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Crosswind Runways: Is This Strip Necessary?

- Before you agree to a proposed secondary crosswind runway, think about the economic impact on the airport in terms of land that could be used for revenue producing purposes.
- Master planning tends to conceptualize crosswind runways in terms of projected operational demand, but does not generally consider the issue in the context of the economic Highest and Best Use of the land.
- Crosswind runways sometimes address wind conditions that occur infrequently, and their cost benefit can be questionable.
- Land displaced by secondary runways often represent potential airside developmental possibilities, or commercial/industrial sites which could be leased or sold to augment airport revenues.
- Even if a secondary runway actually costs you only a portion of its expense, the added maintenance and operational costs once it is in place will have to come out of airport operating income.

No one likes to land in a hairy crosswind, but airport operators and owners should be aware that developing crosswind runways carries with it a price. The dedication of airport land for support of an additional runway system could eliminate revenue producing possibilities for the future. This is particularly critical on airports which derive their revenues from general aviation activities, and where runway systems do not produce direct operating income at the facility.

All airports which participate in the AIP Program have Master Plans which address a number of technical and operational considerations at an airport. A number of Master Plans I have inspected exhibit future crosswind runway development as a potential land use for the airport. The consideration which cause master planners to consider crosswind runways are largely operational: i.e. developed on the perceived need for a runway surface to accommodate wind conditions which, for the most part, occur on an airport less frequently than those applicable to the main runway.

Before acreage is committed to actual construction, it is useful to consider the economic impact of land use for crosswind runways on the existing and potential revenue stream at the airport. This involves analyzing land in the context which allows for the possibility that it may be dedicated for a variety of airside and non airside revenue producing purposes.



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Any analysis is, of course, predicated on the location of the airport, market demand and other external forces which effect land use not only on the airport, but in the surrounding community. This also may involve the consideration of airport land applications which may be not currently in place at the facility, but could be implemented at some point in the future.

Crosswind runways sometimes address operational wind conditions at the facility which can be shown to exist at less than 10% of the time during a given year. Additionally, most crosswind runways proposed for general aviation airports are shorter than the main runway, and the length of these runways compared to the larger surface often will cause larger aircraft to accept some degree of crosswind component rather than undertake the perceived risks of operating on a shorter runway.

As any airport operator can tell you, the amount of land on any given facility dedicated to runway and taxiway support is relatively high. Any displacement of this land must carefully consider whether or not any and all revenue producing potential for the airport and the land has been considered. This may involve the allowance for the future airside development of hangars, or any other traditional airside improvements.

Oftentimes, land can also be used for non airside development such as industrial parks, commercial sites for stores and restaurants and other non aviation developmental activities. These sites can often be successfully leased long-term, or sold outright under the right circumstances.

With the general aviation market in its current condition, small to medium size airports must creatively plan to utilize their land inventory in the most efficient and profitable method possible. This may involve considering land uses which may seem somewhat futuristic in the context of the airports existing condition and configuration. Nonetheless, the land inventory on any airport is a major asset and its use must consider and balance all the economic and operational factors which are relevant.

Even if the expense of a secondary runway system is largely underwritten by AIP money, the cost of operation and maintenance will be borne by the airport operator out of the overall revenue stream which is generated at the airport. This can prove burdensome for smaller facilities who are barely making it. The overall revenues which can be produced by general aviation aircraft is likely to remain static at best. Airport operators need to think ahead and recognize that the capacity to financially survive in the future may involve forgoing developmental options which, while nice to have, may not lend proportional capability and value to the airport facility.