



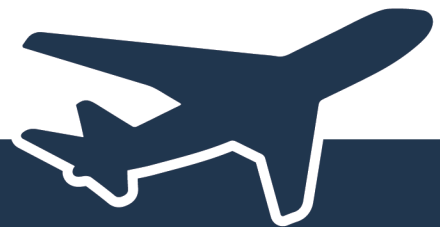
U.S. DEPARTMENT OF TRANSPORTATION
OFFICE OF INSPECTOR GENERAL

**FAA's Approach for Establishing
and Modifying Air Traffic Controller
Staffing Levels Needs Improvement
To Properly Identify Staffing Needs
at Contract Towers**

FAA

Report No. AV2021035

August 18, 2021





FAA's Approach for Establishing and Modifying Air Traffic Controller Staffing Levels Needs Improvement To Properly Identify Staffing Needs at Contract Towers

Requested by the U.S. Senate Committee on Appropriations

Federal Aviation Administration | AV2021035 | August 18, 2021

What We Looked At

The Federal Aviation Administration (FAA) Contract Tower (FCT) Program consists of 257 contract towers in 46 States operated by 3 contractors and the Air National Guard. Contract towers manage about 28 percent of the Nation's air traffic control operations. The FCT Program is governed by seven contracts, based on geographical regions, which establish controller staffing for contract towers. These contracts normally cover a 5-year period and require contractors to submit controller staffing plans for each tower during the contract solicitation process. Our audit objective was to assess FAA's approach for establishing and modifying air traffic controller staffing levels at contract towers.

What We Found

FAA does not establish controller staffing levels at contract towers; instead the Agency reviews and approves staffing levels the contractors submit during the contract solicitation process. While FAA requires a program-wide staffing minimum of four controllers per tower, this minimum is not based on any Agency analysis or a study of controller staffing levels at contract towers. Also, FAA does not adequately monitor whether contractors adhere to the staffing minimum requirement. This is because FAA has not formally documented its process for establishing and reviewing contract tower staffing minimums. In addition, FAA does not proactively review staffing data to identify when staffing changes are needed; instead it relies on contractors to request and justify such changes. Further, FAA did not provide evidence that it had conducted any reviews of contractor performance relative to the labor hours stated in the approved staffing plans. As a result, the Agency may have missed key indicators of the potential need for staffing modifications.

Our Recommendations

We made four recommendations to improve FAA's approach for staffing contract towers and monitoring performance levels. FAA concurred with recommendations 1 through 3. Thus, we consider these recommendations resolved but open pending FAA's completion of planned actions and an Office of Inspector General (OIG) review. FAA partially concurred with recommendation 4, which we consider open and unresolved and request that the Agency reconsider its position within 30 days of the date of this report.

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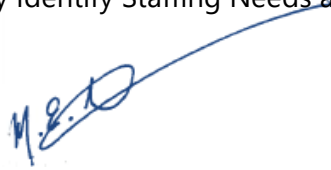
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Memorandum

Date: August 18, 2021

Subject: ACTION: FAA's Approach for Establishing and Modifying Air Traffic Controller Staffing Levels Needs Improvement To Properly Identify Staffing Needs at Contract Towers | Report No. AV2021035

From: Matthew E. Hampton
Assistant Inspector General for Aviation Audits 

To: Federal Aviation Administrator

The Federal Aviation Administration (FAA) Contract Tower (FCT) Program consists of 257¹ contract towers in 46 States operated by 3 contractors and the Air National Guard. Contract towers manage about 28 percent of the Nation's air traffic control operations. In 2020,² we reported that between fiscal years 2015 and 2018, contract towers were more cost effective per aircraft handled than FAA towers with similar mixes of air traffic and runway configurations. Contract towers on average used fewer resources—or controller staffing levels—per aircraft handled and had a lower number and rate of safety incidents compared to similar FAA towers.

The U.S. Senate Committee on Appropriations directed our office to report on the policies, standards, methods, and practices employed by FAA to establish staffing levels at contract towers.³ The committee asked us to assess the program's ability to adjust to significant air traffic growth, as well as local requirements, and examine the relationship and coordination between FAA and its contractors. In undertaking this programmatic evaluation, we were also asked to consider the findings and recommendations of a 2014 National Academy of Sciences report, *The Federal Aviation Administration's Approach for Determining Future Air Traffic*

¹ Effective October 1, 2020, FAA added the 257th contract tower and the 7th military manned tower, Hammond Northshore (HDC), to the FCT Program. However, we excluded this new tower and the six towers operated by the Air National Guard from our universe.

² *Contract Towers Are More Cost Effective Than Comparable FAA Towers and Have Similar Safety Records* (OIG Report No. AV2020028), April 28, 2020. OIG reports are available on our website: <https://www.oig.dot.gov/>.

³ S. Rep. No. 116-109, September 19, 2019. This report accompanied S. 2520—Transportation, Housing and Urban Development, and Related Agencies Appropriations Act, 2020.

*Controller Staffing Needs.*⁴ As such, our objective was to assess FAA's approach for establishing and modifying air traffic controller staffing levels at contract towers.

We conducted our work in accordance with generally accepted Government auditing standards. Exhibit A details our scope and methodology. Exhibit B lists the organizations we visited or contacted, and Exhibit C presents a list of acronyms. Exhibit D lists the 250 contract towers covered by our review. Exhibit E provides the reimbursable hours for the performance periods of July 1, 2018, to June 30, 2019, and July 1, 2019, to June 30, 2020.

We appreciate the courtesies and cooperation of Department of Transportation (DOT) representatives during this audit. If you have any questions concerning this report, please call me at (202) 366-0500 or Nelda Z. Smith, Program Director, at (202) 366-2140.

cc: The Secretary
DOT Audit Liaison, M-1
FAA Audit Liaison, AAE-100

⁴ National Academies of Sciences, Engineering, and Medicine, *The Federal Aviation Administration's Approach for Determining Future Air Traffic Controller Staffing Needs* (Washington, DC: National Academies Press, 2014).

Results in Brief

FAA relies on contractors to establish and modify air traffic controller staffing levels at contract towers.

FAA does not establish controller staffing levels at contract towers; instead the Agency reviews and approves staffing levels the contractors submit during the contract solicitation process. While FAA requires a program-wide staffing minimum of four controllers per tower, this minimum is not based on any Agency analysis or a study of controller staffing levels at contract towers. The National Academies of Science reviewed air traffic controller staffing in 2014, but its report examined FAA-operated facilities—not contract towers. In addition, FAA does not adequately monitor whether contractors adhere to the staffing minimum requirement. This is because FAA has not formally documented its process for establishing and reviewing contract tower staffing minimums. FAA does not proactively review staffing data to identify when staffing changes are needed; instead it relies on contractors to request and justify such changes. As a result, the Agency may have missed key indicators of the potential need for staffing modifications. Further, FAA did not provide evidence that it had conducted any reviews of contractor performance relative to the labor hours stated in the approved staffing plans. According to each FCT contract, the contractor must comply with the staffing plans it gives to FAA during the bidding process and provide actual labor hours that are 98–102 percent of the full performance level outlined in the staffing plans in the awarded contract. During the July 1, 2018, to June 30, 2019, performance period, however, the actual work hours for five of the seven contracts we reviewed fell below the 98-percent level, and FAA failed to identify contractor noncompliance. FAA’s overreliance on contractors decreases the Agency’s ability to proactively identify when staffing levels do not match airport needs, hold the contractors accountable, and mitigate any potential safety risks.

We are making recommendations to improve FAA’s approach for staffing contract towers and monitoring performance levels.

Background

In 1982, FAA began a pilot program to contract air traffic control services at five low-activity “level 1” control towers⁵ that had been closed following a strike by the Professional Air Traffic Controllers Organization the previous year. In 1994,

⁵ Prior to 1998, FAA categorized all towers as levels 1 through 5; level 1 towers have the fewest operations.

Congress provided funding for a multiyear program to convert additional FAA-operated level 1 towers to contract towers.

Seven contracts based on geographical regions establish the staffing of towers within the FCT Program. The contracts normally cover a 5-year period⁶ and require contractors to submit controller staffing plans for each tower during the contract solicitation process. The staffing plans include the staffing level (total number of controllers at each tower), including the manager, and sample shift schedules. FAA approves the staffing plans when it awards the contracts, and the contractors must provide staffing for each tower in accordance with their Agency-approved staffing plans.

Since 1998, the Office of Inspector General (OIG) has performed several audits evaluating controller staffing within the FCT Program. In 1998, we found that staffing at some contract towers was not based on contract staffing plans. We recommended that FAA direct contractors to comply with contract requirements and establish procedures to periodically review staffing levels at contract towers.⁷ In 2000, we found that FAA added specific contract provisions that require contractors to provide monthly reports on the number of controllers at each location and the hours they work.⁸ The contract provisions also allowed FAA to make downward or upward price adjustments based on the actual staffing levels provided by the contractors.

FAA's Reliance on Contractors To Establish and Modify Controller Staffing Levels Limits Its Ability To Identify Staffing Needs at Contract Towers

FAA establishes program-wide controller staffing minimums for the FCT Program, but they are not based on any analysis or study. The Agency does not establish controller staffing levels for each contract tower but instead reviews and approves contractor-submitted staffing levels. FAA also relies on contractors to request and justify staffing changes and does not proactively identify when such changes may be warranted or monitor contractual performance compliance.

⁶ The current FCT contracts became effective in 2015 and have been extended to December 31, 2021.

⁷ *Federal Contract Tower Program* (OIG Report No. AV1998147), May 18, 1998.

⁸ *Contract Towers: Observations on FAA's Study of Expanding the Program* (OIG Report No. AV2000079), April 12, 2000.

FAA Relies on Contractors To Establish Staffing Levels but Sets a Program-Wide Minimum Without Any Supporting Justification

The Agency does not determine contractor staffing levels or monitor contractor compliance with its program-wide staffing levels.

FAA Evaluates and Approves but Does Not Establish Controller Staffing Levels at Contract Towers

FCT contractors use their own internal staffing models to develop each tower's staffing plan, which FAA receives as part of its Screening Information Request (SIR).⁹ The plans must include numbers for supervisory and nonsupervisory full-time equivalents (FTE) and sample shift schedules for each tower that specify shift start and end times, the number of employees on each shift, and periods when only one controller will be on duty. The sample shift schedules are based on the number of FTEs and the tower operating hours and include the annual direct labor hours that the contractor bids to provide. However, FAA does not evaluate or validate those models because the contractors' consider the information proprietary.

Instead, FAA establishes a Technical Evaluation Team to evaluate the contractor's level of familiarity with the work to be performed and assess the effectiveness of the contractor's response to the SIR. According to FAA officials, the evaluation team consists of subject matter experts—former air traffic controllers—who evaluate and grade the contractors' staffing plans and review each sample work schedule to ensure all of the tower's operating hours are adequately covered. According to the contract, the various evaluation teams will then compile the results from all the technical evaluation factors and present their consensus findings to the Source Selection Official. Finally, FAA awards the contracts according to best value, defined as the proposal that gives the Agency the most advantageous solution, based on its evaluation of technical capabilities, price, and other factors.¹⁰

⁹ FAA uses the SIR to obtain information it needs to proceed with a source selection decision and contract award.

¹⁰ FAA does not award FCT contracts solely based on the lowest price.

FAA Lacks Justification for Its Program-Wide Minimum Staffing Level and Does Not Monitor Contractor Compliance With This Requirement

FAA has made minimal changes to its controller staffing requirements since the inception of the FCT Program. In 1999, FAA added a program-wide minimum staffing requirement of four FTEs per tower, including the facility manager. In either 2004 or 2009, FAA added another administrative requirement: tower managers are to spend no more than 50 percent of their time controlling air traffic. However, the Agency could not provide any evidence that it had based these staffing changes on its own analysis or any study of controller staffing at contract towers. FAA also could not provide any documentation to indicate exactly when it adopted either of these changes. This is because FAA did not record and maintain records on controller staffing changes to FCT contracts. The Agency did provide some information on the staffing minimum change but that was based on the institutional knowledge of a program official who was involved in the process. As a result, FAA cannot have assurance that its minimum staffing level is adequate.

The FCT vendors are required to submit monthly staffing reports to FAA. However, FAA does not have a process in place to periodically review whether contractors adhere to the staffing minimum requirement. For example, we examined monthly staffing levels at 248 contract towers for the contract year that spanned July 1, 2018, to June 30, 2019 (see table).¹¹

¹¹ This analysis focuses on certified or tower-rated FTEs because these controllers have demonstrated the qualifications and skills required to control air traffic within their assigned towers.

Table. Number of Contract Towers Operating Below Authorized Controller Staffing Levels and Tower Minimum, by Month

Contract Year 2018–2019	Towers Without the Authorized Number of Certified FTEs	Towers With Fewer Than 4 Certified FTEs	Towers with 2 Certified FTEs
July 2018	84	13	0
August 2018	72	10	0
September 2018	67	10	0
October 2018	69	11	0
November 2018	83	12	0
December 2018	77	14	0
January 2019	78	14	1
February 2019	78	23	0
March 2019	84	19	1
April 2019	86	20	1
May 2019	82	19	2
June 2019	81	26	1

Note: We may have listed a staff count in multiple months based on the severity of a tower’s staffing level shortage during the contract performance period. We looked at staffing levels at a total of 248 contract towers.

Source: OIG analysis of FAA data

We found that at least 67 of 248 contract towers (27 percent) operated below their authorized staffing levels in any given month—most likely due to controller attrition or delays in hiring. For instance, in May 2019, 82 of 248 contract towers (33 percent) operated below their authorized staffing levels, while 19 towers fell below the FCT program-wide staffing minimum of 4 certified FTEs, and 2 towers were staffed with only 2 certified FTEs. In fact, during the above-mentioned contract performance period, five towers had two certified FTEs each. One of those remained at that level for 2 consecutive months. Such drops in staffing significantly increase controller workload and may impact overall safety levels. Further, FAA does not have a formal policy or process in place to monitor the actions of contractors when the number of FTEs drop below the authorized staffing minimum. Due to the absence of such a policy, FAA did not take any steps to ensure contractors’ met minimum staffing levels at contract towers.

According to FCT Program officials, FAA set the staffing minimum early in the program’s history when some towers had a staffing level of three FTEs. FAA stated that program officials at that time had determined three FTEs would not provide adequate coverage to ensure continuity of services. Additionally, 6 of the 10 contract tower managers we interviewed stated that they would prefer to have at least 1 additional controller to permit flexibility when a controller goes on

vacation, takes sick leave, or departs on a permanent basis. However, since FAA has not studied FCT staffing needs, it is unclear if these concerns are valid.

In 2014, the National Academy of Sciences studied the Agency's approach for determining controller staffing needs but only at FAA-operated facilities, not contract towers. Overall, the report found FAA's staffing model for standalone towers to be well documented and appropriate. The Agency bases its model for FAA-operated towers on future needs to account for the significant time—2 to 3 years—it takes to train and certify new controllers. However, the FCT staffing models are not based on future needs because contractors are required to hire controllers with prior experience.

FAA did not document its justification for the changes to its FCT Program staffing requirements and does not have a process of ongoing review. Thus, the Agency also lacks assurance that its current FCT staffing levels are adequate, which poses a potential safety risk.

FAA Relies on Contractors To Request Staffing Modifications and Cannot Adequately Determine Whether Changes Are Warranted

Relying on contractors to modify staffing levels without conducting regular reviews to determine noncompliance makes it difficult for FAA to proactively detect when adjustments are needed.

FAA Does Not Initiate the Process To Modify Controller Staffing Levels at Contract Towers

FAA relies on contractors to request and justify changes to staffing levels at contract towers, which the Agency approves on an as-needed basis through contract modifications. However, contractors rarely make these requests, and a single modification can cover one or more contract towers. For instance, seven FCT contracts between January 1, 2018, and June 9, 2020, had six approved staffing contract modifications that affected nine contract towers. Eight of those nine towers received an increase in staffing, and one tower received a decrease.

According to Agency officials, FAA can adjust staffing levels at contract towers after contract award when three situations occur: (1) when new towers are added to the FCT Program, (2) when a contractor submits verified data that validates the need for a staffing increase or decrease, and (3) when an airport sponsor or contractor submits verified data that validates the need for a change in tower hours. When a contractor requests a staffing change, the FCT Program Office

conducts an internal Quantitative and Qualitative Evaluation (Q&Q) of the staffing plan, staffing-change benefit, and cost proposal. The Q&Q includes a recommendation and the potential effective date of change, and the Contracting Officer's Representative (COR) sends the completed evaluation to the Contracting Officer (CO), who sends an approval or disapproval notification to the contractor and, if necessary, modifies the contract.

However, we found weaknesses in this approach since FAA does not proactively review up-to-date and available operational data or current shift schedules; instead, the Agency relies on contractors to do so. For example, one airport—which serves over 1 million passengers a year and saw a 20-percent increase in air traffic operations after the addition of a new runway in 2017—asked the FCT contractor multiple times for a controller staffing increase. The contractor elected not to submit the airport's requests to FAA. Eventually, in June 2017 and July 2019, the airport went directly to the Agency, which asked the FCT contractor to determine whether the staffing levels at the tower were appropriate. As of December 2020, the contractor had not requested a staffing level modification from FAA, and the number of authorized FTEs at the tower remains unchanged as operations continue to increase. According to FAA officials, the Agency also reviewed a sample 90-day traffic count and conducted an analysis of sample shift schedules to determine periods of single coverage at the airport tower. While FAA found the tower did not meet the requirements to increase the number of controllers, it based its decision on a review of schedules from 2014 rather than on up-to-date operation and schedule information. As a result, the Agency may have missed key indicators of the potential need for staffing modifications.

FAA Does Not Proactively Review Staffing Data To Determine Noncompliance or Identify When Staffing Changes Are Needed

The FCT contract contains provisions to help ensure staffing levels are adequate during the contract performance period. It requires the contractors to give FCT Program officials and the CO monthly reports that include the number of controllers at each FCT tower and the hours they worked. To ensure contractors meet the full performance level,¹² FAA also requires them to ensure the actual hours worked fall between 98 and 102 percent of the full-performance-level labor hours stated in the staffing plans. At the end of each fiscal year, FAA must recoup overpayments from contractors whose controllers worked less than 98 percent of the actual hours listed in the contract. Additionally, with prior approval from the CO, FAA can make upward price adjustments when contractors' actual labor hours worked exceed 102 percent.

¹² Full performance level is defined as actual hours worked (direct labor hours of the prime contractor), exclusive of vacation, holiday, and sick leave, to satisfy 100 percent of the hours negotiated.

FAA provided us with contractors' monthly staffing reports. However, the Agency did not provide evidence that it had reviewed contractor performance. Based on our review, in some instances, FAA did not identify inconsistencies in the contractors' reports. For example, one contractor submitted an incorrect monthly staffing report with actual hours worked that were significantly lower than the hours listed at the same towers for the preceding and following months. One tower listed 9 total hours worked for an entire month, although the previous month, it had recorded 665 total work hours. In fact, another tower listed a negative number for the actual total monthly hours worked, which FAA did not identify or red-flag. This occurred because FAA does not have an established process for conducting performance reviews. According to FCT Program officials, they perform a general review of monthly reports to identify staffing level trends but cannot execute any actions to modify staffing as that is the CO's role. However, this approach has resulted in several weaknesses, including:

- **FAA did not identify or collect overpayments from contractors that failed to comply with the performance requirement.** During the July 1, 2018, to June 30, 2019, performance period, the actual work hours for five of the seven contracts we reviewed fell below 98 percent of the full performance level labor hours. For example, the performance level for the five contracts ranged from 86 to 97 percent. Therefore, those contractors should have reimbursed FAA for 90,213 hours, which equates to a minimum of \$2.64 million (see exhibit E). However, there is no internal policy outlining how the performance requirement should be monitored, who is responsible for the oversight, when reviews are to be completed, or whether the requirements apply to individual towers or to all the towers covered by each contract. Although the contracts provide examples indicating that the performance review is conducted on an individual tower basis, FAA officials confirmed that the performance levels are measured on a total contract basis. They also stated that the Agency focuses solely on ensuring the contractors' monthly invoice totals match the negotiated rates rather than on reviewing whether the hours worked are in line with the approved contract labor hours. The lack of performance reviews decreases FAA's ability to proactively identify when staffing levels do not match airport needs or recoup contractor overpayments when warranted.
- **FAA never implemented a process to address our recommendation to conduct performance reviews.** In our 2012 report,¹³ we recommended that FAA develop a process to validate the invoices and timecards FCT contractors submit each year. This would allow FAA to (1) ensure that the

¹³ *Contract Towers Continue To Provide Cost-Effective and Safe Air Traffic Services, but Improved Oversight of the Program Is Needed* (OIG Report No. AV2013009), November 5, 2012.

hours billed were actually worked and met contract requirements and (2) recover overpayments from contractors. FAA concurred with the recommendation and outlined a process for reviewing contractor timecards, which we accepted as the basis for closing the recommendation. However, during our current audit, we were unable to obtain evidence that FAA had implemented a process with roles and responsibilities to conduct compliance reviews or recoup overpayments for any prior performance periods. FAA officials told us they cannot review contractor timecards because they are contractors' property and do not belong to FAA. However, FAA's Office of Chief Counsel stated the current FCT contracts contain provisions that allow FAA to access contractor documentation that supports contract costs.

- **FAA gave contractors limited relief from the contract performance requirement due to the Coronavirus Disease 2019 (COVID-19) pandemic and did not conduct a performance review.** On March 27, 2020, the CO notified the contractors by email about a "temporary waiver" of the performance requirement in towers with documented cases of COVID-19. However, according to the CO, FAA applied the waiver to all towers in the FCT Program for the entire performance period from July 1, 2019, to June 30, 2020 and the Agency elected not to conduct a performance review. Based on our review of FAA-provided documentation, the waiver allows the hours granted for excused COVID absence/administrative leave¹⁴ to be reported as hours worked/paid to vendors and count toward fulfillment of the contract performance requirement. Based on data provided by the contractors to the CO, only 5 towers had confirmed or suspected COVID-19 cases in April, May, and June 2020, which impacted 27 employees. Since FAA has maintained the requirement for contractors to provide monthly status reports and invoices throughout the pandemic, the Agency could have conducted the performance review in accordance with the waiver. Based on our analysis, the actual hours worked for three of the seven contracts fell below 98 percent of the full performance level labor hours, and contractors should reimburse FAA for 85,328 hours, which equates to a minimum of \$2.5 million (see exhibit E).¹⁵

¹⁴ Excused absence/administrative leave applies to employees who were subject to movement restrictions (quarantine or isolation) under the direction of public health authorities due to significant risk of exposure to COVID-19 or a COVID-19 infection diagnosis.

¹⁵ Our analysis of the actual hours worked at all 250 contract towers included the hours granted for excused COVID absence/administrative leave, but we still found that the 3 contracts were noncompliant with the performance requirement.

Conclusion

As we've highlighted in previous audits, the FCT Program is cost effective and brings significant value to the communities it serves. Still, FAA has an opportunity to improve the program by implementing a more efficient and effective monitoring process and improving its controls over the program's contractual aspects. With greater oversight and a more proactive approach to establishing and modifying air traffic controller staffing levels, the Agency can prevent potential misuses of taxpayer dollars and protect the flying public by ensuring that contract towers are adequately staffed and operated.

Recommendations

To improve FAA's approach for staffing at contract towers and proper monitoring of performance levels, we recommend that the Federal Aviation Administrator:

1. Analyze and document the justification for the FAA Contract Tower (FCT) Program's minimum staffing requirements.
2. Develop and implement an internal process to periodically review, and maintain supporting records for FCT controller staffing minimums.
3. Develop and implement an internal process—including roles and responsibilities, timeframes, and criteria—to ensure contract requirements are met, and overpayments made to contractors are recovered.
4. Recover overpayments to contractors, estimated minimum of \$2.64 million and minimum of \$2.5 million.

Agency Comments and OIG Response

We provided FAA with our draft report on June 25, 2021, and received its formal response on July 23, 2021, which is included as an appendix to this report. FAA concurred with recommendations 1 through 3 and provided appropriate planned actions and completion dates.

FAA partially concurred with recommendation 4, stating the Agency has concerns about OIG including the estimated hours and costs for the entire July 1, 2019, through June 30, 2020, performance period. In FAA's response and in our earlier discussions with the Agency, FAA officials stated that the waiver they issued due to the COVID-19 pandemic relieved contractors from the performance

requirements. FAA also stated in its official response that the Agency would not conduct an assessment or make price adjustments from March 27, 2020, onward based on its COVID-related waiver.

We disagree with FAA's application of the waiver. The waiver terms the Agency sent to the FCT contractors stated that excused absences and administrative leave granted to employees quarantined or isolated under the direction of public health authorities would be reported as hours worked or paid and count toward fulfillment of the contract performance requirement. Further, the waiver stated that vendors must obtain appropriate documentation from and track the leave granted to each affected employee. It did not state that FAA would not conduct performance reviews or waive performance requirements entirely. Accordingly, we consider recommendation 4 open and unresolved and request FAA to reconsider its position.

Actions Required

We consider recommendation 1 through 3 resolved but open pending completion of planned actions. We consider recommendation 4 open and unresolved and request FAA to reconsider its position within 30 days of the date of this report. We request that FAA keep us up to date on its planned actions.

Exhibit A. Scope and Methodology

We conducted this performance audit between June 2020 and June 2021 in accordance with generally accepted Government auditing standards (GAGAS) as prescribed by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The U.S. Senate Committee on Appropriations directed our office to report on the policies, standards, methods, and practices FAA employs to establish staffing levels at contract towers. We were tasked with assessing the program's ability to adjust to significant air traffic growth, as well as local requirements, and examining the relationship and coordination between FAA and its contractors. In undertaking this programmatic evaluation, we also were asked to consider the findings and recommendations of the 2014 National Academy of Sciences report, *The Federal Aviation Administration's Approach for Determining Future Air Traffic Controller Staffing Needs*. Accordingly, our objective was to assess FAA's approach for establishing and modifying air traffic controller staffing levels at contract towers.

To assess FAA's approach for establishing and modifying air traffic controller staffing at contract towers, we reviewed 257 modifications—made between January 1, 2018, and June 9, 2020—to the seven FCT contracts to determine how many included staffing or hour of operation changes. We reviewed the 2014 National Academy of Sciences report to determine the study's implications for FAA's contract towers. We interviewed FCT Program Office officials and reviewed their policy and procedures and FAA orders related to contract tower staffing. Additionally, we interviewed officials from FAA's Facilities and Flight Services Contracting Branch to gather information on the process for modifying staffing at contract towers and determine the information FAA requires contractors to provide prior to contract award. We also interviewed all three FCT contractors to determine the type of information the contractors use in their internal staffing models to develop controller staffing levels at individual contract towers.

During our review period, the FCT Program had 257 contract towers; however, we excluded 7 military manned towers from our overall universe. For the July 1, 2018, to June 30, 2019, performance period, we evaluated 248 of the 250 contract towers because 2 of the towers were not added to the program until October and November 2018. For the July 1, 2019, to June 30, 2020, performance period, we evaluated 250 contract towers. To determine controller staffing issues from the perspective of contract tower managers, we interviewed 10 of 250 statistically selected tower managers. To make this selection, we used a stratified simple

random sample based on contractor towers with recent staffing or changes in hours of operation, seasonal towers, new towers to the program, and towers with the minimum staffing of four FTEs. We also met with 3 airport management officials who were judgmentally chosen from the 10 statistically selected towers to discuss the airports' air traffic operations and the towers' staffing levels.

To assess the staffing-related contract requirements and the impact of noncompliance on staffing, we reviewed the seven contracts FAA has in place with the three FCT contractors and interviewed officials from the Agency's FCT Program Office and the Facilities and Flight Services Contracting Branch. To determine whether contractors performed at the required performance level of 98 to 102 percent, we analyzed the contractors' monthly staffing reports provided by FAA. To calculate the performance level, we compared the individual towers' actual hours worked against the direct labor hours approved by FAA when it awarded the contracts. Since performance levels are based on contract totals, we aggregated the performance levels of all towers within each of the seven contracts. For contracts that fell below 98 percent, we subtracted the approved direct labor hours from the actual hours worked to calculate the reimbursable hours FAA should recoup. The minimum monetary impact was determined by identifying the lowest hourly wage rates for each of the seven FCT contracts, multiplying these rates by the number of hours billed to FAA but not worked within the same FCT contracts, and then summing over all seven FCT contracts. Using the same monthly staffing reports, we also analyzed the number of certified FTEs for the July 1, 2018, through June 30, 2019, performance period to determine how many individual towers fell below their authorized staffing levels and how many fell below the staffing minimum of four certified FTEs.

To gain additional perspective, we interviewed officials at the American Association of Airport Executives, the Aircraft Owners and Pilot Association, and the National Air Traffic Controllers Association. We also interviewed officials from FAA's Office of Labor Analysis to get an overview of the Agency's staffing model for standalone towers, and we interviewed officials from FAA's Air Traffic Safety Oversight Service to better understand the Control Tower Operation certificate process for contract tower controllers. Finally, we spoke to FAA's Office of Chief Counsel about the Agency's legal standing to gain access to contract-related documentation from FCT contractors.

Exhibit B. Organizations Visited or Contacted

FAA Headquarters, Washington, DC

Acquisition and Business Services

- Facilities and Flight Services Contracting Branch

Air Traffic Organization

- FAA Contract Tower Program Office

Aviation Safety

- Air Traffic Safety Oversight Service

Office of the Chief Counsel

- Acquisition and Fiscal Law Division

Office of Finance and Management

- Office of Labor Analysis

FAA Contract Towers

- Anoka, Minnesota (ANE)
- Bozeman, Montana (BZN)
- Easton, Maryland (ESN)
- Grand Island, Nebraska (GRI)
- Jacksonville, Florida (CRG)
- Lacrosse, Wisconsin (LSE)
- King Salmon, Alaska (AKN)
- North Texas Regional, Texas (GYI)
- Stennis, Mississippi (HSA)
- Waukegan, Illinois (UGN)

Airport Management Officials

- Bozeman, Montana (BZN)
- Jacksonville, Florida (CRG)
- Waukegan, Illinois (UGN)

FCT Program Contractors

- Midwest Air Traffic Control Service, Inc.
- Robinson Aviation (RVA), Inc.
- Serco, Inc.

Other Organizations

- American Association of Airport Executives (AAAE)
- Aircraft Owners and Pilots Association (AOPA)
- National Air Traffic Controllers Association (NATCA)

Exhibit C. List of Acronyms

CO	Contracting Officer
COR	Contracting Officer's Representative
DOT	Department of Transportation
FAA	Federal Aviation Administration
FCT	Federal Aviation Administration Contract Towers
FTE	Full-time Equivalent
OIG	Office of Inspector General
Q&Q	Quantitative and Qualitative
SIR	Screening Information Request

Exhibit D. List of 250 Contract Towers

Count	State	Airport Name	Tower ID
1	AK	Bethel	BET
2	AK	Kenai Muni	ENA
3	AK	King Salmon	AKN
4	AK	Kodiak	ADQ
5	AL	Mobile Downtown	BFM
6	AL	Dothan Regional	DHN
7	AL	Tuscaloosa Regional	TCL
8	AR	Drake Field	FYV
9	AR	Northwest Arkansas Regional	XNA
10	AR	Rogers Executive-Carter Field	ROG
11	AR	Springdale Muni	ASG
12	AR	Texarkana Regional/Webb Field	TXK
13	AZ	Chandler Muni	CHD
14	AZ	Flagstaff Pulliam	FLG
15	AZ	Glendale Muni	GEU
16	AZ	Phoenix Goodyear	GYR
17	AZ	Laughlin/Bullhead International	IFP
18	AZ	Ryan Field	RYN
19	AZ	Phoenix-Mesa Gateway	IWA
20	CA	Castle	MER
21	CA	Chico Muni	CIC
22	CA	Fullerton Muni	FUL
23	CA	Jack Northrop Field/Hawthorne Muni	HHR
24	CA	Sacramento Mather	MHR
25	CA	Modesto City-Co-Harry Sham Field	MOD
26	CA	Oxnard	OXR
27	CA	Palmdale USAF Plant 42	PMD
28	CA	Ramona	RNM
29	CA	Redding Muni	RDD
30	CA	Riverside Muni	RAL
31	CA	Sacramento Executive	SAC
32	CA	Salinas Municipal	SNS
33	CA	San Carlos	SQL
34	CA	Brown Field Muni	SDM

Count	State	Airport Name	Tower ID
35	CA	San Luis County Regional	SBP
36	CA	Santa Maria Pub/Capt G Allan Hancock Field	SMX
37	CA	Southern California Logistics	VCV
38	CA	Whiteman	WHP
39	CA	General William J. Fox Airfield	WJF
40	CO	Eagle County Regional	EGE
41	CO	Front Range	FTG
42	CO	Grand Junction Regional	GJT
43	CT	Igor I Sikorsky Memorial	BDR
44	CT	Danbury Muni	DXR
45	CT	Groton- New London	GON
46	CT	Hartford-Brainard	HFD
47	CT	Tweed-New Haven	HVN
48	CT	Waterbury-Oxford	OXC
49	FL	Albert Whitted	SPG
50	FL	Boca Raton	BCT
51	FL	Brooksville-Tampa Bay Regional	BKV
52	FL	Cecil	VQQ
53	FL	Destin Executive	DTS
54	FL	Flagler Executive	FIN
55	FL	Gainesville Regional	GNV
56	FL	North Perry	HWO
57	FL	Jacksonville Executive at Craig	CRG
58	FL	Key West International	EYW
59	FL	Kissimmee Gateway	ISM
60	FL	Lakeland Linder Regional	LAL
61	FL	Leesburg International	LEE
62	FL	Melbourne International	MLB
63	FL	Naples Muni	APF
64	FL	New Smyrna Beach Muni	EVB
65	FL	Ocala International-Jim Taylor Field	OCF
66	FL	Miami-Opa Locka Executive	OPF
67	FL	Ormond Beach Muni	OMN
68	FL	Page Field	FMY
69	FL	Northwest Florida Beaches International	ECP
70	FL	Pompano Beach Airpark	PMP
71	FL	Punta Gorda	PGD
72	FL	Northeast Florida Regional	SGJ

Count	State	Airport Name	Tower ID
73	FL	Witham Field	SUA
74	FL	Space Coast Regional	TIX
75	GA	Athens/Ben Epps	AHN
76	GA	Fulton County Airport-Brown Field	FTY
77	GA	Gwinnett County-Briscoe Field	LZU
78	GA	Middle Georgia Regional	MCN
79	GA	Cobb County International-McCollum Field	RYY
80	GA	Southwest Georgia Regional	ABY
81	GU	Guam International	GUM
82	HI	Ellison Onizuka Kona International at Keahole	KOA
83	HI	Lihue	LIH
84	HI	Molokai	MKK
85	IA	Dubuque	DBQ
86	ID	Friedman Memorial	SUN
87	ID	Idaho Falls Regional	IDA
88	ID	Lewiston-Nez Perce County	LWS
89	ID	Pocatello Regional	PIH
90	IL	Veterans Airport of Southern Illinois	MWA
91	IL	Waukegan National	UGN
92	IL	Central IL Regional Airport at Bloomington/Normal	BMI
93	IL	Decatur	DEC
94	IL	Southern Illinois	MDH
95	IL	St. Louis Regional	ALN
96	IN	Monroe County	BMG
97	IN	Columbus Muni	BAK
98	IN	Gary/Chicago International	GYG
99	IN	Delaware County Regional	MIE
100	KS	Topeka Regional	FOE
101	KS	Garden City Regional	GCK
102	KS	Hutchinson Regional	HUT
103	KS	Johnson County Executive	OJC
104	KS	Manhattan Regional	MHK
105	KS	New Century Aircenter	IXD
106	KS	Philip Billard Muni	TOP
107	KS	Salina Regional	SLN
108	KY	Barkley Regional	PAH
109	KY	Owensboro/Daviess County Regional	OWB
110	LA	Acadiana Regional	ARA

Count	State	Airport Name	Tower ID
111	LA	Chennault International	CWF
112	LA	Houma-Terreborne	HUM
113	LA	Shreveport-Downtown	DTN
114	MA	Westfield-Barnes Regional	BAF
115	MA	Beverly Regional	BVY
116	MA	Barnstable Muni-Boardman/Polando Field	HYA
117	MA	Lawrence Muni	LWM
118	MA	Martha's Vineyard	MVY
119	MA	New Bedford Regional	EWB
120	MA	Norwood Memorial	OWD
121	MA	Worcester Regional	ORH
122	MD	Easton/Newnam Field	ESN
123	MD	Frederick Muni	FDK
124	MD	Martin State	MTN
125	MD	Salisbury-Ocean City Wicomico Regional	SBY
126	MD	Hagerstown Regional-Richard A Henson Field	HGR
127	MI	W K Kellogg	BTL
128	MI	Coleman A Young Muni	DET
129	MI	Jackson County- Reynolds Field	JXN
130	MI	Sawyer International	SAW
131	MN	Anoka County-Blaine (Janes Field)	ANE
132	MN	St. Cloud Regional	STC
133	MO	Branson	BBG
134	MO	Columbia Regional	COU
135	MO	Jefferson City Memorial	JEF
136	MO	Joplin Regional	JLN
137	MP	Francisco C Ada/Saipan International	GSN
138	MS	Golden Triangle Regional	GTR
139	MS	Greenville Mid-Delta	GLH
140	MS	Hawkins Field	HKS
141	MS	Olive Branch	OLV
142	MS	Stennis International	HSA
143	MS	Tupelo Regional	TUP
144	MT	Bozeman Yellowstone International	BZN
145	MT	Glacier Park International	GPI
146	MT	Missoula International	MSO
147	NC	Albert J. Ellis	OAJ
148	NC	Concord Regional	JQF

Count	State	Airport Name	Tower ID
149	NC	Hickory Regional	HKY
150	NC	Kinston Regional Jetport at Stallings Field	ISO
151	NC	Coastal Carolina Regional	EWN
152	NC	Smith Reynolds	INT
153	ND	Minot International	MOT
154	NE	Central Nebraska Regional	GRI
155	NH	Boire Field	ASH
156	NH	Lebanon Muni	LEB
157	NJ	Trenton Mercer	TTN
158	NM	Double Eagle II	AEG
159	NM	Four Corners Regional	FMN
160	NM	Lea County Regional	HOB
161	NM	Santa Fe Muni	SAF
162	NV	Henderson Executive	HND
163	NY	Francis S. Gabreski	FOK
164	NY	Niagara Falls International	IAG
165	NY	Griffiss International	RME
166	NY	Stewart International	SWF
167	NY	Ithaca Tompkins Regional	ITH
168	OH	Burke Lakefront	BKL
169	OH	Cincinnati Muni Airport Lunken Field	LUK
170	OH	Bolton Field	TZR
171	OH	Cuyahoga County	CGF
172	OH	Ohio State University	OSU
173	OK	Ardmore Muni	ADM
174	OK	Enid Woodring Regional	WDG
175	OK	Lawton-Fort Sill Regional	LAW
176	OK	Stillwater Regional	SWO
177	OK	Univ of Oklahoma Westheimer	OUN
178	OK	Wiley Post	PWA
179	OR	Aurora State	UAO
180	OR	Eastern Oregon Regional at Pendleton	PDT
181	OR	McNary Field	SLE
182	OR	Rogue Valley International-Medford	MFR
183	OR	Roberts Field	RDM
184	OR	Southwest Oregon Regional	OTH
185	OR	Portland-Troutdale	TTD
186	PA	Lancaster	LNS

Count	State	Airport Name	Tower ID
187	PA	University Park	UNV
188	PA	Williamsport Regional	IPT
189	PA	Arnold Palmer Regional	LBE
190	PA	Capital City	CXY
191	PR	Fernando Luis Ribas Dominicci	SIG
192	PR	Rafael Hernandez	BQN
193	SC	Donaldson Field	GYH
194	SC	Grand Strand	CRE
195	SC	Greenville Downtown	GMU
196	SC	Hilton Head	HXD
197	SD	Rapid City Regional	RAP
198	TN	McKeller-Sipes Regional	MKL
199	TN	Millington Regional Jetport	NQA
200	TN	Smyrna	MQY
201	TX	Arlington Municipal	GKY
202	TX	Brownsville/South Padre Island International	BRO
203	TX	Denton Enterprise	DTO
204	TX	Easterwood Field	CLL
205	TX	Fort Worth-Spinks	FWS
206	TX	Georgetown Muni	GTU
207	TX	Grand Prairie Muni	GPM
208	TX	Laredo International	LRD
209	TX	Conroe-North Houston Regional	CXO
210	TX	McAllen Miller International	MFE
211	TX	McKinney National	TKI
212	TX	Mesquite Metro	HQZ
213	TX	New Braunfels Regional	BAZ
214	TX	North Texas Regional	GYI
215	TX	Dallas Executive	RBD
216	TX	Valley International	HRL
217	TX	San Angelo Regional/Mathis Field	SJT
218	TX	San Marcos Regional	HYI
219	TX	Scholes International at Galveston	GLS
220	TX	Stinson Muni	SSF
221	TX	Sugar Land Regional	SGR
222	TX	Tyler Pounds Regional	TYR
223	TX	Victoria Regional	VCT
224	TX	TSTC Waco	CNW

Count	State	Airport Name	Tower ID
225	UT	Ogden-Hinckley	OGD
226	UT	Provo Muni	PVU
227	VA	Charlottesville-Albemarle	CHO
228	VA	Lynchburg Regional/Preston Glenn Field	LYH
229	VI	Henry E Rohlsen	STX
230	WA	Bellingham International	BLI
231	WA	Felts Field	SFF
232	WA	Olympia Regional	OLM
233	WA	Renton Muni	RNT
234	WA	Tacoma Narrows	TIW
235	WA	Walla Walla Regional	ALW
236	WA	Yakima Air Terminal/McAllister Field	YKM
237	WI	Appleton International	ATW
238	WI	Central Wisconsin	CWA
239	WI	Chippewa Valley Regional	EAU
240	WI	Kenosha Regional	ENW
241	WI	La Crosse Regional	LSE
242	WI	Southern Wisconsin Regional	JVL
243	WI	Lawrence J. Timmerman	MWC
244	WI	Waukesha County	UES
245	WI	Wittman Regional	OSH
246	WV	Greenbrier Valley	LWB
247	WV	Morgantown Muni-Walter L Bill Hart Field	MGW
248	WV	Mid-Ohio Valley Regional	PKB
249	WV	Wheeling Ohio Co	HLG
250	WY	Jackson Hole	JAC

Exhibit E. Reimbursable Hours and Estimated Minimum Cost From July 1, 2018, to June 30, 2020

Contract	Performance Period: July 1, 2018 to June 30, 2019		Performance Period: July 1, 2019 to June 30, 2020	
	Reimbursable Hours	Estimated Minimum Cost	Reimbursable Hours	Estimated Minimum Cost
A	36,670.30	\$1,072,567.08	37,008.30	\$1,082,453.58
B	6,230.33	\$183,171.70	0	\$0
C	0	\$0	0	\$0
D	9,206.15	\$273,848.56	12,397.90	\$370,201.29
E	6,339.80	\$188,292.06	0	\$0
F	31,766.60	\$926,261.41	35,922.10	\$1,051,395.97
G	0	\$0	0	\$0
Totals	90,213.18	\$2,644,140.81	85,328.30	\$2,504,050.84

Source: OIG analysis of FAA data

Exhibit F. Major Contributors to This Report

NELDA SMITH	PROGRAM DIRECTOR
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Appendix. Agency Comments




Federal Aviation Administration

Memorandum

Date: July 23, 2021

To: Matthew E. Hampton, Assistant Inspector General for Aviation Audits

From: H. Clayton Foushee, Director, Office of Audit and Evaluation, AAE-1 

Subject: Federal Aviation Administration's (FAA) Response to Office of Inspector General (OIG) Draft Report: FAA's Approach for Establishing and Modifying Air Traffic Controller Staffing Levels Needs Improvement To Properly Identify Staffing Needs at Contract Towers

The Federal Aviation Administration's Contract Tower (FCT) Program provides tower services at lower cost and with similar levels of safety with comparable FAA towers. The Program is important because it connects smaller airports and rural communities to the National Airspace System. As cited in previous OIG audit reports, FCTs have proven to be a safe, efficient, cost-effective method of providing air traffic control services at low activity airports.

The FAA agrees with the OIG draft report that maintaining the FCT Program's excellent safety record strongly relies upon repeatable processes to ensure a successful record of continued safety and oversight of the FCT Program. The FAA utilizes a unique process, providing site-specific data such as hours of operation, the number of air traffic operations, and type of air traffic, to determine the level of service required by the vendors. The vendor provides a staffing solution to meet the required level of service, utilizing its proprietary staffing model to establish staffing requirements at each FCT location.

The FAA provides the following comments to the OIG draft report:

- The FAA is assessing the July 1, 2018 to June 30, 2019 performance period and will make a determination regarding price adjustments to the contracts as prescribed in Clause H.26. Therefore, we are currently unable to substantiate or confirm OIG's assertion of \$2.6 million of questioned costs for the July 1, 2018 to June 30, 2019 performance period.
- The FAA has concerns with the OIG including the estimated hours and costs for the entire July 1, 2019 through June 30, 2020 performance period as indicated in recommendation 4 and Exhibit E of the draft report. Due to the COVID-19 pandemic, FAA granted a waiver during the performance period, which relieves the contractors from the performance level requirements in Clause H.26 from March 27, 2020 onward.

As a result, FAA will not make any price adjustments from March 27, 2020 onward. Therefore, we disagree with the OIG including and referencing any price adjustment or recoupment of funds for the entire performance period of July 1, 2019 to June 30, 2020.

Upon review of the draft report, the FAA concurs with the recommendations 1, 2 and 3 as written and plans to implement each recommendation by April 30, 2022.

The FAA partially concurs with recommendation 4 to recover overpayments to contractors, estimated minimum of \$2.64 million and minimum of \$2.50 million. The FAA will complete an assessment in determining any price adjustments for the July 1, 2018 to March 26, 2020 period of performance as required in Clause H.26 by February 28, 2022. If there are price adjustments, we plan to recover by August 31, 2022. The FAA non-concurs with conducting an assessment and applying Clause H.26 for March 27, 2020 onward as stated above.

We appreciate this opportunity to offer additional perspective on the OIG draft report. Please contact H. Clayton Foushee at Clay.Foushee@faa.gov if you have any questions or require additional information about these comments.

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