

Airport Commission Response to “Just The Facts” ad in the Cape Cod Chronicle, June 24, 2021

A group of Citizens who are opposed to the proposals being made in the Airport Master Plan Update by the Chatham Airport Commission placed an ad in the Cape Cod Chronicle (June 24, 2021), citing “facts” and proposing a different “solution” from what has been cited as “Alternative 4” in the Environmental Assessment conducted by Airport Commission aviation consultant, Gale Associates. In the Airport Commission meeting of July 14, 2021, chairman Huntley Harrison made a statement deploring the misinformation that was being spread through the Town through this ad and many other communications, and this has led to a request for a clear explanation and rebuttal of the “facts” presented in the ad. This has been addressed below.

It should be noted that many of these “facts” have been previously explained and rebutted in information that is posted on the Airport Commission’s web pages; however, for the sake of clarity and transparency, a response has been made to each of the statements in the ad.

It should be emphasized that the Commission is committed to preserving and protecting the Chatham Airport for future generations, with safety for the whole community as its top priority.

The complete text of this rebuttal will also be posted on the Airport Commission web pages, under “Responses and Correspondence” at <https://www.chatham-ma.gov/631/Airport-Master-Plan-Update-AMPU-February>

The ad makes the following statements, the Airport Commission’s responses are in blue italics:

“The Airport's Current Approach”

“Visual Conditions only”

Chatham does not have “Visual Conditions only” landings. Chatham has supported landing in “instrument” conditions for over 50 years. The current NDB circling and RNAV circling approaches support landing with poor visibility of 1 mile to 2 miles depending on the category of aircraft. The new approaches would be defined by the FAA but based on a comparison with similar approaches at Hyannis will also support landing in visibility of 1 to 2 miles. Aircraft will be vertically guided over the top of Great Hill at the same altitude as they currently fly in both good and bad weather.

Pilots have been landing with low visibility for over 50 years. However, the safety advantage with the new approaches is 8x the current approaches. This is supported by crash data and studies done by the International Civil Aviation Organization (ICAO). The studies are referenced in presentations posted on the Airport Commission website (see “Safety of Straight-in Approaches” at <https://www.chatham-ma.gov/631/Airport-Master-Plan-Update-AMPU-February>).

“Pilots go to Hyannis in poor visibility”

As noted above, pilots can currently land in Chatham with poor visibility of only 1 to 2 miles depending on aircraft category. It is true that Hyannis will support safe landings as low as 0.5 miles of visibility, but even Hyannis is prone to frequent conditions of fog, with less than 0.5 miles of visibility. So there is no guarantee that pilots are able to land in Hyannis, and as a result many if not most pilots will defer their trips and wait for better weather.

“PROPOSED INSTRUMENT APPROACHES”

“Would benefit jet charters”

There are no jet charters that operate into Chatham. The new approaches do not change in the slightest way the basic parameters that dictate whether an aircraft can land at Chatham. A fair and true statement would be, “Would benefit all aircraft that are capable of landing at Chatham under conditions of poor visibility. Also, benefit members of the community by greatly increasing safety”.

“Would encourage increased traffic”

How would this happen?... The new approaches proposed by the Airport Commission would allow aircraft to land under instrument conditions that are less favorable than what is possible with the existing, obsolete approaches. Understanding the implications on traffic with any approach at an airport is complex. In summary, the below text explains in detail why any increase in traffic due to new approaches would be very small, and well under 10%. Readers who don’t wish to know the details can skip to the next ad statement, beginning with “Would Allow 2500 ...”

First, it is useful to understand that the differences in airport “approachability” between the old and the new approaches is quite small. With the current approaches, the cloud ceiling cannot be lower than 600 feet. With the new approaches, we do not know what the FAA will approve, but by looking at similar airports in our region, we can surmise that they might allow safe landings with the cloud deck as low as 300 or 400 feet. The only difference between the old and new approaches would be when the ceiling is between 300 and 600 feet.

In order to estimate the traffic implications of the improved approaches it is necessary to know how often the ceiling is between 300 and 600 feet. If this condition was very common, which it is not, then the new approaches would allow many more landings. Conversely, if that condition never occurred, then of course there would be no difference at all in the amount of traffic.

Fortunately, NOAA maintains data from the automated weather reporting system (ASOS) at CQX. Hourly cloud conditions are reported 24 hours a day, 365 days a year. Out of the 8760 hourly reports for the year 2019, there were 649 reports with clouds at 300, 400, or 500 feet. This represents 7.4% of the time. If there were no other factors involved, and all aircraft and pilots landing at Chatham were instrument rated and current, and landings were evenly distributed over a 24-hour period, then one could reasonably

estimate that the improvement in approaches would result in an increase of 7.4% in traffic.

However, there are many factors which reduce that 7.4% figure.

First, even though roughly half (50%) of licensed pilots are instrument rated, only an estimated 15% of these are “current” and allowed to land in instrument conditions (Flying Magazine November 2006: “Getting an Instrument Rating” Richard L. Collins). For the sake of being conservative (more flights) let us double that number and say that 30% of instrument rated pilots are current. Thus 30% of 50%, or 15% of pilots can use instrument approaches. This means that the difference in approaches only applies to 15% of the pilot population. This leads one to conclude that the increase in traffic would be 15% of 7.4%, or 1.1%.

Other factors lead one to believe that the increase would be even less. Many pilots, even if they are instrument rated and current, will defer a trip to Chatham if the weather conditions are marginal, so the difference in approaches will have no effect on them. Visibility conditions at night are generally worse than during the day, and the overwhelming majority of operations at Chatham are conducted during the day, which also makes the increase lower.

For pilots returning to a home base in Chatham, the difference in approaches will have no impact on the total number of operations. This is because, after diverting to Hyannis, the pilot must come back at some point to retrieve his aircraft and bring it home. So the difference in approaches just represents a shift in when the landing occurs, rather than an increase in traffic.

Finally, we must consider the charter aircraft as a special category. These aircraft are piloted by 2 instrument rated pilots, so 100% of their operations could be affected 7.4% of the time. Since it is reasonable to believe that some charter clients prefer to defer their trip rather than take the chance of diverting to Hyannis. (Note: Hyannis is frequently closed at night due to fog. If weather is IFR, then there is always a chance one might have to go farther than Hyannis to land. The actual increase in Charter landings is likely to be less than 7.4%.

According to airport records, the number of Charter landings per year has averaged 218 over the past 5 years. Even if we use a conservative 10% increase figure, and we apply this to only a 4-month period (June-Sept), that represents 22 additional operations over 4 months, or an increase of only 1.3 landings per week.

“Would allow 2500 annually scheduled passengers”

This statement implies that the proposed instrument approaches would change the number of scheduled passengers flying into Chatham Airport. The current number of

annual scheduled passengers is zero, and there is nothing in the AMPU that would change that. There are no plans to provide scheduled service to Chatham.

“Would permit straight-in, which is potentially dangerous without a control tower.”

There are thousands of airports which do not have a control tower but have GPS straight-in approaches. These improved approaches were implemented to reduce, not increase, the danger inherent in landing under conditions of reduced visibility. New technology and training have allowed aviation safety to increase steadily in part due to these improvements at airports. Studies conducted by the International Civil Aviation Organization (ICAO) have shown that the incidence of accidents for the proposed approaches is less than 1/8 that for the obsolete Circling Approaches currently in use at Chatham. Articles referring to these studies have been posted on the Airport Commission website for well over a year. Further, FAA Flight Procedures is responsible for implementing approaches, not the Airport Commission or the Town of Chatham. If such approaches are determined to be dangerous, particularly where CQX does not have a control tower, FAA would not publish a straight-in approach at the Airport.

“NEW APPROACHES REDUCE PEOPLE’S SAFETY”

How do they reduce safety? What data supports this statement? This headline contradicts strong evidence to the contrary as noted above.

“Runway Protection Zones (RPZs) are areas at ends of runway, that the FAA states are hazardous and should be empty of residences, roads etc.”

This statement is true but it is taken out of context. Many, if not most, airports have RPZ’s which do not completely fulfill the FAA ideal standard. The Hyannis Airport is a very close example where a state highway and a shopping center are located inside an RPZ. The Airport Commission proposals make no changes to the RPZs which have been in place for many years. During the Master Plan Process, the RPZ was identified as having non-compatible uses within its limits, in accordance with FAA’s Interim Guidance on Land Uses within a Runway Protection Zone. The Airport Commission is currently working with the Planning Board to protect the RPZ from future land development that is incompatible with FAA recommended land uses within the RPZs.

“RPZs are to protect people and property from planes that either land short or overshoot the runway.”

This statement is true. The definition of an RPZ, as defined in FAA AC 150/5300-13a is “Runway Protection Zone (RPZ) - An area at ground level prior to the threshold or beyond the runway end to enhance the safety and protection of people and property on the ground.”

“10 homes, shops, offices and route 28 in West Chatham are already in RPZ hazard zones.”

This statement is also true, but the word “already” implies that the Airport Commission proposals would add to the number of homes, etc. in the RPZs. There is no change to the RPZs with the Commission proposals. In fact, the Commission is working with the Planning Board to restrict further development within the RPZ’s in accordance with FAA guidelines.

“NEW APPROACHES REQUIRE ‘AVIGATION EASEMENTS’”

Not necessarily. The new approaches require that certain obstacles be cleared or reduced in height. This can be achieved by a variety of means, only one of which is the acquisition of Avigation Easements.

“The Town and property owners would be faced with enormous legal costs.”

What data supports this statement? FAA and State grants will cover 95% of easement acquisition costs including legal expenses. Property owners would receive fair compensation for any loss in value due to the easement, in accordance with FAA AC 150/5100-17 - Land Acquisition and Relocation Assistance for Airport Improvement Program Assisted Projects. Current estimates indicate that Airport funds could be used to fund the 5% local share of costs, and that there may be no local taxpayer funding required.

“A local real estate developer and pilot described an Avigation Easement as ‘The kiss of death to a property’s value’”

The statement is an expression of one person’s opinion. The Airport Commission, working with its consultant Gale Associates, will present substantial evidence showing that the granting of Avigation Easements is fairly compensated.

“EXAMPLE OF FAA EASEMENT DEED”

The “example” includes FAA “boilerplate” language and is not required in all easements. The language is modified for each case.

“Would give the Airport a perpetual right of access to the property, and the right to remove any tree or structure existing or in the future.”

The right of access would only be for the removal of any obstruction above a specified limiting height. Trees, landscaping, or structures which are below the limiting height would not be affected by the easement. In most cases, the easements proposed in Chatham would only require the removal of one or two trees from a property.

“Allow all types of aircraft to fly at any height and cause noise, vibrations, fumes, deposits of dust, fuel particles (/lead), fear, interference with sleep or communication, and any other effects.”

The quote from the FAA template is partially correct but is taken out of context. Today, without aviation easements, landing and departing aircraft can fly at any height that is consistent with safe operation or landing of the aircraft. An aviation easement does not change this or give any extra rights to aircraft. The same types of aircraft that can safely operate at Chatham Airport today will still be able to do so. The aviation easement does not change in any way the types of aircraft that can operate at Chatham. The granting of an aviation easement does not cause flight paths to be closer to any given property. The language “and cause noise And any other effects” just formalizes the existing rights of aircraft to cause noise and other effects. The easement also includes language which allows for recourse if the easement is “overburdened” by a substantial change or accident at the airport.

“Includes all Aircraft existing now or in the future, jet, propeller, civil, military, or commercial helicopters, regardless of noise levels, by whoever owned or operated.”

This language in an easement is redundant with the grant assurances already made by the Town of Chatham that allow all types of aircraft to operate at Chatham, consistent with their own operational limitations.

“SERIOUS ENVIRONMENTAL IMPACTS”

The purpose of the Environmental Assessment is indeed to ascertain whether there are serious environmental impacts and/or what mitigation measures need to be adopted to minimize any environmental impact

“Would remove ~20 acres of trees on private property, along runway and in wetland/vernal pool.”

Most of the required clearing is on airport property and a single property just to the northeast of the airport. Detailed estimates for actual tree clearing can only be given once individual properties are surveyed, with most properties needing one or two trees to be topped or removed. Finally, there is no clearing required or proposed in any vernal pool.

“‘DISPLACING THRESHOLDS’ is the Solution”

Per FAA AC 150/5300-13a “Displacement of the threshold often introduces disruptions to an otherwise orderly airport design. Approach light systems and NAVAIDs used for landing need to be moved. Taxiways that remain in the new approach area (prior to the threshold) can create situations where taxiing aircraft penetrate the approach surface or the Precision Obstacle Free Zone (POFZ) (see paragraph 308.d), and may be considered end-around taxiways (see paragraph 102.hh). Holdlines (see paragraph 315) may also need to be moved to keep aircraft clear of these areas and runway capacity may be affected. While threshold displacement is often used to as a solution for constrained airspace, airport designers need to carefully weigh the trade-offs of a displaced threshold. Displacing a threshold may also create a situation where the holdline must be placed on the parallel taxiway. This is undesirable as pilots do not normally expect to encounter a holdline on the parallel taxiway.

This guidance should not be interpreted as an FAA endorsement of the option to displace a runway threshold. Threshold displacement should be undertaken only after a full evaluation reveals that displacement is the best alternative. These standards minimize the loss of operational use of the established runway and reflect the FAA policy of maximum utilization and retention of existing paved areas on airports.”

“Aircraft normally land at the ends of the runway, called thresholds, but the FAA allows these thresholds to be displaced along the runway.”

See previous comment.

“Jet charters would use Hyannis Airport, but recreational flyers would not be affected.”

The Airport Commission has no authority to change the types of aircraft that utilize Chatham Airport. Approaches to an airport are not the determining factors in deciding which types of aircraft can operate at CQX. Runway length is the primary determining factor, and this is not changing.

Stating that recreational flyers would not be affected is conjecture. All pilots are affected by displacing the thresholds, which is an effective shortening of the runway. A shorter runway is ALWAYS less safe than a longer runway due to the higher risk of overrunning the end of the runway. This is a well-established fact and to suggest that a shorter runway is safer is highly misleading.

“There would be less traffic, less hazard and less

noise, no-cost and the character of Chatham would be preserved for future generations.”

The statement that there would be less traffic is true. Less traffic would reduce the long-term viability of the airport for the entire community.

The statement that there would be less hazard is incorrect, as explained in the above paragraphs.

The statement that there would be less noise is true. All other things being equal, less traffic equates to less noise.

The statement that there would be no cost is incorrect. Potential violations of grant assurances would almost certainly result in legal jeopardy for the Town of Chatham and very costly litigation with the FAA and MassDOT. Conflict with MassDOT could result in termination of grants for not only the airport but also state roadway maintenance and other infrastructure projects.

The statement that the character of Chatham would be preserved for future generations by shortening the runway is conjecture. What is the connection between these two disparate items? For many years, the unique character of Chatham has included a small airport with a great diversity in the types and uses for that airport. Limiting Chatham to be used only by small recreational aircraft would not be consistent with its heritage as a diverse, multi-use facility.

Change is Coming

A true statement.

“It makes NO sense to spend millions of dollars and destroy habitat when aeronautical technology is about to undergo such dramatic changes with electric propulsion and vertical take-off planes and drones”

To begin with, the Commission proposals for new approaches will not call for spending millions of dollars. The estimated cost to taxpayers in Chatham could actually be zero because it is anticipated that hangar rental fees will cover the 5% local share of expenses for implementing the GPS approaches.

It is true that aeronautical technology is changing. The Airport Commission proposals will enable Chatham to take advantage of new technology making the airport even safer than it is today. The advent of electric propulsion also promises to make the future Chatham Airport environment quieter than it is today.