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REF260015 - City of Monterey

Continued from June 22, 2026 - Public hearing to consider whether installation of a commercial roof mounted & solar carport canopy grid-tied photovoltaic & battery storage systems is consistent with the 2019 Airport Land Use Compatibility Plan (ALUCP) for Monterey Regional Airport.

RECOMMENDATION:

Staff recommends that the Monterey County Airport Land Use Commission (ALUC) find the proposed project (ALUC File No. REF260015) consistent with the 2019 Airport Land Use Compatibility Plans (ALUCP) for Monterey Regional Airport.

PROPOSED PROJECT:

On April 28, 2026, the City of Monterey submitted an application (ALUC File No. REF260015) to ALUC staff requesting a consistency review of an installation of a commercial roof mounted & solar carport canopy grid-tied photovoltaic & battery storage systems, including a Variance requesting zero setback, placing the solar carport canopy at the property line. The commercial roof mount would be installed on the roof
of the existing medical office building at APN 259-181-004-000. The solar carport canopy would be installed along the south property line of APN 259-181-006-000 and would cover existing parking spaces that serve building patrons. The battery energy storage system would be located inside two 8’x20’ shipping containers which would be placed at APN 259-181-006-000 north of the building.

The project site is located at 23 Upper Ragsdale, Monterey, CA 93940, APN: 259-181-006-000 and 259-181-004-000. The City’s General Plan land use designation for the site is Employment, and the zoning designation is I-R-150-D2-ES (Industrial, Administration, and Research District with Development Control and Emergency Shelter overlays).

On June 22, 2026, the ALUC considered the above described project but raised concerns about the potential glare of the solar panels. Accordingly, the hearing was continued and the application was directed to obtain an ocular impact assessment. Staff is now returning with the desired information.

CONSISTENCY DETERMINATION ANALYSIS:

ALUC staff reviewed the City of Monterey’s referral in accordance with the adopted ALUCP for the Monterey Regional Airport, as discussed below.

NOISE COMPATIBILITY

The proposed project was reviewed for consistency with Table 4A and Exhibit 4B of the ALUCP

(Noise Compatibility Criteria and Long-Range Noise Exposure Contours. Per this review, the entirety of the site is located outside of the 65-75 CENL contours and, therefore, is not expected to be exposed to loud airport noise and is considered a compatible use. Based on the above analysis, the proposed project is consistent with the Monterey Regional ALUCP, with regard to noise compatibility criteria, and no further conditions or requirements regarding noise are recommended.

AIRSPACE PROTECTION & HAZARDS TO FLIGHT

ALUCP Policy 4.2.3 addresses the objective of airspace protection to avoid the development of land use conditions that would pose hazards to flight, such as airspace obstructions, wildlife hazards, and land use characteristics that pose other potential hazards to flight by creating visual or electronic interference. The project site is located entirely inside the 14 Code of Federal Regulations (CFR) Part 77 approach, horizontal, conical, and transitional surfaces for Monterey Regional Airport. Within Safety Zone 4, airspace review is required for objects greater than 70 feet. The proposed solar carport canopy and shipping containers would be 17 and 8.5 feet tall, respectively, and would not penetrate 14 CFR Part 77 surfaces as the height of the carport canopy would be approximately half the height of the existing nearby buildings and the shipping container would be approximately one quarter the height. Therefore, it is not anticipated that the proposed project will penetrate the Part 77 airspace surfaces

The solar panels and shipping containers would not include bright lights, sources of dust, smoke, water vapor, or produce any sources of electrical interference or thermal plumes or create any increased attraction for wildlife or birds. However, solar panels are known to create potential glare and have reflective surfaces. Staff communicated this concern to the Applicant/Owner to ensure that the project would be consistent with ALUCP policies regarding hazards to flight and airspace protection.

Here, the proposed solar panels would be tilted at a 10-degree angle to the south (ALUC-9). This angle and direction would ensure that any reflecting glare is not directed at pilots arriving or departing MRY (28L and 28R, east and west flight patterns). Further, the project's materials also reduce glare. Q-Cells Q.TRON XL-G2 series solar modules feature 2mm of thermally pre-stressed glass with antireflective technology. A peer review of discussing the safety of solar panel glare found that Q Cells solar panels have less reflective potential than water and glass (**Exhibit D**). Solar panels are designed to be as
light absorbent (increase transmission) as possible to mitigate potential energy losses, which would come in the form of reflected light.

As requested by the ALUC, the Applicant utilized an FAA approved glare analysis software program (Forge Solar). This program rendered a 2-mile flight path simulation from the threshold of the landing strip to approximately .5 miles passed the
location of the solar array (2 miles total). Analysis for the project was conducted using the GlareGauge model (also known as Solar Glare Hazard Analysis Tool [SGHAT]) developed by Forge Solar and the U.S. Department of Energy's Sandia National Laboratories to evaluate potential glare. Latitude, longitude, and elevation are automatically recorded through the Google interface, providing necessary information for sun position and vector calculations. Additional information regarding the orientation and tilt of the solar energy panels, reflectance, environment, and ocular factors are entered by the user. If glare is found, the tool calculates the retinal irradiance and subtended source angle (size/distance) of

the glare source to predict potential ocular hazards ranging from a temporary afterimage to retinal burn. The results are presented in a plot that specifies when glare will occur throughout the year, with color codes indicating the severity of potential ocular hazard: **green** is low-impact, **yellow** could briefly impair vision, and **red** could cause serious eye damage. In summary, the proposed project is expected to create only green glare, which is the lowest level and not considered harmful.

Glare from solar panels mainly depends on the angle of the sun. Based on year-round simulations, glare from the project would only occur for a short period late in the afternoon between May and July, when sunlight hits the panels at a shallow angle. The panels are designed to absorb most sunlight and are treated with coatings that reduce reflections even further.

Although the software shows about 366 hours of green glare for the year, the panels share the same design and are placed right next to each other, so their glare overlaps. This means the flight path would actually experience about 122 hours of low-impact glare annually. No yellow or red glare was found, meaning there is no risk of temporary or permanent eye damage. Overall, the analysis shows the project does not create unsafe glare conditions and meets ALUCP requirements.

In the immediate surrounding area, Bright Solar has installed two solar projects, located at 21 Lower Ragsdale and 12 Upper Ragsdale, located under the same flight path and both have similar characteristics to the proposed project in terms of systems, fixed tilt and low pitch. The previous projects have a total surface area of 11,320 square-feet and 6,496 square-feet while the proposed project has a total surface area of 6,123 square-feet which will not exceed any system size already established. MRY has not informed staff of any complaints to the Airport or FAA regarding these existing systems.

Therefore, staff recommend the ALUC find that the project does not introduce a hazard to flight, such as glare, and is consistent with ALUCP Policy 4.2.3.4. No further conditions regarding airspace protection are recommended. The proposed project does not conflict with the required airspace protection policies.

SAFETY COMPATIBILITY

The project site is entirely located within Safety Zone 4 (Airport Influence Area) as shown in ALUCP Exhibit 4C (Monterey Regional Airport Safety Zones). Safety Zone 4 is the second most permissible safety zone of the ALUCP. This Safety Zone allows for residential development at 1 dwelling unit per 2 acres, a maximum intensity of 150 persons per acre for non-residential land uses, and all development types, except schools and day care centers, hospitals, buildings with >3 aboveground habitable floors, hazards to flight, and highly noise-sensitive outdoor nonresidential uses. Therefore, the proposed commercial roof-mounted, solar carport canopy, and battery storage system component is project is an allowed use in Safety Zone 4.

The project is non-residential and therefore subject to the 150 person per 2-acre density limitation and 20% open space requirement of Table 4B. With a non-residential intensity limit of 150 people per 2 acres, there shall be no more than 396 people in total (4.48 acres). It is unlikely that an intensity exceeding 150 people per 2 acres would be reached, given the limited size and capacity of the existing

facilities, as no new structures are proposed. The proposed parking lot would be occupied only by vehicles and would not be used as a gathering place. The project would also meet the minimum 20% open land requirement as no new structures are proposed. Therefore, the proposed project does not conflict with the required safety compatibility policies. Safety Zone 4 prohibits hazards to flight. As detailed above, staff believes that the project would not introduce hazards to flight. All exterior lighting is conditioned to be downlit (Condition No. ALUC-6). Lastly, the property owner shall record the Airport Disclosure Notice (Condition No. ALUC-1).

MONTEREY REGIONAL AIRPORT REVIEW:
On June 22, 2026, ALUC staff forwarded project information to Monterey Airport District (District) staff for review. On July 20, 2026, ALUC staff forwarded District staff the requested evaluation of ocular impacts for the proposed system. With this information district staff had no concerns or comments on this application. See **Attachment C**.

CONCLUSION:
Based on review and analysis of the proposed project, staff recommends that the ALUC find the proposed project consistent with the 2019 Airport Land Use Compatibility Plan for Monterey Regional Airport, subject to three conditions of approval.

The following attachments are on file with HCD:

Attachment A - Draft ALUC Resolution including:

- Draft Conditions of Approval
- Project Plans

Attachment B - City of Monterey Consistency Analysis Letter
Attachment C - MRY Comments
Attachment D - Bright Future Solar Energy Report

CC: ALUC Commissioners; ALUC Counsel; Monterey Peninsula Airport District (C. Morello); City of Monterey (Fernanda Roveri); Project Planner (Jack Sorensen); Fionna Jensen, Principal Planner; Agent (Fernanda Roveri); Applicant (Tyler Yager); ALUC File No. REF260015