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May 23, 2012

Chair Viktoriya Wise
City of San Rafael Planning Commission
1400 5th Avenue
San Rafael, CA 94901

Re: Safety of San Rafael Sports Center

Dear Chair Wise and Planning Commissioners:

As the project sponsor and airport owner of 29 years, we would like to respond to the issues of project safety raised in the recent March 9, 2012 letter from Caltrans Division of Aeronautics.

We the airport owner and operator have an obligation to maintain a safe environment not just for our pilots, but also for our non-aviation tenants and surrounding neighbors. This is an obligation that we take extremely seriously (at threat of legal action), and no project is planned at San Rafael Airport without first considering its potential impact on safety. The San Rafael Sports Center is certainly no exception to this rule. Before considering the project, we checked all applicable FAA and Caltrans rules and regulations to make sure it was an acceptable airport use. We found no evidence to the contrary, and in fact discovered that similar recreational facilities were located at other larger airports throughout the state, including Wiseman Airport Park at Petaluma Municipal Airport. We therefore proceeded to locate and design the project in compliance with then existing standards (which is after all the only thing that one can do).

From 2006 to 2011, the City conducted an exhaustive environmental study of the project at a cost to us of over \$600,000. That review included an in-depth safety analysis conducted by Mead & Hunt, one of the state's leading aviation engineers, and co-author of the California Airport Land Use Planning Handbook ("Handbook"). Caltrans Division of Aeronautics on two occasions provided written commentary on the project plans and environmental study, in both cases expressing no reservations over the proposed recreational use. On January 24, 2012, the Planning Commission voted to certify the final project EIR.

Given all of the above, it came as a huge surprise and shock to us to receive Caltrans' March 9, 2012 letter, in which they asked the City to 'consider' new 2011 Handbook guidance which recommends against locating stadiums or group recreational uses within Safety Zones 2, 3, 4, or 5 at Public Use airports. We learned after talking to Caltrans that the Handbook contains no discussion of why the change was made, nor does it contain a definition of the new term 'group recreational use'. Further, no new accident data support the change, nor was

Caltrans able to point to a single historical injury or fatality at the numerous other recreation facilities located in airport safety zones around the state. Despite all this, we have been forced to mount a major response to Caltrans' letter, which after attorney and consultant fees for further studies and attendance at future hearings, will likely cost upwards of another \$30,000.

This project is a badly needed community serving recreation facility. It is being built without public assistance, and simply cannot support these types of exorbitant processing costs. If the City wants to see this project built, we ask its leaders to approve this project without further delay or cost.

Our specific response to the Caltrans letter is summarized below, with detailed discussion on the following pages:

- The Handbook by law applies only to Public Use airports, which typically have hundreds of daily flights including jet aircraft and often commercial passenger service. San Rafael Airport in contrast is a small private use airport with only a handful of daily flights by aircraft typically weighing less than an average SUV. It is not appropriate to apply Public Use airport standards to private use airports like San Rafael Airport.
- Mead & Hunt, the City's aviation safety consultant for the EIR, and *co-author* of the 2002 and 2011 Handbooks, has reviewed the Caltrans letter and determined that the project intensity levels continue to fall below new 2011 Handbook guidelines for Public Use airports, and the project remains acceptable from a risk standpoint (see M&H letter to City).
- Gadske, Dillon, & Balance, aviation law experts and also *co-authors* of the 2002 and 2011 Handbooks, have also reviewed the Caltrans letter and determined that the extensive project safety analysis within the EIR remains valid, and the project does not present any airport-related safety concerns (see GD&B letter to City).
- The San Rafael Sports Center location is neither unique nor unusual. Recreation facilities are commonly located in Safety Zones 2, 3, 4, & 5 at busy, Public Use airports throughout the State and country. We have not found a single example of an aircraft-related fatality at any of these facilities, despite many, many years of use near busy, Public Use airports.
- Ground fatalities from aircraft are incredibly rare. Many years there are zero in the entire United States. By comparison 483 people died on Bay Area highways last year. Marin families commonly must travel out of county to find field space (including to Wiseman Airport Park at Petaluma Municipal Airport!). Our project reduces overall risk exposure to Marin families by keeping them near to home.

Public Use vs. Private Use Airports

The March 9, 2012 Caltrans letter fails to clearly state that the Handbook guidelines by law apply only to Public Use airports, and therefore are not applicable to San Rafael Airport, a small private use airport closed to the general public. Before proceeding it is important to understand why the State Aeronautics Law and the Handbook distinguish between Public Use and private use airports.

Public Use airports by law must be open to the general public, including student pilots and out-of-town visitors. They must comply with minimum standards for runway width and length, in order to accommodate a wide range of aircraft. Most Public Use airports cater to corporate jets, and many also support commercial air passenger service. Daily flights typically number in the hundreds, occur day and night in sunshine, rain, or snow, and numerous flights are by non-based pilots using the airport for the first time.

Contrast this busy picture with San Rafael Airport, one of the smallest and quietest private use airports in the state. On most days the total number of flights at San Rafael Airport can be counted on one hand. Because of our short runway, our typical aircraft is small and weighs less than an average SUV. We have no corporate jets. Most of our pilots fly for recreation and hold only a VFR license, which means they can only fly in good weather. The general public is prohibited, so only our experienced based pilots, who know the area well, use the field. For these reasons, San Rafael Airport has an extremely low risk profile compared to typical Public Use airports.

Experts Concur That Project Remains Safe

The City has received two detailed letters from aviation safety experts testifying that the project is appropriately designed and continues to comply with current FAA and Caltrans safety standards. These experts are eminently qualified to make this determination, as they co-authored both the 2002 and 2011 versions of the California Airport Land Use Planning Handbook. Ken Brodie of Mead & Hunt and Lori Balance of Gadske, Dillon, & Balance are in fact listed by name in the Handbook Acknowledgements (see attached). Mr. Brodie and Ms. Balance engaged in extensive discussions with their Caltrans counterparts regarding the meaning and intent of the March 9, 2012 Caltrans letter. On the basis of those discussions and their own intimate knowledge of the Handbook, they have advised the City in detailed writing that the project remains safe.

Comparable Recreation Facilities Located in Airport Safety Zones 2-5

The location and activities of the San Rafael Sports Center are neither unique nor unusual compared to other airports around the state and country. Many airports have playfields and recreation buildings located in Safety Zones 2, 3, 4, or 5. Petaluma Municipal Airport and Reid Hillview County Airport in San Jose are two good local examples. Both have multiple youth recreation facilities within Safety Zones 2-5, and both are Public Use airports with longer runways, bigger planes, and hugely higher daily flight activity than San Rafael Airport. Santa Monica Municipal Airport and San Diego International Airport are two even greater extremes. Both provide commercial passenger service with over 450 daily flights, and yet have soccer, baseball, and other family recreation facilities located in the middle of Sideline Safety Zone 5. Numerous other examples around the state and country are included as attachments to this letter. We have not found a single example of aircraft related fatalities at any of these recreation facilities.

In viewing the Safety Zone diagrams at other airports, it is important to understand how they are constructed. As shown in Figure 3A of the Handbook, bigger, busier airports have bigger safety zones. For example, Sideline Safety Zone 5 can be 500, 750, or 1000 feet in width, depending on the length of the runway. This reflects the added risk of bigger, faster aircraft using the longer runways. It is inappropriate to compare recreational facilities by comparing their absolute distances from runway centerlines. For example, the soccer fields at San Diego International Airport are 480 feet from centerline, which puts them in the middle of their Safety Zone 5. Our fields are 170-300 feet from centerline, which is the middle of our Safety Zone 5. It would be inaccurate to state that our fields are less safe because they are closer. Both fields are in Safety Zone 5, and when you factor in type and frequency of flight activity, it should be quite clear that our facility has substantially lower risk.

So, when comparing San Rafael Airport to these other airports, please keep in mind that (1) these are all Public Use airports, (2) these all have longer runways and bigger planes, and (3) these all have substantially larger daily flight activity. If recreation facilities at these airports are safe (and there is absolutely no evidence to indicate otherwise), then certainly the San Rafael Sports Center is safe.

Putting Aircraft Risk Into Perspective

Aircraft crashes are rare. To put it in perspective, the average person has a 1 in 88 chance of being injured or killed in an automobile accident, compared to only 1 in 11 million for an airplane crash. And that is for people *in* the airplane. The chances of being struck *on the ground* by an airplane are infinitesimal. You are 6 times more likely to be killed by a lightning than by an airplane strike. Perhaps precisely because airplane crashes are so rare, they receive a lot of publicity. We saw such an example at the project's EIR certification hearing, where we were

shown sensational news footage of an airplane crash at a Michigan soccer field, complete with a sobbing teenage girl. What wasn't explained was that the soccer field was empty, and that neither the teenager nor anyone else on the ground was hurt. How surprising that a project opponent was not forthright about these facts.

Clearly everything in life comes with some level of risk. Walking to school carries risk. Playing sports carries risk. Driving in a car to an out-of-town sports facility carries *significant* risk. Last year alone 483 people died driving on Bay Area highways. Due to our extreme field shortage in Marin County, many of our families must travel long distances on Bay Area highways in order to play sports. The Commission has received hundreds of parent letters attesting to this fact. Steven Sosa, president of San Rafael Youth Soccer League, has testified to the Commission that his league commonly plays games at Wiseman Airport Park, located in safety zone 3 at Petaluma Municipal Airport. What carries more risk? Driving all the way to Petaluma to play at a busy Public Use airport, or staying close to home and playing at quiet San Rafael Airport? We firmly believe the San Rafael Sports Center will actually *reduce* overall community risk by keeping our families off the highways, and by providing them with safe high quality all-weather field surfaces (something that is currently sorely lacking here in Marin).

Final Notes and Conclusions

As mentioned in the opening, this project has been designed from day one to be compliant with all FAA and Caltrans safety standards. In particular the heights of the buildings, lights, and fences were kept beneath the ascending clear zones outlined by FAA Part 77. The project EIR, and Caltrans March 9, 2012 letter, indicate that the parking lot fence and 1st row of cars may intrude by a few inches into the 7:1 ascending clear zones. We believe this is incorrect, but in any case any such minor discrepancies will be corrected in the final building plans, and verified by the FAA when we file our required Notice of Proposed Construction. We do not believe that any significant project modifications will be required. As regards the 1st row of parking, the Caltrans letter states that vehicle heights must remain below Part 77 ascending clear zones. To address this, parking spaces along the fence will be striped and limited to compact cars. Attached is a revised project cross section that demonstrates that both compact cars and mini-vans will comfortably fit beneath the FAA 7:1 ascending clear zones.

In summary, based on all of the facts discussed herein, not least of which is our 30 years of experience and knowledge owning and operating San Rafael Airport, we remain very confident that the San Rafael Sports Center represents a beneficial and safe co-use. My daughter was 3 years old when we began this project back in 2004. She is 11 now and her 7 year old brother has since joined us. Both love soccer and other sports, and will be major users of this new facility. We are a family company with strong local Marin roots and a reputation for building high quality

projects. You can be assured that we would not build a facility that would endanger our children, our neighbors, or other Marin families.

After 8 years and over \$600,000 of exhaustive and thorough environmental analysis, it is time to approve this project. This is a public service project. We are not Target or George Lucas with unlimited time and funds to continue this paralysis by analysis (as we saw recently with Grady Ranch, even Lucas has his limits). You know how important this project is to Marin families. They have told you so in thousands of heartfelt emails and letters. This project has been studied nearly to death. I beg you to approve it now so that we might build it while my children are still young enough to use it.

Best regards,

A handwritten signature in black ink, appearing to read "Bob Herbst".

Bob Herbst-Manager
San Rafael Airport

cc Mayor Phillips and City Council

Attachments 2011 Handbook Acknowledgements
Airport Safety Zone Diagrams & Aerial Photos
Parking Lot Cross Section

Petaluma Airport - 146 Daily Flights

Rooster Run Golf Course

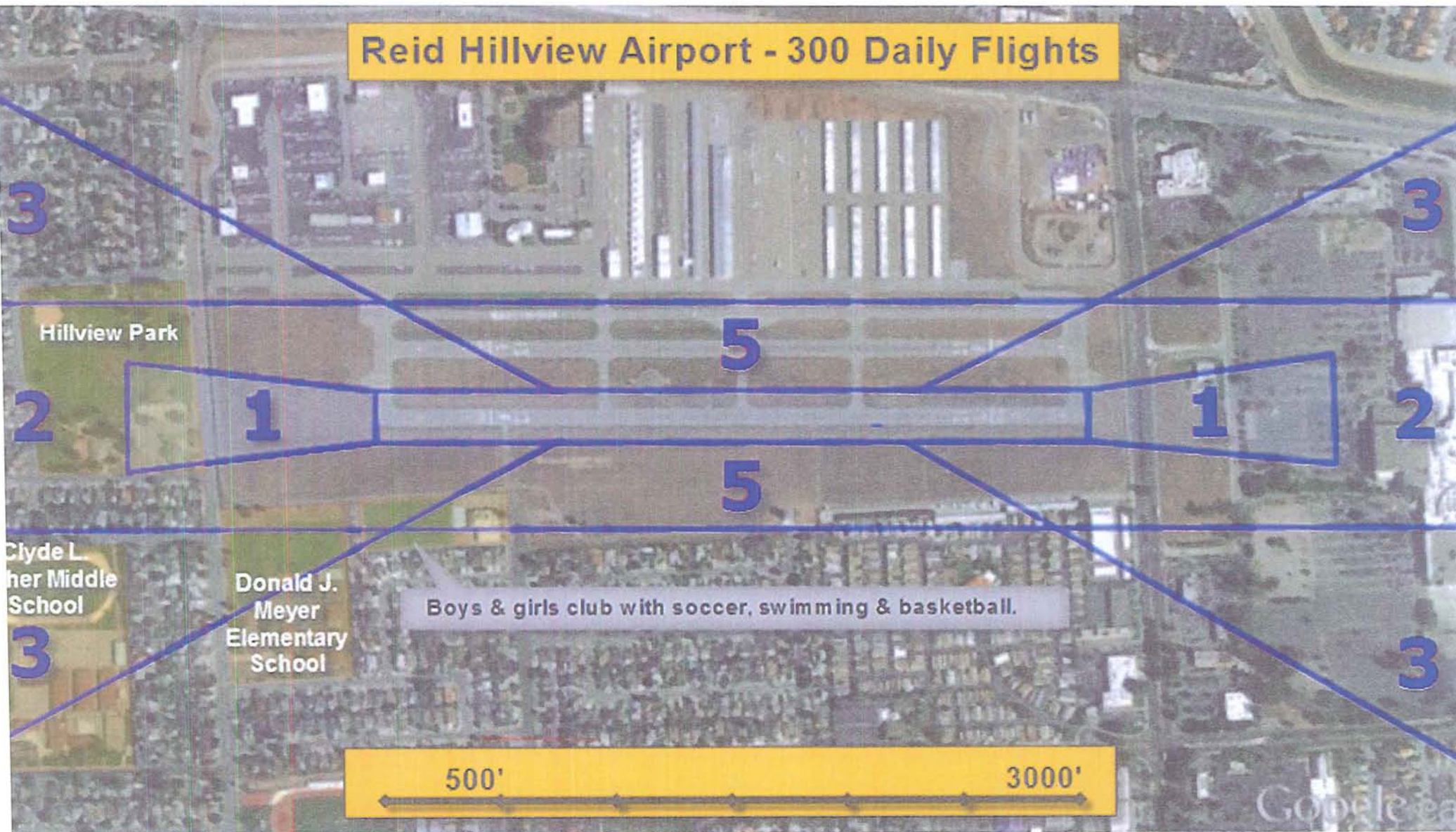
Baseball
Diamonds

Wiseman Youth
Soccer Park



Google earth

Reid Hillview Airport - 300 Daily Flights



Santa Monica Airport - 452 Daily Flights

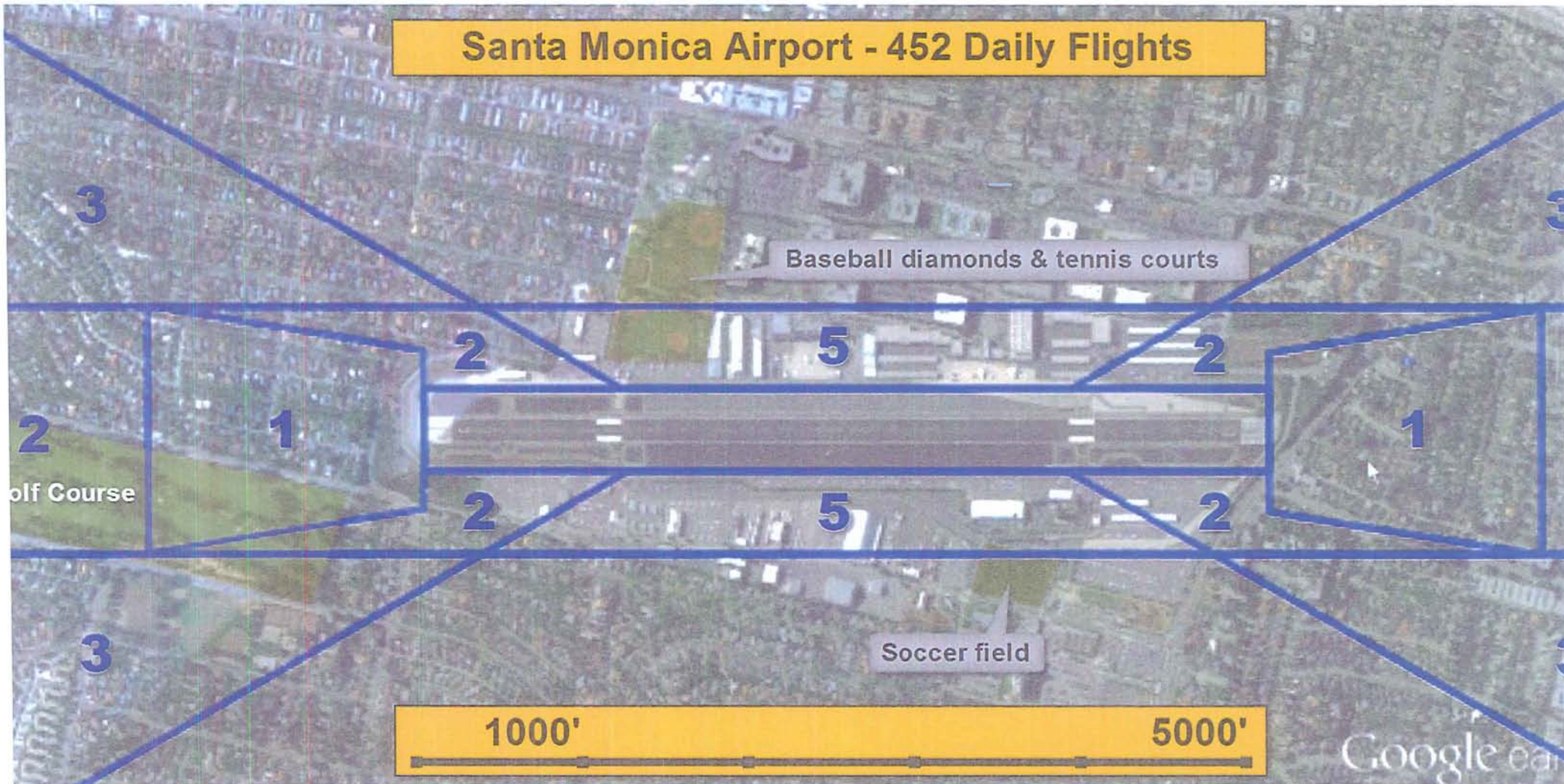
Baseball diamonds & tennis courts

Soccer field

1000'

5000'

Google earth



San Diego International Airport - 556 Daily Flights

Recreational area with
volleyball, basketball, tennis,
playground and harbor

Baseball diamonds,
soccer/football
fields

3

5

1

3

5

500'

5500'

Google earth

Sacramento Executive Airport - 248 Daily Flights

Soccer, volleyball, swimming,
basketball and playground

Golf
Course &
Driving
Range

1000'

5000'

Google earth

Concord Buchannan Field - 257 Daily Flights

3

5

2

2

Golf Course
and
Driving
Range

1

2

5

2

3

500'

3500'

Google ear

Livermore Municipal Airport - 340 Daily Flights

Golf Course

4000'

500'

3

1

2

5

2

2

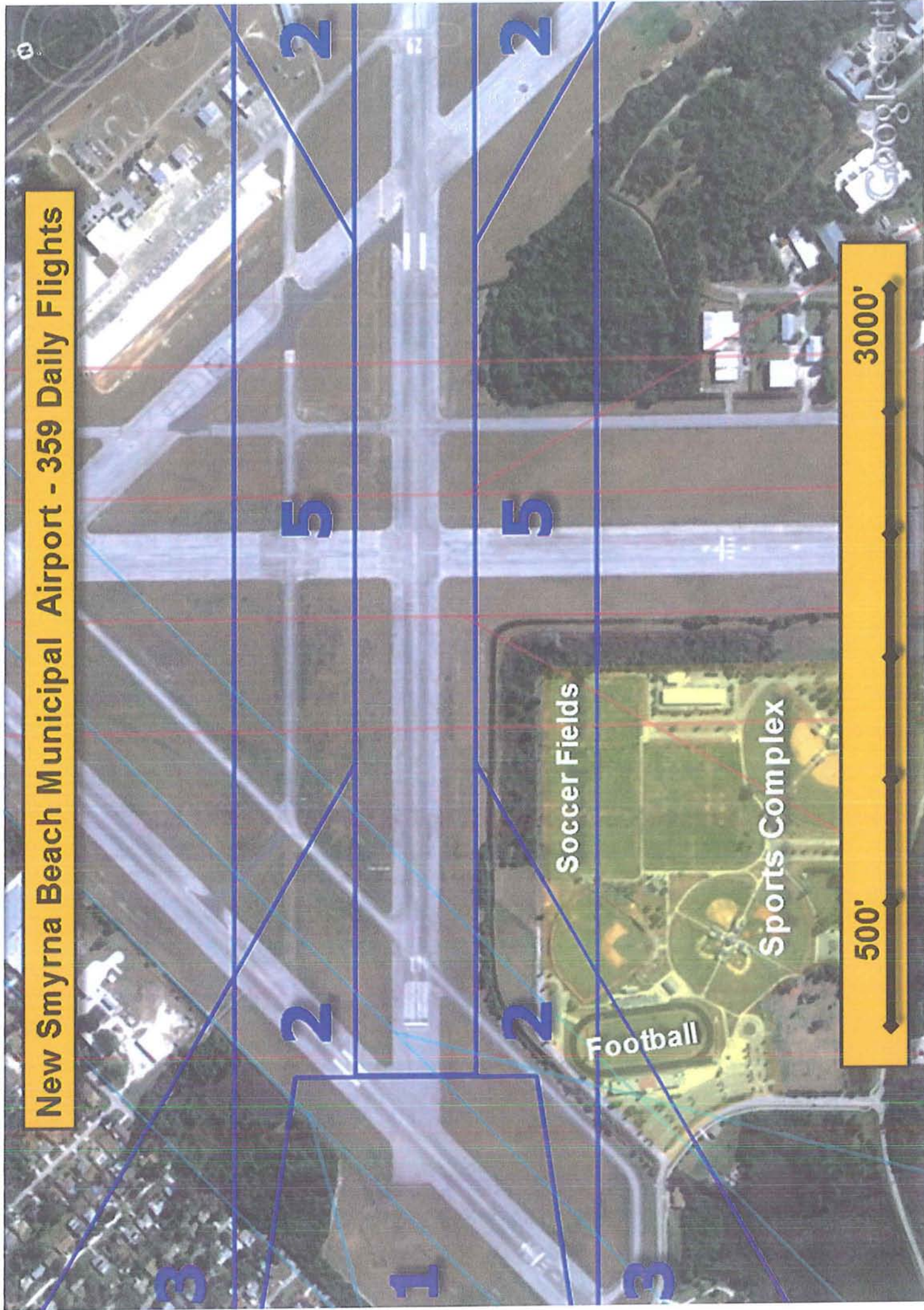
5

2

3

Google

New Smyrna Beach Municipal Airport - 359 Daily Flights



Brookhaven Airport - 165 Daily Flights

Baseball & soccer

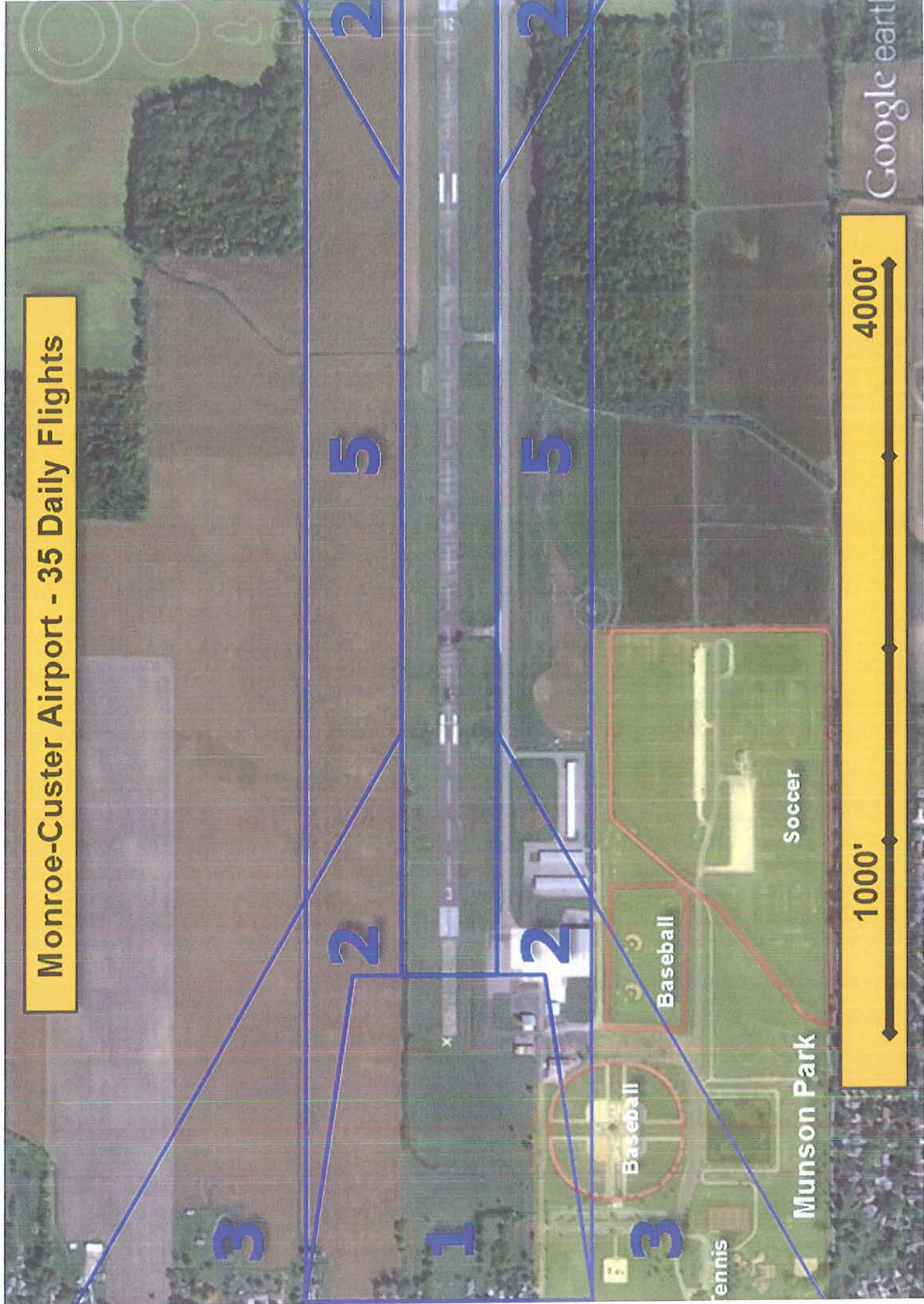
Baseball diamonds

1000'

4000'

Google earth

Monroe-Custer Airport - 35 Daily Flights



Sikeston Memorial Municipal Airport - 17 Daily Flights

Sports Complex

Soccer Fields

Golf Course

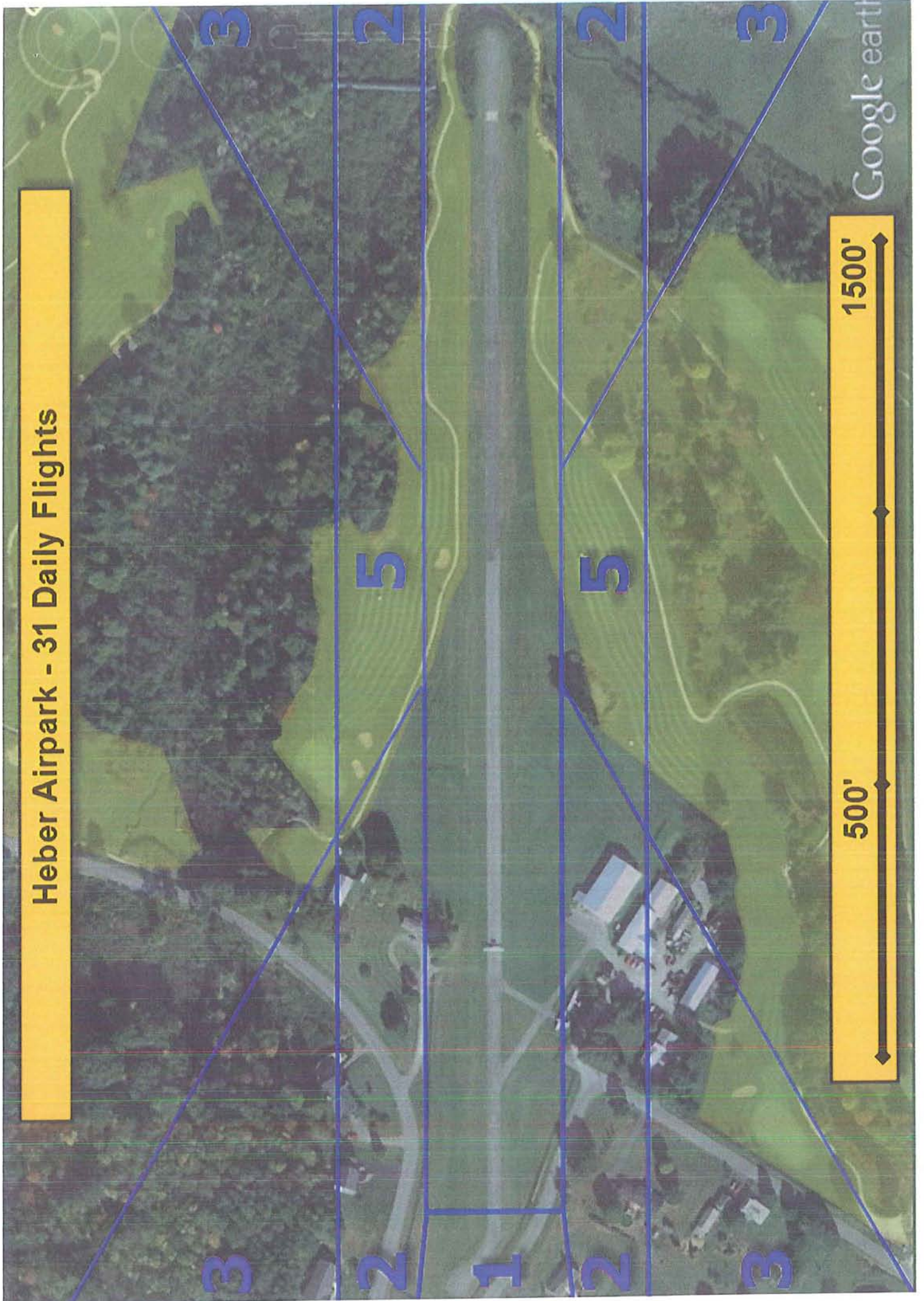
Golf Course

500'

3500'

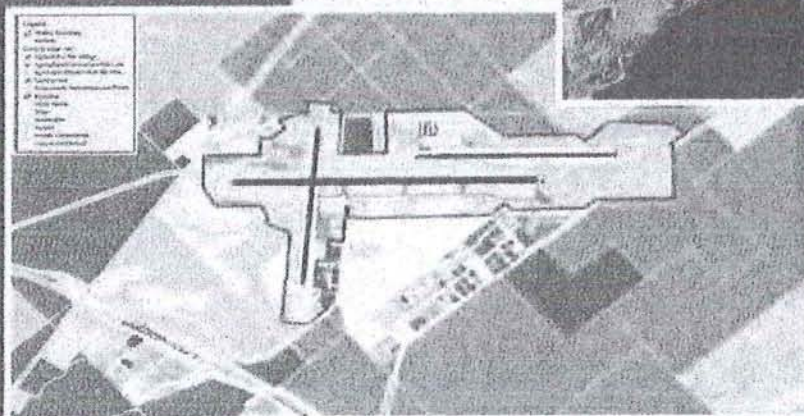
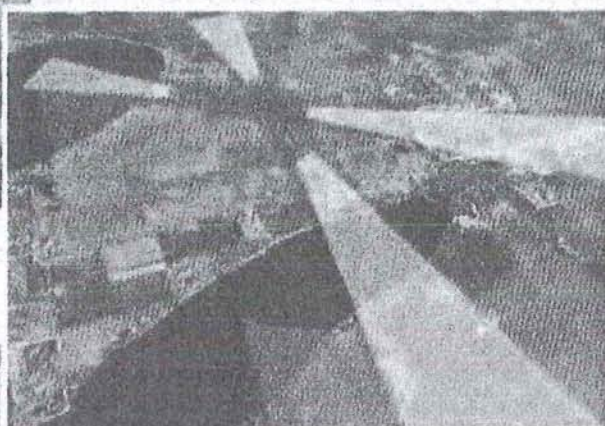
Google earth

Heber Airpark - 31 Daily Flights





California Airport Land Use Planning Handbook



State of California
Department of Transportation

Division of Aeronautics



October 2011

Acknowledgements

CALIFORNIA DEPARTMENT OF TRANSPORTATION

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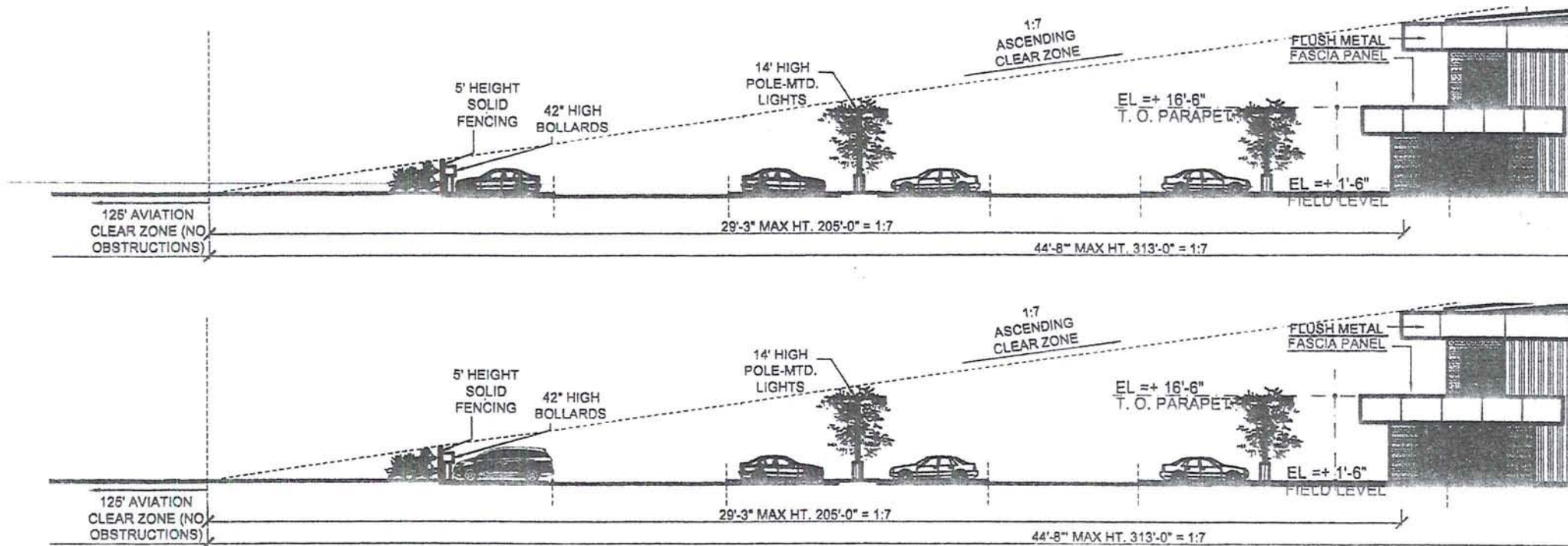
HMMH

Diana B. Wasiuk

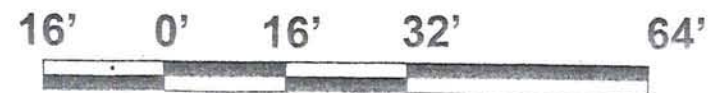


Gatzke Dillon & Balance

Lori Balance



**COMPARISON OF COMPACT SEDAN TO MINI VAN
CLEARANCE AT PARKING ROW CLOSEST TO RUNWAY**



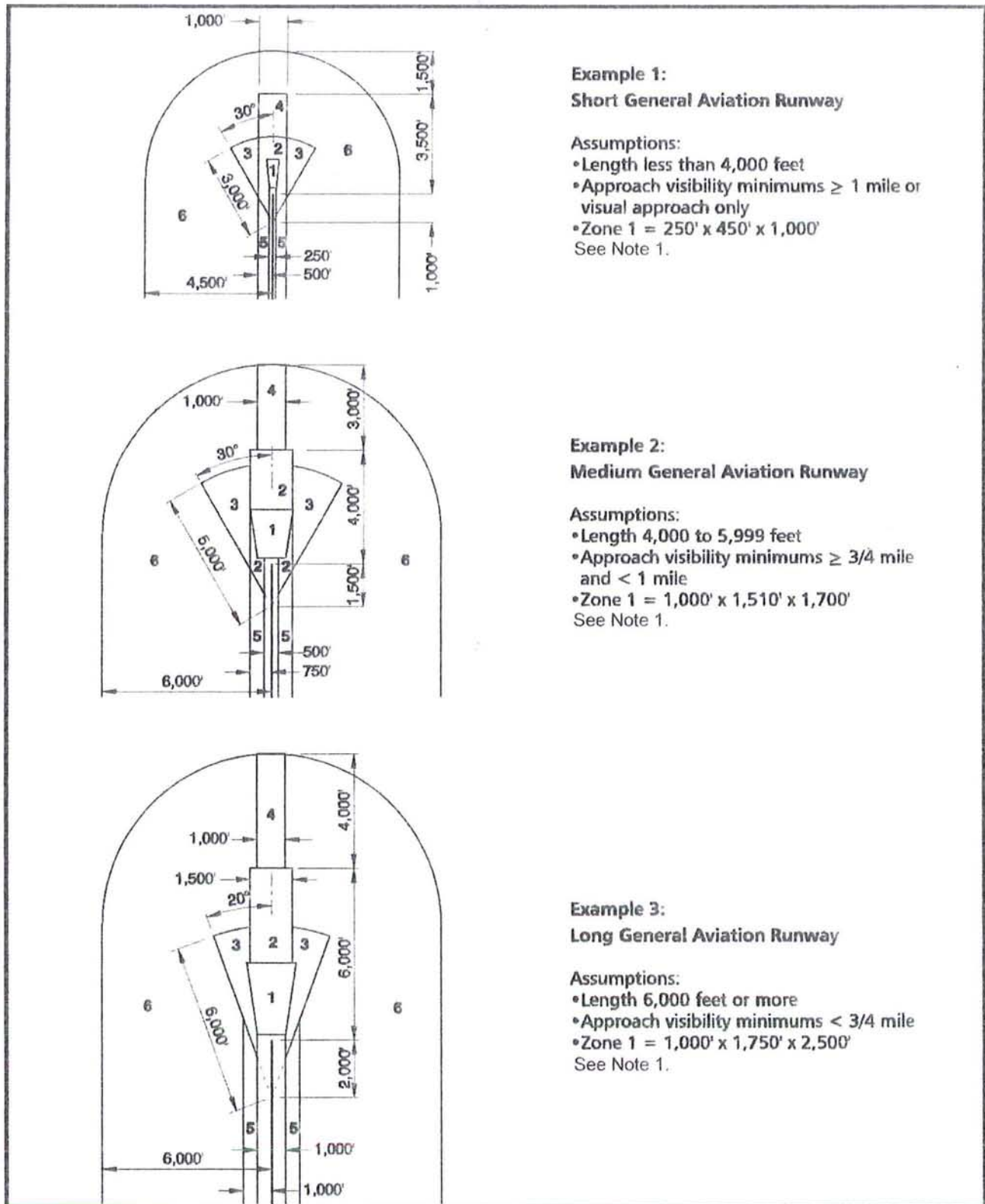
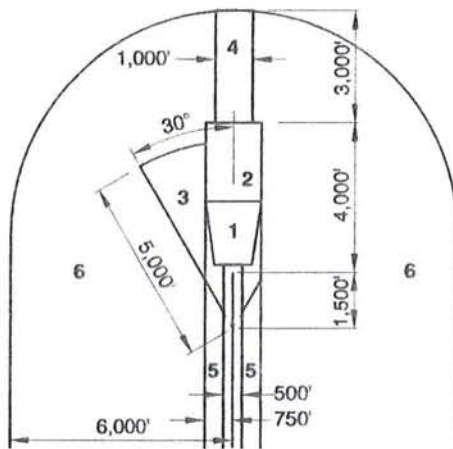


FIGURE 3A

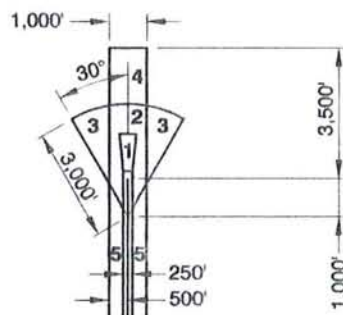
Safety Compatibility Zone Examples – General Aviation Runways



Example 4:
General Aviation Runway with
Single-Sided Traffic Pattern

Assumptions:

- No traffic pattern on right
 - Length 4,000 to 5,999 feet
 - Approach visibility minimums $\geq 3/4$ mile and < 1 mile
 - Zone 1 = 1,000' x 1,510' x 1,700'
- See Note 1.



Example 5:
Low-Activity General Aviation Runway

Assumptions:

- Less than 2,000 takeoffs and landings per year at individual runway end.
 - Length less than 4,000 feet
 - Approach visibility minimums ≥ 1 mile or visual approach only
 - Zone 1 = 250' x 450' x 1,000'
- See Note 1.

Legend

1. Runway Protection Zone
2. Inner Approach/Departure Zone
3. Inner Turning Zone
4. Outer Approach/Departure Zone
5. Sideline Zone
6. Traffic Pattern Zone

Notes:

1. RPZ (Zone 1) size in each example is as indicated by FAA criteria for the approach type assumed. Adjustment may be necessary if the Approach type differs.
2. See Figure 3A for factors to consider regarding other possible adjustments to these zones to reflect characteristics of a specific airport runway.
3. See Figures 4B through 4G for guidance on compatibility criteria applicable with each zone.

These examples are intended to provide general guidance for establishment of airport safety compatibility zones. They do not represent California Department of Transportation standards or policy.

FIGURE 3A CONTINUED