



**CITY OF PHOENIX
AVIATION DEPARTMENT**

Construction Safety Plan

PHOENIX SKY HARBOR INTERNATIONAL AIRPORT
3400 Sky Harbor Boulevard
Phoenix, Arizona 85034

Contractor Representative

Design Construction Services
Project Manager

Airside Construction Coordinator

Airside Superintendent

Date: _____



PHX PHOENIX SKY HARBOR
INTERNATIONAL AIRPORT

Construction Safety Plan

Project Name:
AIP No.:
COP Project No.:

Insert the appropriate project numbers above:

Statement:

Aviation safety is the primary consideration at airports, especially during construction. Hazardous practices and marginal conditions created by construction activities can decrease or jeopardize operational safety on airports. To minimize disruption of normal aircraft operations and to avoid situations that compromise the airport's operational safety, The Phoenix, Aviation Department (PHX) must carefully plan, schedule, and coordinate construction activities. The intent of this document is to clearly communicate the Airfield safety and security requirements and expectations for Contractor throughout the duration of the above stated Project.

1. SCOPE OF WORK:

Insert Project Scope here:

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CONSTRUCTION SAFETY PLAN

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2. DATES FOR START OF WORK AND COMPLETION

Insert construction start and completion dates

3. NOTIFICATIONS:

A. EMERGENCY NOTIFICATIONS:

For emergencies involving life safety (injuries, fires, security breaches, etc.) the Contractor will immediately call **273-3311**, the Sky Harbor Emergency number, followed by as soon as possible by contacting the Airports Incident Reporting Protocol shown on the next page.

**DO NOT DIAL 911 AS RESPONSE TIME WILL BE
DELAYED**

EMERGENCY TELEPHONE NUMBER

602-273-3311

FOR

POLICE

FIRE

RESCUE

B. NOTIFICATION OF CONSTRUCTION ACTIVITIES:

To ensure prompt notification to all airport tenants and users of the airport, of construction projects that may affect their daily routine, PHX will utilize the NOTAM system through the FSS and the email notification through the Pardon Our Dust program..

PHX will coordinate with the ARFF to ensure water availability for fire protection is maintained throughout the project and will coordinate and designate fire hydrant to be used for construction water. Emergency response access and routing coordination will be accomplished before and during construction activities on the AOA.

All AOA projects at Sky Harbor International Airport (SHIA) will have design, pre-bid and pre-construction conferences, in which Operations staff will outline PHX safety and security rules and regulations that apply to the project.

PHX requires Contractors to hold weekly construction meetings to communicate and collaborate on issues relating to the project. PHX staff will attend these meeting and address issues of safety and security on the AOA.

The Contractor will be responsible for disseminating instructions regarding safety and security to all personnel involved in work relating to this project.

C. NOTIFICATION OF KEY CONTRACTOR PERSONNEL:

The Contractor shall provide the phone numbers for five (5) of its responsible personnel, including the project superintendent and, the responsible personnel from each of the key subcontractors firms, each of whom may be contacted in case of an emergency. Personnel shall be on-call 24 hours per day for maintaining construction hazard lighting and barricades. The Contractor will designate a person responsible to maintain and service all traffic control equipment.

Insert or reference an attached list of personnel:

4. *Filing of 7460-1:*

The Contractor must coordinate with the airport to allow 45-days notification by PHX to FAA of construction activities affecting Part 77 navigable airspace. Filing will be accomplished through FAA form 7460-1.

Insert a description of anticipated need for 7460 filings

5. NOTAM ISSUANCE:

To ensure prompt notification to all airport tenants and users, with the construction projects at the airport that may affect their daily routine, PHX will utilize the NOTAM system through the FSS. The Airside Operations Supervisor will issue all required NOTAMs. Work requiring a NOTAM must be communicated to Operations at least 48 hours in advance.

6. INSPECTIONS AND MONITORING:

Operational safety and security monitoring will be conducted continuously throughout all phases of construction within the AOA. Inspector duties are the responsibility of an assigned Airport Operations staff as well as the Contractor supervisory personnel, COP Project Inspectors and the Engineer of Record. In addition, the Contractor shall be responsible for developing and implementing a Contractor Quality Control program including inspections necessary to assure compliance with the requirements of this section in accordance with their contract.

Insert description of the Contractor's quality control program

7. REQUIREMENT FOR A PRECONSTRUCTION MEETING:

A Preconstruction meeting will be held at least one month prior to start of work. Besides discussing the scope of work, construction schedule, means and methods and quality, Airside safety will be addressed to the satisfaction of PHX Operations personnel. Local FAA Air Traffic Control (ATCT) representatives must be invited to attend these meetings.

Safety Meetings

All project Foreman and Superintendents are responsible for conducting weekly safety meetings and daily pre-task plan meetings on the job.

These meetings should include Airside Operations personnel assigned to ensure FAR-139 oversight of the work and if appropriate the designated FAA ATCT point of contact.

Insert a description of the contractor's meeting plan. Include a list of the people or positions included in these meetings

8. PROCEDURE FOR PROTECTING RUNWAY AND TAXIWAY SAFETY AREAS:

The Contractor shall ensure that no personnel or equipment enters into the active movement areas or their associated Safety Areas without the appropriate Airport Operations escort. Access into movement areas or Safety Areas without an Airport Operations escort is **prohibited!**

All access into movement areas must be coordinated and approved by the on duty Airside Operations Supervisor. All communications with Air Traffic Control Tower (PHX ATCT) will be the responsibility of Airport Operations. No access into movement areas will be authorized without a trained and certified Airport Operations escort.

When operating within runway and taxiway safety areas, clearance must be obtained from Airport Operations and PHX ATCT prior to entering the area. Failure to receive proper clearance will result in extreme consequences. Once Airport Operations and PHX ATCT clearance has been received and you are escorted into these areas, all instructions from the PHX ATCT and the Airport Operations Escort must be strictly obeyed.

Construction activity within the Taxiway Safety Area (TSA) is permissible when the taxiway is open to aircraft traffic if:

- a) adequate wingtip clearance exists between the aircraft and the equipment or material;
- b) evacuations, trenches, or other conditions are conspicuously marked and lighted; and
- c) local NOTAMs are in effect for the activity.

During construction operations near active taxiways or runways, the Contractor will furnish and maintain vertical panels barricades equipped with red warning lights along the edges of the runway safety areas and taxiway safety areas. This is to warn construction equipment to stay clear of the active airfield pavement as well as to warn pilots of areas having construction hazards. Low level barricades equipped with red and blue lights acceptable to Airport Operations are used to delineate a taxiway edge adjacent to construction. The Contractor will maintain low level barricades with red warning lights around all equipment, stockpiles and or other areas as directed by the Engineer of Record and Airport Operations.

Insert description of all work within movement area OFZ's. Reference and attached a barricade plan.

9. **PROCEDURES FOR PROTECTING OFZ AND OFA AND THRESHOLD SITING CRITERIA:**

FAR Part 77, "Objects Affecting Navigable Airspace," Current Edition: Establishes standards for determining obstructions to navigable airspace. Civil airport imaginary surfaces are defined in the publication. It also sets forth requirements for notice of certain proposed construction or alteration. Notice of construction provides a basis for recommendations for identifying the construction or alteration in accordance with advisory circular (AC) 70/7460-1, "Obstruction Marking and Lighting," Current Edition. AC 150-5300-13 establishes and defines the standard for protection of the areas defined below. Any construction activity in or near these established areas must be closely coordinated with Airport Operations. Any unauthorized or unescorted entry into one of these areas or zones will result in the regulatory action by the airport against the Contractor.

Runway Safety Area (RSA) - The defined surface surrounding the runway over which an aircraft in dry weather be able to cross at normal operating speeds without incurring significant damage. RSA during construction at PHX is (250 feet from runway centerline and up to 1000 feet from the runway ends).

Definitions and Abbreviations:

Runway Safety Area (RSA) - The defined surface surrounding the runway over which an aircraft in dry weather be able to cross at normal operating speeds without incurring significant damage. The RSA is 500 feet wide centered on the runway centerline and 1000 feet from the runway ends. *Work closer than these limits must be performed with the runway closed.

Object Free Area (OFA) – An area on the ground centered on a runway, taxiway, or taxilane centerline provided to enhance the safety of aircraft operations by having the area free of objects.

Obstacle Free Zone (OFZ) – The OFZ is the airspace below 150 feet, above the established airport elevation, along the runway and extended runway centerline that is required to be clear of all objects.

Taxiway Safety Area (TSA) – A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the pavement.

The protected areas listed above are continually policed by Airport Operations Staff and advanced technologies such as ASDE-X surface detection radar. The Contractor must ensure that these protected areas are never encroached by any person, vehicle, or object during any part of this construction project.

Insert detailed plan for delineation and protection of the OFZ and OFA impacted by this project, reference and attach drawings depicting the location of the areas in relationship to the work area.

10. RUNWAY END AND PROPOSED THRESHOLD STATIONING:

Except in extreme situations, displaced thresholds or threshold stations are not permitted at Phoenix Sky Harbor International Airport. In the extreme case whereby these provisions must be applied, they would only be applied as directed by the Engineer of Record after extensive collaboration, review and approval of the FAA Airports Division, FAA Air Traffic, and Airport Operations.

Insert any details pertaining to displaced thresholds

11. PROPOSED THRESHOLD APPROACH SURFACE :

Threshold modifications will only be applied as directed by the Engineer of Record, after collaboration, review and approval from the FAA Airports Division, FAA Air Traffic, and Airport Operations.

Insert any details pertaining to any impacts to approach surfaces

12. HEIGHT RESTRICTIONS SHOWN:

The maximum height of equipment not on normal haul roads is **20 feet**. Any crane erections shall be coordinated with Airport Operations during every shift. All cranes must have at their highest point either a red light for night operations, or a 3'x 3' orange and white checkerboard flag for daylight only operations. Cranes will be boomed down when not in use.

Insert details pertaining to equipment planned for use which may exceed the maximum height such as cranes, excavators, drill rigs, or backhoes. Reference drawing depicting the areas in which this equipment is planned to be working. Include a description of the precautions the Contractor will take to ensure compliance with the maximum height restriction.

13. JET BLAST CONSIDERATIONS:

Constant diligence must be maintained to ensure the protection of personnel and equipment for the hazards of jet blast. Jet Blast hazard areas should be communicated to all construction personnel.

Closed pavements shall be swept clean prior to reopening to aircraft traffic. Exposed earth in excavation areas within 75 feet of the centerline, immediately adjacent to active taxiways shall be covered to prevent dust from jet blast. Cover material shall be weighted to prevent movement from jet blast.

Insert any details pertaining jet blast protection

14. BARRICADE REQUIREMENTS

Hazard-marking barricades, flashers, etc. will be used:

- a) To identify and define the limits of construction making them visible to aircraft, personnel, or vehicles
- b) To identify hazards such as open manholes, small areas under repair, stockpiled material, waste areas, etc.
- c) To identify OFA to construction personnel
- d) To prevent aircraft from taxiing onto a closed runway for takeoff; and To identify FAA, airport, and National Weather Service facilities and utilities, instrument landing system (ILS) critical areas, as well as other sensitive areas to prevent damage, interference, and facility shutdown.

Traffic Cones shall not be used at any time on the AOA.

Hazardous areas, in which aircraft may not enter, should be indicated by the use of low level barricades marked with diagonal, alternating orange and white reflective stripes. OFA adjacent to construction activity should be delineated using vertical panel barricades to ensure that no construction related activity passes into the OFA without prior coordination. During reduced visibility or night hours, the barricades will be supplemented with flashing red lights. Interval spacing for barricades and lights required will be determined by Airport Operations and may vary depending on the location of work. The intensity of the lights and spacing for barricades and lights will be adequate to delineate the hazardous area without ambiguity. Adequacy of the barricading will be at the sole discretion of the Airport Operations Division. The Contractor will have a designated person on-call 24 hours a day for emergency maintenance of airport hazard lighting and barricades.

Insert or reference an attached Barricades plan detailing the locations of barricades for this project

Approved Types of Barricades

- **Low level water filled** barricades will have the following lighting:
 - When delineating a taxiway edge adjacent to construction each barricades should be configured with one steady blue and one flashing red light.
 - When delineating a closed area or identifying a construction hazard each barricade should be configured with at least one flashing red light.
- **Vertical Panel** type barricades with heavy rubber base and one flashing red light will be used to delineate OFA's within or adjacent to construction areas.

Note: Only barricades located outside of the OFA may be supplemented with sandbags for added support.



16. LIGHTING AND MARKING REQUIREMENTS:

Only low level water filled barricades with orange and white reflective stripes and red flashing warning lights shall used within movement areas at PHX. These barricades must be provided and erected by the Contractor as shown in this Construction Safety Plan or as directed by Operations in the field. All construction areas, including any portion of a closed runways and taxiways, should be clearly and visibly separated from active air operation areas by the use of these approved barricades. Hazard areas, facilities, cables, and power lines should also be clearly identified using approved barricades. The Contractor is responsible for maintaining the condition and visibility of all barricades and for making sure the marking and lighting aids remain in place. Appropriate barriers, lights, signs, and markings should also be used as necessary, to clearly separate all construction/maintenance areas from other parts of the AOA. All barricades, temporary markers, and other objects in the movement areas must be less than 3 inches above the ground level, of low mass, easily collapsible upon contact with an aircraft or any of its components, weighted down or sturdily attached to the surface to prevent displacement from prop-wash, jet blast, wing vortex, or other surface wind currents and, if affixed to the surface, frangible at ground level. Closing of a runway

intersection while the affected runway remains operational is allowed provided that proper barricades are in place and that all the high speed lead off lights leading into the closed intersection are deactivated for the duration of the closure and all directional signs from the runway leading into the closed intersection have been bagged in a manner acceptable to Airport Operations.

Insert any details or reference drawing pertaining to use of the above mentioned barricades and reference the appropriate attached drawing depicting barricade placement.

17. TEMPORARY MARKING, SIGN, AND LIGHTING REQUIREMENTS:

Temporary airfield markings and signs will only be used at the direction of the Engineer of Record after approved by Airport Operations. All temporary marking and or signs must comply with Advisory Circular 150-5340-1J or current edition..

Placement of construction area lighting for night time construction must be coordinated with Airport Operations to ensure no adverse impacts to ATAC or pilot visibility.

Insert any details pertaining to temporary markings or signs

18. TEMPORARY LIGHTING (AC 150/5340-24)

Placement of construction area lighting for nighttime construction must be coordinated with Airport Operations to ensure no adverse impacts to ATCT or pilot visibility.

Insert any details pertaining to temporary movement area lighting for this project and reference the appropriate attached drawing depicting lighting locations.

19. TEMPORARY SIGNAGE PLAN APPROVED BY FAA

All plans for temporary airfield signage must be approved by Airport Operations. Airport Operations will be responsible for forwarding the airport's approved plan to the FAA Airports Safety Office for FAA approval.

Insert a detailed temporary movement area signage plan and reference the appropriate attached drawing depicting sign locations.

20. PROCEDURES AND EQUIPMENT TO DELINEATE CONSTRUCTION CLOSURES AIRPORT OPERATIONAL AREAS :

Only Airport Operations has the authority to open or closed airport movement areas. The Contractor will request all needed movement area closures and openings through the Airside Operations Supervisor. The Airside Operations Supervisor will collaborate with the PHX ATCT and will be responsible for orchestrating all closures and re-openings of airport movement areas. Airport Operations will ensure that Portable Electric Lighted X's are in place at both ends of the closed runway prior to the contractor accessing the runway. Construction personnel shall never access a closed runway until the runway lights are off, Lighted X's are in place, and specific direction has been received from Airside Operations. Portable Lighted X's and their placement will comply with A/C 150/5345-55A.



The Hali-Brite Runway Closure Marker

Compliance with Standards:

ETL Certified to FAA AC 150/5345-55A
with FAA AC 150/5370-2 and NTSB
Safety Recommendation A-03-05

The following runway opening and closing procedures will be strictly followed:



CITY OF PHOENIX
AVIATION DEPARTMENT

Number: SOP 4.01.07

Issue Date: June 1, 2006

Revision Date:

Aviation Director:

Approval

Subject: Runway Procedures at Sky Harbor

Purpose

The purpose of this Standard Operating Procedure is to establish procedures that will be utilized when opening or closing runways. Only the on-duty Oscar-30 can open or close movement areas. This responsibility should only be delegated in the event of extraordinary circumstances.

Procedures

CLOSING:

1. Make contact with the units that will be on the closed runway to confirm the location, time, and nature of the activity. Advise them to REMAIN CLEAR until a runway closure is coordinated, and the Oscar-30 gives them clearance to proceed.
2. Contact ATCT on the recorded telephone line @ 602-273-4875.
3. Coordinate a closure of the affected movement area. Confirm Tower has a Notice To Airmen (NOTAM) for the closure in place, with the correct date and time of the closure.
4. Identify the aircraft crossing points if needed.
5. Identify the vehicle crossing points if needed.
6. Identify the aircraft escort routes if needed.
7. Identify the Maintenance and or Oscar units that will be performing the work or providing escorts in the area, and that will be monitoring the Tower frequency.
8. Confirm with the controller that the Runway is actually closed, noting the exact time.
9. If at night, confirm that all lighting has been turned off.
10. Request SKY HARBOR Communications to broadcast an ALL CALL radio transmission advising all City units that "Per Oscar-30 Runway _____ is closed at this time," giving the current hour and minute.
11. After the "All Call" is given by SKY HARBOR Communications, direct the Maintenance and or Operations units to proceed onto the closed runway.

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OPENING:

1. Inspect runway and runway safety areas and ensure FAR Part 139 compliance.
2. Confirm with each individual Maintenance or Operations unit they are clear of the runway, and will REMAIN CLEAR.
3. Inspect the runway when it is confirmed all units are clear.
4. Request Tower to turn on the lighting if needed.
5. Request SKY HARBOR Communications to broadcast an ALL CALL radio transmission advising "Attention all City units, per Oscar-30, Runway _____ will open in 5 minutes, giving the current hour and minute."
6. Request SKY HARBOR to broadcast an ALL CALL transmission advising "Attention all City Units, per Oscar-30, Runway _____ is now open, giving the current hour and minute."
7. Advise the controller on Tower radio frequency that "Runway _____ is now open."

21. USE OF TEMPORARY VISUAL AIDS :

Will only be used as directed by the Engineer of Record in collaboration with Airport Operations and FAA Air Traffic.

Insert any details pertaining to Temporary visual aids for Pilots

22. AFFECTED AREAS AND OPERATIONS, INCLUDING POSSIBLE SAFETY PROBLEMS:

Prior to entering any work site within the AOA, the Contractor will physically meet with Airport Operations to discuss the intended activities. The Contractor must also arrange a physical inspection of the work area with Airport Operations prior to leaving any area that has been closed for work, or that has been used for a crossing point or haul route by the Contractor.

Insert detailed access procedures include an attached drawing depicting site access routes

23. EQUIPMENT STORAGE AREAS IDENTIFIED:

Stockpiled materials and equipment storage are only permitted in areas designated by the Airport Operations in collaboration with the Engineer of Record. Stockpiled materials and equipment storage are never permitted within the RSA and OFZ of an operational runway. In coordination with PHX the Contractor will ensure that stockpiled materials and equipment adjacent to these areas are prominently marked and lighted during hours of restricted visibility or darkness. This includes determining and verifying that materials are stored at an approved location to prevent foreign object damage and attraction of wildlife.

Insert any details pertaining to planned material stockpiles and reference the appropriate attached drawing showing approved locations,

24. METHODS OF SEPARATING VEHICLE AND PEDESTRIAN TRAFFIC

is restricted to designated service and haul roads in the attachments. Influenced lanes and center areas must be made through the operation 2/73-3302. Airport Operations will monitor all construction activity to ensure proper separation and aircraft movement.

Vehicle involved in an accident while on the AOA, with injury to any person, or damage to any property, must report the accident by calling 2/73-3311. In the event of injury, the driver shall render assistance as needed until emergency vehicles arrive.

Any accident occurring on the Airport shall make a full report thereof to Airport Operations and the Airport Police as soon after the accident as possible and before leaving the Airport.

and reference the appropriate attached drawings pertaining to Approved Road and service routes for

All construction-related traffic routes and work areas shall request lanes to be made through the operation 2/73-3302. Airport Operations will monitor all construction activity to ensure proper separation and aircraft movement.

Vehicle Accidents:

The driver of any motor vehicle involved in an accident while on the AOA, which results in injury to any person, or damage to any property, must report the accident by calling 2/73-3311. In the event of injury, the driver shall render assistance as needed until emergency vehicles arrive.

All persons involved in any accident occurring on the Airport shall make a full report thereof to Airport Operations and the Airport Police as soon after the accident as possible and before leaving the Airport.

Insert any details pertaining to equipment storage areas and vehicle parking areas for construction personnel and equipment.

25. CONSTRUCTION SITE PARKING REQUIREMENTS:

Parking of vehicles or equipment near electronic NAVAID's require special consideration since they may interfere with signals essential to air navigation. Evaluate the effect of construction activity and the required distance and direction from the NAVAID for each construction project. Pay particular attention to stockpiling material, as well as to movement and parking of equipment that may interfere with line of sight from the PHX ATCT or with electronic emissions. Interference from construction may require NAVAID shutdown or adjustment of instrument approach minimums for IFR. This condition requires that a NOTAM be filed. Construction activities and materials/equipment storage near a NAVAID may also obstruct access to the equipment and instruments for maintenance. Before commencing construction activity, parking vehicles, or storing construction equipment and materials near a NAVAID, consult with the PHX FAA Tech Office. If the project anticipates any impact, see paragraph 30.

All parking of construction vehicles and equipment for this project will be limited to the work areas inside the low level barricade areas as defined within the attached Low Level Barricade Plan, or as otherwise designated by Airport Operations.

Insert details and reference the appropriate attach drawings pertaining to equipment storage areas and vehicle parking areas for construction personnel and equipment.

26. VEHICLE OPERATOR REQUIREMENTS:

Any individual with unescorted access and requiring to operate a vehicle in the restricted areas of the airport, but exclusive of the airport movement areas must have an Airfield Driver's Permit (ADP) icon affixed on their airport issued SIDA identification media.

To obtain the ADP icon, the individual will be required to:

1. Read the "Airfield Driver Permit Study Guide" prior to taking the test. (Material obtained at the Security Badging Office)
2. Possess a valid unexpired state issued driver's license
3. Successfully pass the ADP test administered by the Security Badging Office.

Individuals who do not pass the test will be instructed to review the study guide and will then be allowed to test again on another day.

Training:

The City of Phoenix Aviation Department Operations Division will provide training for all individuals requiring an ADP. This training is provided through a self-paced interactive computer program. Information presented in the Airfield Driver Permit Study Guide or other media (e.g. videos) is tested through a series of multiple choice and true/false questions.

ADP Permit Renewal:

If the individual has not received a Notice of Violation (NOV) for the past two (2) years, and whose permit has not expired will not be required to take the ADP test. Airport Operations will have full discretion in determining whether the ADP test needs to be taken or not.

Insert any details pertaining to contractor personnel needing ADP.

27. RADIO COMMUNICATIONS:

All communications with FAA Air Traffic Control Tower (PHX ATCT) must be coordinated through Airport Operations. Construction workers needing access onto runways or taxiways must be under escort by an Airport Operations person certified for access into movement areas. All access into movement areas must be coordinated and approved by the on-duty Airside Operations Supervisor. All communications with the PHX ATCT will be the responsibility of Airport Operations.

The control of vehicular activity within the airport's movement areas is of the highest importance. This requires coordination with airport users and ATCT. The Contractor shall have no direct contact with ATCT Ground Control. All communications with ATCT shall be coordinated through Airport Operations. However, the Contractor must properly train his/her personnel, particularly flag persons, on the proper procedures for monitoring radio frequencies and if the need arises to make emergency communications to ATCT.

Insert any details pertaining to needed access across or within aircraft movement areas. Include plans for the use of flag persons and a communication plan for emergency ATCT notifications.

28. PENALTIES FOR NONCOMPLIANCE WITH AIRPORT RULES:

Due to the safety and security precautions necessary at SHIA, failure of the Contractor to adhere to the prescribed requirements/regulations has consequences that may jeopardize the health, welfare and lives of the customers and employees at SHIA, as well as Contractor's own employees. Therefore, if the Contractor is found to be in noncompliance the Aviation Department will issue a Notice of Violation (NOV).

Applicable Aviation Department Regulations are: Operations of Vehicles in Restricted Areas (03-08), Airfield Drivers Permits (03-04), Enforcement Security (03-06), Notice of Violations (03-07).

The Aviation Department will conduct administrative inspections and enforce violations regarding Rules and Regulations for SHIA. All violators shall be subject to citation and/or Notice of Violation (NOV).

An NOV shall be issued for observed violations of any rules, regulations, local, state, and federal laws governing the airport. The NOV will be issued by and monitored by Airport Operations personnel. A copy of the NOV shall be given to the individual involved.

When issuing an NOV, designated Aviation Operations personnel will advise the responsible individual of the violation and provide them with a copy of the NOV. The individual to whom the NOV was issued will be responsible for coordinating a hearing with the Deputy Aviation Director of Operations (or designee) within 10 calendar days from the date of the infraction. Failure to coordinate this hearing will result in the suspension of the individual's airport security badge. Participants in this hearing will include the person to whom the NOV was issued, that person's immediate supervisor, and Aviation Department personnel. If the NOV was issued for a driving infraction, the individual who committed the violation may have to attend the Aviation Department's Airfield Driving Safety Class before renewing his/her driver's permit. If the infraction is security related, the individual may be required to attend the Aviation Department's Security Training Class. The assigned training must be completed within ten working days after the hearing. Failure to attend the required training within the assigned time shall result in the suspension of the individual's security or driving privileges unless prior arrangements have been made with the hearing officer.

Severe Violation:

Any violation of a severe nature (i.e., a violation resulting in property damages, injury, runway incursions or surface incidents) as determined by the Deputy Aviation Director of Operations (or designee) shall warrant immediate suspension of the permit/badge.

Some examples of severe violations are:

- a. Failure to yield to an aircraft.
- b. Entering movement areas without ATC clearance.
- c. Compromising airport security (security breach).
- d. Reckless endangerment of life or property.

29. VEHICLE IDENTIFICATION:

All vehicles associated with this project must drive within the marked vehicle/tug roadways until they are directly abeam their ramp destination (roadway markings are white). Never drive on or near a runway or taxiway. Airport Operations personnel continuously monitor and enforce airport rules and regulation pertaining to the safe operations of vehicles on the AOA. The Contractor will be responsible for ensuring compliance with all airport rules and regulations. Contractors will impress upon their workers that compliance is mandatory and noncompliance will not be tolerated.

Any material being hauled that crosses runways, taxiways, taxilanes, or vehicle service roadways, will have sufficient flag persons stationed at the crossing point to monitor aircraft movement and to direct construction traffic. The flag person will be equipped with handheld signs or flags to assist in directing the construction traffic. For nighttime construction operations, the flag person will also be equipped with lighted wands and light plants on each side of the taxiway. One vacuum sweeper and one water truck will be dedicated to and stationed full-time at each active taxiway, runway, or taxilane, crossing to maintain the surface free from construction traffic debris. Mud and other material tracked into the paths of aircraft shall be removed immediately if necessary by hand to achieve its complete removal.

I. Vehicle Operations**1. Day Construction (VFR Conditions)**

- a. All vehicles will have appropriate logos on both sides of the vehicle.
- b. All vehicles will have either a flashing amber beacon or a construction flag. The standard for construction flags is 3' X 3' with 1 sq. ft alternating white and orange checkers.

- c. All heavy equipment (loaders, cranes, earth movers, dump trucks, backhoes, cement trucks, pavers, etc) will have a construction flag - no exceptions
- d. Cranes and other tall vehicles must have a construction flag and a red obstruction light illuminated at the highest point on the vehicle.
- e. Vehicles not meeting these requirements must be escorted by a vehicle that meets the requirements.

2. *Night Construction (and IFR Conditions)*

- a. All vehicles will have appropriate logos on both sides of the vehicle.
- b. All vehicles will have a flashing amber beacon.
- c. All vehicles will have working headlights/marker lights where applicable.
- d. Cranes and other tall vehicles must have a red obstruction light illuminated at the highest point on the vehicle.

3. *No vehicle shall be operated in any portion of the AOA*

- a. In a careless or negligent manner.
- b. In disregard of the right and safety of others.
- c. Without due caution or at a speed or manner which could endanger persons or property.
- d. While the driver is impaired or under the influence of an intoxicating liquor or any narcotic habit-forming drug.
- e. If it is hazardously equipped or loaded in a manner which could endanger persons or property.

II *Use of Roadways*

- a. All vehicles will drive within the marked vehicle/tug roadways to reach their destination (roadway markings are white). Never drive on the runway or taxiway.
- b. Aircraft servicing operations conducted at gates will not be subject to these movement requirements.
- c. All vehicles not equipped with an amber rotating beacon, or other lighting system for authorized emergency vehicles, AND continuous two-way radio communication access with the PHX ATCT Phoenix Ground Control will be limited to transit operations conducted within the painted vehicle/tug roadways.
- d. Construction may require the deployment of a temporary service routes or haul routes. Establishment of these routes must require prior coordination with the Engineer of Record and Airport Operations.

III *Operating Speeds*

- a. The maximum speed for all vehicles and equipment, with the exception of authorized emergency vehicles during emergency

functions operated within the vehicle/tug roadways, is 25 miles per hour.

b. Vehicles and equipment operated in all other apron and terminal service areas must not exceed 15 miles per hour, with the exception of authorized emergency vehicles during emergency functions.

c. The maximum speed for vehicles operated in the baggage sort areas, around hangars and on the tug drives bridges through terminals or concourses is 5 miles per hour.

d. The maximum speed for all motor vehicles and ground support equipment operated in aircraft safety areas, such as runways and taxiways, will be determined by the operator in accordance with operational necessity and safe operating practices.

e. The maximum speed for construction vehicles will be determined by Airport Operations and will be based on the construction site location and operational necessity.

IV. Runway and Taxiway Safety Area Access

No individual will be allowed into the runway and taxiway safety areas unless they have are escorted by an individual that has the proper certification and has the permission of the on-duty Airside Operations Supervisor.

30. ALL AFFECTED NAVAID CRITICAL AREAS DEPICTED:

Construction materials and equipment shall not be placed or parked where they may interfere with the line-of-sight of the PHX ATCT and navigational aids in operation. Airport Operations shall determine if any materials or equipment will cause any type of interference. If it is determined that construction could affect FAA NAVAIDS coordination with Airside Operations and local FAA Airways Facilities personnel must be accomplished before the construction project proceeds. If agreed that a construction impact is likely, the systems will be deactivated, or the runway will be closed, and a NOTAM will be issued advising pilots that the system is outage.

Insert any details pertaining to any NAVAID impacts for this project.

31. LOCATION STORAGE OF STOCKPILED CONSTRUCTION MATERIALS:

There shall be no equipment or material storage in the active runway and active taxiway safety areas or in the runway or taxiway infield areas. The Contractor shall remove all equipment from the active runway and Taxiway Object Free Areas (OFA) including the infields. Staging on apron areas will be allowed with prior approval from Airport Operations and the Engineer of Record. Stockpiled material or equipment should not be stored near aircraft turning areas or operational movement areas, aprons, or excavations and trenches. Stockpiled materials shall not be stored near NAVAIDs, visual or approach aids, nor shall they obstruct the PHX ATCT's line of sight to any runway or taxiway.

Insert any details pertaining to stockpiled construction materials.

32. TRENCHES AND OPEN EXCAVATION AND COVER REQUIREMENTS:

All trenching or excavation within the AOA **must** require prior coordination with Airport Operations. Open trenching and excavation may be permitted up to 250 feet from centerline of active runway, with proper coordination and approval from Airport Operations. Adequate signs, lights, and markings must be applied. Trenching and excavation activity inside 250 feet of the runway centerline requires that the runway be closed.

Open trenches or excavations exceeding 3" in depth and 3" in width or stockpiled material is not permitted within the object free areas of operational runways unless adequately covered during runway operations. Covering for open trenches or excavations shall be of sufficient strength to support the weight of the heaviest aircraft operating on the runway.

Insert a description of all excavation work. Reference and attach an excavation barricade plan.

33. CONSTRUCTION LIMITS FOR EACH PHASE:

The construction limits for this project include all routes and work areas described in the plan attachments.

Insert details and drawings pertaining to Work Area specific to each phase of work. These drawings should include, haul routes,

equipment and material storage areas, barricade placement, and safety area boundaries.

34. FOD CONTROL PROVISIONS:

The Contractor will have a minimum of one vacuum sweeper, one water truck, and dedicated operators on site full time throughout this project to respond as needed or as directed by the Engineer or Airport Operations to remove FOD. Special attention will be given at each active taxiway, runway, or taxilane, crossing to maintain the surface free from construction traffic debris. Mud and other material tracked into the paths of aircraft shall be removed by hand if necessary to achieve its complete removal. Airport Operations staff will be on site throughout this project to ensure that any FOD hazards are quickly mitigated.

Insert contractors plan for controlling FOD generated by this construction

35. *FLAGGERS, SPOTTERS AND OBSERVERS CONTROLLING EQUIPMENT CROSSINGS OF MOVEMENT AREAS*

At such a pre-approved taxilane or taxiway crossing point, the Contractor shall have a flag person stationed on each side of the crossing point to monitor aircraft movement and to direct construction traffic. The flag persons shall be equipped with handheld signs or flags to assist in directing construction traffic. For nighttime construction operations, the flag person shall also be equipped with lighted wands and light plants on each side of the taxiway. In addition, one vacuum sweeper and one water truck shall be dedicated to and stationed full time at each active taxilane or taxiway crossing to maintain the surface free from construction traffic debris. Mud and other material tracked onto taxilane or taxiway surfaces shall be removed by hand if necessary to achieve its complete removal.

Insert detailed drawing depicting the planned haul routes, movement area crossing points, Material storage areas, and locations of flag persons. Include detailed procedures for crossing points flag personnel

36. **PROCEDURES FOR NOTIFYING ARFF REGARDING DEACTIVATED WATER LINES, FIRE HYDRANTS, OR BLOCKED EMERGENCY ROUTES:**

The Contractor must plan for and ensure that emergency response access routes are will marked and maintained throughout the scope of the project. Any changes to these routes must be coordinated with the Project Manager and Airport Operations prior to making the change. Activities that impact fire protection infrastructure or emergency response access to facilities without prior coordination and collaboration with Phoenix Fire is strictly prohibited. These activities will only be authorized after close collaboration with appropriate Phoenix Fire Dept. personnel.

Insert details pertaining to any impacts to fire protection systems and attach a detailed drawing depicting the locations of emergency response access routes to the projects work site.

37. **EMERGENCY NOTIFICATION PROCEDURES FOR MEDICAL AND LAW ENFORCEMENT RESPONSE:**

EMERGENCY TELEPHONE NUMBER
CALL:

602-273-3311

FOR

POLICE FIRE RESCUE

38. **WILDLIFE MANAGEMENT:**

Interaction of wildlife with air traffic can be dangerous. It is critical that all reasonable efforts be made to reduce the potential for attraction of wildlife to the construction work area and consequently the AOA. This includes proper housekeeping techniques to remove any scrap food, structures or piles of materials that might attract wildlife, including birds.

Insert details pertaining to control of wildlife.

39. HAZARDOUS MATERIAL MANAGEMENT

HAZCOM and MSDS (Material Safety & Data Sheets)

- All applicable MSDS will be available for employees to review
- Review MSDS and use recommendations for handling, storage, and emergency situations
- When a new product comes on site review MSDS with crew
- Maintain all labels on containers
- See Health & Safety Plan for complete HAZCOM program

Material Release:

A release is defined as any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, placing, leaching, dumping, or disposing into or on any land in a manner that fuels and other regulated substances, pollutants, or storm-water may come to be located in a public storm drain system.

Regulated Substances:

Regulated substances include without limitation, any substance, materials or wastes that are or become regulated under, or that are classified as hazardous or toxic under any environmental law, including petroleum.

The Contractor will immediately report any Material Releases to the Airport Operations via the Airport's Emergency Services number 273-3311. Airport Police and Fire personnel will respond to all spills and or Hazardous Material situation and will manage the event/situation following Airport Defined Rules and Regulations and Phoenix Fire Department procedures.

40. PROTECTION OF UNDERGROUND UTILITIES AND FACILITIES:

Prior to opening an excavation, effort shall be made to determine whether underground installation (including: Sewer, telephone, water, fuel, electric lines, etc.) will be encountered, and if so, where such underground installations are located. Use of Bluestake, as-built research is always required. PHX also requires the submission of a "Airport Subsurface Investigation, Excavation, Saw Cutting, Pot Holing, Drilling, and Construction Activity Permit Checklist" prior to any excavation & Potholing procedure.

Additional sources of information include:

- Aviation Department Design and Construction Services (as-builts)
- Facilities and Services (electrical)
- Aviation Department GIS (as-builts)
- Aviation Department Planning and Environmental (environmental facilities – monitor wells)
- Federal Aviation Administration (FO, comm., power)
- Arizona Fueling Facilities Corp (aircraft fueling)
- COP Information Technology (communications)

Insert Contractor's policy for identifying and protection underground utilities

41. COMMUNICATION WITH RESPONSIBLE PARTIES:

The Project Manager in collaboration with Airport Operations will act as liaison between the Contractor and other airport stakeholders including PHX ATCT and FAA PHX Tech Ops. The Contractor will communicate all needs for outside contact through the Project Manager. If the need for communication is urgent then the Airside Operations Supervisor should be contacted to act as the airport's liaison for all FAA coordination.

42. PROCEDURE FOR PAUSING CONSTRUCTION DUE TO AIRCRAFT AIRPORT EMERGENCIES:

Emergencies and operating conditions may necessitate sudden changes, both in airport operations and in the operations of the Contractor. Aircraft operations shall always have priority over all construction operations. Should runways or taxiways be required for the use of aircraft and should Airport Operations deem construction activity to be too close to active runways or taxiways the Contractor shall suspend their operations, remove their personnel, plant, equipment, and materials to a safe distance and stand by until the runways and taxiways are no longer required for use by aircraft.

Throughout the duration of the job, any practice or situation that Airport Operations or the Engineer of Record determines to be unsafe or a hindrance to regular airport operations shall be immediately rectified.

Any violation of the safety requirements contained in this document shall be considered a violation of the Contract itself and shall be sufficient cause for halting the work without extending the time limit of the job.

Insert the contractors plan for ceasing operations due to emergency response needs

43. CONSTRUCTION PHASING PLAN:

The construction phasing for this project is communicated via the attached Work Area Plan.

Insert or attach and reference the project Phasing plan. Diagrams depicting the various work areas for each phase of work must be provided.