



U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Office of the Regional Administrator

777 S. Aviation Blvd., Ste.150
El Segundo, CA 90245

April 1, 2022

Ms. Lisa Goodman
City of Tempe Procurement Officer
31 East Fifth Street
Tempe, AZ 85281

RE: Tempe Entertainment District (TED) Proposal

Dear Ms. Goodman:

The purpose of this letter is to inform the City of Tempe that the Federal Aviation Administration (FAA) is concerned about potential impacts to Phoenix Sky Harbor International Airport (PHX), land use changes, and the introduction of airport incompatible land use relating to the proposed Tempe Entertainment District (TED). As currently planned, this new development would introduce land use compatibility issues and increase noise incompatibility due to arrival and departure operations from PHX. The FAA's mission is to provide the safest and most efficient aerospace system in the world. Within the context of our mission, the FAA continues to seek ways to mitigate the effects of aviation-related noise by providing financial and technical assistance to airport sponsors on airport compatible land use, noise reduction planning and abatement activities.

The FAA is concerned about potential changes in airport land use compatibility and the introduction of high-density residences within an area known to experience considerable aircraft noise. The proposed TED development raises a number of concerns which include but are not limited to 1) Mixed use development in proximity to runway thresholds at PHX; 2) Development of housing, office space, hotel & arena with height exceeding eighty feet; 3) Airport air navigation; 4) Aircraft emergency flight profile, specifically One Engine Inoperable (OEI) departure & arrival profiles; 5) Construction equipment impacting PHX arrivals and departures, specifically construction cranes; 6) Aircraft performance limitations based on weather conditions, TED construction (interim) and developed (permanent) hazards to air navigation; and 7) Lasers, Fireworks, Promotional Spotlights, Drone Flight Operations and area lighting that will negatively impact aircraft performance and visibility associated with PHX. The FAA is aware that the City of Phoenix and air carriers which serve PHX have expressed related concerns with the TED and potential residential development.

The proposed development would be located within two miles of PHX within the Day-Night Average Sound Level (DNL) 65 decibel (dB) contour and is heavily affected by aircraft arrivals/departures (see enclosure 1)¹. FAA policy states that residential development within

¹ Enclosure 1 (illustration of proposed TED site PHX)

an airport 65 DNL noise contour is incompatible land use. The City of Phoenix, as the owner/operator of PHX, is obligated to challenge all incompatible land uses, including residential development for the safety and health of prospective residents, homeowners, businesses, communities and the general public. In accordance with FAA *Final Policy on Part 150 Approval of Noise Mitigation Measures: Effect on the Use of Federal Grants for Noise Mitigation Projects* (63 FR 16409) structures and new non-compatible development built after October 1, 1998 are not eligible for approval of remedial noise mitigation measures under Part 150 or for AIP funding.

According to the TED proposal presentation², the development proposes to add over 1,600 residential units. This plan would expose thousands of new residents to significant noise (65 dB DNL and higher), on the order of 4000 persons, using the average number of 2.62 persons per household according to the United States Census Bureau. Given that there are currently on the order of 440,000 persons nationwide exposed to significant noise, this development alone would increase the number of people exposed to significant noise by 0.9 percent.

PHX primary departure operations utilize Runways 7L/25R. The proposed development would be approximately 9,800 feet east of the south Runway complex. When operations utilize east flow, using Runway 7L as primary departure, aircraft departing straight out on Runway 7L will overfly the TED site. Runway 7L departures make up about 40% of annual operations. December 2019 was the peak month for departures on Runway 7L, with a monthly total of 11402 and an average of 368 departures per day. December 2021 had the highest number of heavy jet departures for Runway 7L, with a monthly total of 405 and an average of 13 heavy jet departures per day. Of the December 2021 total heavy jet departures on 7L, about 28% were during the nighttime hours of 2200-0700. During a one-week sample of heavy jet departures on 7L in December 2021, the average altitude of heavy jets over the proposed site was 1883 feet above ground level (AGL) and the lowest altitude of heavy jets was 1350 feet AGL.

During west flow operations, aircraft arrivals would fly over the TED site, arriving on Runway 25R. Runway 25R arrivals make up about 20% of annual operations. July 2019 was the peak month for arrivals on Runway 25R, with a monthly total of 1251 and an average of 31 arrivals per day. Proposed TED residential units would be exposed to the type and frequency of aviation activity described above.

FAA is also concerned about the proposed development introduction of multistory residential, hotel and office buildings ranging in height from 80 feet to 140 feet above ground level located within the PHX Part 77 approach surface to Runway 25L. The TED development project is located within the footprint of the Approach/Departure Obstruction Clearance Surface (OCS)³ for existing Runway 08/26 and Runway 7L/25R. Maintaining clearance and protection of the OCS is among critical safety factors for protection of the Nation's airspace and aviation operations to and from PHX. For safety reasons, the height

² [PAAB Meeting \(110921\) \(skyharbor.com\)](#)

³ Defined in FAA Advisory Circular (AC) 150/5300-13, Airport Design, and Engineering Brief 99A.

of proposed structures must be below the OCS. Additionally, the FAA is concerned about impacts to air navigation due to the presence of large scale (height) construction cranes.

The City of Tempe is responsible for ensuring proper planning and environmental studies are initiated in partnership with federal agencies, state, local, and private entities, in addition to notifying real estate investors, homeowners, and business owners of their exposure to direct overflight and airport noise in excess to 65 DNL contours.

Noise and land use compatibility planning are complex issues which need active engagement by the City of Tempe together in partnership with the City of Phoenix and Maricopa County, PHX, Sky Harbor Airport Commission, aeronautical users, airport business stakeholders, the business community, Phoenix/Tempe communities, citizens and the general public to establish a cohesive strategy for the health and well-being of the entire community. Please review the FAA [Airport Noise Compatibility Planning Toolkit \(Land Use Compatibility and Airports, A Guide for Effective Land Use Planning \[PDF\]\)](#).

Should the City of Tempe proceed with the TED project exposing on the order of 4000 residents to significant noise, residential sound insulation for these properties would not be eligible for federal funding assistance (Airport Improvement Program) from the FAA. As noted previously, residential housing placed within the 65 DNL is incompatible airport land use. Future TED residents' concerns about PHX aircraft operations sent to the FAA would be respectfully referred back to the City of Tempe. Therefore, we strongly encourage the City of Tempe to consider the FAA's concerns and look to develop and maintain compatible land uses around PHX.

The TED development Project is within Title 14 CFR Part 77 Notice Criteria where filing is required to ensure the safe, efficient use, and preservation of navigable airspace. The Notice Criteria Tool is available on-line at <https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm>. Filing Notice can be accomplished on-line at <https://oeaaa.faa.gov/oeaaa>. There are no filing fees associated with the filing Notice. Instructions are available at the website.

Sincerely,



Raquel Girvin
Regional Administrator

Enclosure

cc:

Andrew Ching, Tempe City Manager
Chad Makovsky, C.M, Director of Aviation Services, City of Phoenix