

PARAS PROGRAM FOR APPLIED RESEARCH IN AIRPORT SECURITY



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Airport Law Enforcement Staffing

National Safe Skies Alliance, Inc.

Mike Everson, Co-Principal Investigator

Airport Law Enforcement Consultant

Gloria Bender, Co-Principal Investigator Andy Entrekin James FitzGerald Jessica Gafford

TransSolutions, LLC

Michele Freadman

M. Freadman Consulting, LLC

Dr. Jon ShaneJohn Jay College of Criminal Justice

Paula Vanderburg

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The Program for Applied Research in Airport Security (PARAS) is an industry-driven program that develops near-term practical solutions to security problems faced by airport operators. PARAS is managed by Safe Skies, funded by the Federal Aviation Administration, and modeled after the Airport Cooperative Research Program of the Transportation Research Board.

Problem Statements, which are descriptions of security problems or questions for which airports need guidance, form the basis of PARAS projects. Submitted Problem Statements are reviewed once yearly by the Safe Skies Oversight Committee, but can be submitted at any time.

A project panel is formed for each funded problem statement. Project panel members are selected by Safe Skies, and generally consist of airport professionals, industry consultants, technology providers, and members of academia—all with knowledge and experience specific to the project topic. The project panel develops a request of proposals based on the Problem Statement, selects a contractor, provides technical guidance and counsel throughout the project, and reviews project deliverables.

The results of PARAS projects are available to the industry at no charge. All deliverables are electronic, and most can be accessed directly at www.sskies.org/paras.

PARAS PROGRAM OFFICER

Jessica Grizzle Safe Skies PARAS Program Manager

PARAS 0055 PROJECT PANEL

Scott Bader Tucson Airport Authority

Frank Capello Broward County Aviation Department (Retired)

Cory Chase Cottage Grove Police Department

Mark Jongsma Reno Tahoe Airport Police Department

Kevin Murphy ALEAN

Corey Nunley Lubbock International Airport

Jeanne Olivier Port Authority of New York and New Jersey (Retired)

Timothy Tyler Metropolitan Washington Airports Authority

Teri Uno Tampa International Airport Police Department (Retired) **Charlie Vazquez** Tampa International Airport Police Department

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PARAS ACRONYMS

ACRP Airport Cooperative Research Program

AIP Airport Improvement Program

AOA Air Operations Area

ARFF Aircraft Rescue & Firefighting

CCTV Closed Circuit Television

CFR Code of Federal Regulations

DHS Department of Homeland Security

DOT Department of Transportation

FAA Federal Aviation Administration

FBI Federal Bureau of Investigation

FEMA Federal Emergency Management Agency

FSD Federal Security Director

GPS Global Positioning System

IED Improvised Explosive Device

IT Information Technology

MOU Memorandum of Understanding

RFP Request for Proposals

ROI Return on Investment

SIDA Security Identification Display Area

SOP Standard Operating Procedure

SSI Sensitive Security Information

TSA Transportation Security Administration

ABBREVIATIONS, ACRONYMS, INITIALISMS, AND SYMBOLS

ALA Airport Liaison Agents

ASP Airport Security Program

ATLAS Advanced Threat Local Allocation Strategy

CAD Computer- Aided Dispatch System

CBA Collective Bargaining Agreement

CBP Customs and Border Protection

COBRA Combined Officer Broad Response Action Team

DPS Department of Public Safety

EMS Emergency Medical Services

FAMS Federal Air Marshal Service

FIS Federal Inspections Services

FREMS Fire Rescue Emergency Medical Services

FTE Full Time Equivalent

ICE Immigration and Customs Enforcement

ICMA International City/County Management Association

IROPS Irregular Operations

IST Incident Support Team

LEO Law Enforcement Officer

MOA Memorandum of Agreement

PERF Police Executive Research Forum

RMS Records Management System

SLA Service Level Agreement

SWAT Special Weapons and Tactics

SECTION 1: INTRODUCTION

Police departments across the country are experiencing low recruitment numbers and high attrition. This trend is causing a strain on resources, with specific impacts on airport law enforcement, whose responsibilities include TSA-required regulatory functions, airport calls for service, and other functions dictated by each airport. Staffing challenges have created a need for law enforcement to implement staffing strategies that enable efficient deployment of staffing and law enforcement officer (LEO) resources. Knowing the minimum practical level of staffing required at each duty post and patrol assignment to meet the airport's overall security requirements and operational needs is essential to determine the optimum allocation of LEOs deployed throughout the airport campus.

Airports may analyze their staffing requirements for a number of reasons, including budget and labor negotiations, legislative and policy changes, security enhancements and mandates required by new security threats, staff shortages, political and societal issues, funding restrictions, equipment, systems, or airport campus layout changes.

The PARAS 0055 research project called for the development of a staffing tool to help airports assess their individual needs to determine their law enforcement staffing requirements. The resulting LEO Staffing Assignment Tool calculates the number of annual LEOs/Full-Time Equivalent (FTE) staff needed to cover assigned patrols and posts at the airport using airport-specific requirements and constraints. The tool uses a standard week (or two-week) schedule of assignments by job type and shifts, and a user-defined average relief factor for vacations, holidays, sick time, etc. to calculate the annual FTE requirements for each job type (e.g., patrol officers, command staff, canine units, etc.).

Discoveries made during the research prompted the development of a second tool to accompany the LEO Staffing Assignment Tool that could help the user understand the workload distribution of the police department based on the volume of calls for service. The Workload Analysis Tool uses actual, historical data to determine staffing requirements to meet department-specific needs. The analysis accounts for how time is dedicated to reactive calls for service to ensure law enforcement superiors, airport officials, and governing officials have a greater ability to make informed decisions, optimize resource allocation, and ensure staffing levels align with the reactive and proactive demands of the airport. The Workload Analysis Tool is an accessory to the LEO Staffing Assignment Tool and is completed independently.

An in-depth User Guide has been developed to support users of the Tools. The User Guide includes step-by-step instructions with images, as well as a series of video tutorials.

SECTION 2: AIRPORT POLICING AND GOVERNANCE STRUCTURES

Airport law enforcement departments are mission-specific to the airport environment. Airport LEOs are required to have the same education and training as municipal law enforcement officers but are also responsible for performing airport-specific tasks and operations that require additional education and training. In this way, they are more similar to other mission-specific law enforcement departments (e.g., military police, university/college police, transit police, Capitol Police) than their municipal counterparts.

In addition to knowing and applying state statutes and local ordinances, airport LEOs must have knowledge of federal criminal and civil codes and regulations from TSA, FAA, FBI, Customs and Border Protection (CBP), Immigration and Customs Enforcement (ICE) and others. They may be asked to assist in enforcing civil codes from FAA or TSA regulations, as well as assist other federal partners with federal criminal violations and investigations.

Required training often includes operating a vehicle on the AOA to ensure the officers can perform their duties in a dangerous, dynamic, and fast-paced environment with many large, moving vehicles.

TSA-certified explosive detection canine teams must meet high training and certification standards, operate at the highest level of proficiency, and meet response times outlined in the Other Transaction Agreements with TSA. To meet these standards, canine teams are often required to participate in training that removes them from regular patrol duties.

Airport LEOs must be trained to respond to incidents involving a variety of hazardous materials, including jet fuel, chemicals used in aircraft maintenance, and those in cargo shipments.

The airport operating environment requires a delicate balance of safety, security, efficiency, and customer service to ensure seamless operations. LEOs must work with the airport staff and community to maintain the safety and security of the airport. This partnership between law enforcement and airport security, operations, etc. is unlike any other law enforcement community.

One of the main responsibilities of any LEO is to be visible, accessible, and responsive to the community they are protecting. This can be particularly challenging for airport LEOs because of the unique environment, federal mandates, and ever-present threat profile. The unique vulnerabilities inherent to airports demand vigilance and high visibility, community engagement, and a high level of professionalism. Rapid response to any calls for service demands adequate LEO staffing; overworked and understaffed departments struggle to maintain the expected level of service and performance.

2.1 Airport Governance Models

US commercial airports have several ownership and governance models that impact LEO policy, procedures, operations, and staffing levels. As discussed in PARAS 0042: Force Multiplier Strategies for Airport Law Enforcement, the ownership and governing authority of the airport and the airport's Airport Security Program (ASP) will affect policies and procedures that impact the required staffing of LEOs across the airport campus. The ownership and governance model also impacts the type of agreement between the airport and the law enforcement department providing LEOs, as well as level of control over staffing levels.

City, County, State (Public) Governance – Most US commercial airports fall into the public ownership category. In many instances, the airports are run as part of the Aviation Department of the

city, county, or state. Local communities and policies will have a significant impact on LEO staffing decisions. A board of directors may be elected to manage critical airport decisions.

Airport Authority Governance – Some public owners of airports authorize independent entities, such as a quasi-government authority, to manage the daily operations of the airport. These can take the form of airport authorities and port authorities, which may be responsible for one or more airports and other multimodal transportation methods (e.g., seaports). As a quasi-governmental agency, airport authorities have the flexibility to control airport operations at a more granular level (e.g., by creating and prioritizing assignments).

2.2 Airport Law Enforcement Models

There are five typical law enforcement entities responsible for providing law enforcement services at airports. When combined with the different governance structures, each airport has a unique law enforcement model governed by specific local requirements and regulations. The law enforcement entity assigned to the airport will impact the agreements made, LEO staffing levels, and the airport operator's influence on those staffing levels.

Airport Police Departments – Many airports have a dedicated department responsible for law enforcement activities and services at the airport terminals, AOA, roadways, perimeter, and other airport leased space (e.g., tenant buildings, marine terminals). This department is a self-contained entity with a Chief or Police responsible for the LEOs. Depending on the airport's organization chart, airport security and the Airport Security Coordinator responsibilities may or may not fall under the Chief of Police's purview. Airport LEOs have the same arresting authority and training responsibility as state and local peace officers.

City Police Departments – Some airports are assigned a unit from the city police department, often under an agreement such as a Memorandum of Understanding (MOU) or service level agreement (SLA). The city LEOs will typically bid for assignment to the airport unit, or they may be required to rotate through the assignment. Airport units are often managed by an assigned commanding officer. The airport may have some influence over which LEOs are assigned, but the LEOs are employed and governed by the providing agency's policies and any existing collective bargaining agreements.

One airport has an agreement with the city police that allows LEOs to sign up for assignment at the airport for overtime hours. Staffing is determined by the airport's assigned Lieutenant with minimal input from the airport security manager. As a result, officers are assigned to the airport after other city priorities are met, often relying on overtime to fill the staffing level. The agreement in place between the airport and city police does not prevent this, and may in fact encourage this arrangement, because "the airport is paying for it" and not the city.

County Sheriff's Departments – Many airports are supported by the county sheriff's department. Airports with this type of law enforcement model may have a dedicated airport/aviation department. Similar to the city police model, LEOs will bid for the airport assignment. These units are often managed by an assigned commanding officer, and law enforcement services are often outlined in the terms of the contract and SLA between the airport and the sheriff's department.

State Police Departments – Similar to city and county police departments, state police provide a law enforcement unit to some airports. The LEOs bid for assignment to the airport unit and are often managed by an assigned commanding officer.

Department of Public Safety – Using Department of Public Safety (DPS) officers is a lesser used law enforcement model at airports that has significant operational differences to the other support types. DPS officers are often cross-trained in ARFF and emergency medical services (EMS), making them highly efficient and flexible when responding to calls for service. The amount of training required to maintain their certifications will require additional coverage built into the staffing level.

In some instances, the governance structure and the law enforcement model at the airport create competing priorities and needs for LEO services. Airports staffed by city, county, and sheriff's departments are often forced to compete with the local law enforcement departments who need the same officers for patrol in the local jurisdiction.

The rank of officers assigned to the airport will depend greatly on the type of agency providing law enforcement support. Airport police departments often have a Chief responsible for the department, while law enforcement departments assigned as part of a unit under contract may have a Commander or similar-titled person of command level rank such as lieutenant, captain, or major as the highest-ranking commanding officer. Common ranks and job classes include:

- Chief
- Deputy Chief
- Sheriff
- Deputy Sheriff
- Major
- Corporal
- Captain

- Commander
- Lieutenant
- Sergeant
- Officer
- Cadet
- Dispatcher

To help determine the number of supervisors needed, the Police Executive Research Forum (PERF) recommends a span of control of about 7:1 officers to sergeants/supervisors.

ACRP Synthesis 107: *Models for Law Enforcement at Airports* discusses the common LEO support types at airports in more detail.

SECTION 3: LAW ENFORCEMENT STAFFING MODELS

Traditional law enforcement staffing strategies are designed and tailored to meet the needs of city, county, or state law enforcement agencies. However, these have limited applicability in the airport environment, because airports have different considerations than their neighboring communities (e.g., population, types of calls for service, size of response area). Additionally, traditional strategies do not account for airport-specific considerations, such as the terminal layout; number of passenger screening checkpoints; outlying facilities such as rental car facilities, maintenance/hangars, warehouses, etc.; agreements with city, county, state, and federal partners; compliance with FAR 139, 49 CFR §1542, and other regulatory requirements affecting law enforcement responsibilities at airports; and irregular and emergency operations.

Airport law enforcement managers often lack the proper tools to forecast future needs and plan for unforeseen changes, mandates, or vacancies. Without tools to assist law enforcement managers, competing priorities often cloud the landscape and make it difficult to understand and determine the actual staffing needs or potential solutions. There is currently no universal method to determine appropriate LEO staffing levels. Below are the models used in both traditional and airport law enforcement staffing analyses.

Per Capita – Staffing level is based on the ratio of officers-to-population (or passenger). This model is easy to comprehend and applies to most law enforcement departments, but it is considered inefficient and unreliable. The model applies false assumptions, such as all officers are available for dispatch or work functions are time balanced across shifts. The staffing level found through this method is often biased toward the law enforcement department's perceived needs. While not recommended on its own, the per capita model provides a good benchmark for additional staffing analyses.

Minimum Staffing – Staffing level is based on past practice, policy, supervisor experience, or a combination thereof. This model is rarely used on its own because it lacks objective standards. Policy makers often create artificial minimums based on perceived needs or politics. This model is often required by collective bargaining agreements (CBA), making them difficult to change, and can result in violations of the CBA if the levels are not met. However, minimum staffing requirements provide a good benchmark for additional staffing analyses.

Authorized/Budgeted Level – Staffing level is based on the city/state/county airport budget allocations. It is often considered the least effective method to determine staffing levels because it is usually based on artificial benchmarks. Since the department's actual needs are not considered, this model of staffing often creates the perception of the department being understaffed and overworked, which can lead to low morale, decreased productivity, and poor optics with the community.

Crime Trends – Staffing level is based on trends in criminal activity. This model is highly reactionary, often based on past and projected trends. Some critics believe it rewards ineffective practices and poor performance by adding LEOs instead of correcting behavior.

Workload Based – Staffing level is based on actual demand levels (calls for service). The workload-based model is the most accurate and comprehensive model, but also the most complex. The model uses historical data to determine staffing requirements to meet department-specific needs. The model also accounts for how time is distributed across various categories (e.g., reactive calls for service, administrative time, proactive time) to ensure administrators have greater fiscal and management control. The amount of data needed may be difficult for some departments to obtain, especially if the department only has hardcopy data. The analysis often requires specialized expertise, such as an outside consultant.

Often, multiple staffing models will be utilized in a staffing analysis to fully understand the community needs. For instance, a per capita model is often used as the bare minimum benchmark upon which the workload-based model is founded. Including fixed-position staffing requirements in the analysis will ensure that required positions are accounted for in the staffing plan.

SECTION 4: REGULATORY REQUIREMENTS

Law enforcement requirements at airports are specifically outlined in 49 CFR §§ 1542.215 and 1542.217, TSA National Amendments, and Security Directives. In accordance with the regulations, each airport must provide LEOs in the number and manner necessary to adequately support its ASP. However, the regulations do not specify the method to determine the airport's response time or level, or the number of required LEOs. Response times to specific incidents/calls for service must be approved by TSA. These regulatory requirements include, but are not limited to, the following:

- Airport ASP (49 CFR § 1542 Subpart B Airport Security Program) specifies law enforcement support for the individual airport, such as patrols of ticket counters, baggage claims, baggage makeup areas, screening checkpoints, perimeter, and public areas including the terminal and curbside; response times to the passenger and screening checkpoints, SIDA door alarms or high priority doors alarms from a public to security restricted area; patrols of Sterile, Secured, and AOAs; response to covert and overt alarms at the screening checkpoint; and escorting.
- 49 CFR 1542.215 Law enforcement support outlines law enforcement responsibilities to support the ASP and each system for screening persons and accessible property required under parts 1544 and 1546.
- 49 CFR 1542.217 Law enforcement personnel outlines law enforcement requirements, including arrest authority and training.
- TSA-NA-16-01C Inspection of Merchandise and Consumables Intended for the Sterile Area specifies requirements for inspecting merchandise and consumables intended for the Sterile Area. Some airports assign this responsibility to their LEOs.
- TSA-NA-17-01 Security Measures (National Terrorism Advisory System) discusses patrols of the terminal curb and high traffic areas, removal of unauthorized vehicles in front of the terminal, requirements to exercise security measures, and specific security measures to be performed at baseline and DHS threat level changes/alerts for US commercial airports.
- TSA-NA-12-04A Response to SIDA Door Alarms describes mandatory response and resolution procedures for SIDA door alarms as specified in the ASP.
- Security Directive 1542-18-01D Threat to US Airports establishes LEO flexible response time to incidents at passenger and baggage screening checkpoints; requirements for fixed-post LEOs at screening checkpoints; security inspections in passenger terminals, both Sterile and non-Sterile areas, and other public areas; and random ID checks on the AOA and at access points into the Secured Area.
- TSA-NA-23-02 Aviation Worker Screening LEOs will be tasked with responding for calls regarding prohibited items or incidents at the screening locations. Some airports currently assign this responsibility to their LEOs. Using a fixed post or random screening strategy to fulfill this responsibility will greatly impact the required staffing levels.
- ASP Change 11-01 Amendment to TSA Approved ASP: Patrols delineates specific areas of patrol to be conducted in or around the airport, which must be incorporated in the ASP.

Additionally, there are often regulations proposed and enacted that require airport LEOs to conduct additional duties and responsibilities to support aviation security and security measures determined by TSA in their passenger screening regulatory oversight functions at airports.

Airports also often work with federal regulators under agreements to ensure the airport is covered by qualified law enforcement services and able to support to the TSA passenger screening checkpoint in accordance with governing requirements in regulations, (i.e., Security Directives, National Amendments, and other authorities regarding law enforcement services). These include:

- Statement of Joint Objectives between TSA and the airport describes the high-level objective for law enforcement supporting the ASP; many airport operators use this as a guiding document to determine priorities and response options.
- TSA Law Enforcement Officer Reimbursement Program allows participating airports to be partially reimbursed for the costs of local LEOs deployed at TSA airport passenger screening checkpoints.
- TSA Canine Reimbursement Program provides funds (annual stipend) for state/local law enforcement departments to offset the costs of explosive detection canines led by led by airport LEOs, including training of the canine teams.

SECTION 5: AIRPORT-SPECIFIC POSTS AND RESPONSIBILITIES

In addition to their typical law enforcement responsibilities, some airport LEOs assist in performing TSA regulatory requirements and other non-regulated security functions. Although each airport's strategy for use of LEOs to support the airport operations differs, LEOs perform several of the following common functions:

- Provide a visible deterrence with uniformed officers and marked patrol vehicles
- Patrol the airport campus, including terminal buildings, public roadways, parking lots, hotels, gas stations, and other non-aviation-related infrastructure on the airport property
- Provide initial response to crimes against persons and property, drug trafficking, medical events, unruly individuals, persons experiencing homelessness, altercations, and various other calls for service such as revenue escorts and parking enforcement
- Fulfill 49 CFR § 1542.215 requirements, including responding to incidents at the passenger screening checkpoint related to the screening of persons and their accessible property, incidents related to screening of checked baggage, and requests for law enforcement support from aircraft operators and foreign air carriers
- Respond to door alarms on security doors in accordance with the ASP-defined response protocols
- Respond to events at the Federal Inspection Services (FIS) facility, including executing warrants and removing airport employees without the appropriate CBP seals
- Provide customer service
- Challenge badge holders as appropriate in security restricted areas
- Conduct sweeps of the Sterile Areas overnight (post last flight)
- Enforce traffic and pedestrian movement
- Monitor airfield access and conduct patrols of the airport perimeter and AOA
- Deploy K-9, narcotic, and explosive ordnance detection teams, and other special teams including undercover
- Support special security operations (e.g., scheduled events, VIP escorts)
- Serve on investigative units and criminal task forces, such as the Joint Terrorism Task Force, and units for narcotics, human trafficking, and auto theft
- Manage crowds, direct foot traffic, and maintain order to reduce crowds that can create a threat target

5.1 Regular Operations

The majority of airport LEOs are dedicated to patrol functions across the airport, even when posted in specific areas such as the passenger screening checkpoint. Patrol officer daily duties are often classified into three broad categories:

- Reactive
 - o Response to door alarms on SIDA or regulatory doors
 - o Response to TSA screening and baggage checkpoints
 - o Response to covert and overt alarms at TSA checkpoints

 Answer, dispatch, and respond to public-initiated calls for service (from airport, airlines, customers, and the community)

- o Emergency response
- VIP/dignitary escort and protection
- Medical response
- o Escorting fire/EMS, armored vehicle drivers (revenue pick up), and other unbadged individuals
- Executing warrants
- Prisoner transport

• Proactive or uncommitted

- o Officer-initiated calls for service
- o Traffic management
- Testing access control doors and gates
- o Conducting site audits and inspections
- Conducting badge challenges
- o Terminal, curb, perimeter, and ramp patrols, including general aviation, hangars, fuel farms, parking lots, etc.
- Patrols of rental car facilities and other outlying facilities (e.g., warehouses, cargo terminals, hotels, gas stations)
- o Deterrence and high visibility presence
- Canine patrols
- Combined officer response/patrols/assignments with TSA Advanced Threat Local Allocation Strategy (ATLAS) and Federal Air Marshal Service (FAMS), DHS, CBP, and FBI Airport Liaison Agents (ALA)
- o Situational awareness
- o Terminal/facility sweeps

Administrative

- Completing reports
- o Conducting investigations (state misdemeanors and felonies, civil infractions)
- o Issuing citations
- Training
- Court time

Many analysts who have completed workload analyses on police departments use the International City/County Management Association's (ICMA) "Rule of 60," which recommends:

- Patrol officers should spend an average of 60% of their available patrol time on reactive activities, also referred to as the Saturation Index
- Approximately 60% (or two-thirds) of the department's sworn officers should be assigned to patrol duties

• The total service time required to complete a call for service in officer-minutes (*number of responding officers x time in minutes*) should not exceed a factor of 60

The Northwestern University Traffic Institute's Police Allocation Manual recommends that proactive and administrative activities not exceed 50% of available patrol time. PERF recommends the following breakdown of patrol time:

- 30% Community engagement (proactive and uncommitted)
- 35–45% Responding to calls for service (reactive)
- 25–35% Administrative

In order to lower the overall workload for each officer, airport operators could consider the following strategies:

- Reallocate and deprioritize some patrol duties at lower risk locations
- Develop policies and prioritization systems designed to reduce LEOs over responding to low risk calls for service
- Create multiple reporting channels with some designated for low priority calls
- Leverage technologies (e.g., cameras, drones, license plate readers) and civilian personnel operators to help monitor and alert in areas with fewer patrols
- Switch to shorter shift schedules
- Increase minimum staffing levels on shifts
- Implement virtual and e-learning platforms that allow LEOs to complete administrative training remotely

5.2 Irregular Operations

The vast majority of aviation research and discussion of irregular operations (IROPS) is devoted to those involving flight disruptions. In the context of this research, IROPS refer to any disruptions to operations at the airport requiring law enforcement response. IROPS fall into two categories: planned and unplanned. Planned IROPS may include:

- VIP/dignitary escort
- Demonstrations, picketing, or protests
- Construction
- Military flights
- Scheduled system downtime (e.g., maintenance/repair to access control system)
- Weather-related/natural disaster events that occur with a few days warning (e.g., snow/ice storm, hurricanes)

Most airports increase LEO staffing during known peak travel periods, such as holidays and special locally-hosted events (e.g., Super Bowl, Kentucky Derby). Close coordination with the airport customer service department will allow the airport operator to use projected passenger volumes to increase/decrease staffing levels and schedule officer leave time. Passenger traffic throughout the day can also identify peaks when more people will be at the airport and additional LEOs may be needed to ensure coverage.

It is also common for airports to increase staffing during presidential election years to accommodate VIP visits. Airport operators, especially those in metropolitan areas, will consult and coordinate with the Secret Service and FBI to try to anticipate the frequency of the visits based on political trends and local politics.

One airport operator is responsible for a large-scale prisoner exchange every quarter. During the exchange, the airport police and local/state officers collaborate to ensure a successful and uneventful operation. The airport will bring in a team of officers on overtime to facilitate the operation and allow the scheduled airport officers to focus on their daily responsibilities.

Airport law enforcement responsibilities during planned events typically include coordinating with other law enforcement departments (Capitol Police, Secret Service, FBI, security detail), coordinating with airport departments (operations, facilities, security, customer service, or contract security), maintaining situational awareness during the event, and remaining on standby. Depending on the event, LEO or civilian personnel may be posted nearby to monitor unsecured access points or the event. In some instances, the officers from the prior shift may be held over until the event has resolved or a Special Response Unit may assist.

One airport operator described their approach to manage a planned protest. They knew from past protest experiences and the security intelligence that they did not have enough staff and resources to handle an event of the expected size. The department took several steps to prepare for the meeting.

First, leave was suspended the week leading up to the event and a few days after; all officers were notified they were on call. Next, they created an incident action plan to map out the staffing needs and identify what requests for mutual aid needed to be made. An incident command was initiated and a commander assigned. Ancillary groups such as Special Weapons and Tactics (SWAT), bicycle response, canine teams, and investigators were assigned tasks.

Finally, the Chief's office contacted mutual aid partners to request resources. An intelligence officer was brought in to assist with intelligence gathering and management. The Chief requested a civil disturbance unit from the State Police Department, which determined the appropriate number of officers to send based on the available intelligence. Requests were also sent to all neighboring agencies for as many officers as could be spared.

Many airports will develop an operations contingency plan to ensure stakeholders are aware of their responsibilities during unexpected events. Staffing levels during planned IROPS should be adequate to cover for resources that must be pulled to attend the event. Many airports use security intelligence to assess the potential threat risk and assign LEOs accordingly.

Unplanned IROPS (e.g., weather, power outage, flight diversions) greatly impact staffing and service levels as resources are pulled to address calls for service. If the airport operator feels that more officers are needed for coverage, they may have officers stay after their shift ends, have officers arrive early for their shift, pull from other departments (security, facilities, operations, Special Response Unit), or call in additional city/county resources from neighboring jurisdictions for significant or prolonged incidents.

Airports have unique emergency response protocols, including procedures for handling aircraft incidents, bomb threats, and other aviation-related emergencies. Airport LEOs receive specialized training to handle these situations effectively, and sufficient staffing is necessary to respond promptly and effectively.

5.3 Levels of Expected Service

Responses to calls for service are often used as the main source of data to determine if a police department is performing to standard. Response time is the main key performance indicator to ensure enough LEOs are available on the shift. Some airports operators collect specific response time metrics that assess their ability to meet regulatory requirements, such as response time to door alarms or the security checkpoint. Call type can be used to determine the Saturation Index and the overall workload of the officers on shift. Crime trends can be derived from the call type and time/day of the call.

Call volume and call processing (including dispatch time, officer arrival, and resolution time) can be used to determine the appropriate number of dispatchers needed and to create call prioritization procedures for simultaneous calls for service.

The ASP defines the expected response time for LEOs to respond to specific calls for service and alarms throughout the airport (i.e., SIDA door alarms, TSA screening checkpoints, passenger and baggage screening calls for service, and covert and overt alarms at checkpoints), which are periodically tested by TSA. Expected service levels may also be outlined in SLAs, Memoranda of Agreement, MOUs, and post orders, depending on the airport

One airport has developed an SLA with the city police department that provides the airport with 100% control over the number of officers assigned to the airport and their assignments. The airport operator outlines the requirements for each shift, assignment, officer ranks, billeted hours authorized to cover the assignments, training requirements, and operational need. The SLA also outlines hours that can be billed for cross utilization of officers on task forces and attendance at leadership and civil aviation security management training and conferences. The agreement is reviewed annually to ensure the expected levels of service remain appropriate.

Providing airport executives with statistical reports on the calls for response can help justify requests for increased LEO staffing numbers.

Airport operators with anticipated resource demand and historical data and reports showing how many resources have been required in the past can input that information into the Workload Analysis and Staffing Assignment Tools to determine their annual resource needs more accurately.

SECTION 6: ALLOCATION AND DEPLOYMENT STRATEGIES

Each airport has a unique law enforcement staffing model based on many factors, such as airport governance model, law enforcement model, and the agreements between the airport and the department providing contracted law enforcement services. Other features of the airport and law enforcement department may also impact how LEOs are staffed across the airport, such as the public safety and security priorities, outlying on-property facilities and areas that need to be patrolled, the layout of the airport, requirements in collective bargaining agreements, and local conditions. Each department's approach to fulfilling the responsibilities in the ASP and associated regulatory requirements differs based on leadership, priorities, budget, and staffing.

Crime trends typically do not impact the overall staffing levels at airports, although they greatly impact deployment strategies and schedules. LEOs may be tasked to perform select special operations (stake outs/surveillance, undercover) or conduct more frequent patrols of at-risk locations based on the crime trend data.

When airports are experiencing low staffing numbers due to retention or recruiting challenges, often the lower security locations and activities (e.g., rental car centers, LEO visibility) are sacrificed to ensure the federally required locations and activities are covered first, followed by the airport-specific high-risk areas.

6.1 Airport Assignment Areas

Airport operators typically divide the airport property into assignment areas. LEOs are expected to perform certain responsibilities depending on which assignment or area they are given. For example, a LEO assigned to the security checkpoint may be responsible for responding to calls for service at the checkpoint; collecting and managing dangerous, illegal, and prohibited items discovered by the TSA; and monitoring cameras within the footprint of the checkpoint. A LEO assigned to patrol the west perimeter, however, may be required to patrol several acres of property; test vehicle gates; check on suspicious activity, vehicles or persons; and look for damaged perimeter fence line in a patrol vehicle. The assignment areas are highly dependent on the airport layout and priority response areas.

Airport size, facilities, and layout are the main drivers defining the various assignment boundaries. Terminal assignment footprints are often defined based on the ability of an officer to respond to an alarm in that area within the response time required in the ASP, and to handle other priority calls for service. Longer walking distances will result in slower response times, but this can be mitigated by using bikes or electric standup vehicles (aka trikes).

The most common assignment areas are:

- Sterile Area of each concourse/terminal
- Public area of each concourse/terminal
- Around or at each passenger checkpoint (some ASPs allow for flexible response)
- Curb of each concourse/terminal
- Patrol the perimeter and outlying facilities
- Ramps, aprons, and other areas in the AOA

At some airports, LEOs are also responsible for:

- Terminal exit lanes
- Highways and roadways on airport property
- Public transit stations (bus and rail)
- Airport automated people movers (i.e., intra-airport trains)
- Airport parking lots and garages
- Rental car facilities

One airport operator described how the previous off-site Fire Rescue EMS (FREMS) personnel had to be escorted through the Sterile and Secured Areas to respond to medical emergencies because they were not badged and on-site at the airport. This was a burden for law enforcement as the officers had to be pulled from their primary responsibilities to escort the FREMS personnel. The airport built a 24/7 FREMS station in the Sterile Area for badged personnel to quarter between calls for service and training. This greatly relieved the burden on the officers.

6.1.1 Prioritization

Airport security is built into the physical measures, technology, and human resources deployed in a layered approach that aims to protect high-risk targets. Airport leadership and police command staff should describe their ideal security posture. With that goal in mind, the executives can then identify and evaluate the department's staffing needs to reach the ideal posture, while accounting for the unique requirements of their airport and the areas at the airport that need law enforcement coverage.

The first priority should be the federally required assignments outlined in federal regulations, the ASP, and agreements. This is typically response to the passenger screening checkpoint and access doors leading to the Sterile Area and SIDA, and other locally-designated critical activities. These requirements will need to be met before other assignments. Each airport will have a unique approach to meet federal requirements as approved by the TSA in the ASP.

Once all assignments required by regulations, local laws, and written agreements have been filled, determining priority assignments at the airport will greatly depend on the airport's unique layout, designated security areas, deployed security measures, and resource availability. These secondary priority areas are typically high-risk areas that are not required by the ASP, but are of vital importance to support the ideal security posture.

This will typically include public areas of the terminal where crowds tend to form and where individuals have not been through security screening. The threat is unknown, and these unscreened individuals could be carrying weapons. It is common to assign high visibility uniformed officers in all public areas as a visible deterrent to crime and criminal activity. Ensuring a visible and engaged presence throughout the airport community is crucial to support the ideal security posture. LEOs need to conduct high-visibility patrols to observe and interact with airport workers, visitors, customers, and tenant employees with the flexibility to respond to calls for service when needed. Executives should consider staffing approaches that provide this flexibility for their patrol staff.

Many airports also prioritize the terminal roadways where customers are picked up and dropped off, baggage claim halls, rental car centers, parking garages, and airport train stations. Marked vehicle patrols on roadways into and out of all airport property provide visibility to those entering or leaving the

airport. Patrols in AOA and SIDA provide coverage of the federally regulated security areas to mitigate safety violations such as speeding.

Other priority assignments include patrol and response in the Sterile Areas. Terminals, gate hold rooms, concessionaires, and other Sterile Areas of airports can be huge areas to patrol, and are populated with customers and aviation workers. Many accidents, medical emergencies, disputes, disturbances, and other calls for service are generated in the Sterile Areas, and LEOs must be able to rapidly respond to meet the needs of the public.

Some airports place an emphasis on perimeter tenant facilities, others on vehicle access gates or the main airport roadways. Often, it is the parking areas, public transit stations, outlying buildings on property, and airport access roads that are staffed last to ensure higher risk areas are covered first. Historical data should be used to help appropriately prioritize assignments based on the distribution of types of calls throughout the day and across the reporting area (i.e., airport terminal, rental car facility). The PARAS 0055 Workload Analysis Tool can be used for the evaluation.

Detectives support the patrol officers by conducting investigations to resolve the officers' reports on calls for service, criminal activity, suspicious activities, and other recorded incidents. Departments without these positions may struggle to resolve reports in a timely manner, or may experience increased overtime to complete reports at the end of the shift.

Crime analysts can provide the law enforcement department with insights into crime trends to help provide direction for deployment strategies. Additionally, since the analyst position is often a civilian role, the department can reassign detectives—who often hold this responsibility—to perform their primary investigative role and other tasks. The analyst can also examine the call processing, dispatch, and arrival times, as well as call types and locations, to provide command staff analyses of the service calls.

Command and supervisory staff are critical to an effective department. The command staff can provide guidance to officers on the correct response or approach to a situation and ensure assignments are being covered. It is often the responsibility of command or supervisor ranks to create a shift schedule that covers the department's assignments while accommodating relief factors such as vacations and training.

6.1.1.1 Visibility and Deterrence

Law enforcement visibility and deterrence is often a primary factor when determining LEO staffing prioritization. This includes proactive and uncommitted service time with strategies such as:

- Informed and strategic patrol routes based on crime trends
- Deployment of special operation divisions (e.g., canine teams at the baggage claim, vehicle gates, and a variety of public areas in the terminals)
- Positioning marked police vehicles with flashing lights in locations with higher levels of activity or risk (e.g., terminal curbs, parking areas, inside the AOA, rental car center)
- Long gun patrols in the public area of the terminal(s)
- Visibility of uniformed officers in high traffic areas of the terminal (e.g., ticketing, baggage, gate areas, public corridors)

Many airport operators, highlighting the importance of creating a customer friendly and safe environment in the terminals, prefer deployment of canine teams over long gun patrols as the dogs are

less intimidating. Additionally, patrols on bikes or trikes elevate the officer above the walking crowd, providing the officer more visibility in the crowds and a wider field-of-view.

Airport operators may periodically coordinate saturation patrols to concentrate law enforcement visibility and presence in a specific location for a set period of time. Patrols may be deployed on foot, bike, or vehicle, and often include local mutual aid partners. Saturation patrols serve four significant purposes:

- 1. **Deter crime:** The large number of officers makes criminal activity less appealing and risker to potential bad actors while creating a strong security presence.
- 2. **Apprehend criminals:** More officers on patrol increases the chance of catching criminals in the act.
- 3. **Gather intelligence:** Officers on patrol interact with stakeholders and establish relationships within the airport community, which facilitates the development of sources (human intelligence), to potentially uncover valuable information about criminal activity.
- 4. **Build community trust:** Saturation patrols can show stakeholders that police are committed to their safety and security, and to fostering better relationships

In general, the public areas of the airport (baggage claim, ticket counters, lobby, curbs, parking lots) are the most vulnerable because the people in those areas have not been through security screening and may be carrying weapons. High priority should be given to patrols in the public spaces to deter potential bad actors from targeting crowds.

6.1.1.2 External Assignments and Details

Depending on the airport's law enforcement model and agreements with local agencies, some airport LEOs may be assigned to roles outside of the airport on a temporary or extended period of time.

Some airport LEOs are part of local and regional task forces that are a crucial component to crime fighting in the communities surrounding airports. Without them, airport law enforcement departments may struggle to find the resources, funds, and equipment necessary to effectively address the criminal activity creeping into the airport environment. Airports are often targets for illegal activities such as narcotics trafficking, gang-related activity, gun smuggling, human trafficking, terrorism, and money laundering. Task forces investigate, pursue, and prosecute these criminal activities through the cooperation and temporary reassignment of officers from multiple local, state, and federal departments. This leverages each department's skills, contacts, and resources for a greater impact on the criminal activities with far less effort than would be required of a single jurisdiction.

Each participating LEO in the task force has the opportunity to learn valuable skills, lessons learned, and alternate strategies that can potentially be applied to the airport department. In many instances, these are short-term assignments, after which the officer returns to the airport's roster. In other cases, the officer may be assigned to the task force for much longer or even permanently. Participating officers are taken off the schedule only for the period they are assigned to the task force.

Participating LEOs also create a network of working relationships with law enforcement contacts at the local, state, and federal levels that can be leveraged to assist with investigations, share information, and connect with new contacts.

Specially trained airport LEOs may also participate in local SWAT teams. Some airport explosive detection canine teams respond with SWAT teams as part of mutual aid agreements. This response may

render them unavailable for an entire shift. As such, many agencies do not include them on regular shift schedules, but assign them as they are available.

6.1.2 Airport Layout

The airport's law enforcement department generally has jurisdiction over the entire airport property, including terminals, runways, and surrounding areas. Tenants of GA facilities, military bases, or other independently operated facilities on property often contract with independent security services or military police, but airport LEOs generally support those entities with certain law enforcement services, such as patrols and response to calls for service.

One airport police department has an agreement with the private corporate hangar owners and the Air National Guard on property. The agreement allows the airport police to patrol these areas and assist the tenants when requested. The agreement also allows airport police to transport detainees to the appropriate holding facility on behalf of the military police.

The airport's proximity to local holding facilities may impact the LEO staffing level, as other officers are often required to cover an officer's shift duties while a detainee is transported and booked. Some airports have a holding facility on property, which significantly reduces the transport time and overall amount of time an officer is away from their primary responsibilities.

Public transportation stops at airports are a major concern for airport security. These transit systems bring many non-airport users onto airport property, and LEOs are frequently called to remove individuals without business at the airport. Airports with a stop on the public bus or rail system route will often assign a LEO to patrol the transit station and monitor the crowds. These transportation systems often drop off non-airport users at the airport, who then become the responsibility of the airport and airport police. Working with individuals without business at the airport (e.g., people experiencing homelessness, migrants) can be taxing on law enforcement resources and availability.

One airport police department shares jurisdiction with the State Police, including on the highways running through the airport property. There are agreements in place that delineate airport police response from State Police response along these highways, but airport police will respond to calls just outside these boundaries if they can respond faster.

6.1.3 Local Conditions

Staffing levels are based on a number of unique local factors and conditions. The most commonly used is the passenger traffic levels, which can be equated to a city police department's citizens. When passenger traffic increases during holidays and special events, airport police departments often increase shift staffing levels. Often, this is done using overtime to cover the gaps in resource availability.

Passenger profile may have small impacts on LEO staffing requirements. Airports located near military bases may experience increased crowds in the meeter/greeter area when military flights are scheduled to arrive. The research has also shown that non-legacy air carriers often generate more calls to respond to unruly passengers than the legacy carriers.

One air carrier contracts with multiple airports to provide airport LEO patrols in their main office facility, mechanical areas, ticketing lobby, and their baggage claim area and carousels. Officers may sign up for shifts with the air carrier for overtime hours. If a shift is not filled, the airport can extend the patrol areas of nearby officers to ensure LEO presence.

When LEOs are working a shift for the air carrier, they are expected to remain in that area except if called to respond to life emergencies and critical incidents; these officers will not be dispatched to airport calls for service.

Allowing the air carrier to contract LEOs benefits the airport because officers working their airport shift are not needed to cover the air carrier areas and can focus on other priority areas.

A major challenge for many airports located near urban and downtown areas is assisting people experiencing homelessness at the airport. Airports report many challenges with these individuals that require LEO monitoring and response, including harassment of travelers and workers, disturbing the peace, and trespassing. Working with these individuals to connect them with local services, or simply removing them from the airport, typically takes a significant amount of time. Creating response teams with social workers or mental health clinicians has been shown to greatly alleviate LEO workload and improve outcomes related to these calls for service.

One airport law enforcement agency is preparing for a significant increase in people experiencing homelessness staying in the airport during the day. The neighboring city is building an emergency housing facility that can house 750 individuals every night. The facility is closed during the day, and those staying there cannot return until it opens for the night. Given the proximity to the airport, it is expected that a large number of these individuals will attempt to seek shelter in the climate-controlled buildings on airport property.

Several airport operators have experienced challenges with recruitment and retention. These are driven by social viewpoints regarding police conduct, recovery from post pandemic levels, and other factors. Some agencies offered 20-year retirement plans for officers immediately after 9/11 to boost their numbers. When those officers reached their 20 years in 2021/22 and retired, many agencies were left with vacancies that are still unfilled. Most airports are operating under their allotted number of officers, and many are operating at just above minimum. Additionally, other local departments and agencies are often competing for the same applicants, and airports lose many prospective officers to outside agencies that can offer higher wages or better benefits.

In one case, the local law enforcement agency with the contract to provide airport law enforcement is struggling to fill both on-airport and off-airport vacancies, regardless of signing bonuses or increased pay. The workload from unfilled vacancies is fulfilled through agency-wide overtime, causing huge increases to the security budget.

Many airports serve as international gateways with a constant flow of international travelers and cargo. These airports face unique challenges related to customs, immigration, and the potential for smuggling or trafficking activities, necessitating coordination and cooperation with federal agencies such as CBP and ICE. Airport LEOs must work closely with these agencies to ensure compliance with international laws and regulations, and to conduct thorough inspections and investigations. Some LEOs are posted at FIS facilities during flight hours.

6.2 Force Multiplier Options

Airport law enforcement departments rely significantly on the assistance of other agencies, departments, and groups to maintain the safety and security of the airport. These arrangements can take the form of contracted services, collaboration with airport departments, mutual aid and other agreements, non-sworn law enforcement personnel, and volunteer services. Assistance from these resources may not always be utilized due to airport or local city/state regulations, but they can assist with supplementing resource availability during regular operations, as well as planned and unplanned incidents.

Support resources available to airport law enforcement include:

Airport department(s) – relevant departments include security, operations, and properties, which often perform auditing and inspection activities, respond to non-law enforcement calls (slip and falls, lost luggage, persons experiencing homelessness), monitor the curbside, and may be able to issue citations and notices of violation on behalf of the airport. Security and operations may perform data analyses, monitor the airport surveillance systems, and dispatch from the airport communications center.

One airport has created an Incident Support Team (IST) composed of civilian airport and tenant personnel who assist with larger scale incidents. If the situation requires additional resources, the IST is activated, and available team members are deployed where they are most needed.

Mental health clinicians/social workers – respond to certain calls for service with a LEO escort (coresponse model) to help de-escalate persons experiencing crisis, assess individuals, and assist with referrals to local hospitals or psychiatric facilities. Clinician services are usually under contract with the airport.

Response teams – created to respond to specific incidents that do not necessarily require a law enforcement response. Calls for response involving unhappy air carrier customers, minor injuries, individuals without business at the airport, and individuals experiencing a mental health crisis often require more time to complete and the involvement of professionals trained to handle those incidents. Dispatching specific response teams to manage the incident before sending LEOs can reduce officer reactive time. PARAS 0033 *Mental Health and Airport Security* offers more details on response team implementation.

Contract security – can be used to supplement many LEO activities such as traffic management, passenger exit lane monitoring, vehicle and pedestrian gate monitoring, vehicle inspections, vendor and merchandise inspections, ID badge checks, surveillance system monitoring, escorting, patrols, lower priority door alarms, and other security functions depending on the airport. In these instances, there is typically a contract between the airport and the service provider specifying the contractually obligated functions.

For years, Hawaii's Department of Transportation used a contract security firm that provided law enforcement services for the state's airports. The law enforcement group of the firm had the power to arrest, but the officers had no access to police databases, no holding facility or ability to transfer a detainee to one, and prosecutors would not take their cases.

Now that the Sheriff's Department has primary responsibility over law enforcement services at the airport, the contracted officers are responsible for some patrol functions, posts at the checkpoints and exit lanes, and traffic control at the curbs. If necessary, the contracted officers will call for assistance from the Sheriff's deputies to carry out arresting and charging activities.

Police cadets – several airport operators interviewed reported having a police academy on or at the airport, and cadets were often used to support sworn LEOs in functions similar to contract security functions.

Federal partners – TSA ATLAS or Playbook teams perform several inspection activities around the airport. Officers stationed at or near the airport (e.g., FBI ALAs, TSA FAMS, DHS ICE and Homeland Security Investigations officers, and CBP LEOs) can provide additional law enforcement support when necessary. Some airports work with TSA's Visible Intermodal Prevention and Response (VIPR) teams to create high visibility, high saturation patrols around the airport during heightened threat periods. Collaboration with federal partners is often outlined in agreements with the airport.

One airport law enforcement department has partnered with CBP and FAMS to increase uniform presence and perform random sweeps of the baggage claim and security checkpoints under a signed agreement.

Local law enforcement agencies – airport police may enter into agreements with neighboring law enforcement agencies that outline patrol arrangements in shared jurisdictions. In some cases, officers will be badged and SIDA trained to allow them to respond in the Secured Areas without an escort. Many airport LEOs are also trained to drive in the AOA.

One airport has created the Combined Officer Broad Response Action Team (COBRA) made up of airport LEOs from multiple divisions in combination with TSA Behavior Detection Officers, TSA ATLAS teams, armed FAMS, and CBP LEOs. COBRA conducts organized uniformed patrols for visibility and covert behavioral detection in the most vulnerable areas of the airport, particularly the public space.

Volunteer – many airports have created a customer service program staffed by volunteers, often consisting of retired aviation professionals such as airline personnel. These volunteers usually remain on the public side of the airport and offer assistance to passengers. The volunteers can call for police response for more serious interactions.

Ambassadors – similar to volunteers, Ambassadors provide customer service but are usually paid for this role through the operations or customer service budget. Some airports badge these individuals so they can work in the Sterile Area.

One airport created an Ambassador program that utilizes retired LEOs to monitor the public areas of the airport. The Ambassadors serve as the "eyes and ears" of the airport and are responsible for providing customer service and directions to lost passengers, approaching persons experiencing homelessness and offering services, and reporting incidents in the public area to the airport police using issued radios. The former LEOs provide years of knowledge and experience that can be leveraged for both customer service and security. The Ambassadors wear an issued uniform—a branded blue shirt worn with khaki pants—that is considered less intimidating than a police uniform.

Retired LEOs – some airports recruit recently retired LEOs to perform select civilian responsibilities for a limited number of hours per year, such as crime analysis. Salaries, benefits, and roles are outlined in the union agreements.

In addition to patrol officers, airport often utilize the following units or divisions to support the department:

- Special operations division (SWAT, bomb squad, Explosive Detection Canine teams)
- Criminal investigations division (detectives, crime/intelligence analysts, plainclothes assignments)
- Support services division (social services, clinicians)
- Traffic division
- Police records division
- Quartermaster functions at holding facilities (property and evidence)

Some airport operators prefer to use LEOs at the curb to provide a uniformed presence and authority in those areas. However, they may choose to assign traffic and curb monitoring activities to civilian, supplemental staff. This allows the LEOs to focus on activities that require a law enforcement presence and authority. Airport operators can consider using civilian resources for specific, non-law enforcement tasks to relieve officers for more critical tasks. In addition to Ambassador programs and co-responder models discussed above, examples of potential strategies include:

- Creating Airport Resource Officers to check regulated doors, respond to door alarms, manage
 Lost and Found, respond to slip and falls on escalators, write medical reports and review video,
 etc.
- Deploying Community Service Officers who assist passengers arriving and departing the terminal roadways and enforce parking regulations in front of the terminals.

SECTION 7: WORKFORCE MANAGEMENT

Creating effective schedules that account for officer leave requests, training requirements, and union agreements while reducing costly overtime hours and ensuring 24-hour coverage at the airport can be a considerable challenge for command staff. Traditional law enforcement scheduling is often used by airport law enforcement with minor adjustments to account for peak passenger traffic or requirements outlined in agreements.

7.1 Work Time Considerations

Command staff are responsible for overall staffing levels, extended leaves (Family and Medical Leave Act, disability, military/national guard), workload standards, shift rotations, and other aspects of resource management. In general, more officers will require more supervisors; most experts advise that the ideal span of control is 5:1 to 7:1 officers to supervisors.

LEO staffing models and schedules must account for sick time, leave time, and training while minimizing vacancies that will be covered by overtime. Scheduling and shift-swapping applications can greatly assist with this challenge. Supervisors and officers can use the program to fill vacant shifts, sign up for overtime, switch shifts, request and approve leave, and view who is on or off duty. Compliance programs can assist commanding officers with tracking uncompleted training for their direct reports.

7.1.1 Overtime

Overtime is a major challenge and financial burden for every law enforcement department. Anticipated overtime is often projected and built into the staffing levels and schedule to help compensate for those hours in the budget. Retirements and lack of qualified applicants have left many law enforcement departments with more vacancies than typical in the last few years. The vacancies and lower-than-minimum staffing levels often result in using officers on overtime to fill in the gaps.

One airport operator indicated that their agreement with the city to provide LEOs does not specify which officers should be assigned to the airport, which frequently results in the officers signing up for the airport assignment as overtime hours. This unexpected use of overtime has doubled the airport's security costs without providing additional law enforcement services. Union agreements make it difficult to alter this arrangement.

Some airports use compensation (comp) time in lieu of payment for overtime. Others do not permit comp time as it can be viewed as a debt for the department/airport. Careful scheduling for planned absences with contingencies for unplanned absences can help reduce overtime. Airport law enforcement agencies with unmanageable levels of overtime should consider hiring another officer to cover the shifts being staffed through overtime.

7.1.2 Leave Time

Leave time—also known as non-productive FTE—is also dependent on the airport, law enforcement department, and agreements between them and/or their union. Many departments will only approve vacation time up to 90 days out, with exceptions for vacations that must be planned well in advance (e.g., cruises). Some airports and departments place limits on how many officers can take discretionary leave (e.g., personal time, comp leave) at a time to reduce the impact on staffing levels.

7.1.3 Training

Staffing around training time is highly dependent on the law enforcement department (training is also incorporated into non-productive FTE). Some airports have an onsite facility or range the LEOs can use to take training and renew certifications. Often the officers are expected to take their training during off hours as overtime or comp time. If the officer must take the training during their shift, it is often scheduled on days with plenty of coverage to minimize the impact to staffing levels.

Some departments will schedule all the training for the year in January to ensure a balanced staffing level and workload around known peak travel periods. Some departments schedule all training before approving any vacations to ensure multiple officers will not be unavailable for long periods.

Departments that have attained law enforcement accreditation, such as the Commission on Accreditation for Law Enforcement Agencies, Inc. (CALEA®), will have additional training needs that are required to maintain their certification. DPS officers who perform dual functions as LEO and ARFF will need more training than typical LEOs to maintain their ARFF and EMS certifications.

7.1.4 Exercise Time

Many municipal law enforcement departments allow for exercise time during the officer's shift, and some airports have exercise rooms for the LEOs and/or airport workers. Exercise time may be assigned by the shift supervisors based on the number of calls for service or staffing requirements for the day.

7.2 Shifts and Schedules

Daily assignments and scheduling are typically the responsibility of the shift supervisor (often a lieutenant or sergeant) who assigns patrols and posts as well as the rotation of officers throughout the shift. Many departments try not to assign an officer to the same patrol or post for more than a couple of hours to maintain alertness and provide equity in assignments.

Storing the daily roster on a shared drive in the Airport's Communication Center/Security Operations Center allows the police, airport operations, airport security, dispatch, and other relevant stakeholders with a need to know to see which officers are working that day/shift.

Shift lengths are often mandated in union agreements and vary significantly between airport law enforcement departments for a number of reasons. Often the shift length is chosen to help ensure coverage throughout the day at minimal staffing levels. Some commanding officers prefer a short overlap in shifts to allow the first shift to debrief the next shift and wrap up calls for service, or complete training with less overtime. Multiple starting times across the shifts can also create this overlap.

Many law enforcement agencies use a compressed workweek schedule to give officers more days off to rest and recover while maintaining 24-hour coverage.

7.2.1 8-Hour Shifts

Some law enforcement agencies have three shifts (e.g., day, swing, night) of eight hours each. Eighthour shift schedules will require more officers to ensure 24/7 scheduled coverage. Absences are typically covered by overtime, often requiring an officer already on duty to stay longer and/or the next shift officer to start their shift early. Because of this, law enforcement agencies using 8-hour shifts work

¹ https://www.calea.org/

significantly more overtime than those on 10- or 12-hour shifts—as much as five times that of 10-hour and three times that of 12-hour.

CONTINENTAL SCHEDULE

This schedule uses four squads to rotate through the day, swing, and night shifts over the course of a week. Every fourth week the officers receive three consecutive days off. An example schedule is shown below.

Week 1 Week 2 Week 3 Week 4 5 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 2 4 6 Team A Team B Team C Team D Day Shift (12-hr) Day Shift (8-hr) Night Shift (12-hr) Day Off

Figure 7-1. Continental Schedule

LEOs working this schedule receive an average of two overtime hours per employee per week.

LOW NIGHT DEMAND SCHEDULE

The Low Night Demand schedule ensures 24-hour coverage but assigns more LEOs to the day shift than the swing and night shift. This schedule may be useful for some airports who have the majority of calls for service on the day shift.

The schedule requires six squads—two assigned to day shift, one each to swing and night shifts, and two off duty. The squads rotate through the shifts to provide equity to the officers. An example schedule is shown below.

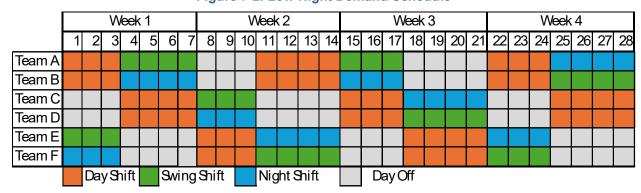


Figure 7-2. Low Night Demand Schedule

Some LEOs working on this schedule may not like the 7-day work weeks. Additionally, officers work an average of 37.3 hours, but this could be made up throughout the cycle.

7.2.2 10-Hour Shifts

Ten-hour shifts are common for airport law enforcement agencies, possibly because this schedule works well for smaller agencies of less than 50 officers. Five to six squads rotate through three shifts (e.g., day, swing, night) for 24-hour coverage. Of all the shift lengths, 10-hour shifts result in the least amount of overtime, which can greatly reduce costs.

4/10 SCHEDULE

The most common 10-hour schedule is the 4/10 schedule, which compresses the workweek into four days instead of five. Six squads are used to cover the day, swing, and night shift, with overlap between each shift. The benefit to this schedule is the ability to create overlaps during high activity periods for more officer availability. This overlap can be used to cover training periods if needed. The example below shows the overlap on Fridays.

Week 2 Week 1 Week 3 2 3 4 5 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21 Team A Team B Team C Team D Team E Team F Night Shift Day Shift Swing Shift Day Off

Figure 7-3. 4/10 Schedule

With this schedule, officers work their scheduled 2,080 hours a year with an extra 52 days off a year (156 days). Each squad's workweek shifts by a day each week, giving a more equitable balance between the squads.

6-4 SCHEDULE

The 6-4 schedule uses five squads on three 10-hour shifts. Each squad works six days with four days off, then switching to a new shift for the next six days. This overlap can be used to help ensure coverage during high activity periods. An example schedule is shown below.

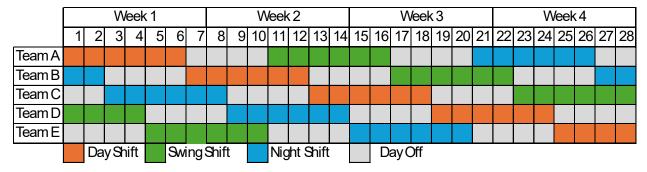


Figure 7-4. 6-4 Schedule

Working six consecutive 10-hour shifts may be difficult for some officers, but four days off can be appealing. LEOs working this schedule will receive an average of two overtime hours per officer per week

7.2.3 12-Hour Shifts

Twelve-hour shifts are very common among both municipal police agencies and airport law enforcement agencies. Since officers are only split into two shifts, the agency can operate with fewer LEOs and still maintain 24-hour coverage. Absenteeism is covered through overtime by calling in an off-duty officer.

LEOs working 12-hour shifts will average two overtime hours per officer per week.

PITMAN (2-3-2) SCHEDULE

The Pitman schedule—also known as the 2-3-2 schedule—is popular with police agencies because officers receive every other weekend off. Typically, four squads provide 24-hour coverage by rotating two 12-hour shifts for two weeks. Two squads are assigned to day shift and two are assigned to night shift. An example schedule is shown below.

Week 1 Week 2 1 2 3 4 5 6 8 9 10 11 12 13 14 Team A Team B Team C Team D Day Shift Night Shift Day Off

Figure 7-5. Pitman Schedule

This schedule ensures no office works more than three scheduled consecutive days and officers receive a three-day weekend every other week.

PANAMA (2-2-3) SCHEDULE

The Panama schedule—also known as the 2-2-3 schedule—is a rotating variant of the Pitman schedule. The Panama schedule typically consists of four squads working 12-hour shifts with two squads starting on day shift and two on night shift on a 28-day rotation period. After two weeks, the squads switch shifts for equity among the officers. An example schedule is shown below.

Week 1 Week 2 Week 3 Week 4 2 4 5 6 8 9 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 Team A Team B Team C Team D Night Shift Day Shift Day Off

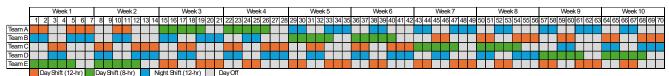
Figure 7-6. Panama Schedule

Like the Pitman schedule, officers are off every other weekend and are only scheduled to work a maximum of three consecutive days.

PANAMA PLUS SCHEDULE

The Panama Plus schedule adjusts the Panama schedule by using five squads that alternate between working 12-hour shifts and 8-hour day shifts on weekdays. After each squad has worked eight weeks of the Panama schedule, they work an 8-hour weekday schedule for two weeks. The weekday shifts allow the officers to catch up on administrative tasks, such as training. After the two 8-hour workweeks, the squad switches to the opposite shift for officer equity. An example schedule is shown below.

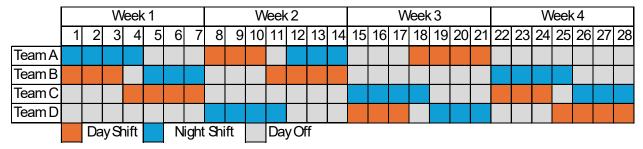
Figure 7-7. Panama Plus Schedule



DUPONT SCHEDULE

The DuPont schedule uses four squads and two shifts for 24-hour coverage. Each team rotates between day and night shift throughout the week and rotation. An example schedule is shown below.

Figure 7-8. DuPont Schedule



Adjusting to the rotations between shifts may be difficult for some officers, but the seven consecutive days off can be appealing. Every four weeks officers will be scheduled for 72 hours a week.

7.2.4 24-Hour Shifts

DPS LEOs are typically cross trained and certified as law enforcement, EMS, and fire/rescue. Over the course of the month, the officers work 10 days, switching between LEO, EMS, and fire responsibilities. The rotation between roles may occur between shifts, or over the course of a single shift, depending on the agency. In most cases, at least three officers will work the shift together to ensure one LEO is in uniform at all times.

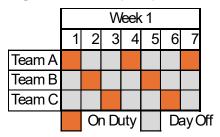
Since these schedules frequently result in more than an average of 40 hours per week, many agencies using the 24-hour shift will add a rotating day off—also known as a Kelly Day—every 28 days to reduce overtime.

While working 24-hour shifts, officers are given time to rest and sleep. This would require living quarters to accommodate.

24-48 (ABC) SCHEDULE

Many airports using DPS officers use a schedule in which the officers work one 24-hour shift followed by 48 hours off. This schedule consists of a three-day cycle with three squads. Each squad works one 24-hour shift followed by two consecutive days off. An example schedule is shown below.

Figure 7-9. 24-48 (ABC) Schedule



Officers working this schedule will average 56 hours per week but will work no more than three days a week.

48-96 SCHEDULE

The 48-96 schedule is a variant of the 24-48 schedule. Three squads work two consecutive 24-hour shifts followed by four days off. An example schedule is shown below.

 Week 1
 Week 2

 1
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11
 12
 13
 14

 Team A
 Team B
 Team C
 Team C
 Day Shift
 Day Off

Figure 7-10. 48-96 Schedule

LEOs working this schedule average 56 hours per week. Some officers may not like working 48 consecutive hours, but may appreciate four days off. Additionally, officers only have to commute to the airport 60 times throughout the year, which could attract applicants who would otherwise have long commutes.

7.3 Union Requirements

Many law enforcement departments operate under CBAs for their officers or officers up to a specific rank. Some departments require officers to join the union; for others it is optional. Additionally, some unions only offer advocacy services (e.g., training, resources, networking) and do not participate in CBAs.

For airports that utilize law enforcement departments with unions, the CBAs may dictate several conditions for law enforcement staffing levels. While not all CBAs include staffing requirements, the following are some common labor management practices outlined in CBAs:

- Scope of job duties by rank/job class
- Minimum staffing
- Scheduling
- Overtime distribution
- Wages
- Shift lengths
- Working conditions (e.g., time spent performing certain strenuous or tasking activities)
- Shift rotations
- Bid schedules for assignments
- Exercise time
- Time-off requests (how far in advance they can be made, number of days off at a time)
- Leave time (vacation, PTO, comp)
- Overtime vs. detail rates and qualifications
- Minimum hours for court time, details, etc.

SECTION 8: LEO STAFFING TOOLS

Police departments across the country are reporting low recruitment numbers and high attrition. This trend is causing a strain on resources, with specific impacts on airport law enforcement. The challenges in recruiting law enforcement applicants, high attrition rates of officers, and complex demands on airport law enforcement has created a need for airports to develop and implement efficient staffing strategies that deploy LEOs for 24-hour coverage. Knowing the minimum practical level of staffing required at each duty post and patrol assignment to meet the airport's security requirements and operational needs is necessary to determine the optimum allocation of LEOs deployed throughout the airport campus.

Airports may analyze their staffing requirements for a multitude of reasons, including budget and labor negotiations, policy changes, security enhancements and mandates required by new security threats, staff shortages, legislative and policy changes, political and societal issues, funding restrictions, equipment or systems, or airport campus layout changes. Law enforcement command staff are keenly aware of how to effectively utilize their resources, though they often lack the proper tools to forecast future needs and plan for unforeseen changes, mandates, or vacancies. Competing priorities often cloud the landscape and make it difficult to determine the actual needs or potential solutions without quantifiable data to support requests for additional resources.

Many law enforcement agencies hire consultants to provide custom, comprehensive, and detailed staffing analyses. However, there is an associated cost with this service and the agency would likely need to initiate the procurement process. Law enforcement staffing tools exist, but they do not fully account for the unique airport LEO responsibilities. The airport law enforcement industry recognized a need for a staffing tool that was customizable and simple to use.

8.1 Airport LEO Staffing Assignment Tool

As part of the PARAS 0055 research, the research team developed an airport law enforcement staffing tool that can help airports determine the necessary staffing levels and define an allocation and deployment strategy that complies with the requirements of their governance, local jurisdiction, and law enforcement responsibilities. Specifically, the tool calculates the number of annual FTE LEOs needed to cover assigned patrols and posts at the airport based on user input on officer ranks, shifts, and assignments that reflect the police department's current operations.

The staffing tool was created to account for several factors to ensure it is robust enough to serve airports of all types, sizes, demand levels, governance models, and law enforcement support models. The user has the ability to adjust factors in the input fields and instantly see whether the change adequately addresses new requirements or more effectively uses available LEOs. The staffing tool can be used to answer the following questions, among others:

- Does the current staffing level meet the airport's security requirements, including ASP and regulatory compliance?
- How many patrol units should be on duty during each shift?
- How should the LEOs be allocated throughout the airport campus?
- How does changing the shift type (8-, 10-, 12-hour) affect the staffing level?
- Are there enough LEOs to cover days off, vacations, sick days, training, and other relief factors?
- How will changing different factors affect the staffing needs?
- How will changes to priorities affect the staffing needs?

The Staffing Assignment Tool allows the user to create a schedule of specific posts or patrols that can be presented to executives to show the number of LEOs required to provide those services.

8.2 Workload Analysis Tool

The research team also created a workload analysis tool that allows the user to understand the workload distribution of the police department based on volume of calls for service. The Workload Analysis Tool calculates the department's workload burden using actual historical data from the department's records management system (RMS) or computer-aided dispatch (CAD) system. Officers with a higher workload percentage are responding to calls for service much more frequently, which can cause burnout.

The tool helps the user determine the current percentage of reactive time each officer spends while on shift. The tool can also be used to determine how many shifts are needed in order to lower or raise the percentage of reactive time. The tool is designed to provide law enforcement command staff, airport officials, and governing officials with improved visibility and understanding of staffing requirements and models, which will provide greater fiscal and management control.

The Workload Analysis Tool is a much more in-depth exercise than the Staffing Assignment Tool. To provide the most accurate and valuable results, the user must break down the RMS/CAD data into reactive calls for service to identify how many officer-minutes (number of calls for specific service x minutes to complete call x number of responding officers) are required for each type of call for service per year. The data needed to complete the exercise must be carefully processed to make it suitable for the Workload Analysis. This processing involves cleaning, transforming, and organizing raw data to ensure there are no duplicates, miscategorized calls, or missing information.

Bad or inaccurate data will create inaccurate results.

Note: It is not necessary to complete the Workload Analysis in order to use the Staffing Assignment Tool. The Workload Analysis is an accessory to the Staffing Assignment Tool, and is designed to enhance the agency's ability to make informed decisions, optimize resource allocation, and ensure LEO staffing levels align with the reactive and proactive demands of the airport and law enforcement commanders.

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