

Under Control

Over the past 30 years or so, contract towers have proven to be an integral and necessary part of the National Airspace System providing general, business and military aviation with an added layer of safety, and doing so in a very cost-effective way, reports **Mark Boguski**



“Cessna 62425 extend your downwind for spacing, you are number three following a Bonanza on the right downwind and a Falcon jet on a two mile final.”

“Archer 4766F, Line up and wait Runway 22.”

“Cessna 972NC, enter a right downwind for Runway 18.”

“Learjet 58H, right on Runway 22, right on Alpha, taxi to parking, monitor ground.”

“Cessna 150NT, enter a left downwind for Runway 18.”

“Mooney 521AG, transition approved at or above two thousand six hundred, advise west of centerline.”

“Bonanza 340Q, number two, clear to land Runway 18, caution wake turbulence.”

“Cessna 425, start your base, number three behind the Bonanza on right base and the Falcon on short final.”

“Cessna 982NC, practice approach approved, no separation services provided, maintain VFR, report SKINI inbound.”

Such is a typical minute for a busy air traffic controller at a VFR contract tower, armed only with a radio, two eyes, a

Needed. The IG report found that contract towers provide similar levels of service in terms of quality and safety as FAA staffed towers, and at significantly lower cost.

The IG looked at 30 randomly selected contract towers and 30 FAA towers with similar levels of operations and found on average, contract towers operate at \$1.5 million less than a comparable FAA tower. The US Contract Tower Association (USCTA) points out that the contract tower programme saves taxpayers approximately \$200 million per year.

The lower cost is primarily a function of what the IG report said were ‘lower staffing and lower salary levels at contract towers versus similar FAA towers’. At towers with similar levels of operations, contract towers were averaging six air traffic personnel versus FAA towers with 16. Part of this difference is certainly the training aspect; FAA towers serve a large training function as new controllers come from the FAA Academy and progress through their certifications.

At contract towers, the controllers are primarily retired FAA controllers or

Contract towers are the backbone of general aviation airports in the US accounting for 29 per cent of all tower operations

landline to approach control, and a bucket full of experience. These controllers sort out traffic that includes military, jet traffic, air taxi, general aviation and lots of student flight training.

It’s all unscheduled and fluctuates from periods of intense activity to utter boredom. Contract towers are the backbone of general aviation airports in the US, accounting for 29 per cent of all tower operations. Of the 521 control towers operating in the US, 254 or 49 per cent are operated as contract towers.

The Contract Tower programme has been operating for 36 years and has been an extremely successful model of partnering between government and industry, extending air traffic control services to smaller airports where the Federal Aviation Administration (FAA) could not cost effectively operate a control tower.

Cost Effective

The latest Inspector General (IG) report was issued in November 2012 and was titled *Contract Towers Continue to Provide Cost-Effective and Safe Air Traffic Services, but Improved Oversight of the Program is*

controllers coming out of the military that are already certified. Spencer Dickerson, executive director of the US Contract Tower Association proudly points to the fact that approximately 70 per cent of the 1,400 contract controllers are veterans.

However, lower costs do not indicate lower levels of safety. When compared with similar sized FAA towers, contract towers were found to have significantly lower rate of safety incidents. The IG report cites statistics for the Fiscal Year 2010 that 240 contract towers had 197 safety incidents while 92 similar sized FAA towers had 362 safety incidents. The report further notes that ‘FAA safety evaluations found fewer operational deficiencies in areas such as improper radio communications by controllers’.

Contract tower controllers are required to have the same training and certifications as FAA controllers. Jim Slate, vice president, air traffic services at Robinson Aviation, points out: “The key point is that the pilot should be given the same level of service as an FAA tower. We operate under the same rules, have the same training. The goal first and foremost is safety.”

The Federal Contract Tower programme (FCT) began in 1982 with five towers as a pilot programme after the Professional Air Traffic Controllers Organization (PATCO) strike. A decade later there were 27 towers and then in 1994 Congress provided funding for a further expansion of the programme.

There are now 254 towers in the programme with four more towers being added this year. This programme has enjoyed strong bipartisan support from Congress over the years and in 2018 both the House and Senate Appropriations Committee fully funded the FCT to the tune

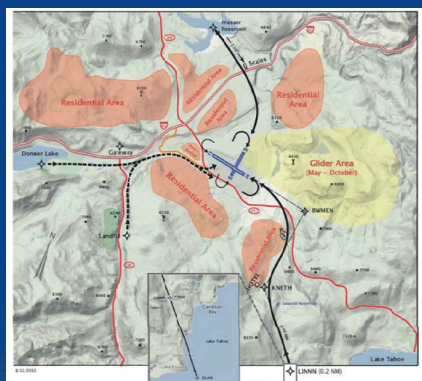
of \$162 million. In addition, \$5 million was recommended to help continue and expand a remote tower demonstration programme.

One of the major concerns for both the users and service providers however is consistency of FAA and Congressional funding.

While the programme has broad support from members of Congress and the user community, the ongoing budget battles in the US Congress, getting appropriation bills completed on time, multiple continuing resolutions, and sequestration have created an environment of budget uncertainty.

This was borne out in 2013 when the

Obama administration planned to close 149 FCTs as part of its response to sequestration. The alarm went out in the aviation community and both Congress and the FAA were inundated with overwhelming support for the contract tower programme from aviation industry groups such as AOPA, NBAA, NATA, NATCA, AAAE and others, as well as the grassroots pilot community. Cutting towers was the wrong thing to do to address budget shortfalls was the loud and succinct message. Eventually, the FAA and the Administration backed down and the towers remained open.



Truckee-Tahoe provides a good example of a US rural airport dealing with a unique tower situation ... so it came up with a unique solution

Hardy Bullock faced a conundrum. His airport at Truckee-Tahoe in California had evolved from a sleepy single runway general aviation airport to a popular resort destination with traffic exceeding 43,000 operations including a large number of jets and turboprops.

Mix the jets in with the normal GA traffic, the gliders, the skydivers, a highly noise sensitive community, mountainous terrain surrounding the airport, high density altitude, strong gusty winds, wildlife around the airport, and the fact that radar service was not available below 10,000 MSL and Hardy could see a safety issue just waiting to happen.

Hardy, Truckee-Tahoe Airport's director of aviation and community services, however, was not a man that would allow the status quo to remain so he set off for solutions. He contracted with Midwest ATC to staff a non-fed contract tower, constructed a tower out of shipping containers, installed

a multilateration system for advisory guidance and worked with the FAA to develop procedures and instituted a safety management system.

He is also working to get an ADS-B ground station installed at the airport. Truckee-Tahoe includes elaborate noise abatement procedures on its website, informational videos showing the approach to the airport and many community outreach efforts to make the airport a community-friendly partner.

Truckee-Tahoe spends \$1 million a year on its non-fed tower and is hopeful that they can get accepted into the federal contract tower programme when they accept new entrants.

Hardy likens his airport to an 'aeronautical ecosystem' with its high mixed use – an ecosystem that just got a little bigger as the new contract tower went operational as Class D airspace on March 29 earlier this year.



Currently there are three main service providers in the FCT programme, Midwest ATC, Robinson Aviation and Serco. Each of these providers operates in several FAA regions under the FCT, as well as operating non-fed and international towers under separate contracts. For example, Midwest ATC operates towers in Afghanistan and Guantanamo Bay, Serco operates towers in the UK, Canada and the Middle East.

Under the contract tower programme, the FAA determines how many hours a day the tower needs to be in operation and the FCT contractor submits a proposal to the FAA with the schedule and staffing plan to operate the tower for the expected level of traffic. The airport sponsor is responsible for the tower construction and/or maintenance, and if they desire the tower to be operated for a greater number of hours than the FAA has determined, they are able to pay the FCT contractor for those additional hours.

While contract towers are considered VFR towers, they are by no means 'low activity'. Two towers are in the top 50 and 12 are in the top 100 of the busiest US towers. Of the top two towers, Phoenix-Mesa, Arizona handled over 290,000 operations and North Perry, Florida, handled over 226,00 operations in 2017.

Many of the towers have radar displays which are a great aid to the controllers for situational awareness, but many still do not and are purely visual. It's up to the FAA to decide if a radar feed is needed.

Heidi Williams, director of air traffic services and infrastructure for the National Business Aviation Association (NBAA) emphasises how important contract towers are to its members: "Contract towers are a critical aspect of the FAA and operationally critical to the National Airspace System. It's a hugely successful programme and important to general aviation and business aviation to have that additional layer of safety."

Opportunity

An exciting development for contract towers is the demonstration of a remote tower installation at Leesburg Executive Airport, Virginia.

The system uses a series of cameras to provide controllers in a remote location - currently an airport conference room - with a view of traffic to enable them to manage it remotely.

Teri Bristol, the chief operating officer of the FAA Air Traffic Organization, in remarks to a recent AAAE/Contract Tower Workshop, described how the FAA is hopeful that this

demonstration will provide low cost options to bring air traffic services to smaller airports.

"Potentially, remote towers may be a more cost-effective way to provide airport traffic control tower service," she told delegates. "With the use of cameras, and possibly other sensors, controllers would manage the traffic without necessarily needing to be physically located at that airport. This would potentially mean we can avoid the costs associated with the traditional 'bricks and mortar' towers needed today, including reducing the cost of extensive refurbishment and replacement."

The FAA has also awarded a contract to Searidge Technologies to provide a remote tower at Fort Collins/Loveland airport in Colorado for another demonstration project and plans to issue a Request for Information to airports to see what further interest there is in remote towers.

Rune Duke, senior director for government affairs at the Airport Owners and Pilots Association (AOPA), is very supportive of the initiative and sees this as a cost-effective way to extend ATC services to a number of smaller airports that don't now qualify for a tower. "AOPA is embracing the new technology and encouraging the FAA to investigate ways to use this technology to enhance safety," explains Duke. [ATM](#)

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