

May 19, 2006

TO: City Manager  
FROM: Airport Director  
SUBJECT: Taxiway Edge Reflectors

#### Rationale and comparison regarding taxiway – lane reflector purchase

During past years Cal Dot and FAA have inspected the Airport and had concerns regarding that the taxiway edge lights are inoperative. Regulations for an airport with operable runway lights indicate that the main taxiways should be lighted as well. Given the old military utilities-units we inherited, the anticipated high cost, unknown result and complexity of repair efforts (given the negative military history of runway light repair efforts) both FAA and Cal Dot representatives have been very flexible and agreed that placement of taxiway reflectors would be a viable and cost effective way to address the regulatory needs, their concerns, replace the function of the taxiway lights and enhance safety for 24 hour operations at the Airport at this time.

Airport users and tenants have complained about the low visibility and difficulty of navigating on the airport taxiways at night. After conducting tests during the hours of darkness during May 2006 and operating out some other airports during periods of low visibility during the same time frame staff found a product, which will work well in the unique environment at Marina Municipal Airport. Two items make night time operations at Marina more of a challenge than other airports in this area; the extreme low visibility given lack of surrounding lighting and the large distances in the width of taxiways.

In the civilian world the taxiways at Marina should be 35 feet wide. The current environment has a range of distances where the taxiways are 70 to 233 feet wide, (from inoperative light to inoperative light).

In short order three vendors were found which offered somewhat similar products. They are Valley Illuminators, Ventures and Flightlight Inc. The prices are all similar. The Valley product has the largest reflective area of the lot are easily maintained and hold up well. The other two products have one half to two quarters less reflective area. During night flights to airports in California staff has found that the Valley product is the most visible of the group.

Based on discussions with other seasoned airport managers the Valley product seems to have a very good reputation. They are simple in construction and placement. They include large areas of reflective materials, are fastened together with screws and bolts (no glues), and are capable of being repaired if not hit directly by an aircraft. They seem to last a long time and do not require much maintenance. From a purchase standpoint they cost a few cents more, although given the long useful life span of these units they will be far more cost effective.

I recommend the purchase of 100 of these reflectors for our airport.