

## SECTION 60 – SAFETY

**60.01 SAFETY REQUIREMENTS:** Safety and Security is the contractor's responsibility and shall be coordinated with the Airports Authority of Trinidad and Tobago (AATT) and the engineer.

**60.02 GENERAL SAFETY PROVISIONS:** General Safety Provisions are contained in FAA Advisory Circulars AC 150/5370-10, "Standards for Specifying Construction of Airports" and AC 150/5370-2E.

a. The Contractor shall acquaint his supervisors and employees with the airport and operations that are inherent to the Crown Point International Airport and shall conduct his/her construction activities accordingly. The Contractor shall be responsible for providing all safety precautions, measures and devices as required for the protection of all personnel against injury, facilities and equipment.

b. The work shall proceed in such a manner as to provide safe conditions for all personnel, facilities and equipment throughout the progress of the work. The sequence of operations shall be such that maximum protection is afforded to ensure that personnel and workers in the work area are not subject to any dangerous conditions and guard against injury.

c. The Contractor shall conduct activities so as not to violate any safety standards contained herein. The Contractor shall inspect all construction and storage areas as often as necessary and promptly take all steps needed to prevent/remedy any unsafe or potentially unsafe conditions/activities discovered.

d. All construction personnel on the project site shall wear a fluorescence safety vest that will clearly identify them as being authorized to work/have access to the project site.

e. The Contractor's superintendent or designated person shall be on the construction site at all times during construction. The Contractor's superintendent shall be designated the Contractor's responsible representative and shall be available to the Owner and Engineer throughout the construction activities and shall also be available for emergencies on a twenty-four hour daily basis.

f. The Contractor shall designate a person and two backup people who can be contacted 24 hours a day in the event of a construction or safety emergency and for maintaining construction hazard lighting and barricades. These designated persons shall be authorized to make field decisions on the Contractor's behalf and be able to respond within a reasonable time from the initial contact. A reasonable time may be defined as minutes from the notification depending on the level of the emergency as determined by the Owner or Engineer. The Contractor is to provide the Engineer with the names and phone numbers of these designated individuals prior to the start of construction and they shall have cell phones with a "868" area code.

g. The Contractor shall be held responsible for controlling his employees, subcontractors, and their employees. The Contractor shall conduct "tailgate" safety meetings each week. Operational safety should be a standing agenda item during progress meetings throughout the construction project.

h. The Contractor shall promptly take all actions necessary to prevent or remedy any unsafe or potentially unsafe conditions as soon as discovered whether caused by negligence, oversight, or project scope change.

**i.** The Contractor shall be responsible for protection of the construction site and all work, materials, equipment, and existing facilities thereon, against vandals and other unauthorized persons. Security measures shall include such additional security fencing, barricades, lighting, and other measures as the Contractor may deem necessary to protect the site.

**j.** The Contractor shall rebuild, repair, restore, and make good at his own expense all damages to any portion of the work occasioned by his use of these facilities before completion and acceptance of his work.

**k.** The Contractor shall provide AATT with a current list of all employees working on the airport. The list shall be maintained at a current level by the Contractor and subcontractors.

The Contractor's attention is particularly directed toward providing adequate safety precautions for construction personnel as well as the traveling public. The Contractor shall note that in some cases work will be required in close proximity to aircraft and aircraft operations. At all times, the Contractor and all construction personnel shall adhere to the following minimum requirements:

**a.** Brief each equipment and vehicle operator to thoroughly acquaint them with the absolute necessity of exercising discretion and proper judgment while in the vicinity of aircraft operations. All such operators shall be licensed by the Government of Trinidad and Tobago to operate the particular class of vehicle.

**b.** Yield the right-of-way to aircraft at all times.

**c.** Not under any circumstances allow workers, vehicles, or equipment to cross the active runway, taxiways, or active aircraft ramps without the explicit approval of the Air Traffic Control Tower.

**d.** Assist the Airports Authority Operations personnel in monitoring the conduct of each operator.

**e.** Require all vehicle and equipment operators to maintain safe and reasonable rates of speed while on the AOA and to utilize equipment strictly in accordance with prevailing weather conditions.

**f.** At the direction of AATT, dismiss from the Project any person operating unauthorized vehicles or equipment in an unauthorized area, or operating vehicles or equipment in a reckless and unreasonable manner.

**g.** Not smoke in the AOA since the AOA is a "No Smoking Area". The Contractor may wish to designate a controlled smoking area if necessary. In addition, evidence of employee possession or consumption of alcoholic beverages or drugs on the job site can be expected to result in removal of the employee from the Project.

**h.** Not allow trash or debris to accumulate in his work or the aircraft operations areas. Extreme caution will be taken to keep all trash and debris from taxiways, runways, and ramp areas.

**i.** Not allow construction vehicles or equipment to be operated within 85 feet (26 m) of the edge of an active taxiway or within 200 feet (61 m) of the edge of an active runway, unless they are utilizing an official Airport service or access road, without the express consent of the AATT and Control Tower.

**j.** Immediately cease and remove workers and equipment from any operations or work areas at any time instructed to do so by the AATT, the Control Tower, or by the Airports Authority. The Contractor will not allow construction operations to return to the area until permission to do so have been given by the AATT.

**k.** Provide Airport AOA credentialed escort for any vendors or materials suppliers both to and from the project site if they are required to enter the AOA.

**l.** When necessary and as directed by the Engineer the Contractor shall provide, erect, and maintain all necessary barricades, signs, danger signals, and lights for safe air traffic operations. Obstructions shall be illuminated as required by the AATT. All safety devices and lights are subject to the approval of the Airports Authority and the AATT.

**m.** Because of the complexity of Airport operations, it shall be necessary for all Contractors' vehicles to travel over a predetermined route on Airport property. During daylight operations each vehicle or piece of construction equipment operating in aircraft movement areas shall display in full view a 3-foot (1 m) square flag attached to a staff. The flag shall be checkered pattern of 1-foot (33 cm) square of International Orange and White. During nighttime operations, each vehicle or piece of construction equipment shall be equipped with a "strobe" type light satisfying the requirements of the Airports Authority.

**n.** At all times when working within the AOA or traveling to or from work within the AOA, the Contractor shall maintain radio contact with the Control Tower.

**o.** The operational capability of the Airport must be maintained; therefore, closure of runway, taxiway, and apron areas, or portions thereof, at times other than those designated in the Contract, will not be allowed without prior coordination and approval from Airport Operations through the AATT.

**p.** The Contractor shall ensure that the Airport operating surfaces are completely clear of all foreign materials and that all surface transitions between old and new surfaces meet all Specifications prior to release of his work crews at the end of each shift. Airport Operations will inspect the work with the AATT to verify that safe operating conditions exist prior to reopening the runway and taxiways and releasing the Contractor's work crew. Work should be terminated daily so as to leave sufficient time for such inspection and any follow-up action deemed necessary prior to the designated runway opening time.

**q.** The Contractor shall establish safe methods of working to ensure the safety of all employees, personnel, and the general public in the work area.

**r.** Any construction activity near the AOA will require certain precautions and shall be marked and restricted from any construction traffic. The Contractor shall furnish, place, and maintain barricades, steel plates, direction and warning signs, red flags, battery powered yellow lights, and flagmen to adequately protect the work, under construction from damage to protect the traveling public from accident and/or unnecessary inconvenience as shown on the plans or as directed by the Engineer.

**s.** Yellow lights shall continuously flash and have a minimum intensity of four (4) candelas and a flash rate of 55 to 75 flashes per minute with a 10 percent flash duration.

**t.** All construction areas shall be separated from Air Operations Areas by barricades painted and dimensioned as shown on the Plans, or as directed by the AATT, and as indicated in the Barricade Plan required by Section SP-29. Barricades shall be placed with a separation of no greater than 10 feet (3 m) to the next barricade. Each barricade shall have two (2) yellow flashing lights as described above.

**u.** The tops of all booms on cranes shall be identified by checkered flags, as shown on the Plans, and 12-volt red flashing lights in accordance with ICAO Annex 14 standards. All booms shall be lowered when not in operations.

v. The top most part of the asphalt plant and storage bins shall be marked by checkered flags as described above and high intensity obstacle lights in accordance with ICAO Annex 14 requirements.

w. The Contractor will not be paid separately for furnishing, placing or relocating, and maintaining barricades, steel plates, lights, danger signals, temporary relocated threshold markings, obstacle lights, etc.

x. No open-flame welding or torch cutting operations permitted unless adequate fire safety precautions are provided and these operations have been authorized by AATT. No flare pots are to be used within the AOA.

**60.03 BARRICADE PLAN:** Low level barricades are to be installed and maintained by the contractor as identified on the construction plans for all areas where construction would occur near AOA and RSA areas.

The perimeters of the actual work areas shall be adequately barricaded with low level (water fillable type) barricades lighted with omnidirectional flashing red lights to prevent intrusion by taxiing aircraft, equipment and vehicles, and vertical panel type barricades for delineating the work area.

The Contractor shall provide a sufficient quantity of barricades and flashing red lights to enclose the perimeter of the actual work, and to remove and adjust the configuration of barricades and lights to accommodate taxiway and runway closures or other reasons to accommodate construction and safety.

The Contractor is required to prepare a Barricade Plan and to submit the plan to the AATT two (2) weeks prior to commencing work. Written approval of the Contractor's Barricade Plan is required prior to commencing work. All barricades and lights will remain the property of the Airport Authority upon final project completion.

**a. Low Profile Barricades and Lights.** Each barricade section shall be equipped with solar powered or battery powered red safety lights and 20" x 20" safety flags that are orange and white (alternating) in color. The battery powered lights and the flags shall be furnished and maintained by the Contractor.

**b. Low Level Barricades.** Low level barricades shall be orange and white in color and shall be interlocking and shall be capable of being water filled ballasted to prevent damage from jet blast. The low level barricades shall be model AR-10x96, as manufactured by:

Off the Wall Products, LLC	Phone:	Toll Free (888) 363-7740
P.O. Box 112303	Fax:	(801) 363-6372
Salt Lake City, UT 84117	Web Site:	<a href="http://www.multi-barrier.com">www.multi-barrier.com</a>

or an approved equal. The AR-10x96 low level barricades shall have a section of 8 feet (2.4 m) in length and shall be 10 inches (254 mm) in height.

**60.04 CLOSED RUNWAY LIGHTING:** Each evening, before the start of work, all Airport edge lights and the Airport Beacon will be turned off by Airport Operations. In addition to this, the Contractor shall be required to indicate runway closure by placing runway closure lights. The location, type, and orientation of lights shall be as directed by the AATT.

The Contractor shall supply, transport, install, relocate as required, service and maintain two (2) portable lighted runway closure markers throughout the construction period at no cost to the Owner. The portable markers shall be in position at each end of the runway before men and equipment enter the runway safety area. Set up and operational time shall be less than five (5) minutes by one Contractor employee. The portable runway closure markers shall be as specified in FAA Advisory Circular 150-5345-55, "*Lighted Visual Aid to Indicate Temporary Runway Closure*" and the portable power supply shall be a gasoline engine. Upon final completion of the project the runway closure markers shall become the property of the Airport Authority.