DOT/FAA/AM-25/55
Aviation Safety
Office of Aerospace Medicine
Washington, D.C. 20591

Development of the FAA Air Traffic Controller Academy Graduate Competency Model Technical Report

Lauren Cole[2]
Eleanor A. L. LaRose[2]
Audrey Shiomichi[2]
Elizabeth Lentz[2]
Jamie D. Barrett[1]
Chanda Sanders[1]

[1]Civil Aerospace Medical Institute (CAMI)
Federal Aviation Administration
Oklahoma City, OK 73169

[2]Personnel Decisions Research Institutes, LLC
Arlington, Virginia 22209

June 2025

NOTICE

This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The United States Government assumes no liability for the contents thereof.

This publication and all Office of Aerospace Medicine technical reports are available in full text from the Civil Aerospace Medical Institute's publications website and at the National Transportation Library's Repository & Open Science Access Portal.

Technical Report Documentation Page

1. Report No. DOT/FAA/AM-25/55	2. Title & Subtitle Development of the FAA Air Traffic Controller Academy Graduate Competency Model
3. Report Date June 2025	4. Performing Organization Code AAM-520
5. Author(s) L. Cole, E. A. L. LaRose, A. Shiomichi, E. Lentz, J.D. Barrett, C. Sanders	6. Performing Org Report Number Not applicable
7. Performing Organization Name & Address Civil Aerospace Medical Institute (CAMI) Federal Aviation Administration Oklahoma City, OK 73169	8. Contract or Grant Number Not applicable
9. Sponsoring Agency Name & Address U.S. Department of Transportation Federal Aviation Administration NextGen Human Factors Division (ANG-C1) Washington, D.C. 20591	10. Type of Report & Period Covered Technical Report
11. Supplementary Notes Not applicable	

12. Abstract

Air Traffic Controller (ATC) training provides new and previous-experience hires the opportunity to learn and practice various knowledge, skills, and abilities (KSAs) required to control air traffic successfully. However, there is a lack of understanding of the minimum competencies and proficiencies new hires possess when they arrive at a field facility, which could influence the field training experience and potentially affect certification rates at the first facility. To address this gap, a competency model was developed for Tower and En Route training options at the FAA Academy. The Federal Aviation Administration (FAA) Civil Aerospace Medical Institute (CAMI) conducted research directed by the National Airspace System (NAS) Human Factors Research Division, NAS Human Factors Safety Laboratory, AAM-520, to develop a competency model for the expectations for performance of trainees upon successful completion of the Academy training. In support of this effort, CAMI contracted the services of PDRI by Pearson. The contractor team applied rigorous job analysis methods to develop and validate the competency model. As such, three primary steps were taken: developing a framework and draft competencies and reviewing them with instructors and evaluators, developing and administering a job analysis survey to validate the competencies, and revising the competency model based on the results of the survey. This report provides details on the steps taken to develop the model and present the final model for use within and outside of the FAA.

13. Key Word Air Traffic Control, Training, Competency Model		14. Distribution Statement Document is available to the public through the National Transportation Library: http://www.faa.gov/go/oamtechreports/
15. Security Classification (of this report) Unclassified	16. Security Classification (of this page) Unclassified	17. No. of Pages 57

Acknowledgments

This research was completed with funding from the Federal Aviation Administration (FAA) Human Factors Division (ANG-C1) in support of the Air Traffic Organization (ATO). The authors thank FAA Program Manager Karl Kaufmann and Reshma Kumar (ANG-C1), technical sponsor Stephanie Kreseen (AJI-342), and the FAA Academy for their contributions to the work.

Table of Contents

List of Tables

List of Figures

1. Introduction

The Federal Aviation Administration (FAA) Civil Aerospace Medical Institute (CAMI) identified a need to assist the National Airspace System (NAS) Human Factors Research Division, NAS Human Factors Safety Laboratory, AAM-520, with the development of a competency model for Air Traffic Controller (ATC) Academy Graduates to inform training standards over the course of the FAA Academy. The competencies define what is required for successful performance while at the Academy to ensure developmental ATCs are ready for field training upon FAA Academy graduation. In response to this need, CAMI retained the services of PDRI to develop and validate a competency model for ATC Academy graduates.

ATC training at the FAA Academy provides new hires the opportunity to learn and practice various knowledge, skills, and abilities (KSAs) required to control air traffic successfully. However, there is a potential misalignment of expectations between what trainees should know upon leaving the Academy and the competencies and proficiencies that developmental ATCs possess when they arrive at a field facility, which could influence the field training experience and potentially affect certification rates at developmental ATCs' first facility.

Identifying and defining the competencies and proficiency levels required for ATC new hires, as well as identifying the minimum qualifications and proficiencies for training at the FAA Academy and in the field, can lead to the development of competency-based training standards. These standards can be used to define the minimum level of knowledge and skill needed to be successful at various stages of FAA Academy training up until graduation from the FAA Academy for ATC new hires. Identifying these proficiency levels can support the creation of competency-based training approaches that lead to greater effectiveness and efficiency of the ATC training program at the FAA Academy.

Competency models can provide a firm foundation for organizations to build an integrated and strategically aligned human resource system to support the entire employment life cycle. This includes competency-based practices that guide recruitment, selection and promotion, performance management, training and development, career pathing, and strategic workforce planning. Anchoring these practices in a common set of competencies, both aligned with the mission and strategic goals of the organization and required for effective job performance, standardizes expectations and ensures these practices have a positive impact (Campion et al., 2011).

The competency development process utilizes job analysis techniques that capture the information required and provide the technical documentation needed to meet professional standards generally recognized by the government, the courts, and the organizational psychology profession, including the Uniform Guidelines on Employee Selection Procedures (1978), the Standards for Educational and Psychological Testing (2014), and the Principles for the Validation and Use of Personnel Selection Procedures (2018).

This report describes the procedures used by PDRI to develop and validate the FAA ATC Academy Graduate Competency Model, which specifies the competencies and proficiencies expected of ATC new hires upon completing their training at the FAA Academy. Specifically, this report presents information on the FAA ATC Academy Graduate competency framework (Section 1), the development of core and technical competencies (Section 2), the development and administration of surveys to collect information on the importance of the competencies and specific work behaviors for each track (Section 3), analyses and results of the data acquired during the administration of the surveys (Section 4), the development of behavioral indicators (Section 5), and finalization of the competency model (Section 6).

1. Section 1: Air Traffic Controller Academy Graduate Competency Framework

This section describes the Air Traffic Controller (ATC) Academy Graduate competency model framework that guided competency development and validation tasks, including:

- Define competencies.
- Review the Department of Transportation Competency Model framework.
- Develop the ATC Academy Graduate Competency Model blueprint.

1.1. Step 1: Define Competencies

A competency can generally be defined as a measurable pattern of knowledge, skills, abilities, or other characteristics that individuals need to perform work roles or functions successfully and that can be shown to differentiate high and low performers (Corporate Leadership Council, 2003; Mirabile, 1997; Rodriguez et al., 2002; Schippmann et al., 2000; Spencer et al., 1994). Competencies define, in a common language that can be understood by all members of an organization, how employee behavior contributes to organizational success. A competency model represents the collection of competencies required for effective job performance (Dubois & Rothwell, 2004; Green, 1999; Lucia & Lepsinger, 1999).

Within a competency model, there are different groups of competencies. Grouping competencies helps to organize and simplify the competency model (Spencer & Spencer, 1993). For this effort, the competencies would be grouped by core and technical competencies. The core competencies describe the competencies that apply to all employees, regardless of organization, job series, or location. Core competencies provide consistency for all employees and a common language to describe many of the basic or common requirements for effective performance across the organization. The technical competencies describe the competencies necessary for technical proficiency within the specific job series. Technical competencies are more narrowly defined for occupations, specialties, or discipline areas. These competencies provide greater detail about the specific requirements for a given occupation and supplement the core competencies.

1.2. Step 2: Review the Department of Transportation Competency Model Framework

The Department of Transportation (DOT) had competency models developed for all mission-critical occupations (2014). To maintain consistency with the DOT model and future FAA competency models, the structure and format of the DOT model served as the foundation for the ATC Academy Graduate model. The DOT models include core and technical competencies, competency definitions, work behaviors, and behavioral indicators across different levels of proficiency.

1.3. Step 3: Develop the ATC Academy Graduate Competency Model Blueprint

PDRI developed the ATC Academy Graduate Competency Model to include both core and technical competencies. These competencies are intended to focus on behaviors that are common across ATC tracks (En Route and Tower), as well as competencies that differentiate En Route and Tower. Although TRACON was initially included in the scope of this competency model, it was determined that this track is an extension of the En Route environment, and any differences in competencies would emerge after the Academy. Therefore, TRACON was not included in the competency model.

Each competency includes a competency name and behavioral definition, defining work behaviors and behavioral indicators across different levels of proficiency. The initial outline for an individual competency within the ATC Academy Graduate Competency Model is displayed in Figure 1. Note that the proficiency levels were edited later for the validation survey.

Competency Name		
Behavioral Definition	Provides a high-level summary of how the competency is manifested on the job.	
Work Behaviors	Describes how the competency is manifested on the job by providing precise descriptions of employee behavior.	
Proficiency Level	**Behavioral Indicators**	
Level 5 Expert	• High complexity; applies competency in exceptionally difficult or challenging situations. • Minimal supervision; mentors and advises others.	Provides detailed behavioral examples that define each level of proficiency for each competency.
Level 4 Advanced	• Multiple, varying, and complex; applies competency in considerably difficult situations. • Limited supervision; requires little or no guidance.	
Level 3 Intermediate	• Multiple, varying complexity; applies competency in difficult situations. • General supervision; requires occasional guidance.	
Level 2 Basic	• Routine complexity; applies competency in somewhat difficult situations. • Close supervision; requires frequent guidance.	
Level 1 Awareness	• Basic complexity; applies competency in the simplest situations. • Close supervision; requires close and extensive guidance.	

Figure 1. Initial Competency Framework

2. Section 2: Development of Core and Technical Competencies

This section describes the approach used to develop the ATC Academy Graduate core and technical competencies. The competencies include definitions comprising broad work activities along with more specific behavioral indicators that are required for successful evaluation and graduation from the Academy. Development of the competencies began with previously established core and/or technical competencies utilized in other FAA roles. The relevant competencies were then modified by tailoring the competency definitions and work behaviors to describe the ATC Academy learning

environment specifically. The process of developing the definitions and work behaviors associated with each of the competencies involved the following steps:

- Review background information.
- Conduct familiarization visits.
- Develop draft competencies, definitions, and work behaviors.
- Conduct workshops.

2.1. Step 1: Review Background Information

The first step in developing the draft competency definitions and work behaviors was to gain an understanding of the instructional content covered in the Basics for ATC course and at the ATC Academy. This was accomplished by reviewing a number of resources provided by the FAA, which included the DOT Core Competency Model, Basics for ATC lesson plans, ATC Academy lesson plans, and additional documents that could provide insight into key competencies and work behaviors. Appendix A provides a summary of resources reviewed at the time of this project effort.

2.2. Step 2: Conduct Familiarization Visits

As a next step, PDRI participated in familiarization visits to observe the various tracks and stages of the ATC Academy. PDRI participated in a familiarization visit to the Academy in Oklahoma City, Oklahoma. A team of four (two members from CAMI and two members from PDRI) conducted ATC Academy familiarization visits across multiple days in February 2024. The team observed ATC trainees in academics, beginning simulations, and advanced simulations portions of the Academy.

During the visit, the team met with Academy instructors and supervisors, observed the training environment and equipment, and held discussions to ensure a better understanding of the Academy and its evaluation requirements. The project team assured trainees, incumbents, and supervisors that individual performance was not being evaluated or critiqued. Discussion and project team note-taking focused on the important behaviors observed and understanding the typical day-to-day classroom and simulation activities.

2.3. Step 3: Develop Draft Competencies, Definitions, and Work Behaviors

Based on the relevant background information collected and reviewed, along with the information gathered during the familiarization visits, PDRI developed draft competency content for both the core and technical competencies. This content included competency names, definitions, and example work behaviors.

In developing draft content, key consideration was given to the ATC Academy lesson plans, as this competency model focuses on the content taught up to graduation from the ATC Academy. For the core competencies, the DOT Competency Model served as a starting point, while the TRACON Draft Training Standards provided the basis for the technical competencies. The core and technical competencies were then modified to align with the language and content included in the ATC Academy lesson plans.

2.4. Step 4: Conduct Workshops

Next, PDRI conducted virtual workshops with En Route and Tower ATC Academy instructors and evaluators to review and revise the draft content and develop new content, as needed. Academy leadership assisted the project team with identifying appropriate individuals to participate in workshops. Before the session, participants received a calendar invitation containing a Microsoft Teams link for the meeting. The calendar invitation also included an agenda and project briefing materials.

The purpose of the workshops was to ensure that the competencies, behavioral definitions, and work behaviors were relevant, accurate, and applicable for ATC new hires, from Basics to Academy graduation. Workshops were led following a structured protocol that began with a project briefing and then guided participants through the process of reviewing, discussing, and revising the competencies, behavioral definitions, and work behaviors.

Separate workshops were conducted to review the core and technical competencies for each track (i.e., Tower and En Route), totaling four sessions across two days. In the first workshops, participants reviewed the core competencies, while participants in the second workshops reviewed the technical competencies. The core competency review workshops included four participants: two for Tower and two for En Route. The technical competency review workshops included five participants: three for Tower and two for En Route. These four workshops occurred in June of 2024. Workshops were conducted virtually via MS Teams and lasted approximately three hours.

In each workshop, participants completed an informed consent and background form (see Appendix B for the Participant Background Form). After completing the informed consent and background form, facilitators guided participants through a comprehensive review of competencies, along with the competencies' behavioral definitions and work behaviors to ensure they accurately represented the FAA and the knowledge required of ATC new hires and Academy graduates prior to entering the field.

Participants in the core workshops confirmed that the core competencies adapted from the DOT competency model were mostly relevant and generalizable to the ATC new hires. Participants in both tracks agreed that the *Situation Awareness* competency should be moved from the technical competency list and included as a core competency.

As with the core competency review workshops, participants in the technical competency workshops provided feedback to ensure that the competencies accurately reflected and were tailored to each of the respective tracks.

After the core and technical workshops were complete, PDRI consolidated feedback and sent the revised competencies to project stakeholders for additional input prior to finalization and survey administration. The results of these workshops were revised lists of technical competencies, including behavioral definitions and key work behaviors. See Tables 1 and 2 for participant demographics for each set of workshops.

Table 1. Workshop Participant Demographics – Rounds One and Two

	Core		Technical	
	n	%	n	%
Participant Type (Select all that apply)				
Instructor	1	25%	1	20%
Evaluator	0	0%	0	0%
Supervisor	0	0%	0	0%
Multiple Roles	3	75%	4	80%
Other	0	0%	0	0%
Primary Track				
En Route	2	50%	2	40%
Tower	2	50%	3	60%
Male or Female				
Male	4	100%	5	100%
Female	0	0%	0	0%
Ethnicity				
Not Hispanic or Latino	3	75%	4	80%
Hispanic or Latino	1	25%	1	20%
Prefer Not to Disclose	0	0%	0	0%
Race				
American Indian/Alaska Native	0	0%	0	0%
Asian	0	0%	0	0%
Black/African American	1	25%	1	20%
Native Hawaiian/ Pacific Islander	0	0%	0	0%
White/Caucasian	2	50%	3	60%
Other	1	25%	1	20%
Two or More	0	0%	0	0%
Prefer Not to Disclose	0	0%	0	0%

Note. The same participant could participate in both core and technical workshops.

Table 2. Competency Review Workshop Participant FAA Background – Rounds One and Two

	Core			Technical		
	n	Mean	SD	n	Mean	SD
Years in the FAA	4	30.3	4.99	5	27.0	8.46
Years as Academy Instructor, Evaluator, or Supervisor	4	4.8	2.22	5	4.2	2.28
Years working in the ATC environment	4	36.3	3.86	5	31.4	11.35

Note. The same participant could participate in both core and technical workshops.

3. Section 3: Development and Administration of the Job Analysis Surveys

The next step was to develop and administer the job analysis survey. A key consideration in developing any human resource practice, especially those to make talent decisions, is ensuring they are job-related. A job analysis helps establish job-relatedness by confirming that the identified competencies and work behaviors are required for the job and needed for successful performance. Or in this case, confirming they are required for the successful completion of Academy training. Professional and legal guidelines emphasize the important role of job analysis. As such, this competency development process utilizes job analysis techniques to capture the information required and provide the documentation needed to meet professional standards generally recognized by the government, the courts, and the industrial-organizational psychology profession. Accordingly, the methods used to conduct the competency model surveys were consistent with the Uniform Guidelines on Employee Selection Procedures (1978), the Principles for the Validation and Use of Personnel Selection Procedures (2018), and the Standards for Educational and Psychological Testing (2014).

The purpose of the job analysis survey was to collect information from FAA ATC instructors and evaluators to verify the importance of the core and technical competencies, and to gather information about expectations for levels of proficiency with the competencies at the different training levels (Basics, Academics, Beginning Simulations, Advanced Simulations). This process consisted of the following steps:

- Step 1: Define proficiency levels.
- Step 2: Develop the job analysis survey.
- Step 3: Administer the job analysis survey.

3.1. Step 1: Define Proficiency Levels

The ATC Academy Graduate Competency Model targets a unique population in that the highest level of expected proficiency is a developmental ATC who graduated from the ATC Academy but is not yet at full performance. Therefore, it was anticipated that the traditional Beginner-to-Expert proficiency scale would not apply to this competency model. A workshop was held with a representative group of subject matter experts (SMEs) across the FAA Academy leadership, En Route track, and Tower track to define the appropriate proficiency scale. SMEs were presented with options for levels and labels and reached consensus on a four-point scale that aligned with different levels of training, as shown in Figure 2.

Training Level	Proficiency Level	Definition
Advanced Simulations	**Level 4 Advanced**	• High complexity; applies competency in exceptionally difficult or challenging situations. • Minimal supervision; mentors and advises others.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.
Academics	**Level 2 Basic**	• Applies the competency in difficult situations. • Requires occasional guidance.
Basics	**Level 1 Awareness**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.

Figure 2. Final Proficiency Level Framework

This scale was used in the job analysis survey to gather feedback on the expected proficiency level for each competency at each level of training.

3.2. Step 2: Develop the Job Analysis Survey

The job analysis survey was constructed for ATC instructors and evaluators. The survey provided participants with a brief description of the survey and asked them to provide a series of ratings for each competency/work behavior. To encourage honesty and openness in responses, instructions indicated to respondents that results would be reported to the FAA in aggregate form with no individual responses shared. In addition, the information provided would not be used to make any personnel decisions, nor would it influence future employee opportunities.

The survey included both the core and technical competencies for En Route and Tower tracks. In addition, a brief set of occupational information items (i.e., years of experience, ATC track, years with FAA) was included to describe the survey respondents and to evaluate sample representativeness in comparison to the population of ATC instructors and evaluators. Respondents were given the option to provide basic demographic information at the end of the survey.

3.1.2. Survey Contents

The job analysis survey asked respondents to complete two ratings for the competencies and work behaviors: level of importance and expected proficiency level required for successful ATC evaluation. Respondents were asked to do this for the core competencies as well as the technical competencies for the track (either En Route or Tower) in which respondents felt most comfortable rating.

First, respondents were asked to decide if a competency was important for successful ATC evaluation at each training level (Basics, Academics, Beginning Simulations, Advanced Simulations) using the following scale:

NB = No Basis to rate (no experience instructing at this level)
0 = Not Needed for successful ATC evaluation
1 = Minor Importance for successful ATC evaluation
2 = Some Importance for successful ATC evaluation
3 = Important for successful ATC evaluation
4 = Very Important for successful ATC evaluation
5 = Extremely Important for successful ATC evaluation

If a respondent did not have any experience instructing ATC trainees at a specific training level, the respondent was instructed to rate the level of importance of the competency as "NB" for "No Basis to rate." Additionally, if a respondent decided the competency was not needed for effective performance, the respondent was instructed to rate the level of importance of the competency as "0" for "Not Needed." Respondents rating a competency as either "No Basis" or "Not Needed" were instructed to skip the expected proficiency level rating for the corresponding training level for the competency and to move on to the training level or competency.

Next, respondents were asked to provide ratings for the level of proficiency of each competency required for successful ATC evaluation, using the following scale:

1 = Awareness. Applies the competency in the simplest situations; requires close and extensive guidance.
2 = Basic. Applies the competency in somewhat difficult situations; requires frequent guidance.
3 = Intermediate. Applies the competency in difficult situations; requires occasional guidance.
4 = Advanced. Applies the competency in considerably difficult situations; generally requires little or no guidance.

Taken together, these data provide a basis for ensuring that the work behaviors were job-relevant, thus addressing both professional and legal standards for validity. See Appendix C for the job analysis survey.

3.3. Step 3: Administer the Job Analysis Survey

The job analysis survey was administered using PDRI's web-based platform. While both FAA employees and contractors are Academy instructors, the FAA decided to administer the survey to FAA employees only, as contractors have less visibility into the larger picture of training goals at the FAA. A census survey approach was used to allow every FAA instructor/evaluator the opportunity to provide information on the importance and relevance of the competencies and work behaviors for ATC new hires.

The FAA project team provided PDRI with a complete list of FAA ATC instructors and evaluators, along with their email addresses. Emails with unique survey links were sent to each participant in September 2024. To encourage participation in the surveys, the FAA project team supported several recruitment and announcement campaigns, including communication from Academy leadership, participant reminder emails, and extension of the survey administration period to accommodate work and personal schedules.

4. Section 4: Job Analysis Survey Data Analyses and Results

The primary purpose of the job analysis survey was to identify: 1) important competencies and work behaviors for successful evaluation and ATC Academy graduation, and 2) the level of proficiency for each competency at each training/proficiency level for successful evaluation in the ATC Academy.

This section of the report describes the data analyses from the job analysis surveys. These steps, which are described in detail below, included:

- Step 1: Screen responses for quality, response rate, and sample demographics.
- Step 2: Analyze data to assess data quality and present descriptive results describing the competencies and work behaviors.
- Step 3: Identify important competencies and work behaviors.
- Step 4: Identify competency training/proficiency level requirements.

4.1. Step 1: Screen Responses for Quality, Response Rate, and Sample Demographics

A total of 29 FAA employees across all ATC Academy instructors and evaluators were emailed the link to the online survey. From there, 21 respondents completed at least part of the survey, yielding a response rate of 72.4%. To ensure respondents responded conscientiously to the survey, a thorough examination of survey responses was performed. Three data cleaning checks were conducted – missing data, lack of variance, and illogical responses.

One respondent indicated they were not a current ATC Academy instructor or evaluator. As a result, the respondent was exited from the survey. For the first data cleaning procedure, data were examined for excessive missing data. Two of the cases had excessive missing data and were removed from the dataset. Next, data were examined for lack of variance. Cases with a standard deviation of zero for either the competency or work behavior importance ratings indicate that a respondent provided the same response for all competency and/or work behavior importance ratings. Providing the same response across all importance ratings may suggest that the respondent simply clicked through the items, not paying attention or responding thoughtfully when completing the survey. One respondent rated “No Basis” for all the core and technical competencies’ importance ratings. Given this, one case was removed from the dataset. Lastly, data were examined for illogical ratings. Ratings were flagged as illogical if a

respondent indicated that a competency was not important but rated it as requiring more than an Awareness level for competency proficiency at that training level. This pattern likely indicates that a respondent was not filling out the survey thoughtfully. While some respondents gave illogical responses, no respondent had an excessive number. Given this and the small sample size, no cases were removed due to illogical responses.

With the data cleaning procedures outlined above, four cases were removed from the dataset. A total of 17 cases remained in the dataset and were used for subsequent analyses. Table 3 presents demographics of the survey respondents, and Table 4 presents respondents' average time spent working in the ATC position and at the FAA.

Table 3. Survey Respondent Demographics

	n	%
Male or Female		
Male	7	33.3%
Female	5	23.8%
Prefer Not to Disclose	1	4.8%
Missing	8	38.1%
Ethnicity		
Not Hispanic or Latino	12	57.1%
Hispanic or Latino	0	0.0%
Prefer Not to Disclose	1	4.8%
Missing	8	38.1%
Race		
American Indian/Alaska Native	0	0.0%
Asian	0	0.0%
Black/African American	0	0.0%
Native Hawaiian/ Pacific Islander	0	0.0%
White/Caucasian	10	47.6%
Other	1	4.8%
Two or More	1	4.8%
Prefer Not to Disclose	1	4.8%
Missing	8	38.1%

4.2. Step 2: Analyze Data

Descriptive statistics were calculated for the core and technical competency sections of the job analysis survey. Data analyses were conducted with all respondents for core competency importance and proficiency ratings. For the technical competency importance and proficiency ratings, the sample was split based on the ATC track for which respondents felt most comfortable completing ratings. Given the small sample sizes for this survey effort, the results are far less stable, as the results can be skewed by a relatively few aberrant responses. This limits the conclusions that can be drawn from the data. The analyses are detailed below by survey section.

4.1.2. Competency Analyses

The following descriptive analyses were calculated for each competency in the surveys:

- Percentage of respondents who indicated that the competency was “Not Needed” for ATC new hires for a given training/proficiency level.
- Level of importance means and standard deviations for the competency for a given training/proficiency level.
- Proficiency level means and standard deviations for the competency for a given job training/proficiency level.

4.3. Step 3: Identify Important Competencies

One of the primary goals of the data analyses was to identify the important competencies to retain in the ATC Academy Graduate Competency Model. The criteria for determining competency importance are described below.

First, for a competency to be deemed important, it had to be rated as “Not Needed” by 10% or less of respondents. This means that the majority of respondents (> 90%) needed to indicate that the competency was of some importance to the ATC Academy. Additionally, a competency had to receive a mean level of importance rating of 3.00 (“Important for successful ATC evaluation”) or higher from respondents. These requirements needed to be met for the Advanced Simulations training level for a competency to be classified as important. Across both the En Route and Tower tracks, all core and technical competencies met these requirements and were thus determined important. Appendix D presents the core competency importance results, while Appendices E and F present the technical competency importance results for the En Route and Tower tracks, respectively.

4.4. Step 4: Identify Competency Proficiency Level Requirements

In addition to identifying the important competencies, the proficiency required for each competency was also identified for each training/proficiency level.

Responses from the survey were analyzed to identify the proficiency level of each competency required for effective ATC trainee performance at each of the training levels (Basics, Academics, Beginning Simulations, and Advanced Simulations). To determine the level of proficiency of a competency at a given job level, means and standard deviations were computed for respondents who indicated that the competency was of some importance for the training level (i.e., chose a response other than “Not Needed” or “No Basis to Judge”). Proficiency level results for the core competencies are presented in Appendix G. Proficiency level results for the En Route and Tower technical competencies are presented in Appendices H and I, respectively. These results were then used to build out the behavioral indicators for each competency, described in the next section.

5. Section 5: Development of Behavioral Indicators

This section describes the development of behavioral indicators for the core and technical competencies. Behavioral indicators reflect the process of translating the work behaviors validated in the surveys into meaningful descriptions of performance at different proficiency levels. The process of developing the behavioral indicators included the following approach:

1. Develop draft behavioral indicators.
2. Conduct behavioral indicator workshops.

5.1. Step 1: Develop Draft Behavioral Indicators

The first step in developing draft behavioral indicators consisted of an extensive review of information about the ATC new-hire role. This included but was not limited to the project team's familiarization visit notes, the DOT Core Competency Model, information provided in competency development workshops, background information, and training materials provided by the FAA (see Appendix A).

Behavioral indicators were developed for each competency from training/proficiency Level 2 - Academics through Level 4 - Advanced Simulations. Additionally, a description of the lowest proficiency level, Level 1- Basics/Awareness, was provided, although behavioral indicators were not developed for this level. Any individuals who do not meet the Level 2-Academics description would be considered Level 1.

5.2. Step 2: Conduct Behavioral Indicator Workshops

Once the initial behavioral indicators were drafted, PDRI conducted virtual workshops with ATC Academy instructors and evaluators to review and revise the draft behavioral indicators and, as needed, develop new behavioral indicators. Academy leadership assisted the project team with identifying appropriate individuals to participate in workshops. SMEs that participated in previous workshop sessions (rounds one and two) could participate in these sessions. Prior to the session, participants received a calendar invitation containing a Microsoft Teams link for the meeting. The calendar invitation also included an agenda and project briefing materials.

The purpose of the workshops was to ensure that the behavioral indicators were relevant, accurate, and applicable for ATC new hires, from Basics to Academy graduation. Workshops were led following a structured protocol that began with a project briefing and then guided participants through the process of reviewing, discussing, and revising the behavioral indicators.

Separate workshops were conducted in November 2024 to review the behavioral indicators for the core and technical competencies for each track (i.e., Tower, En Route), totaling four sessions across two days. In the first workshops, participants reviewed the core competencies, while participants in the second workshops reviewed the technical competencies. The core competency behavioral indicator workshops

included five participants: three for Tower and two for En Route. The technical competency behavioral indicator workshops also included five participants: three for Tower and two for En Route. Workshops were conducted virtually via Microsoft Teams.

In each workshop, participants completed a background form (see Appendix B for the Participant Background Form) and a verbal informed consent briefing. Workshops were led following a structured protocol that began with a project briefing and then guided participants through the process of reviewing, discussing, and revising the behavioral indicators to ensure they accurately represented the FAA and ATC environments, along with the knowledge required of ATC new hires and Academy graduates prior to entering the field. In each workshop, competencies, behavioral definitions, and work behaviors were presented, followed by a review and discussion of the behavioral indicators, with revisions as necessary. Participants were reminded that the behavioral indicators were example behaviors, with proficiency levels loosely aligned with training levels (Basics, Academics Training, Beginning Simulations, and Advanced Simulations).

After the core and technical workshops were complete, PDRI consolidated feedback and sent the revised competencies to project stakeholders for additional input prior to finalization and survey administration. The results of these workshops were revised lists of technical competencies, including behavioral definitions and key work behaviors. See Tables 4 and 5 for participant demographics for the round three and four workshops.

Table 4. Workshop Participant Demographics – Rounds Three and Four

	Core		Technical	
	n	**%**	**n**	**%**
Participant Type (Select all that apply)				
Instructor	3	60%	3	60%
Evaluator	0	0%	0	0%
Supervisor	0	0%	0	0%
Multiple Roles	2	40%	2	40%
Other	0	0%	0	0%
Primary Track				
En Route	2	40%	2	40%
Tower	3	60%	3	60%
Male or Female				
Male	5	100%	5	100%
Female	0	0%	0	0%
Prefer Not to Disclose	0	0%	0	0%
Ethnicity				
Not Hispanic or Latino	4	80%	4	80%
Hispanic or Latino	1	20%	1	20%
Prefer Not to Disclose	0	0%	0	0%
Race				
American Indian/Alaska Native	0	0%	0	0%
Asian	0	0%	0	0%

	Core		Technical	
	n	%	n	%
Black/African American	1	20%	1	20%
Native Hawaiian/ Pacific Islander	0	0%	0	0%
White/Caucasian	2	40%	2	40%
Other	1	20%	1	20%
Two or More	1	20%	1	20%
Prefer Not to Disclose	0	0%	0	0%

Note. The same participant could participate in both core and technical workshops.

Table 5. Competency Review Workshop Participant FAA Background – Rounds Three and Four

	Core			Technical		
	n	Mean	SD	n	Mean	SD
Years in the FAA	5	23.2	8.23	5	23.2	8.23
Years as Academy Instructor, Evaluator, or Supervisor	5	2.5	2.50	5	2.5	2.50
Years working in the ATC environment	5	28.0	12.33	5	28.0	12.33

Note. The same participant could participate in both core and technical workshops.

After reviewing and revising the behavioral indicators, we asked participants to confirm that the revised behavioral indicators illustrate the expected level of performance at each of the four proficiency levels. Due to the small number of participants in each workshop, this input was gathered verbally rather than through a formal rating process. All workshops achieved sufficient SME agreement for all training/proficiency levels for each set of competencies and behavioral indicators reviewed.

The results of these workshops were revised behavioral indicators for the core and technical competencies.

6. Section 6: Finalization of Competency Model

This section describes the steps taken to finalize the ATC Academy Graduate Competency Model and presents the final model. The process involved the following:

- Review and Consolidate Feedback.
- Gather FAA Project Team Feedback.
- Finalize the ATC Academy Graduate Competency Model.

6.1. Step 1: Review and Consolidate Feedback

Following each set of workshops, the behavioral indicators and suggested edits were reviewed. The En Route SMEs reviewed the core competencies first, followed by the Tower SMEs. The Tower SMEs reviewed the version edited by the En Route SMEs and made their edits to that version. The results from the Tower workshop represented consolidated feedback from all SMEs. The PDRI team then reviewed to deconflict any feedback that differed between the groups. Edits were made at the Behavioral Indicator level only, to maintain consistency with the competency name, definitions, and work behaviors that were validated through the survey. Across the competencies, most of the edits reflected a slight shift down in levelling. For example, where the Level 4 Advanced behaviors read too advanced for Academy graduates, the Level 3 behaviors may have been moved up to Level 4. Then Levels 2 and 3 were adjusted to accommodate the shift. Here is one example:

Competency: Adaptability and Resilience

- Original Level 4 behavior: “Seamlessly adapts to unexpected changes, modifying strategies efficiently and expeditiously.”
- Original Level 3 behavior and NEW Level 4 behavior: “Adapts to changes or evolving situations independently, adjusting actions with minimal oversight.”
- NEW Level 3 behavior: “Adjusts to changes or evolving situations with support but may initially struggle to shift focus.”

There were also some minor wording changes (i.e., “audits” to “assesses”, “synthesizes” to “interprets”, “methodically” to “systematically”) to better align with language used at the Academy.

For the technical competencies, we facilitated workshops for each of the En Route and Tower tracks, allowing participants to focus on the track requirements and ensure the behavioral indicators generalized to the overall track. Where competencies overlapped between the tracks, feedback from one track that appeared to generalize to another track was shared in subsequent workshops. As a result, feedback aligned across sessions as they were completed but also allowed for track-specific nuances and feedback. However, there were a few instances in which edits made by one group (i.e., wording change or moving a behavioral indicator to a different proficiency level) were not shared with all participants. For example, an edit from the Tower workshop reviewed changes made from previously conducted En Route workshops, but the En Route workshop did not have the opportunity to review Tower workshop feedback. Edits that we thought would benefit the larger model, not just the track-specific competency, were discussed to determine the extent to which the edit would or would not generalize within and across tracks (e.g., changing the “deadwood” term to “no longer pertinent strip”). These edits were highlighted, and the FAA project team was provided the opportunity to review before finalizing the model.

6.2. Step 2: Gather FAA Project Team Feedback

There were a few pieces of SME feedback that were discussed with the FAA Project Team and an Academy representative, as they had potentially larger impacts on the final model:

Core Competencies:

- The SMEs noted that the definitions of each proficiency level may or may not align with the expectations at that level. For example, Tower SMEs felt that they may have been written too highly. The decision was made to keep the definitions as-is and supplement the proficiency-level definitions with the level of training that aligns with the proficiency level (e.g., Level 2 Basic is aligned with Academics training) to help clarify the alignment.

- The Tower SMEs gave feedback on the Attention to Detail competency that they felt all Training Levels should be a Level 4 Advanced proficiency. They viewed the competency as critical and felt the expectation would not change throughout the Academy training. The decision was made to keep the proficiency levels as-is to allow for growth and improvement in this area while at the Academy.

Tower Technical Competencies:

- The Tower SMEs suggested renaming Airspace & Procedures to Airspace/Airport & Procedures to encompass all the airport work they do. This change was approved.

- The Tower SMEs suggested removing the following competencies due to the low level of proficiency and coverage needed at the Academy:

    - Relief Briefing
    - Equipment Utilization
    - Weather

    Equipment Utilization was approved to be removed as the equipment varies greatly across facilities. Relief Briefing and Weather were both retained as awareness of those concepts is still important during the Academy. However, the proficiency levels were adjusted so that Academics, Beginning Simulations, and Advanced Simulations were all aligned to the Level 2 Basic proficiency.

No additional review was required for the En Route technical competencies. Following the feedback review discussion, the competency model was shared with the FAA project team for final feedback and review. No additional edits were made after the review discussion.

6.3. Step 3: Finalize the ATC New Hire Competency Model

The final ATC Academy Graduate Competency Model includes ten FAA core competencies, thirteen En Route technical competencies, and eleven Tower technical competencies. Thus, the final model includes a total of 21 competencies to represent both tracks, with En Route having an additional two unique technical competencies.

In the following pages, the final ATC Academy Graduate Competency Model, including competency name, behavioral definition, defining work behaviors, and behavioral indicators across four different proficiency levels, is presented.

ATC New Hire Core Competencies

		Communication	
Definition		Expresses and relays information in a timely, clear, and precise manner.	
Work Behaviors		• Conveys relevant information in a clear, concise, and timely manner. • Ensures the transfer of complete and correct information. • Tailors communication (e.g., tone, technical detail) based on the recipient of the information and the communication medium. • Actively listens to and understands others. • Responds promptly to questions, directions, and requests. • Uses standard and prescribed phraseology.	
Training Level	**Proficiency Level**	**Definition**	**Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Responds to difficult/complex questions with ease, responding promptly and accurately in a clear, concise, credible, and courteous manner. • Consistently uses standard and prescribed phraseology in novel, non-routine, or complex scenarios. • Thoroughly documents information accurately and legibly. • Briefs information timely, concisely, and in a manner that is easily understood.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Communicates information clearly and concisely, conveying main ideas and supporting points. • Handles questions from others appropriately, asking clarifying questions when necessary. • Adapts communication style to audience and their level of understanding. • Addresses issues with colleagues appropriately (e.g., tone, detail) and in a timely manner when responding in writing, with supervision as needed. • Uses standard and prescribed phraseology in different volume scenarios. • Records and displays information that is organized, legible, and mostly complete, but may have minor inconsistencies or details missed.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Uses appropriate language and grammar in communication. • Communicates information clearly and concisely to avoid miscommunications. • Answers routine or basic questions appropriately (e.g., tone, detail) and in a timely manner when responding, with supervision.

			• With guidance, uses standard and prescribed phraseology in straightforward or routine scenarios. • Records and accurately displays essential information in a simple and straightforward way.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

	Judgment and Decision Making		
Definition		Makes decisive, informed, and timely decisions based on an analysis of the situation.	
Work Behaviors		• Makes informed and timely decisions based on available information. • Assesses the impact and implications of decisions. • Determines strategies for approaching, developing, and responding to new requests or tasks, balancing risks and benefits. • Considers objective criteria, situational considerations, and organizational needs throughout the decision-making process.	
Training Level	**Proficiency Level**	**Definition**	**Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Considers and adjusts course of action when current strategy is unsuccessful or when new information is provided. • Considers and presents the impacts, risks, and benefits of competing alternatives when making decisions and choosing a course of action. • Makes decisions and takes appropriate action with the available information currently at hand. • Defends and supports decisions with information, regulations and appropriate guidelines.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Independently makes sound or timely decisions in a variety of situations. • Recognizes when information is lacking and seeks out additional information to assist in decision-making. • Identifies alternative courses of action when presented with a decision. • Takes ownership of decisions.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Utilizes available information and resources as a basis for making decisions. • Makes decisions in a variety of routine situations, accepts guidance when needed. • Seeks advice when making significant decisions or considering alternative courses of action.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

	Teamwork		
Definition		Works with others to achieve goals or objectives; coordinates tasks with relevant individuals; encourages cooperation and trust among coworkers.	
Work Behaviors		• Collaborates with others to achieve team, ATC, and FAA goals. • Builds trust by being reliable and dependable. • Trusts others to operate in a safe and efficient manner. • Provides constructive feedback. • Shares relevant information and knowledge with others. • Considers the impact on others when making decisions.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
	Level 4 Advanced	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Solicits internal teams' contributions, understanding their perspectives and integrating them into decisions and plans, as appropriate. • Maintains a positive team atmosphere by recognizing and addressing issues that are impacting team cohesion and performance. • Creates opportunities for sharing of knowledge, skills, and best practices within and across work units and organizations. • Fosters team unity to ensure focus remains on objectives and consistent progress on tasks. • Consistently and tactfully offers specific and timely feedback to others in complex or difficult interpersonal situations.
Beginning & Advanced Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Contributes ideas and shares skills and knowledge, encouraging others to do the same. • Shares relevant skills and knowledge with others. • Recognizes team members' roles, how these various roles interact with each other, and the resulting impact on workflow. • Positively impacts team cohesion and performance, offering feedback when asked and sharing information as needed.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Proactively offers assistance to ensure the team achieves goals and objectives. • Considers other work group members' priorities, needs, and concerns. • Collaborates with diverse personalities, work backgrounds/occupations, and work styles to establish trust and achieve team goals and objectives. • When prompted, provides feedback and shares pertinent information.

Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

		Adaptability and Resilience	
Definition		Appropriately adjusts and recovers from evolving situations or changes in a calm and efficient manner.	
Work Behaviors		• Quickly adapts and adjusts to evolving situations or changes. • Quickly recovers from mistakes and setbacks, refocusing on the next task. • Remains calm under stressful situations (e.g., maintains composure, stays focused on task). • Formulates alternate plans of action and understands when to execute alternate plan(s).	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Adapts to changes or evolving situations independently, adjusting actions with minimal oversight. • Endures setbacks or mistakes with minimal disruption, maintaining productivity and focus. • Consistently demonstrates composure in high-stress situations. • Proactively identifies alternative plans and executes them in real time, switching strategies as needed without external input.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Adjusts to changes or evolving situations with support but may initially struggle to shift focus. • Recovers from mistakes or setbacks, promptly moving on to the next task with little need for encouragement. • Remains calm and composed in stressful situations, staying focused. • Identifies alternate plans and knows when to implement them, consulting others occasionally for confirmation.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Recovers from mistakes or setbacks with encouragement, gradually refocusing on the next task. • Implements alternative plans when prompted, though may require help to know when and how to implement them. • Accepts feedback and adapts approach when given guidance.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

		Attention to Detail	
Definition		Focuses on details; thorough in completing tasks.	
Work Behaviors		• Checks work for accuracy, thoroughness, and adherence to applicable standards or other guidelines. • Evaluates information or data to assess accuracy, relevance, and completeness. • Meticulously follows applicable FAA orders and regulations. • Maintains focus on the task at hand.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Rigorously reviews and assesses work to ensure accuracy and adherence to all standards, catching even subtle discrepancies. • Independently analyzes data and information for completeness, identifying inconsistencies or gaps quickly and accurately. • Maintains unwavering focus on tasks, sustaining precision and thoroughness over long periods of time.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Consistently checks work for accuracy, thoroughness, and alignment with standards, with few errors. • Independently evaluates information to verify its accuracy, relevance, and completeness, seeking guidance in complex cases. • Maintains focus during tasks, even in busy or demanding environments, with only minor lapses.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Reviews work for accuracy and completeness but may overlook minor errors or inconsistencies. • Assesses data or information with some support to ensure relevance and compliance with standards. • Maintains focus on tasks, though occasional distractions may reduce precision or slow progress.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

	Information Processing/Management		
Definition		Ability to receive, interpret, analyze, and utilize data or stimuli effectively; capacity to understand, organize, and synthesize information in order to make informed decisions or take appropriate actions.	
Work Behaviors		• Identifies and gathers relevant information. • Processes information quickly; does not wait or hesitate. • Disseminates relevant information accordingly. • Records updates in a timely manner.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Identifies, gathers, and interprets complex information, even in challenging situations. • Processes information rapidly and accurately, making well-informed decisions without hesitation. • Disseminates essential information to all relevant stakeholders. • Processes updates in real-time, ensuring information is current and accessible and seeks clarification when necessary.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Gathers relevant information and identifies key data points with minimal oversight. • Processes information efficiently, making decisions appropriate for the situation at hand. • Distributes relevant information, ensuring it reaches the correct recipients, though occasional input from others may be needed. • Records updates promptly, ensuring data is available when needed with minimal follow-up required.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Gathers information but may overlook some data points or details. • Processes information systematically but may take longer when under pressure or uncertain. • Shares key information when prompted or directed but may require guidance to disseminate to the appropriate channels. • Records updates, regularly requiring reminders to ensure information is captured accurately.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

		• Requires close and extensive guidance.	

		Situation Awareness	
Definition		Recognizes and understands the elements of a given situation; anticipates the impact of the current situation on future situations.	
Work Behaviors		• Aware of other control positions' workloads and traffic. • Uses shared mental model to correctly comprehend the situation. • Accurately assesses the importance and severity of events and tasks.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Seamlessly applies shared mental models to anticipate and respond to both current and evolving situations. • Accurately assesses the urgency and importance of events and tasks, independently prioritizing them in real-time. • Anticipates the impact of the current situation on future conditions and takes action to mitigate risks and optimize outcomes.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Applies shared mental models to accurately understand both the current situation and how it might evolve in the near term. • Assesses events to determine their urgency and importance, occasionally consulting others for confirmation or assistance with prioritization. • Identifies potential impacts of the current situation on future situations with guidance to refine forecasts.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Identifies key elements of a situation with guidance or prompting from others. • Uses shared mental models to interpret the immediate situation, though may not fully comprehend the situation in its entirety. • Recognizes events but may occasionally struggle to prioritize them accurately without direction.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

FAA New Hire Technical Competencies – En Route Track

	FAA Standards & Regulations		
Definition	Understands and applies related regulations, policies, standards, or procedures (e.g., FAA Orders, letters of agreements (LOAs), standard operating procedures (SOPs)) in accordance with FAA training requirements and lesson plans.		
Work Behaviors	• Understands the purpose and importance of regulations, policies, standards, and procedures. • Acquires and maintains a working knowledge of regulations, policies, standards, and procedures. • Adheres to all LOAs/directives, SOPs, or FAA Orders. • Applies knowledge of FAA standards and regulations for all air traffic controller responsibilities and tasks.		
Training Level	**Proficiency Level**	**Definition**	**Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Adheres to LOAs/directives, SOPs, and FAA Orders in routine and non-routine situations and is a resource for others. • Recognizes and complies with applicable regulations, policies, standards, and procedures in complex situations.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Adheres to LOAs/directives, SOPs, and FAA orders in routine situations, with oversight. • Interprets regulations, policies, standards, and procedures in routine situations. • Correctly notifies supervisor when applying regulations, policies, and procedures in complex situations. • Consistently prioritizes aircraft safety.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Demonstrates a general understanding of common regulations, policies, standards, and procedures. • Follows regulations, policies, standards, and procedures in basic situations. • Complies with LOAs/directives, including SOPs.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level; Individuals demonstrate ability and willingness to learn.)*

	Airspace & Procedures		
Definition		Understands how Air Traffic Control (ATC) classifies, organizes, and uses classes of airspace and Special Use Airspace (SUA).	
Work Behaviors		• Understands the purpose and importance of classifying, organizing, and using classes of airspace. • Acquires and maintains a working knowledge of classes of airspace and SUA. • Applies knowledge of airspace classification and procedures in performing ATC tasks and duties.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Appropriately blocks correct airspace and SUA, when needed. • Applies the minimum requirements (e.g., altitude) for airspace, based on FAA orders. • Applies separation standards from adjacent airspace and SUAs.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Knows and recalls information concerning airspace. • Accurately labels components/features of airspace. • Understands components/features of airspace, including dimensions of individual and adjacent airspace.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Understands when to classify airspace as SUA. • Efficiently uses applicable navigational aids (NAVAIDS). • Demonstrates basic knowledge of the National Airspace System (NAS). • Identifies components/features of airspace, including dimensions.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level; Individuals demonstrate ability and willingness to learn.)*

	Traffic Flows & Sequences		
Definition		Understands and applies standards associated with aircraft traffic flows and sequencing, ensuring effective traffic flow is maintained.	
Work Behaviors		• Understands the purpose and importance of appropriately sequencing aircraft. • Uses accurate phraseology when issuing clearances. • Sequences, delivers, stops, and releases aircraft effectively and efficiently. • Complies with traffic management unit (TMU) initiatives and restrictions, and next sector requirements. • Makes efficient use of taxiways/runways.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Consistently issues clearance with appropriate prioritization. • Minimizes delays, issuing release subject to your discretions (SYDs) and minimizing expect departure clearances (EDCs).
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Utilizes accurate phraseology when issuing selected clearances. • Investigates aircraft arrival status, when needed. • Ensures correct computer entries and strip marking for instructions or clearances issued/received.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Recognizes the purpose and importance of sequencing aircraft. • Obtains knowledge of correct phraseology for sequencing aircraft and issuing clearances, along with delay procedure phraseology. • Accurately initiates control instructions with guidance or prompting.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level; Individuals demonstrate ability and willingness to learn.)*

		Relief Briefing	
Definition		Understands and applies procedures for transferring control, radio communications, reporting aircraft/vehicle information, and transferring position responsibilities.	
Work Behaviors		• Conducts briefing at the end of the scenario in accordance with standard operating procedures (SOPs). • Asks necessary questions to ensure a complete understanding of the operational situation. Thoroughly answers questions asked. • Identifies current conditions (e.g., weather).	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Accurately conducts relief briefing processes, in accordance with SOP. • Understands the differences in responsibilities for the relieving specialist and the specialist being relieved. • Ensures complete transfer of necessary information, asking follow-up questions to ensure understanding. • Differentiates between instrument flight rules (IFR) and visual flight rules (VFR) conditions at airports and areas of jurisdiction.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Accurately relays relevant information, including current sector conditions, including weather. • Actively participates in briefings, following the appropriate sequence of steps, with guidance. • Utilizes necessary aids/forms for briefing.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Recognizes the importance of an accurate briefing. • Asks appropriate questions in briefing to fully understand the situation. • Understands the responsibilities, processes, and phraseology involved in briefings. • Accurately identifies current airspace conditions, including weather.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level; Individuals demonstrate ability and willingness to learn.)*

		Aircraft Separation	
Definition		Ensures appropriate separation of aircraft; identifies conflicts and issues control instructions to aircraft and controllers to ensure separation standards are met.	
Work Behaviors		• Understands the different types of separation used to provide safe, orderly, and expeditious separation of air traffic. • Applies appropriate procedures and instructions to ensure separation (e.g., vertical, longitudinal, lateral, runway, radar, wake turbulence, intersecting runway/flight path) for aircraft on same, converging, crossing, or opposite direction courses. • Issues safety alerts and alternate courses of action, when necessary.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Aircraft-to-aircraft/aircraft-to-airspace separation is consistently ensured, in accordance with altitude/separation regulations. • Accurately performs handoffs/point outs, as required. • Understands and applies separation standards in considerably difficult situations.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Provides enough restriction to ensure separation from aircraft or airspace, with guidance. • Understands when to use either standard or minimum separation in difficult situations. • Accurately and efficiently issues safety alerts and alternate courses of action.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Understands the various types of separation, along with any causes and effects. • Applies minimum requirements for separation in straightforward situations. • Understands the differences between the various types of separation.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level; Individuals demonstrate ability and willingness to learn.)*

	Equipment Utilization		
Definition		Makes effective use of equipment and technology resources to ensure safety and efficiency of aircraft.	
Work Behaviors		• Maintains an awareness of available equipment capabilities and technological resources and their processes. • Uses appropriate and available equipment and technology to perform work activities. • Uses correct syntax when inputting data into computer systems. • Monitors and integrates information from systems, computer screens, and equipment. • Rapidly recovers from equipment failures and emergencies.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Identifies rare or subtle malfunctions. • Understands the alternative methods for computer entries (legacy and template), and when to change approach.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Demonstrates correct procedures for operating all equipment. • Identifies malfunctions in a timely manner. • Reports malfunctions timely and accurately.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Demonstrates correct procedures for operating commonly used equipment. • Identifies common malfunctions. • Recognizes to whom and when to report malfunctions.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

	Radar Identification		
Definition	Understands the standards associated with ensuring aircraft identification, including using radar identification methods; ensures errors in aircraft identification are detected and remedied; understands and applies methods and procedures for transferring radar identification.		
Work Behaviors	• Understands and identifies selected data on radar. • Understands appropriate reasons and procedures for issuing radar vectors. • Understands distinctions of radar identification (e.g., handoffs, point outs, and traffic). • Uses correct phraseology for initiating and receiving transfer of radar identification. • Includes pertinent information when performing transfer of radar identification. • Promptly detects aircraft identification errors. • Accurately resolves aircraft identification errors. • Understands and applies methods and procedures for transfer of radar identification.		
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Accurately employs aircraft radar identification methods in a timely manner. • Tracks radar targets through evolving, complex situations. • Promptly and accurately corrects errors in aircraft identity. • Differentiates among the different tracking identifiers. • Differentiates among and correctly applies the types of transfer of radar identification.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Accurately employs aircraft radar identification methods. • Uses data blocks and other target markers appropriately. • Correctly identifies and tracks radar targets. • Accurately corrects errors in aircraft identity. • Terminates radar service in a timely manner. • Correctly applies transfer of radar identification.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Employs multiple aircraft radar identification methods. • Recognizes appropriate use of data blocks and other target markers. • Identifies radar targets in straightforward situations. • With guidance, corrects errors in aircraft identity. • Terminates radar service in straightforward situations.

Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

		Phraseology	
Definition		Uses standard and prescribed air traffic terminology when communicating with controllers, pilots, and other personnel to ensure the transfer of complete and correct information.	
Work Behaviors		• Uses standard and prescribed air traffic phraseology (i.e., approved procedures, words, phrases, or formats). • Quickly identifies and addresses phraseology mistakes. • Transmits only required information/instructions efficiently (i.e., combining information when appropriate).	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Uses correct phraseology in time sensitive, complex situations. • Corrects phraseology mistakes and takes steps to address the issue going forward. • Recognizes the opportunity to proactively combine information for a more efficient transmission.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Uses phraseology correctly across differing, moderately complex situations. • Identifies and corrects phraseology mistakes immediately. • Transmits required messages using only pertinent information without excess verbiage.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Recognizes and correctly applies phraseology in routine situations. • Accurately interprets phraseology from other controllers. • With guidance, corrects phraseology mistakes.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

		Spatial Awareness	
Definition		The ability to accurately perceive and grasp the comprehensive state of air traffic within the assigned airspace.	
Work Behaviors		• Understands flight trajectories to ensure air traffic is in accordance with standards. • Interprets air traffic's positions, trajectories, and intentions to determine the status of the current airspace. • Leverages multiple integrated systems (e.g., radar, flight strips, equipment) to continuously scan, monitor, and evaluate the entire control environment.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Monitors complex air traffic situations with numerous positions and trajectories to determine appropriateness and safety of the airspace. • Proactively addresses any potential issues in highly challenging situations. • Consistently identifies and leverages multiple integrated systems to evaluate the entire control environment in an efficient manner.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Monitors the airspace to confirm all positions, trajectories, and intentions are appropriate and safe. • Recognizes potential issues and proactively addresses them. • Regularly leverages multiple systems to gather and analyze information about the control environment.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Demonstrates understanding of how different flight trajectories interact with each other in the airspace to make control decisions. • Consistently ensures that flight trajectories are within acceptable standards. • With guidance, consolidates information across systems to monitor and evaluate the control environment.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

	Conflicts, Emergencies, Unusual Situations		
Definition		Understands and applies standards associated with responding to conflicts, emergencies, and unusual situations.	
Work Behaviors		• Continuously scans for and/or identifies conflicts, emergencies, and unusual situations. • Promptly collects and disseminates accurate information on emergencies and unusual situations. • Implements solutions swiftly to prevent potential conflicts and emergencies from occurring. • Responds appropriately to urgent situations and emergencies. • Efficiently issues accurate traffic advisories, safety alerts, and control instructions. • Coordinates emergencies and unusual situations with appropriate controllers, facilities, and supervisors.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Collects and records necessary emergency/unusual situation information in a timely manner. • Notifies supervisor about the emergency/unusual situation in a timely manner. • Effectively coordinates plan of action with appropriate controllers/facilities.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Effectively resolves conflicts. • Issues control instructions to effectively resolve conflicts. • Recognizes when to coordinate with supervisor and other controllers/facilities. • Identifies appropriate information to record for the emergency/unusual situation/conflict.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Recognizes different types of emergencies/unusual situations/conflicts. • Recognizes who to report emergencies/unusual situations/conflicts. • Demonstrates understanding of conflict reporting and resolution procedures.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

		Flight Progress Strips	
Definition		Understands the standards associated with managing flight plan data including data entry, forwarding, and posting of information to flight progress strips.	
Work Behaviors		• Posts, updates, and organizes flight strips efficiently. • Uses approved strip marking. • Enters flight plan information correctly. • Recognizes and corrects errors on flight strips. • Communicates amended flight strip information to appropriate aircraft. • Determines the required fix postings for departure, arrival, and/or en route aircraft.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Recognizes errors in the flight progress strips. • Updates flight progress strips correctly to include all required information in a timely manner. • Organizes flight progress strips in response to various situations. • Utilizes flight progress strips in response to various situations.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Uses proper strip marking in complex situations. • Posts the correct flight progress strip in a timely manner. • Enters flight plan information correctly. • Identifies and promptly removes no longer pertinent strip.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Writes legibly on flight progress strips. • Uses proper strip marking in straightforward situations. • Posts the correct flight progress strip. • Updates flight progress strips to include required information.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

		Weather	
Definition		Understands basic principles of weather, different elements of the atmosphere, and the National Weather Service's (NWS) role in providing aviation weather services to the FAA.	
Work Behaviors		• Identifies weather hazards. • Identifies the intensity of different types of weather. • Determines the impact of hazardous weather on sector/positions operations. • Develops and issues hazardous weather mitigation plans. • Solicits and disseminates pilot weather reports (PIREPs) when required. • Issues significant meteorological information (SIGMETs). • Responds to pilot requests and issues effective control instructions for turbulence and weather avoidance. • Alerts others of reported turbulence. • Defines and differentiates instrument flight rules (IFR) and visual flight rules (VFR) conditions.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Recognizes the potential impact of weather types and intensities on the operation.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Accurately disseminates pertinent weather report and advisory information to appropriate parties. • Disseminates urgent weather report and advisory information to all required parties. • Recognizes low altimeter settings that affect lowest usable flight levels.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Identifies the different types of weather conditions at the airport. • Demonstrates understanding of conditions that warrant PIREP solicitation. • With assistance, disseminates pertinent weather report and advisory information to appropriate parties.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

		Coordination	
Definition		Coordinates all information that is pertinent to the situation, in accordance with Academy procedures; acknowledges and verifies all information exchanges; coordinates intra- and interfacility actions with appropriate personnel.	
Work Behaviors		• Accurately coordinates separation or changes with appropriate controller/control positions. • Coordinates status and use of runways, taxiway, or helipads. • Requests departure release and coordinates initial departure headings from radar controller. • Coordinates missed approaches, releases, headings, and vectors with departure controller. • Coordinates restrictions or special instructions. • Coordinates and closes runway crossings in a timely manner.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Coordinates pertinent content across all stakeholders in highly complex situations. • Effectively coordinates with correct position(s) across different, complex situations.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Performs manual handoffs and pointouts in a timely manner. • Coordinates pertinent content in complex situations. • Coordinates with correct position(s) across different situations.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Performs automated handoffs and pointouts. • Uses standard procedures to coordinate pertinent content. • Coordinates with correct position(s) in straightforward situations.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

FAA New Hire Technical Competencies – Tower Track

	FAA Standards & Regulations		
Definition		Understands and applies related regulations, policies, standards, or procedures (e.g., FAA Orders, letters of agreements (LOAs), standard operating procedures (SOPs)) in accordance with FAA training requirements and lesson plans.	
Work Behaviors		• Understands the purpose and importance of regulations, policies, standards, and procedures. • Acquires and maintains a working knowledge of regulations, policies, standards, and procedures. • Adheres to all LOAs/directives, SOPs, or FAA Orders. • Applies knowledge of FAA standards and regulations for all air traffic controller responsibilities and tasks.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Adheres to LOAs/directives, SOPs, and FAA Orders in routine situations and is a resource for others. • Recognizes and complies with applicable regulations, policies, standards, and procedures. • Correctly applies specific rules to expediate aircraft (e.g., time or distance) with general supervision.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Applies LOAs/directives, SOPs, and FAA orders in routine situations, with direct supervision. • Demonstrates an understanding of regulations, policies, standards, and procedures in routine situations.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Understands common LOAs, regulations, policies, standards, and procedures. • Follows regulations, policies, standards, and procedures in basic situations, with assistance.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level; Individuals demonstrate ability and willingness to learn.)*

	Airspace/Airport & Procedures		
Definition		Understands how Air Traffic Control (ATC) classifies, organizes, and uses classes of airspace and airport environments.	
Work Behaviors		• Understands the purpose and importance of classes of airspace/airport environment. • Acquires and maintains a working knowledge of classes of airspace/airport environment. • Applies knowledge of airspace classification and procedures in performing ATC tasks and duties.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Applies separation standards to runways. • Effectively taxi aircraft to and from locations. • Clears runway exits in a timely manner, preventing delays for local controllers. • Notifies local controllers of any blocked taxiways.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Efficiently demonstrates taxing aircraft, with assistance. • Understands taxi routes and hold points. • Identifies all the components of the airport environment efficiently and effectively.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Illustrates basic knowledge of the National Airspace System (NAS). • Identifies components/features of airspace and airport environment, including dimensions visual reporting points, movement and non-movement areas, and airport users/tenants.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level; Individuals demonstrate ability and willingness to learn.)*

	Traffic Flows & Sequences		
Definition		Understands and applies standards associated with aircraft traffic flows and sequencing, ensuring effective traffic flow is maintained.	
Work Behaviors		• Understands the purpose and importance of appropriately sequencing aircraft. • Uses accurate phraseology when issuing clearances. • Sequences, delivers, stops, and releases aircraft effectively and efficiently. • Complies with traffic management unit (TMU) initiatives and restrictions, and next sector requirements. • Makes efficient use of taxiways/runways.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Consistently issues clearance with appropriate prioritization, making efficient use of runways/taxiways. • Minimizes delays, requesting releases and minimizing expect departure clearances (EDCs). • Demonstrates sequencing of visual flight rules (VFR) arrivals to the runway. • Effectively taxis out aircraft to minimize delays and meet flow control requirements.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Utilizes accurate phraseology when issuing selected clearances. • Ensures correct computer entries and strip marking for instructions or clearances issued/received. • Demonstrates sequencing of VFR arrivals to the runway with minimal assistance. • Issues clearance with appropriate prioritization, making efficient use of runways/taxiways with assistance.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Learns the purpose and importance of sequencing aircraft. • Obtains knowledge of correct phraseology for sequencing aircraft and issuing clearances, along with delay procedure phraseology. • Initiates control instructions with guidance or prompting.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level; Individuals demonstrate ability and willingness to learn.)*

		Relief Briefing	
Definition		Understands and applies procedures for transferring control, radio communications, reporting aircraft/vehicle information, and transferring position responsibilities.	
Work Behaviors		• Conducts briefing at the end of the scenario in accordance with standard operating procedures (SOPs). • Asks necessary questions to ensure a complete understanding of the operational situation. Thoroughly answers questions asked. • Identifies current conditions (e.g., weather).	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
	Level 4 Advanced	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Accurately conducts relief briefing processes, in accordance with SOP. • Understands the differences in responsibilities for the relieving specialist and the specialist being relieved. • Ensures complete transfer of necessary information, asking follow-up questions to ensure understanding. • Differentiates between instrument flight rules (IFR) and visual flight rules (VFR) conditions at airports and areas of jurisdiction.
	Level 3 Intermediate	• Applies the competency in difficult situations. • Requires occasional guidance.	• Accurately relays relevant information, including current sector conditions, including weather. • Actively participates in briefings, following the appropriate sequence of steps, with guidance. • Utilizes necessary aids/forms for briefing.
Academics, Beginning & Advanced Simulations	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Recognizes the importance of an accurate briefing. • Asks appropriate questions in briefing to fully understand the situation. • Understands the responsibilities, processes, and phraseology involved in briefings.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level; Individuals demonstrate ability and willingness to learn.)*

		Aircraft Separation	
Definition		Ensures appropriate separation of aircraft; identifies conflicts and issues control instructions to aircraft and controllers to ensure separation standards are met.	
Work Behaviors		• Understands the different types of separation used to provide safe, orderly, and expeditious separation of air traffic. • Applies appropriate procedures and instructions to ensure separation (e.g., vertical, longitudinal, lateral, runway, radar, wake turbulence, intersecting runway/flight path) for aircraft on same, converging, crossing, or opposite direction courses. • Issues safety alerts and alternate courses of action, when necessary.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Consistently ensures aircraft-to-aircraft, aircraft-to-airspace, and runway separation, in accordance with orders (7110.65). • Accurately performs handoffs and transfer of communications, as required. • Applies the appropriate separation standards in routine situations.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Provides control instruction to ensure runway separation and separation from aircraft or airspace, with guidance. • Issues safety alerts and alternate courses of action. • Applies minimum requirements for separation in routine situations with assistance.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Understands the various types of separation, along with any causes and effects. • Understands when to use either standard or reduced separation in routine situations. • Understands the differences between the various types of separation.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level; Individuals demonstrate ability and willingness to learn.)*

		Phraseology	
Definition		Uses standard and prescribed air traffic terminology when communicating with controllers, pilots, and other personnel to ensure the transfer of complete and correct information.	
Work Behaviors		• Uses standard and prescribed air traffic phraseology (i.e., approved procedures, words, phrases, or formats). • Quickly identifies and addresses phraseology mistakes. • Transmits only required information/instructions efficiently (i.e., combining information when appropriate).	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Consistently uses correct standard phraseology in differing situations. • Corrects standard phraseology mistakes and takes steps to address the issue going forward. • Recognizes the opportunity to proactively combine information for a more efficient transmission.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Uses standard phraseology correctly across differing situations with guidance. • Identifies and corrects standard phraseology mistakes immediately. • Transmits required messages using only pertinent information without excess verbiage.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Recognizes and learns standard phraseology for routine situations. • Understands standard phraseology from other controllers during coordination.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

		Spatial Awareness	
Definition		The ability to accurately perceive and grasp the comprehensive state of air traffic within the assigned airspace.	
Work Behaviors		• Understands flight trajectories to ensure air traffic is in accordance with standards. • Interprets air traffic's positions, trajectories, and intentions to determine the status of the current airspace. • Leverages multiple integrated systems (e.g., radar, flight strips, equipment) to continuously scan, monitor, and evaluate the entire control environment.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Identifies routine air traffic situations with numerous aircraft and flight paths to determine effective use of the airspace and airport environment. • Proactively addresses any potential issues in routine situations. • Scans windows, strips, and radar to evaluate the entire control environment in an efficient manner.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Scans the airspace and airport environment to confirm positions, flight paths, and intentions of all aircraft with minimal assistance. • Recognizes potential issues and addresses them with assistance. • Regularly scans to gather and analyze information about the control environment.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Learns how different flight paths interact with each other in the airspace to make control decisions. • Learn how to be aware of what other tower controllers are doing. • Identifies aircraft in airspace and airport environment.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

		Conflicts, Emergencies, Unusual Situations	
Definition		Understands and applies standards associated with responding to conflicts, emergencies, and unusual situations.	
Work Behaviors		• Continuously scans for and/or identifies conflicts, emergencies, and unusual situations. • Promptly collects and disseminates accurate information on emergencies and unusual situations. • Implements solutions swiftly to prevent potential conflicts and emergencies from occurring. • Responds appropriately to urgent situations and emergencies. • Efficiently issues accurate traffic advisories, safety alerts, and control instructions. • Coordinates emergencies and unusual situations with appropriate controllers, facilities, and supervisors.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
	Level 4 Advanced	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Applies appropriate control instructions to resolve potential conflicts. • Issues safety alerts and traffic advisories accurately and timely.
	Level 3 Intermediate	• Applies the competency in difficult situations. • Requires occasional guidance.	• Applies appropriate control instructions to resolve potential conflicts with guidance. • Issues safety alerts and traffic advisories accurately and timely with assistance.
Academics, Beginning & Advanced Simulations	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Recognizes different conflicts with assistance. • Learns tools for conflict resolution.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

		Flight Progress Strips	
Definition		Understands the standards associated with managing flight plan data including data entry, forwarding, and posting of information to flight progress strips.	
Work Behaviors		• Posts, updates, and organizes flight strips efficiently. • Uses approved strip marking. • Enters flight plan information correctly. • Recognizes and corrects errors on flight strips. • Communicates amended flight strip information to appropriate aircraft. • Determines the required fix postings for departure, arrival, and/or en route aircraft.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Recognizes and corrects errors in the flight progress strips. • Updates flight progress strips correctly to include all required information in a timely manner. • Organizes flight progress strips in response to routine situations.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Uses proper strip marking in routine situations with minimal assistance. • Passes the correct flight progress strip in a timely manner. • Enters flight plan information correctly. • Organizes flight progress strips in response to routine situations with assistance. • Identifies and promptly removes no longer pertinent strips.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Writes legibly on flight progress strips. • Uses proper strip marking in routine situations with assistance. • Passes the correct flight progress strip. • Updates flight progress strips to include required information with assistance.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

		Flight Progress Strips	
Definition		Understands the standards associated with managing flight plan data including data entry, forwarding, and posting of information to flight progress strips.	
Work Behaviors		• Posts, updates, and organizes flight strips efficiently. • Uses approved strip marking. • Enters flight plan information correctly. • Recognizes and corrects errors on flight strips. • Communicates amended flight strip information to appropriate aircraft. • Determines the required fix postings for departure, arrival, and/or en route aircraft.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Recognizes and corrects errors in the flight progress strips. • Updates flight progress strips correctly to include all required information in a timely manner. • Organizes flight progress strips in response to routine situations.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Uses proper strip marking in routine situations with minimal assistance. • Passes the correct flight progress strip in a timely manner. • Enters flight plan information correctly. • Organizes flight progress strips in response to routine situations with assistance. • Identifies and promptly removes no longer pertinent strips.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Writes legibly on flight progress strips. • Uses proper strip marking in routine situations with assistance. • Passes the correct flight progress strip. • Updates flight progress strips to include required information with assistance.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

		Weather	
Definition		Understands basic principles of weather, different elements of the atmosphere, and the National Weather Service's (NWS) role in providing aviation weather services to the FAA.	
Work Behaviors		• Identifies weather. • Implements weather mitigation plans. • Recognizes and responds appropriately to wind shears and wind shifts. • Defines and differentiates instrument flight rules (IFR) and visual flight rules (VFR) conditions.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
	Level 4 Advanced	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Independently implements weather mitigation plans. • Issues effective control instructions in response to unusual and urgent weather conditions. • Solicits PIREPs in urgent or complex situations. • Disseminates urgent weather report and advisory information to all required parties.
	Level 3 Intermediate	• Applies the competency in difficult situations. • Requires occasional guidance.	• Implements weather mitigation plan with limited direction. • Issues effective control instructions in response to weather conditions. • Solicits PIREPs in somewhat difficult situations. • Accurately disseminates pertinent weather report and advisory information to appropriate parties.
Academics, Beginning & Advanced Simulations	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Recognizes the potential impact of weather types and intensities on the operation. • Demonstrates understanding of conditions that warrant PIREP solicitation. • Implements straightforward weather mitigation plans with assistance. • With guidance, issues control instructions in response to weather conditions. • With assistance, disseminates pertinent weather report and advisory information to appropriate parties.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

		Coordination	
Definition		Coordinates all information that is pertinent to the situation, in accordance with Academy procedures; acknowledges and verifies all information exchanges; coordinates intra- and interfacility actions with appropriate personnel.	
Work Behaviors		• Accurately coordinates separation or changes with appropriate controller/control positions. • Coordinates status and use of runways, taxiway, or helipads. • Requests departure release and coordinates initial departure headings from radar controller. • Coordinates missed approaches, releases, headings, and vectors with departure controller. • Coordinates restrictions or special instructions. • Coordinates and closes runway crossings in a timely manner.	
Training Level	**Proficiency Level**	• **Definition**	• **Behavioral Indicators**
Advanced Simulations	**Level 4 Advanced**	• Applies the competency in considerably difficult situations. • Generally requires little or no guidance.	• Coordinates with correct position(s) utilizing proper procedures and standard phraseology.
Beginning Simulations	**Level 3 Intermediate**	• Applies the competency in difficult situations. • Requires occasional guidance.	• Coordinates with correct position(s) utilizing proper procedures and standard phraseology with minimal guidance.
Academics	**Level 2 Basic**	• Applies the competency in somewhat difficult situations. • Requires frequent guidance.	• Understands standard procedures when coordinating pertinent information. • Coordinates with correct position(s) in routine situations with guidance. • Understands standard phraseology during coordination.
Basics	**Level 1 Awareness**	• Applies the competency in the simplest situations. • Requires close and extensive guidance.	*(Individuals who do not meet the definitions or examples at the Basic level demonstrate the characteristics of the Awareness proficiency level.)*

References

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education (Eds.). (2014). *Standards for educational and psychological testing.* American Educational Research Association.

Campion, M. A., Fink, A. A., Ruggeberg, B. J., Carr, L., Phillips, G. M., & Odman, R. B. (2011). Doing competencies well: Best practices in competency modeling. *Personnel Psychology, 64*(1), 225–262. https://doi.org/10.1111/j.1744-6570.2010.01207.x

Corporate Leadership Council. (2003). *Competency Management Ownership and Structure.* Corporate Executive Board.

Dubois, D. D., & Rothwell, W. J. (2004). *Competency-based human resource management.* Mountain View, CA: Davies-Black Publishing.

Equal Employment Opportunity Commission. (1978). Uniform guidelines on employee selection procedures. *Federal Register,* 44, 38290-38315.

Federal Aviation Administration. (2016). *Assessment of the Adequacy of the National Training Programs for Air Traffic Controllers (Findings and Recommendations Report in Response to PL 112-15 Section 609a of the FAA Modernization and Reform Act of 2012.* Washington, DC: Author.

Federal Aviation Administration. (2022). The Air Traffic Controller Workforce Plan 2022-2031. Washington, DC: Author.

Green, P. C. (1999). *Building robust competencies: Linking human resource systems to organizational strategies.* San Francisco, CA: Jossey-Bass Publishers.

LeBreton, J. M., & Senter, J. L. (2008). Answers to 20 questions about interrater reliability and interrater agreement. *Organizational Research Methods, 11*(4), 815–852. https://doi.org/10.1177/1094428106296642

Lucia, A. D., & Lepsinger, R. (1999). *The art and science of competency models: Pinpointing critical success factors in organizations.* San Francisco, CA: Jossey-Bass.

Mirabile, R. J. (1997). Everything you wanted to know about competency modeling. *Training and Development, 51,* 73-77.

Rodriguez, D., Patel, R., Bright, A., Gregory, D., & Gowing, M.K. (2002). Developing competency models to promote integrated human resource practices. *Human Resource Management, 41,* 309-324. https://doi/10.1002/hrm.10043

Shippman, J. S., Ash, R. A., Battista, M., Carr, L., Eyde, L. D., Hesketh, B., Kehoe, J., Pearlman, K., Prien, E. P., & Sanchez, J. I. (2000). The practice of competency modeling. *Personnel Psychology, 53*(3), 703-740. https://doi/10.1111/j.1744-6570.2000.tb00220.x

Society for Industrial and Organizational Psychology. (2018). *Principles for the validation and use of personnel selection procedures*. Bowling Green, OH: SIOP.

Spencer, L. M., McClelland, D. C., & Spencer, S. M. (1994). *Competency assessment methods: History and state of the art.* Boston, MA: Hay McBer Research Press.

Spencer, L. M., & Spencer, S. M. (1993). *Competence at work: Models for superior performance.* New York, NY: John Wiley & Sons.

U.S. Department of Transportation. (2014). *DOT Core Competencies.* Washington, DC.

Appendix A. Background Resources Reviewed

1. Academy Training Materials

    - Basics for Air Traffic Control Lessons
    - Tower
        - Lesson Plans
        - End-of-Lesson Tests
        - Performance Evaluation Forms and TSS Grading Guidelines
    - En Route
        - Lesson Plans
        - End-of-Lesson Tests
        - ERAM Grading Guidelines
        - Non-Radar Grading Guidelines
    - Draft Training Standards (2017)

2. FAA Sources

    - U.S. Department of Transportation, Federal Aviation Administration. (2022). *The Air Traffic Controller Workforce Plan 2022-2031.* Washington, DC: Author.
    - U.S. Department of Transportation, Federal Aviation Administration. (2016). *Assessment of the Adequacy of the National Training Programs for Air Traffic Controllers (Findings and Recommendations Report in Response to PL 112-15 Section 609a of the FAA Modernization and Reform Act of 2012.* Washington, DC: Author.

3. Additional Sources

    - DOT Core Competency Model
    - O*NET. (2024). *Air Traffic Controllers (53-2021.00).* https://www.onetonline.org/link/summary/53-2021.00

Appendix B. Workshop Participant Background Form

FAA ATC Academy Graduate Competency Model Development Workshops – Background Form

The information you provide will be used to describe the overall characteristics of the Air Traffic Control (ATC) Academy instructors, evaluators, and supervisors who participate in competency development. Information provided will never be used to identify you to anyone at any time. All information will be summarized and reported in aggregate form.

FAA ATC Academy Graduate Competency Model Development Workshops – Background Form

1. Do you currently work as a(n) (select many):
   - □ Academy Instructor
   - □ Academy Evaluator
   - □ Supervisor
   - □ Other

   If you selected "Other," please specify: _____

2. What is your current primary track/specialty (select one):
   - □ En Route
   - □ Tower
   - □ Both

3. Number of years working in the FAA: _____ (insert approximate number of years)

4. Number of years working as an Academy instructor, evaluator, and/or supervisor: _____ (insert approximate number of years)

5. Number of years working in the Air Traffic Controller environment: _____ (insert approximate number of years)

6. Optional: Your sex identification:
   - □ Male
   - □ Female
   - □ Prefer not to disclose

7. Optional: Do you consider yourself Hispanic or Latino (of Cuban, Mexican, Puerto Rican, South or Central American or other Spanish culture or origin, regardless of race)?
   - □ Yes
   - □ No
   - □ Prefer not to disclose

8. Optional: Your race (select all that apply):
   - □ American Indian/Alaska Native
   - □ Asian
   - □ Black/African American
   - □ Native Hawaiian/Pacific Islander
   - □ White/Caucasian
   - □ Other
   - □ Prefer not to disclose

Appendix C. Job Analysis Survey

Welcome Page

ATC New Hire Competency Survey

Welcome

Thank you for participating in the FAA's survey to develop a competency model for ATC New Hires. The competencies and defining work behaviors in this survey have been developed by focus groups made up of ATC instructors and evaluators. Now, we need your assistance as an ATC instructor/evaluator to understand the importance and level of proficiency required for each competency across Academy training levels.

The purpose of this survey is to collect important information to tell us (1) the importance of competencies at each training level (BASICS, Academics Training, Beginning Simulations, and Advanced Simulations) and (2) the level of proficiency required for each competency at each training level. Your input is critical for understanding the ATC Academy training requirements.

Your responses are strictly confidential. Results will be analyzed across respondents and no individual or identifying data will be reported.

This survey is not a performance evaluation. The information you provide in this survey will not be used to make any personnel decisions, nor will it in any way influence future employment opportunities.

Your participation in this survey is completely voluntary, and it is your choice to participate. By clicking "Next," you consent to your confidential information being collected and included in the aggregated results.

Please complete this survey by 10/04/2024.

Next

Navigation Page

ATC New Hire Competency Survey

Navigating the Survey

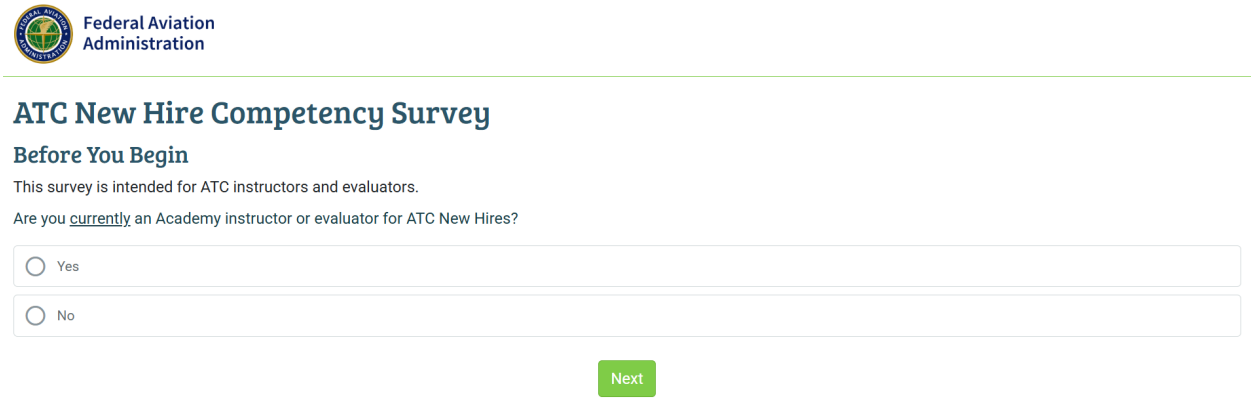
Use the "Next" button at the bottom of the screen to navigate through all the sections in this survey. Do not use the navigation buttons on your web browser.

If you cannot see the "Next" button, then you are not at the bottom of the page. Use your scroll bar to move to the bottom of the page. Please answer all questions on a page before continuing.

This survey should take approximately 20 minutes to complete. If you need to take a break, please complete all the questions on the current page and click "Next" to navigate to the next page. You can either leave your web browser open or close out of it. If you close your web browser, click the survey link you were provided in the email to re-open and resume the survey.

Next

Filter Page for Current Instructors and Evaluators



Federal Aviation Administration

ATC New Hire Competency Survey

Before You Begin

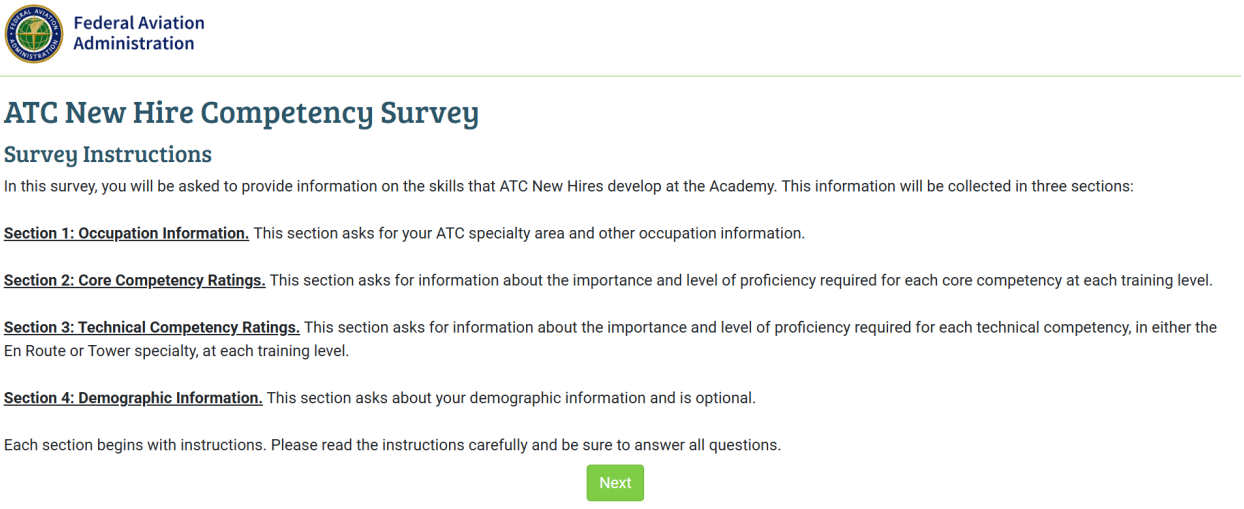
This survey is intended for ATC instructors and evaluators.

Are you currently an Academy instructor or evaluator for ATC New Hires?

- ○ Yes
- ○ No

Next

Survey Instructions



Federal Aviation Administration

ATC New Hire Competency Survey

Survey Instructions

In this survey, you will be asked to provide information on the skills that ATC New Hires develop at the Academy. This information will be collected in three sections:

Section 1: Occupation Information. This section asks for your ATC specialty area and other occupation information.

Section 2: Core Competency Ratings. This section asks for information about the importance and level of proficiency required for each core competency at each training level.

Section 3: Technical Competency Ratings. This section asks for information about the importance and level of proficiency required for each technical competency, in either the En Route or Tower specialty, at each training level.

Section 4: Demographic Information. This section asks about your demographic information and is optional.

Each section begins with instructions. Please read the instructions carefully and be sure to answer all questions.

Next

Section 1: Occupational Information

ATC New Hire Competency Survey

Section 1: Occupational Information

The information you provide will be used to describe the overall characteristics of the ATC Instructors and Evaluators who participate in competency development. Information provided will never be used to identify you to anyone at any time. All information will be summarized and reported in aggregate form.

Are you currently an FAA employee or contractor (select one):

- ○ FAA employee
- ○ Contractor

How many years have you worked for the FAA (including both employee and contractor roles) (select one):

- ○ 0-5
- ○ 6-10
- ○ 11-16
- ○ 17-20
- ○ 21+

How many years have you worked as an instructor and/or evaluator (select one):

- ○ 0-5
- ○ 6-10
- ○ 11-16
- ○ 17-20
- ○ 21+

Which specialty area(s) do you currently instruct or evaluate (select all that apply):

- ☐ En Route
- ☐ Tower
- ☐ Neither

Which discipline/specialty area(s) have you supervised in the past (select all that apply):

- ☐ En Route
- ☐ Tower
- ☐ Neither

Next

Section 2: Core Competency Ratings

Federal Aviation Administration

ATC New Hire Competency Survey

Section 2: Core Competency Ratings

This section contains competencies that have been identified as critical for successful ATC evaluations and that ATC trainees are expected to perform upon graduating from the Academy. Please respond to each competency, and decide the importance and proficiency level required for each training level: BASICS, Academics Training, Beginning Simulations, and Advanced Simulations. These training levels are defined as follows:

BASICS – New Hires who have completed BASICS training.

Academics Training – New Hires who have completed Academics training.

Beginning Simulations – New Hires who have completed the beginning simulation tasks.

Advanced Simulations – New Hires who have completed all of the advanced simulation tasks for their assigned course.

For each competency, you will be asked to make two types of ratings: Importance and Proficiency Level.

Step 1: Importance

Rate the Importance of each competency for successful ATC evaluation at each training level, using the following scale:

NB = No experience instructing/evaluating at this training level; no basis to rate competency importance.
0 = Not Needed for successful ATC evaluation
1 = Minor Importance for successful ATC evaluation
2 = Some Importance for successful ATC evaluation
3 = Important for successful ATC evaluation
4 = Very Important for successful ATC evaluation
5 = Extremely Important for successful ATC evaluation

If the competency is **NOT needed** for successful ATC evaluation for a particular training level, click on the button labeled "0" for "Not needed" and do not complete other ratings for the competency at this training level.

If the competency **is needed** for successful ATC evaluation, click on the button that reflects the Importance of the competency labeled "1" to "5", per the rating scale shown above. Then, proceed to Step 2.

Step 2: Proficiency Level

For each training level listed, rate the proficiency level of each competency required for successful ATC evaluation. Rate the Proficiency Level of each competency at each training level using the following scale:

1 = Awareness. Applies the competency in the simplest situations; requires close and extensive guidance.
2 = Basic. Applies the competency in somewhat difficult situations; requires frequent guidance.
3 = Intermediate. Applies the competency in difficult situations; requires occasional guidance.
4 = Advanced. Applies the competency in considerably difficult situations; generally requires little or no guidance.

Note: If you rated a Competency as "NB" for No Basis to judge or "0" for Not Needed for Importance, you will not need to make a Proficiency rating.

EXAMPLE:

For each competency, you will be presented with a general definition and series of work behaviors that describe how the competency is manifested in training.

Communication	
Behavioral Definition	Expresses and relays information in a timely, clear, and precise manner.
Work Behaviors	• Conveys relevant information in a clear, concise, and timely manner. • Ensures the transfer of complete and correct information. • Tailors communication (e.g., tone, technical detail) based on the recipient of the information and the communication medium. • Actively listens to and understands others. • Responds promptly to questions, directions, and requests. • Uses standard and prescribed phraseology.

For each competency, you will be provided with a table for your ratings. Again, if you have no basis to rate a particular training level, select "NB" for No Basis for the Importance rating and move to the next training level or competency. If you believe that the competency is not needed at that training level, select 0 = Not Needed for the Importance rating and move to the next training level or competency.

In the above example, the instructor did not have experience instructing ATC New Hires during BASICS, so "NB" for No Basis was marked for the BASICS training level and no further ratings were made at this training level. The instructor did have experience instructing Academics Training, Beginning Simulations, and Advanced Simulations training levels, and made ratings for those levels on their Importance and Proficiency.

Click **Next** to begin rating the competencies.

Next

Section 2: Core Competency Ratings

For each competency, review the competency, definition, and work behaviors. Provide ratings of Importance and Proficiency Level for each training level: BASICS, Academics Training, Beginning Simulations, and Advanced Simulations.

Communication	
Behavioral Definition	Expresses and relays information in a timely, clear, and precise manner.
Work Behaviors	• Conveys relevant information in a clear, concise, and timely manner. • Ensures the transfer of complete and correct information. • Tailors communication (e.g., tone, technical detail) based on the recipient of the information and the communication medium. • Actively listens to and understands others. • Responds promptly to questions, directions, and requests. • Uses standard and prescribed phraseology.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Learning Orientation	
Behavioral Definition	Actively seeks to understand processes; acquires, retains, and applies new knowledge; assesses personal strengths and weaknesses and pursues opportunities for self-improvement.
Work Behaviors	• Demonstrates aptitude and willingness to learn new knowledge, skills, and behaviors. • Accepts feedback and adjusts behavior appropriately. • Asks appropriate questions to improve understanding and performance. • Understands the value of practice and repetition to improve performance. • Learns from mistakes.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Judgment and Decision Making	
Behavioral Definition	Makes decisive, informed, and timely decisions based on an analysis of the situation.
Work Behaviors	• Makes informed and timely decisions based on available information. • Assesses the impact and implications of decisions. • Determines strategies for approaching, developing, and responding to new requests or tasks, balancing risks and benefits. • Considers objective criteria, situational considerations, and organizational needs throughout the decision making process.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Problem Solving	
Behavioral Definition	Identifies problems and determines accuracy and relevance of information; effectively evaluates alternative options and develops effective solutions.
Work Behaviors	• Recognizes issues and problems affecting air traffic operations. • Uses systematic, logical approaches to analyze problems. • Produces and evaluates alternative solutions to problems or issues. • Makes recommendations to overcome obstacles and applies solutions as necessary.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Teamwork	
Behavioral Definition	Works with others to achieve goals or objectives; coordinates tasks with relevant individuals; encourages cooperation and trust among coworkers.
Work Behaviors	• Collaborates with others to achieve team, ATC, and FAA goals. • Builds trust by being reliable and dependable. • Trusts others to operate in a safe and efficient manner. • Provides constructive feedback. • Shares relevant information and knowledge with others. • Considers the impact on others when making decisions.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Adaptability and Resilience	
Behavioral Definition	Appropriately adjusts and recovers from evolving situations or changes in a calm and efficient manner.
Work Behaviors	• Quickly adapts and adjusts to evolving situations or changes. • Quickly recovers from mistakes and setbacks, refocusing on the next task. • Remains calm under stressful situations (e.g., maintains composure, stays focused on task). • Formulates alternate plans of action and understands when to execute alternate plan(s).

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Organizing, Planning, and Prioritizing	
Behavioral Definition	Provides updates on issues, progress, and changes; develops efficient processes to complete tasks; assesses and manages tasks, allocating resources effectively.
Work Behaviors	• Compartmentalizes tasks while maintaining a broad perspective. • Prioritizes multiple ongoing tasks, including sequencing and scanning, based on urgency and safety. • Attends to multiple actions simultaneously. • Performs duties in order of their importance. • Coordinates and plans for subsequent actions.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Attention to Detail	
Behavioral Definition	Focuses on details; thorough in completing tasks.
Work Behaviors	• Checks work for accuracy, thoroughness, and adherence to applicable standards or other guidelines. • Evaluates information or data to assess accuracy, relevance, and completeness. • Meticulously follows applicable FAA orders and regulations. • Maintains focus on the task at hand.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

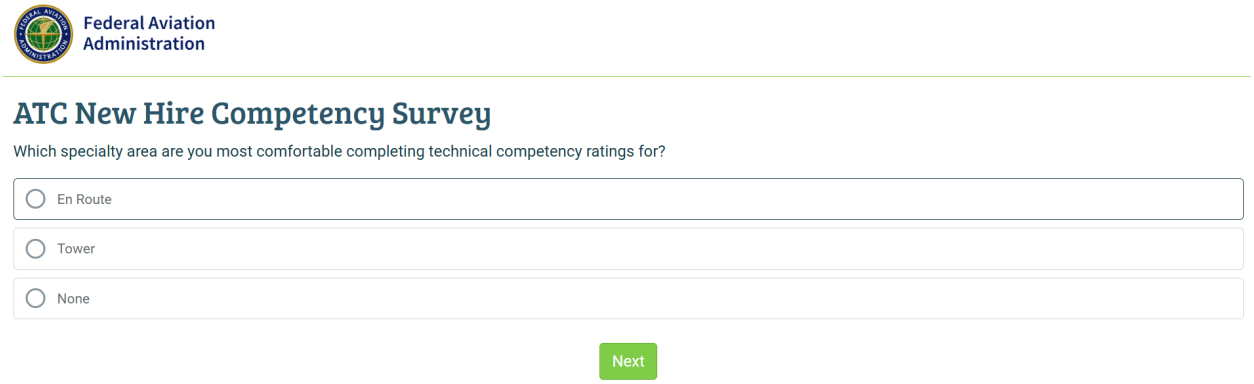
Information Processing/Management	
Behavioral Definition	Ability to receive, interpret, analyze, and utilize data or stimuli effectively; capacity to understand, organize, and synthesize information in order to make informed decisions or take appropriate actions.
Work Behaviors	• Identifies and gathers relevant information. • Processes information quickly; does not wait or hesitate. • Disseminates relevant information accordingly. • Records updates in a timely manner.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Situation Awareness	
Behavioral Definition	Recognizes and understands the elements of a given situation; anticipates the impact of the current situation on future situations.
Work Behaviors	• Aware of other control positions' workloads and traffic. • Uses shared mental model to correctly comprehend the situation. • Accurately assesses the importance and severity of events and tasks.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Filter Question for Technical Competencies



Section 3: Technical Competency Ratings – En Route Track

Federal Aviation Administration

ATC New Hire: En Route Technical Competencies

This section contains a competency and defining work behaviors that have been identified as required for effective performance as an ATC New Hire specializing in En Route.

We would like you to review the competency and defining work behaviors and decide if the competency and its associated work behaviors are needed for an **En Route ATC New Hire**.

For each competency, you will provide the same two ratings of Importance and Proficiency.

FAA Standards and Regulations	
Behavioral Definition	Understands and applies related regulations, policies, standards, or procedures (e.g., FAA Orders, letters of agreements, standard operating procedures) in accordance with FAA training requirements and lesson plans.
Work Behaviors	• Understands the purpose and importance of regulations, policies, standards, and procedures. • Acquires and maintains a working knowledge of regulations, policies, standards, and procedures. • Adheres to all LOAs/directives, standard operating procedures (SOPs), or FAA Orders. • Applies knowledge of FAA standards and regulations for all air traffic controller responsibilities and tasks.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Airspace and Procedures	
Behavioral Definition	Understands how Air Traffic Control (ATC) classifies, organizes, and uses classes of airspace and Special Use Airspace (SUA).
Work Behaviors	• Understands the purpose and importance of classifying, organizing, and using classes of airspace. • Acquires and maintains a working knowledge of classes of airspace and SUA. • Applies knowledge of airspace classification and procedures in performing ATC tasks and duties.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Traffic Flows & Sequences	
Behavioral Definition	Understands and applies standards associated with aircraft traffic flows and sequencing, ensuring effective traffic flow is maintained.
Work Behaviors	• Understands the purpose and importance of appropriately sequencing aircraft. • Uses accurate phraseology when issuing clearances. • Sequences, delivers, stops, and releases aircraft effectively and efficiently. • Complies with traffic management unit (TMU) initiatives and restrictions, and next sector requirements. • Makes efficient use of taxiways/runways.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Relief Briefing	
Behavioral Definition	Understands and applies procedures for transferring control, radio communications, reporting aircraft/vehicle information, and transferring position responsibilities.
Work Behaviors	• Conducts briefing at the end of the scenario in accordance with SOP. • Asks necessary questions to ensure a complete understanding of the operational situation. Thoroughly answers questions asked. • Identifies current conditions (e.g., weather).

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Aircraft Separation	
Behavioral Definition	Ensures appropriate separation of aircraft; identifies conflicts and issues control instructions to aircraft and controllers to ensure separation standards are met.
Work Behaviors	• Understands the different types of separation used to provide safe, orderly, and expeditious separation of air traffic. • Applies appropriate procedures and instructions to ensure separation (e.g., vertical, longitudinal, lateral, runway, radar, wake turbulence, intersecting runway/flight path) for aircraft on same, converging, crossing, or opposite direction courses. • Issues safety alerts and alternate courses of action, when necessary.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Equipment Utilization	
Behavioral Definition	Makes effective use of equipment and technology resources to ensure safety and efficiency of aircraft.
Work Behaviors	• Maintains an awareness of available equipment capabilities and technological resources and their processes. • Uses appropriate and available equipment and technology to perform work activities. • Uses correct syntax when inputting data into computer systems. • Monitors and integrates information from systems, computer screens, and equipment. • Rapidly recovers from equipment failures and emergencies.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Radar Identification	
Behavioral Definition	Understands the standards associated with ensuring aircraft identification, including using radar identification methods; ensures errors in aircraft identification are detected and remedied; understands and applies methods and procedures for transferring radar identification.
Work Behaviors	• Understands and identifies selected data on radar. • Understands appropriate reasons and procedures for issuing radar vectors. • Understands distinctions of radar identification (e.g., handoffs, point outs, and traffic). • Uses correct phraseology for initiating and receiving transfer of radar identification. • Includes pertinent information when performing transfer of radar identification. • Promptly detects aircraft identification errors. • Accurately resolves aircraft identification errors. • Understands and applies methods and procedures for transfer of radar identification.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Phraseology	
Behavioral Definition	Uses standard and prescribed air traffic terminology when communicating with controllers, pilots, and other personnel to ensure the transfer of complete and correct information.
Work Behaviors	• Uses standard and prescribed air traffic phraseology (i.e., approved procedures, words, phrases, or formats). • Quickly identifies and addresses phraseology mistakes. • Transmits only required information/instructions efficiently (i.e., combining information when appropriate).

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Spatial Awareness	
Behavioral Definition	The ability to accurately perceive and grasp the comprehensive state of air traffic within the assigned airspace.
Work Behaviors	• Understands flight trajectories to ensure air traffic is in accordance with standards. • Interprets air traffic's positions, trajectories, and intentions to determine the status of the current airspace. • Leverages multiple integrated systems (e.g., radar, flight strips, equipment) to continuously scan, monitor, and evaluate the entire control environment.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Conflicts, Emergencies, and Unusual Situations	
Behavioral Definition	Understands and applies standards associated with responding to conflicts, emergencies, and unusual situations.
Work Behaviors	• Continuously scans for and/or identifies conflicts, emergencies, and unusual situations. • Promptly collects and disseminates accurate information on emergencies and unusual situations. • Implements solutions swiftly to prevent potential conflicts and emergencies from occurring. • Responds appropriately to urgent situations and emergencies. • Efficiently issues accurate traffic advisories, safety alerts, and control instructions. • Coordinates emergencies and unusual situations with appropriate controllers, facilities, and supervisors.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Flight Progress Strips	
Behavioral Definition	Understands the standards associated with managing flight plan data including data entry, forwarding, and posting of information to flight progress strips.
Work Behaviors	• Posts, updates, and organizes flight strips efficiently. • Uses approved strip marking. • Enters flight plan information correctly. • Recognizes and corrects errors on flight strips. • Communicates amended flight strip information to appropriate aircraft. • Determines the required fix postings for departure, arrival, and/or en route aircraft.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Weather	
Behavioral Definition	Understands basic principles of weather, different elements of the atmosphere, and the National Weather Service's (NWS) role in providing aviation weather services to the FAA.
Work Behaviors	• Identifies weather hazards. • Identifies the intensity of different types of weather. • Determines the impact of hazardous weather on sector/positions operations. • Develops and issues hazardous weather mitigation plans. • Solicits and disseminates pilot weather reports (PIREPs) when required. • Issues significant meteorological information (SIGMETs). • Responds to pilot requests and issues effective control instructions for turbulence and weather avoidance. • Alerts others of reported turbulence. • Defines and differentiates instrument flight rules (IFR) and visual flight rules (VFR) conditions.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Coordination	
Behavioral Definition	Coordinates all information that is pertinent to the situation, in accordance with Academy procedures; acknowledges and verifies all information exchanges; coordinates intra- and interfacility actions with appropriate personnel.
Work Behaviors	• Accurately coordinates separation or changes with appropriate controller/control positions. • Coordinates status and use of runways, taxiway, or helipads. • Requests departure release and coordinates initial departure headings from radar controller. • Coordinates missed approaches, releases, headings, and vectors with departure controller. • Coordinates restrictions or special instructions. • Coordinates and closes runway crossings in a timely manner.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Section 3: Technical Competency Ratings – Tower Track

Federal Aviation Administration

ATC New Hire: Tower Technical Competencies

This section contains a competency and defining work behaviors that have been identified as required for effective performance as an ATC New Hire specializing in Tower.

We would like you to review the competency and defining work behaviors and decide if the competency and its associated work behaviors are needed for a **Tower ATC New Hire**.

For each competency, you will provide the same two ratings of Importance and Proficiency.

FAA Standards and Regulations	
Behavioral Definition	Understands and applies related regulations, policies, standards, or procedures (e.g., FAA Orders, letters of agreements, standard operating procedures) in accordance with FAA training requirements and lesson plans.
Work Behaviors	• Understands the purpose and importance of regulations, policies, standards, and procedures. • Acquires and maintains a working knowledge of regulations, policies, standards, and procedures. • Adheres to all LOAs/directives, standard operating procedures (SOPs), or FAA Orders. • Applies knowledge of FAA standards and regulations for all air traffic controller responsibilities and tasks.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Airspace and Procedures	
Behavioral Definition	Understands how Air Traffic Control (ATC) classifies, organizes, and uses classes of airspace and Special Use Airspace (SUA).
Work Behaviors	• Understands the purpose and importance of classifying, organizing, and using classes of airspace. • Acquires and maintains a working knowledge of classes of airspace and SUA. • Applies knowledge of airspace classification and procedures in performing ATC tasks and duties.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Traffic Flows & Sequences	
Behavioral Definition	Understands and applies standards associated with aircraft traffic flows and sequencing, ensuring effective traffic flow is maintained.
Work Behaviors	• Understands the purpose and importance of appropriately sequencing aircraft. • Uses accurate phraseology when issuing clearances. • Sequences, delivers, stops, and releases aircraft effectively and efficiently. • Complies with traffic management unit (TMU) initiatives and restrictions, and next sector requirements. • Makes efficient use of taxiways/runways.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Relief Briefing	
Behavioral Definition	Understands and applies procedures for transferring control, radio communications, reporting aircraft/vehicle information, and transferring position responsibilities.
Work Behaviors	• Conducts briefing at the end of the scenario in accordance with SOP. • Asks necessary questions to ensure a complete understanding of the operational situation. Thoroughly answers questions asked. • Identifies current conditions (e.g., weather).

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Aircraft Separation	
Behavioral Definition	Ensures appropriate separation of aircraft; identifies conflicts and issues control instructions to aircraft and controllers to ensure separation standards are met.
Work Behaviors	• Understands the different types of separation used to provide safe, orderly, and expeditious separation of air traffic. • Applies appropriate procedures and instructions to ensure separation (e.g., vertical, longitudinal, lateral, runway, radar, wake turbulence, intersecting runway/flight path) for aircraft on same, converging, crossing, or opposite direction courses. • Issues safety alerts and alternate courses of action, when necessary.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Equipment Utilization	
Behavioral Definition	Makes effective use of equipment and technology resources to ensure safety and efficiency of aircraft.
Work Behaviors	• Maintains an awareness of available equipment capabilities and technological resources and their processes. • Uses appropriate and available equipment and technology to perform work activities. • Uses correct syntax when inputting data into computer systems. • Monitors and integrates information from systems, computer screens, and equipment. • Rapidly recovers from equipment failures and emergencies.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Phraseology	
Behavioral Definition	Uses standard and prescribed air traffic terminology when communicating with controllers, pilots, and other personnel to ensure the transfer of complete and correct information.
Work Behaviors	• Uses standard and prescribed air traffic phraseology (i.e., approved procedures, words, phrases, or formats). • Quickly identifies and addresses phraseology mistakes. • Transmits only required information/instructions efficiently (i.e., combining information when appropriate).

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Spatial Awareness	
Behavioral Definition	The ability to accurately perceive and grasp the comprehensive state of air traffic within the assigned airspace.
Work Behaviors	• Understands flight trajectories to ensure air traffic is in accordance with standards. • Interprets air traffic's positions, trajectories, and intentions to determine the status of the current airspace. • Leverages multiple integrated systems (e.g., radar, flight strips, equipment) to continuously scan, monitor, and evaluate the entire control environment.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Conflicts, Emergencies, and Unusual Situations	
Behavioral Definition	Understands and applies standards associated with responding to conflicts, emergencies, and unusual situations.
Work Behaviors	• Continuously scans for and/or identifies conflicts, emergencies, and unusual situations. • Promptly collects and disseminates accurate information on emergencies and unusual situations. • Implements solutions swiftly to prevent potential conflicts and emergencies from occurring. • Responds appropriately to urgent situations and emergencies. • Efficiently issues accurate traffic advisories, safety alerts, and control instructions. • Coordinates emergencies and unusual situations with appropriate controllers, facilities, and supervisors.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Flight Progress Strips	
Behavioral Definition	Understands the standards associated with managing flight plan data including data entry, forwarding, and posting of information to flight progress strips.
Work Behaviors	• Posts, updates, and organizes flight strips efficiently. • Uses approved strip marking. • Enters flight plan information correctly. • Recognizes and corrects errors on flight strips. • Communicates amended flight strip information to appropriate aircraft. • Determines the required fix postings for departure, arrival, and/or en route aircraft.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Weather	
Behavioral Definition	Understands basic principles of weather, different elements of the atmosphere, and the National Weather Service's (NWS) role in providing aviation weather services to the FAA.
Work Behaviors	• Identifies weather. • Implements weather mitigation plans. • Recognizes and responds appropriately to wind shears and wind shifts. • Defines and differentiates instrument flight rules (IFR) and visual flight rules (VFR) conditions.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Coordination	
Behavioral Definition	Coordinates all information that is pertinent to the situation, in accordance with Academy procedures; acknowledges and verifies all information exchanges; coordinates intra- and interfacility actions with appropriate personnel.
Work Behaviors	• Accurately coordinates separation or changes with appropriate controller/control positions. • Coordinates status and use of runways, taxiway, or helipads. • Requests departure release and coordinates initial departure headings from radar controller. • Coordinates missed approaches, releases, headings, and vectors with departure controller. • Coordinates restrictions or special instructions. • Coordinates and closes runway crossings in a timely manner.

	Importance Ratings							Required Proficiency			
BASICS	No Basis	0	1	2	3	4	5	1	2	3	4
Academics Training	No Basis	0	1	2	3	4	5	1	2	3	4
Beginning Simulations	No Basis	0	1	2	3	4	5	1	2	3	4
Advanced Simulations	No Basis	0	1	2	3	4	5	1	2	3	4

Section 4: Demographic Information

Federal Aviation Administration

Section 4: Demographic Information (Optional)

The information you provide will be used to describe the overall characteristics of the supervisors who participate in competency development. Information provided will never be used to identify you to anyone at any time. All information will be summarized and reported in aggregate form.
Optional: Your gender identification:

- ○ Male
- ○ Female
- ○ Other
- ○ Prefer not to disclose

Optional: Do you consider yourself Hispanic or Latino (of Cuban, Mexican, Puerto Rican, South or Central American or other Spanish culture or origin, regardless of race)?

- ○ Yes
- ○ No
- ○ Prefer not to disclose

Optional: Your race (select all that apply):

- ☐ American Indian/Alaska Native
- ☐ Asian
- ☐ Black/African American
- ☐ Native Hawaiian/Pacific Islander
- ☐ White/Caucasian
- ☐ Other
- ☐ Prefer Not to Disclose

Next

Survey Ending Page

Federal Aviation Administration

Thank you for your participation!

You have successfully completed the entire survey.

Appendix D. Job Analysis Results – Core Competency Importance Ratings

Core Competency Importance Ratings by ATC Academy Training Levels

Communication Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	14	4.50	0.65	0%
Beginning Simulations	14	4.00	0.96	0%
Academics Training	14	3.07	1.27	0%
Basics	10	2.80	1.40	0%

*N excludes No Basis Ratings

Learning Orientation Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	14	4.36	0.84	0%
Beginning Simulations	14	4.29	0.61	0%
Academics Training	14	3.86	0.95	0%
Basics	11	3.45	0.93	0%

*N excludes No Basis Ratings

Judgment and Decision Making Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	14	4.64	0.63	0%
Beginning Simulations	14	3.86	0.77	0%
Academics Training	14	2.57	1.34	7%
Basics	10	2.60	1.58	0%

*N excludes No Basis Ratings

Problem Solving Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	14	4.57	0.65	0%
Beginning Simulations	14	3.71	0.61	0%
Academics Training	14	2.50	1.22	0%
Basics	11	2.36	1.69	7%

*N excludes No Basis Ratings

Teamwork Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	14	4.07	1.00	0%
Beginning Simulations	14	3.64	1.15	0%
Academics Training	14	3.00	1.52	7%
Basics	10	2.90	1.52	7%

*N excludes No Basis Ratings

Adaptability and Resilience Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	14	4.57	0.65	0%
Beginning Simulations	14	3.86	1.03	0%
Academics Training	13	2.69	1.44	7%
Basics	10	2.60	1.26	0%

*N excludes No Basis Ratings

Organizing, Planning, and Prioritizing Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	13	4.69	0.63	0%
Beginning Simulations	13	3.85	0.80	0%
Academics Training	13	2.54	1.20	7%
Basics	10	2.30	1.34	7%

*N excludes No Basis Ratings

Attention to Detail Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	13	4.92	0.28	0%
Beginning Simulations	13	4.15	0.69	0%
Academics Training	13	3.15	1.41	0%
Basics	10	2.60	1.35	0%

*N excludes No Basis Ratings

Information Processing/Management Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	13	4.77	0.44	0%
Beginning Simulations	13	3.92	0.76	0%
Academics Training	13	2.92	0.95	0%
Basics	10	2.30	1.49	7%

*N excludes No Basis Ratings

Situation Awareness Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	13	4.69	0.63	0%
Beginning Simulations	12	4.08	0.90	0%
Academics Training	13	2.38	1.45	7%
Basics	9	2.33	1.73	7%

*N excludes No Basis Ratings

Appendix E. Job Analysis Results – En Route Technical Competency Importance Ratings

En Route Technical Competency Importance Ratings by ATC Academy Training Levels

FAA Standards and Regulations Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	7	4.86	0.38	0%
Beginning Simulations	7	3.86	0.69	0%
Academics Training	7	3.57	0.98	0%
Basics	5	3.40	0.89	0%

*N excludes No Basis Ratings

Airspace and Procedures Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	3.67	1.75	0%
Beginning Simulations	6	3.17	1.47	0%
Academics Training	6	3.33	1.51	0%
Basics	5	3.00	1.58	0%

*N excludes No Basis Ratings

Traffic Flows and Sequences Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	4.17	0.98	0%
Beginning Simulations	6	3.83	1.17	0%
Academics Training	6	3.00	1.55	0%
Basics	5	1.80	1.79	29%

*N excludes No Basis Ratings

Relief Briefing Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	4.50	0.84	0%
Beginning Simulations	6	4.17	0.98	0%
Academics Training	6	2.83	1.83	14%
Basics	5	2.00	2.00	29%

*N excludes No Basis Ratings

Separation Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	4.83	0.41	0%
Beginning Simulations	6	4.33	0.82	0%
Academics Training	6	3.50	1.52	0%
Basics	5	2.20	2.28	29%

*N excludes No Basis Ratings

Equipment Utilization Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	4.33	0.82	0%
Beginning Simulations	6	4.17	0.75	0%
Academics Training	6	3.00	1.41	0%
Basics	5	2.00	1.58	14%

*N excludes No Basis Ratings

Radar Identification Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	4.50	0.84	0%
Beginning Simulations	6	4.33	0.82	0%
Academics Training	6	3.17	1.17	0%
Basics	5	2.40	1.14	0%

*N excludes No Basis Ratings

Phraseology Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	4.67	0.82	0%
Beginning Simulations	6	4.67	0.52	0%
Academics Training	6	3.50	0.84	0%
Basics	5	2.80	0.84	0%

*N excludes No Basis Ratings

Spatial Awareness Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	4.33	0.82	0%
Beginning Simulations	6	4.00	1.10	0%
Academics Training	6	2.83	1.60	0%
Basics	5	2.00	1.87	29%

*N excludes No Basis Ratings

Conflicts, Emergencies, and Unusual Situations Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	4.50	0.84	0%
Beginning Simulations	6	3.67	0.82	0%
Academics Training	6	2.83	1.72	0%
Basics	5	1.80	1.30	14%

*N excludes No Basis Ratings

Flight Progress Strips Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	4.50	0.84	0%
Beginning Simulations	6	4.17	0.75	0%
Academics Training	6	3.00	1.55	0%
Basics	5	2.20	1.48	14%

*N excludes No Basis Ratings

Weather Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	3.83	0.98	0%
Beginning Simulations	6	3.50	1.05	0%
Academics Training	6	2.83	1.72	14%
Basics	5	2.40	1.82	14%

*N excludes No Basis Ratings

Coordination Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	4.67	0.82	0%
Beginning Simulations	6	4.17	0.98	0%
Academics Training	6	3.00	1.41	0%
Basics	5	1.80	1.79	29%

*N excludes No Basis Ratings

Appendix F. Job Analysis Results – Tower Technical Competency Importance Ratings

Tower Technical Competency Importance Ratings by ATC Academy Training Levels

FAA Standards and Regulations Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	4.83	0.41	0%
Beginning Simulations	6	4.00	1.10	0%
Academics Training	6	2.83	0.98	0%
Basics	5	2.40	1.34	0%

*N excludes No Basis Ratings

Airspace and Procedures Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	3.17	1.47	0%
Beginning Simulations	6	3.17	1.47	0%
Academics Training	6	2.33	1.03	0%
Basics	5	2.20	1.30	14%

*N excludes No Basis Ratings

Traffic Flows and Sequences Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	4.50	0.84	0%
Beginning Simulations	6	3.67	1.63	0%
Academics Training	6	2.83	1.94	14%
Basics	5	2.40	1.82	14%

*N excludes No Basis Ratings

Relief Briefing Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	3.00	2.00	14%
Beginning Simulations	6	3.00	2.00	14%
Academics Training	6	2.50	1.87	14%
Basics	5	1.40	1.95	43%

*N excludes No Basis Ratings

Separation Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	5.00	0.00	0%
Beginning Simulations	6	4.50	0.55	0%
Academics Training	6	3.50	1.05	0%
Basics	5	2.40	1.95	14%

*N excludes No Basis Ratings

Equipment Utilization Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	3.17	1.72	0%
Beginning Simulations	6	2.83	1.47	0%
Academics Training	6	2.17	1.33	14%
Basics	5	1.80	1.30	14%

*N excludes No Basis Ratings

Phraseology Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	4.67	0.82	0%
Beginning Simulations	6	4.00	1.10	0%
Academics Training	6	3.17	1.33	0%
Basics	5	2.20	1.92	14%

*N excludes No Basis Ratings

Spatial Awareness Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	4.67	0.52	0%
Beginning Simulations	6	3.83	1.17	0%
Academics Training	6	1.83	1.60	29%
Basics	4	1.75	1.71	14%

*N excludes No Basis Ratings

Conflicts, Emergencies, and Unusual Situations Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	4.83	0.41	0%
Beginning Simulations	6	3.83	0.98	0%
Academics Training	6	2.00	1.55	14%
Basics	4	1.50	1.91	29%

*N excludes No Basis Ratings

Flight Progress Strips Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	4.17	0.75	0%
Beginning Simulations	6	3.33	1.03	0%
Academics Training	6	2.33	1.03	0%
Basics	5	1.20	1.30	29%

*N excludes No Basis Ratings

Weather Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	3.50	1.52	0%
Beginning Simulations	6	3.17	1.33	0%
Academics Training	6	2.83	0.75	0%
Basics	5	2.00	1.41	14%

*N excludes No Basis Ratings

Coordination Importance Ratings				
Position	**N***	**Mean**	**SD**	**% Not Needed**
Advanced Simulations	6	4.00	1.10	0%
Beginning Simulations	6	3.50	1.38	0%
Academics Training	6	2.33	1.21	14%
Basics	5	1.80	1.10	14%

*N excludes No Basis Ratings

Appendix G. Job Analysis Results – Core Competency Proficiency Level Ratings

Core Competency Proficiency Level Ratings by ATC Academy Training Levels

Communication Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	14	3.64	0.50
Beginning Simulations	14	3.14	0.66
Academics Training	14	2.64	0.74
Basics	12	2.17	1.11

Learning Orientation Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	14	3.43	0.51
Beginning Simulations	14	3.29	0.47
Academics Training	14	3.00	0.68
Basics	12	2.50	0.80

Judgment and Decision Making Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	14	3.57	0.51
Beginning Simulations	14	3.14	0.66
Academics Training	14	2.57	0.85
Basics	11	2.27	1.01

Problem Solving Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	14	3.71	0.47
Beginning Simulations	14	3.21	0.43
Academics Training	14	2.43	0.94
Basics	12	2.25	1.14

Teamwork Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	14	3.29	0.61
Beginning Simulations	14	3.00	0.78
Academics Training	14	2.79	1.12
Basics	12	2.25	1.14

Adaptability and Resilience Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	14	3.50	0.52
Beginning Simulations	14	3.21	0.70
Academics Training	14	2.36	0.93
Basics	12	2.17	1.03

Organizing, Planning, and Prioritizing Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	13	3.69	0.48
Beginning Simulations	13	3.08	0.49
Academics Training	13	2.31	0.95
Basics	11	2.00	0.89

Attention to Detail Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	13	3.85	0.38
Beginning Simulations	13	3.31	0.48
Academics Training	13	2.62	0.87
Basics	11	2.09	0.83

Information Processing/Management Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	13	3.77	0.44
Beginning Simulations	13	3.23	0.60
Academics Training	13	2.77	0.83
Basics	11	2.18	0.98

Situation Awareness Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	13	3.62	0.51
Beginning Simulations	12	2.92	0.79
Academics Training	13	2.08	0.95
Basics	11	1.82	1.08

Appendix H. Job Analysis Results – En Route Technical Proficiency Level Ratings

En Route Technical Competency Proficiency Level Ratings by ATC Academy Training Levels

FAA Standards and Regulations Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	7	3.71	0.49
Beginning Simulations	7	3.43	0.79
Academics Training	7	2.57	1.13
Basics	5	2.60	0.89

Airspace and Procedures Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.33	0.82
Beginning Simulations	6	2.83	0.75
Academics Training	6	2.67	1.03
Basics	5	2.60	1.14

Traffic Flows and Sequences Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.50	0.55
Beginning Simulations	6	3.00	0.63
Academics Training	6	2.33	1.21
Basics	5	2.00	1.00

Relief Briefing Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.67	0.52
Beginning Simulations	6	3.50	0.55
Academics Training	6	2.67	1.03
Basics	5	2.00	1.00

Separation Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.83	0.41
Beginning Simulations	6	3.33	0.82
Academics Training	6	2.67	1.21
Basics	5	2.20	1.30

Equipment Utilization Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.50	0.55
Beginning Simulations	6	3.00	0.63
Academics Training	6	2.50	1.05
Basics	5	1.80	0.84

Radar Identification Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.67	0.52
Beginning Simulations	6	3.00	0.63
Academics Training	6	2.67	0.82
Basics	5	2.20	0.84

Phraseology Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.67	0.52
Beginning Simulations	6	3.67	0.52
Academics Training	6	2.83	0.75
Basics	5	2.40	0.55

Spatial Awareness Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.50	0.55
Beginning Simulations	6	3.17	0.75
Academics Training	6	2.33	1.21
Basics	5	2.00	1.00

Conflicts, Emergencies, and Unusual Situations Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.50	0.84
Beginning Simulations	6	3.33	0.82
Academics Training	6	2.33	1.21
Basics	5	2.00	1.00

Flight Progress Strips Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.50	0.84
Beginning Simulations	6	3.33	0.82
Academics Training	6	2.50	1.05
Basics	5	2.00	1.00

Weather Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.17	0.75
Beginning Simulations	6	2.83	0.98
Academics Training	6	2.67	1.03
Basics	5	2.20	0.84

Coordination Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.83	0.41
Beginning Simulations	6	3.17	0.75
Academics Training	6	2.67	1.03
Basics	5	2.00	1.00

Appendix I. Job Analysis Results – Tower Technical Proficiency Level Ratings

Tower Technical Competency Proficiency Level Ratings by ATC Academy Training Levels

FAA Standards and Regulations Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.83	0.41
Beginning Simulations	6	3.33	0.52
Academics Training	6	3.00	0.63
Basics	6	2.17	0.75

Airspace and Procedures Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	2.67	0.52
Beginning Simulations	6	2.67	0.52
Academics Training	6	2.50	0.84
Basics	5	2.20	0.84

Traffic Flows and Sequences Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.83	0.41
Beginning Simulations	6	3.17	0.75
Academics Training	6	2.50	1.22
Basics	6	2.00	1.26

Relief Briefing Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	2.83	1.17
Beginning Simulations	6	2.83	1.17
Academics Training	6	2.33	1.21
Basics	6	1.83	1.33

Separation Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.83	0.41
Beginning Simulations	6	3.33	0.52
Academics Training	6	2.83	0.75
Basics	6	2.00	1.10

Equipment Utilization Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.00	0.89
Beginning Simulations	6	2.67	1.03
Academics Training	6	2.00	0.89
Basics	6	1.50	0.84

Phraseology Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.67	0.52
Beginning Simulations	6	3.33	0.52
Academics Training	6	2.83	0.75
Basics	5	2.20	1.10

Spatial Awareness Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.67	0.52
Beginning Simulations	6	3.00	0.63
Academics Training	6	2.33	1.21
Basics	6	1.83	1.17

Conflicts, Emergencies, and Unusual Situations Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.83	0.41
Beginning Simulations	6	3.00	0.63
Academics Training	6	2.67	1.03
Basics	6	1.67	1.21

Flight Progress Strips Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.17	0.75
Beginning Simulations	6	2.83	0.41
Academics Training	6	2.50	0.55
Basics	6	1.67	0.82

Weather Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.33	0.82
Beginning Simulations	6	3.00	0.63
Academics Training	6	2.33	0.52
Basics	6	1.83	0.75

Coordination Proficiency Ratings			
Position	**N**	**Mean**	**SD**
Advanced Simulations	6	3.50	0.84
Beginning Simulations	6	3.00	0.63
Academics Training	6	2.33	0.82
Basics	5	2.00	0.71