glendale.ⁱⁱⁱ The City of Phoenix not only knew of the project and its proposed residential, but it issued a letter of support in favor of the project (see Letter of support from the City of Phoenix's Deputy Aviation Attorney is attached below in Endnote 1). This project is located almost directly opposite on the lake from Tempe's land at Priest Drive and Rio Salado, as can be seen below, it is the parcel in yellow. Inexplicably, the 65 DNL did not prohibit multifamily residential in this project, which Phoenix supported.



Of course, this was long after the City of Phoenix had

worked to block the Cardinals Stadium, threatening to sue Tempe because the IGA did not allow outdoor sports arena within the 65-70 and 70-75 DNL. Interestingly enough, the 14 C.F.R. Part 150's Table 1 in Appendix A does not define outdoor sports arenas within the 65-70 or 70-75 as an incompatible use. It only requires that special sound reinforcement systems be installed.

III. Conclusion

Tempe once again affirms that it is not in breach of the IGA. Tempe is acting well within its longtime understanding of the 1989 Noise Compatibility Plan, the IGA and the 1996 interpretive Letters between the Mayors. The City of Tempe is also committed to the IGA remaining in place until its expiration in 2044, but firmly disagrees with Phoenix's sudden attempt to dictate an entirely one-sided term for the first time since the approval of the 1999 NCP. In fact, until 1999, the City of Phoenix appeared to understand the allowance for multifamily residential included in the both the 1989 F.A.R. Part 150 and the Table 1 of Appendix A of 14 C.F.R. Part 150, and discussed in the 1989 Study and the 1996 Letters between Mayors. And to the knowledge of the City of Tempe's Planning Director, who has worked in the Community Development Department for 19 years, City of Phoenix has not registered a single complaint about multifamily

Mr. Chad Makovsky October 5, 2022 Page 19

within the 65 DNL. Instead its focus was entirely on the height of proposed development. Now, at the very time that the Arizona Coyotes are attempting to negotiate a land deal with the City of Tempe for an arena and an entertainment district, the City of Phoenix has awakened and arisen. Phoenix objections are, however, based on quicksand. Tempe is willing to cooperate with Phoenix in all ways that do not require the relinquishment of Tempe's authority over its land use and development, including Bluebird Development, LLC's execution of an avigation easement, a notice to the prospective purchasers and a notice to any tenant signing a lease that they are in proximity to an airport, and so long as that cooperation contributes to the recognition and enforcement of the IGA. We are confident in Phoenix's good faith in continuing to do so as well.

Sincerely,

BUCHALTER A Professional Corporation

Bachaca fuluer

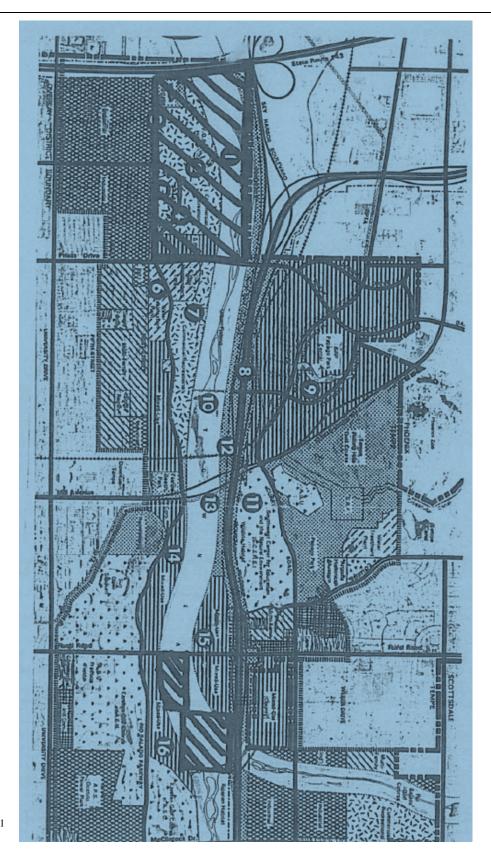
Barbara Lichman

BL:sb

 CC: Jeffrey Barton, Phoenix City Manager Mario Paniagua, Phoenix Deputy City Manager Cris Meyer, Phoenix City Attorney Carolina Potts, Assistant Chief Council Andrew Ching, Tempe City Manager Sonia Blain, Tempe City Attorney Tempe City Council

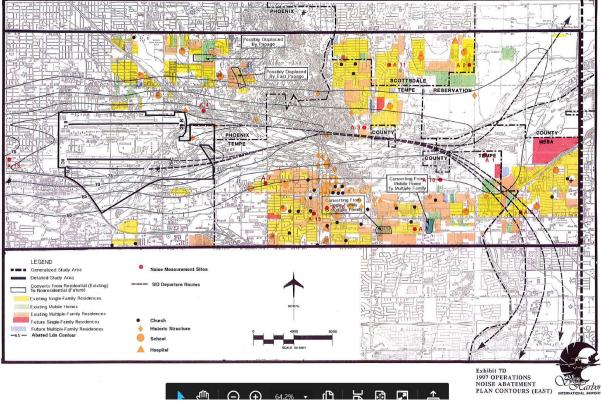
i

Mr. Chad Makovsky October 5, 2022 Page 20



Mr. Chad Makovsky October 5, 2022 Page 21

This map attached to the staff memorandum and included in the public record." As you can see, the area along Tempe Town Lake is largely denoted as mixed use (marked by a vertical strip), this includes the area marked as number 9, Salt River Project's Papago Park Center. Prior to the IGA, Phoenix and Tempe had negotiated a nonbinding Letter of Intent (available upon request) which was passed by the Council on Jan. 13, 1994. The Jan. 13th agenda also included a Planned Area Development for the Papago Park Center development, The PAD included a multifamily project called the Stadium Lofts which made up of 84 dwelling units and was within the 65 DNL. Both items were also discussed on December 16, 1993, where the Letter of Intent was delayed by Council to the next Council meeting.



1997 noise contours predicted by the 1989 NCP, predicted before ANCA.

ii

Mr. Chad Makovsky October 5, 2022 Page 22

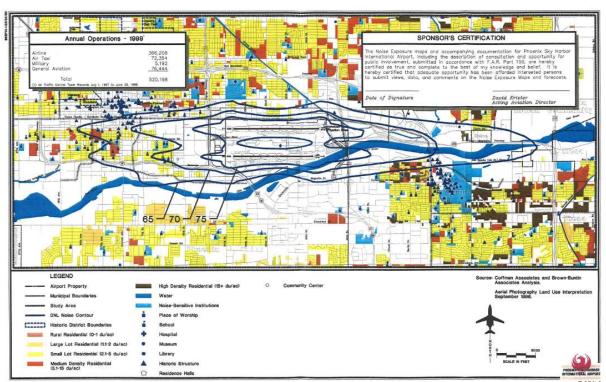


Exhibit 1 PHOENIX SKY HARBOR INTERNATIONAL AIRPORT 1999 NOISE EXPOSURE MAP

1999 noise contour approved in the 1999 NCP, after ANCA was passed.

Mr. Chad Makovsky October 5, 2022 Page 23

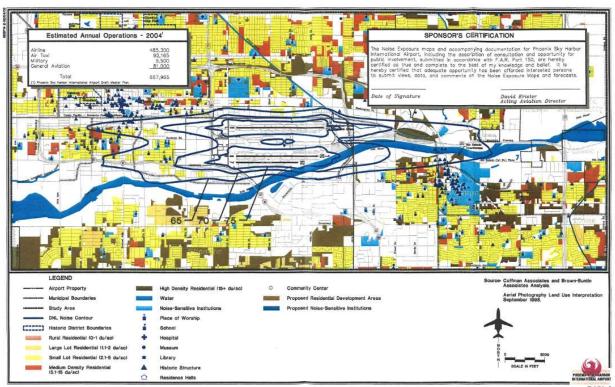


Exhibit 2 PHOENIX SKY HARBOR INTERNATIONAL AIRPORT 2004 NOISE EXPOSURE MAD

2004 noise contour predicted by the 1999 NCP.

ⁱⁱⁱ On February 7, 2013, the Papago Park Center, now known as 'The Grand at Papago Park," was back before the Council with a request for the Council to approve a Zoning Map Amendment from the General Industrial District to MU-4, Mixed-Use High Density District and an Amended Planned Area Development Overlay for a proposed commercial and residential development, and the PAD was further amended by Council on June 6, 2019.

Mr. Chad Makovsky October 5, 2022 Page 24



January 7, 2013

Mitchell Rosen Development Manager for Papago Park Center Salt River Project P.O. Box 52025 Phoenix, AZ 85072-2025

Dear Mr. Rosen,

Thank you for the opportunity to comment on the proposed development, The Grand at Papago Park Center, to be located east of Phoenix Sky Harbor International Airport, on the southeast corner of Washington Street and Priest Drive in Tempe, Arizona.

Our Airport planning staff has reviewed your 19th Amended Planned Area Development for Papago Center submittal to the City of Tempe Development Review Commission, for consideration at the hearing scheduled for January 8, 2013. The maximum building heights, as shown on sheet A-4 (Attachment 1) correspond to the maximum heights as shown on the proposed maximum height of development map previously provided to our staff by your team. We appreciate your willingness to coordinate with the Airport to determine acceptable maximum building heights.

When a final design is determined, a Federal Aviation Administration (FAA) 7460 Obstruction Evaluation form must be submitted for structures and any temporary equipment, such as cranes that exceed any proposed structure heights and receive a FAA "No Hazard" determination. The City of Phoenix Aviation will not object to the proposed conceptual development conditioned upon a FAA No Hazard determination and maximum development heights not exceeding the height limitations as shown on sheet A-4 (Attachment 1).

As a reminder, the City of Phoenix Aviation Department and the FAA define maximum building height to include all rooftop appurtenances, obstructions lights, lighting arresting devices, and buildings mechanical equipment. This information is illustrated in Attachment 2.



3400 East Sky Harbor Boulevard, Suite 3300 • Phoenix, Arizon ATTACHMENT 46:02-273-3321 • FAX 602-273-2100 • TTY 1-800-781-1010

enumber Deceme

Mr. Chad Makovsky October 5, 2022 Page 25

Another concern is that the property is located within the current 65-70 and 70-75 decibel Day Night Level (DNL) noise contour lines. There is a Noise Exposure Map Update underway and results will be available by the end of 2013.

This site is subject to overflights of aircraft operation at the Airport. People are often irritated by repeated overflights regardless of the actual sound level. Per ARS, Section 28-8486 Territory in the Vicinity of a Public Airport, we request that a notice to prospective purchasers be provided.

Thank you for coordinating with us early in the development process. If you have any questions regarding the FAA process or the Airport, please contact me at 602-273-4072 or you may also contact Randy Payne, Project Manager at 602-273-2058.

Sincerely,

Judy M. Ross Deputy Aviation Director City of Phoenix

Attachments

CC: Jeff Kulaga, City of Tempe Assistant City Manager Ryan Levesque, City of Tempe Community Development Department Tamie Fisher, City of Phoenix Assistant Aviation Director

ATTACHMENT 47