

PART 1 GENERAL

1.01 SUMMARY

- A. The Sea-Tac International Airport is a complex operating facility which is governed by a very strict set of operating rules to insure the safety of the traveling public, the operators of the various airlines and those individuals who function as support personnel to the facility. It is recognized and understood that the Contractor is required to comply with the most current edition requirements contained in FAA Advisory Circulars and Port Rules and Regulations as they pertain to this project. It is understood and accepted by the Port that the Contractor has familiarized itself with general Airport operations and has taken these into consideration in arriving at its bid prices and in scheduling its various activities.
- B. Following are the general safety operations and objectives that must be achieved to maximize safety and to minimize time and economic loss to the aviation community, construction contractors and others directly or indirectly affected by the project. The Contractor shall keep these objectives in mind when formulating schedules and operational activities. The Contractor shall be responsible for controlling their operations and the operations of subcontractors (at all levels) and suppliers so as to comply with the requirements of this Section.
 - 1. Keep the airport operational for all users
 - 2. Minimize delays to aircraft operations
 - 3. Maintain safety of aircraft movement and airport operations as a whole
 - 4. Minimize delays to construction operations
 - 5. Minimize airport operation and construction activity conflicts
 - 6. Maintain safety of personnel using the airport at all times

1.02 DEFINITIONS

- A. Air Operations Area (AOA): That area within the airfield perimeter security fence.
- B. Air or Aircraft Movement Area (AMA): The movement area consists of runways, taxiways and other areas of the airport that are used for taxiing or hover taxiing, air taxiing, takeoff and landing of aircraft, exclusive of loading aprons and aircraft parking areas.
- C. Non-Movement Area: That area of the Airport Operations Area not defined as a movement area and including the exterior of buildings on or adjacent to the non-movement area. Aircraft in motion on these surfaces are not under control of the air traffic control tower.
- D. Apron: That non-movement area prepared for the positioning or parking of aircraft during ground operations not involving landing and takeoff of airplanes. The areas are usually designed according to use, such as terminal, cargo, parking, service hangar, or holding apron. Such terms as "ramp," "hardstand," "turnaround," etc., are synonymous with apron. Other sub-area designations are:
 - 1. Aircraft Parking Positions - used for parking aircraft to enplane and deplane passengers, load or unload cargo.

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2. Aircraft Service Area - on or adjacent to an aircraft parking position. They are used by airline personnel and equipment for servicing aircraft and staging of baggage, freight and mail for loading and unloading of aircraft.
 3. Service/Fire Lanes - identified rights-of-way on apron designated for aircraft ground service vehicles and fire equipment.
 4. Taxi lanes - reserved to provide taxiing aircraft with access to and from parking positions.
- E. Runway: A clearly defined area on the airport that has been prepared and is suitable for landing and takeoff of airplanes. The principal runway elements include the structural pavement, shoulders, blast pads, runway safety area, extended runway safety area and airport imaginary surfaces. The runway drainage system, lighting, marking and areas required for landing aids are also integral design parts of the runway.
- F. Taxiway: A defined path over which airplanes can taxi from one part of an airport to another. It includes the structural pavement, shoulder, taxiway safety area and obstacle-free area.
- G. Vehicle Control Line: A red line bordered on both sides by white lines painted on the ramp parallel to and within 12 feet of the north-south vehicle drive lanes. The vehicle control line is present where movement area surfaces boundary non-movement areas and service roads.
- H. Vehicle Drive Lanes: Identified rights-of-way in the non-movement area designated for vehicular movement on the AOA. Drive lanes are delineated by white lines or traffic markings painted on the pavement.
- I. Terminal Buildings and Support Facilities: Interior of terminal and concourses, and support facilities such as cargo buildings (including exterior of buildings and roofs), which are inside the AOA.
- J. Street-Side of Buildings: Exterior of building and roof on street side, outside of the AOA streets, multilanes, drives, parking garage and remote parking lots. This area is also referred to as the landside of the airport.
- K. Foreign Object Debris (FOD): Any object capable of being ingested into aircraft engines or penetrating aircraft tires. Examples are knives, forks, spoons, hand tools, bolts, nails, nuts, cable, polyurethane, vehicle parts, sand, gravel, paper, rocks, dirt, cans, glass, wood, et al.
- L. Director, Airport Operations: That individual who directs all airfield operations and activities with respect to safety, security, airport rules and regulations, and emergency situations.
- M. Manager-Airfield Security/Airport Security Coordinator: That individual appointed by the General Manager, Airfield Line of Business, who directs all activities with respect to security.
- N. Unsuitable Weather: Atmospheric or environmental conditions which restrict construction activities and effect operation of aircraft while approaching a runway to land; during landing; taxiing between runways, ramps, aprons, hangars, or loading zones; standing by to takeoff; or during takeoff as determined by the General Manager, Airfield Line of Business or the General Manager or his authorized representative. In addition, that atmospheric or environmental condition

which may, in the opinion of the Engineer, affect the final outcome, position, or condition of construction work, maintenance work, or improvement of any sort or nature.

- O. Jet Blast: Jet blast is the force of jet exhaust produced by the aircraft engines. The high velocities produced by aircraft engines are capable of causing bodily injury and damage to equipment. The drag and uplift forces produced by jet engines are capable of moving large boulders. A jet engine operating at maximum thrust is capable of lifting a 2-foot boulder 35 feet behind the airplane completely off the ground.

As an example, a DC10 at takeoff thrust can produce a velocity of 750 mph 10 feet behind the aircraft; a velocity of 260 mph 100 feet behind the aircraft; a velocity of 55 mph 1,000 feet behind the aircraft; 10 mph 4,400 feet behind the aircraft. At maximum values these velocities may extend 30' out beyond the wingtips of the aircraft and to a height of 60' above ground level. (This information is taken from FAA Advisory Circular 150/5300-13 Figure 8-4.)

- P. Low Visibility Operations: Low Visibility Operations means movement of aircraft for takeoff landing or taxi when the visibility is reported to be less than 1,200 feet runway visual range (RVR).

INSTRUCTIONS: The following paragraph is required for projects at the airport that are subject to a Construction Safety Phasing Plan (CSPP), which is a Federal Aviation Administration requirement for certain projects per Advisory Circular 150/5370-2F.

1. Attach the CSPP to the end of this section. (obtain from PMG)
2. Add the Safety Plan Compliance Document Daily Inspection Report to the end of this section as Attachment A.
3. Include the following SUBMITTALS verbiage.
4. Delete SUBMITTALS section if project doesn't require a CSPP.

1.03 SUBMITTALS

- A. Prior to issuance of the Notice to Proceed, the Contractor shall submit a Safety Plan Compliance Document (SPCD) for review and acceptance by the Port. The document details how the Contractor will comply with the Construction Safety Phasing Plan (CSPP) as prepared by the Port.
- B. Submit signed document that the Contractor will comply with the CSPP or submit a SPCD that indicates revisions to the CSPP. Major or significant revisions to the CSPP may require FAA approval, which could take 90 days.
- C. Prepare and submit SPCD Daily Inspection Report as an attachment to the Contractor Daily Report.
- D. The CSPP and a sample SPCD Daily Inspection Report are attached to this section.

1.04 REFERENCES

The rules, requirements and regulations specified in this section have been compiled from the following sources:

- A. Sea-Tac International Airport Schedule of Rules and Regulations No. 5 (Effective February 12, 2015)
- B. Port Regulations for Airport Construction, Revision 2004.
- C. Federal Aviation Administration Advisory Circular 150/5370-2F, 150/5210-5C Appendix 1, and 70/7460-1L (Current Edition).
- D. Federal Aviation Regulations (FAR) Part 77.
- E. FAA order NM 5200.3.

1.05 REQUIREMENTS AND REGULATIONS RELATING TO THE OPERATION OF MOTOR VEHICLES

A. General:

- 1. During the term of this Contract, the Contractor shall recognize and abide by the following rules and controls as they may be modified by federal regulations.
- 2. In addition to these regulations, the Engineer is empowered to issue such other instructions as may be deemed necessary for the safety and well being of Airport users or otherwise in the best interests of the Port.

B. Operation of Motor Vehicles:

1. General:

- a. Motor vehicle operations within and on the Airport premises shall be governed generally by the provisions of the Washington State Motor Vehicle Codes and Traffic Direction procedures and signals for turns, lights and safe-driving precaution shall be in conformity therewith. In addition, motor vehicles shall conform to all special regulations prescribed by the Commission or procedures imposed pursuant to Commission regulation by the Director.
- b. Traffic on enplaning and deplaning drives, public thoroughfares and parking areas of the Airport is limited to those vehicles properly licensed to operate on public streets and highways.
- c. All vehicular equipment in the AOA, cargo, tunnel, access road, aircraft parking or storage areas shall at all times comply with any lawful signal or direction of Port employees. All traffic signs, lights and signals shall be obeyed, unless otherwise directed by Port employees.
- d. Every person operating motorized equipment of any character on any area shall operate the same in a careful and prudent manner and at a rate of speed posted or fixed by this section and at no time greater than is reasonable and proper under the conditions existing at the point of operation, taking into account traffic and road conditions, view obstructions and consistent with all conditions so as not to endanger the life, limb, or property or the rights of others entitled to the use thereof.

2. Operation of Vehicles Within AOA:

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- a. All motor vehicles that enter the AOA shall possess exhaust systems which are protected with screens, mufflers, or other devices adequate to prevent the escape of sparks or the propagation of flame.
- b. Regardless of the time of day, all powered construction vehicles that are equipped with headlights shall operate with the headlights on when the vehicle is in motion on the AOA.
- c. All Contractor vehicles shall be equipped with the following visibility/identification features: 1) Operable yellow flashing beacons, beacons must be lighted during all periods of vehicle operation; 2) 3 foot by 3 foot flags having a checkered pattern of international orange and white squares at least 1 foot on each side (For fabric color specifications see FAA Advisory Circular 150/5210-5C, Appendix A.). Attach flag on top of vehicle with rigid pole so that flag will be visible at all times. Vehicles without beacons/flags will not be permitted to enter the AOA.
- d. No person shall operate any motor vehicle or motorized equipment in the AOA of the Airport unless such motor vehicle or motorized equipment is in a safe and mechanically reliable condition for such operation.
- e. Any person operating equipment in the Air Operations Area shall, in addition to this section, abide by all existing Federal Aviation Administration and other governmental rules and regulations.
- f. No person shall operate any motor vehicle or motorized equipment on the aircraft movement or non-movement areas of the Airport at a speed in excess of twenty (20) miles [32 km/h] per hour, or the posted speed limit, whichever is lower, less where conditions warrant. Designated motor vehicle drive lanes shall be utilized where provided unless specific authorization to the contrary is given by the Engineer.
- g. No person operating a motor vehicle or motorized equipment in the AOA shall in any way hinder, stop, slow, or otherwise interfere with the operation of any aircraft on the Airport.
- h. All aircraft and emergency vehicles have priority over Contractor vehicles. Contractor vehicles shall yield right of way to aircraft and emergency vehicles. Contractor shall ensure that under no circumstances will any Contractor or subcontractor or other vehicle associated with the job pass beneath any part of an aircraft or loading bridge, or block the access to any parking gate or delay any aircraft movement.
- i. Vehicles shall remain within established drive lanes. The Vehicle Control Line separates the aircraft movement area (runways and taxiways) from the non-movement area (terminal and aircraft aprons and parking areas). It is prohibited to use runways or taxiways or adjacent field areas unless specifically indicated on the drawings. It is emphasized that the Contractor's authority to operate does not extend to active aircraft movement area. The Contractor

shall operate along established haul routes with prior approval of the Director, Airport Operations, or the Director's designee, and the Engineer. No vehicle shall cross the Vehicle Control Line without approval of the Airport Traffic Control Tower and must be in radio contact with the Tower, under escort, or on an established haul route.

- j. Contractor vehicles shall not deviate from haul routes specified on the drawings.
- k. Escorts: At all times during work within 250 feet of the centerline of an operating runway or 160 feet of the centerline of an operating taxiway, or when entering or crossing an active movement area, vehicles shall be accompanied by an approved Port Escort. All requests for escorts and operations involving an aircraft movement area, or any other activity that may tend to interfere with the general operation of the Airport, shall be approved by the Director, Airport Operations by way of the Engineer. A minimum of 24 hours' prior notice shall be given the Engineer in each case. See Section 01500 - Temporary Facilities and Controls, for submittal requirements.

C. Parking:

- 1. No parking is permitted on any Airport roadway as the primary purpose of the Airport roadways is for motor vehicle traffic.
- 2. No person shall park any motor vehicle, other equipment, or materials in the AOA of the Airport, except in a neat and orderly manner and at such points as prescribed by the Contract documents.
- 3. No person shall park any motor vehicle or other equipment or materials in the AOA of the Airport within fifteen (15) feet of any fire hydrant or standpipe.
- 4. Parking of construction workers' private vehicles shall also be within the storage area construction fence located outside the AOA or in a public or private parking facility outside the AOA. Under no circumstances will vehicles or equipment be parked within five (5) feet of the Airport Perimeter Security fence line.
- 5. Vehicles parked within the AOA shall be chocked or have the parking brake activated.

D. Impoundment of Motor Vehicles:

- 1. Any vehicle in violation of the provisions as referenced in Chapter 46.52 (Abandoned Vehicles) or Chapter 46.61 (Rules of the Road) of the Revised Code of Washington may be subject to impoundment pursuant to the provisions and procedures contained therein.
- 2. No vehicle shall be impounded except under the direction of an authorized police officer of the Port.

E. Vehicle Identification:

- 1. All vehicular equipment operating within the AOA must display signs of commercial design on both sides of the vehicle to identify the vehicle as

belonging to the Contractor firm. The Contractor's name must appear in letters a minimum of two inches high. Magnetic signs are acceptable.

2. Vehicles that appear at access gates without signs on both sides of the vehicle will be denied access. Vehicles found to be missing signs within the Air Operations Area will be escorted off the job site and not be permitted to re-enter until signs have been installed.

- F. Load Limits: Unless otherwise indicated, when using airport roadways, the Contractor shall restrict the gross combination weight to the legal limits allowed on public roads.

1.06 REQUIREMENTS AND REGULATIONS RELATING TO OPERATORS OF VEHICLES

- A. All drivers operating vehicles on airport property must carry a valid United States driver's license on his/her person, appropriately endorsed for the type of equipment being operated.
- B. All personnel (including drivers) working within the AOA must have a valid Port Identification/Access badge. See Section 01 14 13 - Airport Personnel Identification/Access Control for Procedures required for badge issuance.
- C. All personnel working within the AOA shall receive special drivers training and be approved by the Port before being allowed to operate within the AOA or be escorted by Port approved escort. Personnel operating outside the AOA may operate vehicles without attending the special drivers training course.
- D. Contractors, Subcontractors, Suppliers and Contractor occasional deliveries requiring access to the AOA in support of the Contract work that do not have valid Port identification shall be escorted by authorized Contractor personnel. The Port will not provide escorts for the Contractor's work.

1.07 REQUIREMENTS FOR ORIENTATION OF CONTRACTOR PERSONNEL AND PROJECT MEETINGS

- A. Air Operations Orientation:
 1. After Execution of the Contract, but prior to the start of the Work, arrange with the Engineer to have all supervisory and job office personnel assigned to this project attend an "Air Operations Orientation." This orientation will be conducted by the Port for discussion of the rules and regulations pertinent to this Contract. The orientation will be repeated at reasonable intervals during the construction period. Port attendees will include the Engineer and the Director, Airport Operations or the Director's authorized representative.
 2. The Air Operations Orientation may be conducted as part of the preconstruction meeting and shall not be considered an educational course in Air Operations Safety, but a discussion of existing rules or regulations related to airport activities. The Contractor shall be totally responsible and liable for the actions of his employees, agents, or representatives.
- B. Safety and Security Meetings: An airport safety and security meeting will be conducted after Execution of the Contract and prior to commencing construction. Additional construction safety meetings will be scheduled throughout the life of the Contract.

1.08 SECURITY REQUIREMENTS

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- A. General Intent: It is intended that the Contractor shall comply with all requirements of the Airport Security Plan (ASP) and with the security requirements specified herein.
- B. Security Identification Display Area (SIDA) Training: Comply with the requirements of Section 01 14 13 - Airport Personnel Identification/Access Control.
- C. Identification/Access Badging: All Contractor personnel shall have Port-issued identification/access badges. See Section 01 14 13 - Airport Personnel Identification/Access Control for procedures required for issuance of Identification/Access badges.
- D. Perimeter Fence Security:
 - 1. Do not open gates or remove fencing without approval of the Engineer. Adequate precautions shall be taken to prevent entrance of unauthorized persons to Airport-restricted areas or inadvertent entry of dogs or large animals into the AOA.
 - 2. Prior to securing work each evening, ensure that all access gates which have been opened are closed and locked and that perimeter fencing is restored to a condition that will maintain present security standards.
 - 3. Five Foot Rule: No Contractor will be permitted to store materials, park equipment or erect permanent or semi-permanent structures within five (5) feet of either side of the AOA perimeter security fence.
 - 4. Use of Gates: Access to work within the AOA shall be limited to only the gates shown on the drawings. Use of the gates shown for continuous access (in excess of twice per work shift) will require the gate be manned by Port Operations or Security personnel, provided by the Port. Gates for Contractor access during hours of darkness shall be supplied with a light plant and generator whenever the gate is in use. Furnishing, fueling and maintaining the light plants shall be the responsibility of the Contractor. The Contractor shall schedule with the Engineer a minimum of 48 hours prior to requiring continuous access through a gate.
 - 5. Prior to removing or making holes in the Airport perimeter fencing, the Contractor shall obtain permission and written approval from the Engineer, and take adequate precautions to prevent entry of unauthorized personnel or animals.

1.09 SAFETY REQUIREMENTS

- A. In addition to the requirements specified in other sections, the following Safety Requirements shall also apply to the Contractor's activities:
 - 1. Traffic Control: The Contractor shall furnish all required traffic control to protect the public outside the AOA. The actions, equipment and position of flagmen, when required, shall be the sole responsibility of the Contractor. The Contractor shall provide flagmen and construction traffic control on public facilities in accordance local jurisdiction requirements and the current edition of the Manual of Uniform Traffic Control Devices (MUTCD).
 - 2. In the event an employee of the Contractor violates a safety provision, they shall be prohibited from returning to work on the AOA without first attending another Airport Safety Orientation class and approval of the Director,

Airport Operations. Subsequent violations will be deemed as just and sufficient cause to demand the employee be permanently removed from the job site. The Contractor shall be responsible for all costs and delays caused by safety violation.

3. Contractor's Designated Representative: The Contractor shall inform its supervisors and workmen of the airport activity and operations that are inherent to this airport, as well as the safety requirements and security regulations of the airport. The Contractor shall conduct its construction activities to conform to both routine and emergency requirements. During the course of construction, the Contractor shall designate a responsible representative who will be personally available on a 24-hour basis. The Contractor shall advise the Engineer of the representative's name and telephone number (the telephone shall not be connected to an answering machine). The Contractor shall comply with all current safety laws, ordinances and regulations as they may apply to this Contract.

1.10 INTERRUPTIONS AND STOPPAGES OF THE WORK DUE TO AIRCRAFT OPERATIONS AND HAZARDOUS CONDITIONS

A. Work Stoppages:

1. Work may be stopped by the Director, Airport Operations or the Director's designee, through the Engineer, any time the former considers that the intent of the regulations regarding safety or Security Requirements are being violated or that a hazardous condition exists. This decision to suspend the operation will be final and will only be rescinded when satisfied that the Contractor has taken action to correct the condition and prevent recurrence.
2. Frequent inspections will be made by the Director, Airport Operations or the Director's authorized representative during the critical phases of the work to insure that the Contractor is following the recommended safety procedures. The Inspector shall report any violations or potential safety hazards to the Engineer who will in turn advise the Contractor of the concern for immediate correction by the Contractor.
3. Work may also be stopped or suspended by Airport Operations through the Engineer during periods of extremely inclement weather, such as low visibility, snow or ice accumulation, or when it is necessary to provide an extra margin of safety to aircraft operations due to other unsuitable conditions, or reduce other activities in favor of conducting snow removal operations required to keep the airport operational.
4. Work may be stopped or suspended by Airport Operations through the Engineer during periods when a VIP (e.g. POTUSA) or critical event is occurring.

B. Intermittent Construction Operations:

1. Portions of the Work in this Contract will occur in the AOA. Heavy construction may require closing of certain areas by the Airport. However, some work may be done on an intermittent basis. The Contractor shall maintain constant communication with the Engineer when working on an AOA location, and immediately obey all instructions from the Engineer.

Failure to obey instructions or maintain proper communication will be cause to suspend the Contractor's operations in such areas until satisfactory conditions are assured.

2. When directed to cease work and move from the area, the Contractor shall immediately respond and move all material, equipment and personnel outside areas. Operations shall not be resumed until directed from the Director, Airport Operations through the Engineer. Every reasonable effort will be made to cause minimum disturbance to the Contractor's operations; however, no guarantee can be made as to the extent to which disturbance can be avoided.
3. Limitation of Operations: The Contractor shall be responsible for controlling its operations and those of its subcontractors so as to provide for the free movement of aircraft in the apron areas of the AOA.

1.11 REQUIREMENTS AND REGULATIONS AFFECTING THE CONDUCT OF THE WORK

A. General:

1. Requirements to Begin Work: Before starting work, the Contractor shall provide and have available all flags, signs, barricades, lights and electrical generators as may be required for the protection of air traffic, vehicular traffic and the construction work. All personnel shall have the proper identification badges and have received the required training and instruction.
2. No hazardous materials will be stored within the terminal complex.
3. No burning is permitted on Airport property.
4. Smoking by personnel is prohibited on the AOA and inside the terminal.
5. Construction Activity and Aircraft Movements:
 - a. Prior to the start of the construction activities in the AOA affecting aircraft movement areas, the safety requirements relating thereto will be coordinated by the Port between the Director, Airport Operations, air carriers, fixed base operators, other users and appropriate representatives of the FAA. This coordination will be based on the Contractor's accepted construction schedule with the primary purpose of compliance with the Contract document requirements.
 - b. Construction activity and storage of equipment, relating to off-AOA projects are not exempt from all the regulations that govern the AOA. Materials can not be stored in violation of POS security fence set back clearances (5' rule). Activity and storage of equipment may also have an impact on the FAR Part 77 surfaces that are prescribed to protect the airspace associated with the airport.
 - c. Construction work will not be allowed within the safety area of an open runway or within the object free area of an open taxiway (160' from centerline) without prior permission of the Director, Airport Operations or authorized designee. (Refer to 1.11 Obstructions to Navigation.)
6. Limitation of Construction Activities:

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- a. During construction there shall not be lips greater than 1 inch for pavement traveled by aircraft and 3 inches for edges between old and new surfaces at edges and ends not traveled by aircraft.
 - b. Open-flame welding or torch-cutting operations are prohibited unless adequate fire and safety precautions are provided and have been accepted by the Fire Department through the Engineer.
 - c. Open trenches, excavations and stockpiled material at the construction site shall be prominently marked with barricades and lights as detailed on the drawings.
 - d. Stockpiled material shall be limited in height and constrained in a manner to prevent movement resulting from aircraft blast or wind conditions.
 - e. The Contractor will ensure that all lighting fixtures are shielded against interference with the vision of pilots and air traffic controllers.
 - f. During non-working hours, all trenches and excavations outside of the barricaded work areas shall be backfilled or covered unless otherwise indicated in the Contract documents.
 - g. Non-working hours shall be defined as when construction is not taking place within a work area.
- B. Construction Adjacent to Runways:
 - 1. All equipment and material above the runway centerline grade and within a distance of 250 feet from the runway centerline must be removed when the runway is being used by aircraft unless specifically allowed by the phasing drawings.
 - 2. Within 250 feet of the runway centerline, all open trenches, lips greater than one inch, and drop-offs greater than three inches must be filled, covered, or sloped when the runway is open.
 - 3. Notification to the Director, Airport Operations or his representative, by way of the Engineer, is required prior to beginning any construction within the aircraft movement area. Notification of the proposed construction should be made a minimum of fourteen (14) days prior to beginning work.
- C. Construction Adjacent to Taxiways:
 - 1. No equipment or material within 160 feet of a taxiway centerline shall be above the taxiway centerline grade while the taxiway is being used by aircraft unless specifically allowed in the phasing drawings.
 - 2. Open trenches or abrupt drop-offs may be made adjacent to taxiway pavement edges only as shown on drawings.
 - 3. Marking and lighting of work areas adjacent to taxiways shall be required and accepted by the Engineer.
- D. Barricades and Marking of Barricades:
 - 1. Barricades shall be Multi-Barrier AR-10 X 96 HDPE, or OTW Safety AR10x96 O V.2, or Sherwin Industries, Inc. RRM-Safety Barricade Model

- #1008-25, or Neubert Aero Corp., 8ft Airport "low-profile" barricade or approved equal compliant with FAA Advisory Circular 150/5370-2F with 6" X 72" orange and white reflective striping on both sides.
2. Each barricade shall be provided with two (2) screw-in C01 airfield grade 360-degree red flashing solar lights. Lights shall have an override switch to allow lights to be operative during all hours of low visibility. If required, supplement with generator-powered constant burn lights that meet the requirements of FAA Advisory Circular 150/5370-2F.
 3. Barricades shall be installed as shown on the drawings or relocated by the Contractor at the direction of the Engineer whenever the need arises throughout the duration of the Contract. Barricades shall be placed indicated on the drawings to separate active areas from areas under construction. Placement of the barricades shall be in accordance with the drawings and shall be accepted by the Engineer.
 4. Barricade lights shall be operative at all times. It shall be the Contractor's responsibility to immediately repair or replace any light or flasher that is not operating.
 5. Barricades shall be in place prior to commencing construction operations, and shall be maintained in good appearance for the life of the contract.
 6. Barricades shall be relocated as noted by the phasing plans or as directed by the Engineer.
 7. Barricades shall be filled to capacity with water where shown on the drawings or as directed by the Engineer.
 8. Install red delineator reflectors between barricades where indicated on the plan sheets.
- E. Reflector Markers:
1. Reflector markers shall be of an impact-resistance color impregnated special polymer extrusion that has been UV-stabilized with both ground and pavement mounts. Height shall be 18"; color shall be solid red or orange; or as specified in the specifications for color. Reflectors shall meet FAA AC 5345-39C.
 2. Install reflector markers as shown on the drawings.
- F. Closures: No ramp, apron, taxiway, or runway area shall be closed to aircraft without approval of the Director, Airport Operations through the Engineer. This will enable Notices to Airmen (NOTAMS), or other advisory communications to be issued. A minimum of 72 hours notice of requested closing shall be directed to the Engineer. The Engineer will arrange inspections prior to opening any area to air traffic. Any waste material, or debris must be removed from aprons promptly to avoid possible damage to aircraft.
- G. Debris
1. Debris Control: When Airport roadways and public highways are used in connection with construction under this Contract, the Contractor shall remove all debris cluttering the surfaces of such roadways. Trucks and equipment shall have all accumulated dirt, mud, rocks and debris removed before accessing the AOA and when leaving the work area. Loads shall be

- struck flush and secured to prohibit loss of material. If spillage occurs, such roadways shall be swept clean immediately after such spillage to allow for safe operation of vehicles as determined by the Engineer. If the Contractor is negligent in cleanup and Port forces are required to perform the Work, the expense of said cleanup shall be paid by the Contractor.
2. No loose material or waste (FOD), capable of causing damage to aircraft or capable of being ingested into jet engines may be left in the working area on or next to runways, taxiways, ramps, or aprons. The Contractor shall direct special attention to all areas that are operational to aircraft during construction. These shall be kept clean and clear of all materials or debris at all times.
 3. Food waste on a work site is a safety concern in that it attracts animals and birds that may impact the safe movement and operation of aircraft on the airfield. Food waste shall be promptly removed from construction sites.
- H. Existing Airport Pavements and Facilities: The Contractor shall preserve or protect existing and new pavements and other facilities from damage due to construction operations. Existing pavements, facilities, utilities, or that are damaged shall be replaced or reconstructed to original strength and appearance at the Contractor's expense. The Contractor shall take immediate action to replace any damaged facilities and equipment and reconstruct any damaged area that is to remain in service.
- I. Storage Areas:
1. The storage area(s) depicted on the plans shall be used to store all idle equipment, supplies and construction materials (other than bulk materials such as aggregate, sand and soil). Storage shall not interfere with operational areas.
 2. All material and equipment shall be stored at storage sites indicated on the Contract drawings.
 3. Do not store materials or equipment in areas in which the equipment or materials will affect the operation of FAA electronic apparatus.
 4. All equipment storage and movement shall have prior approval of the Director, Airport Operations, or the Director's authorized designee and the Engineer.
 5. The perimeter of any storage area that abuts an AOA pavement shall be protected by barricades no more than 10 feet apart marked with red flashing lights. Upon completion of all Work, remove all and barricades and lights from the project site.
 6. Contractor's vehicles, equipment and materials shall be stored in areas designated on the drawings. Upon completion of the Work, the storage area shall be cleaned up and returned to its original condition to the satisfaction of the Engineer.
 7. Equipment not in use during construction and during all non-construction hours shall be parked in the Contractor's storage area. All exceptions shall be approved in advance by the Director, Airport Operations by way of the Engineer. Parking of construction workers' private vehicles shall not be allowed within storage areas located on the AOA.

8. Stockpile areas shall be used to store all bulk materials needed for the project and may or may not be fenced at the Contractor's option. However, barricades, as specified herein, shall be installed where potential conflicts with aircraft or ground vehicular traffic exists. Stockpiles shall not penetrate the FAR Part 77 imaginary surfaces or present FOD problems.
9. Equipment and materials shall not be stored between runways. . An exception to this is for tracked construction vehicles/devices, and certain materials that are specified in Contract drawings. The height of the equipment and the location where it will be stored must be specified in the drawings.

1.12 OBSTRUCTIONS TO NAVIGATION

The Contractor shall limit the height of vehicles, equipment, stockpiled materials excavated earth, to the limits as specified on the drawings.

1.13 DAILY INSPECTIONS

- A. The Director, Airport Operations or the Director's representative will conduct a daily inspection of each construction site before workers leave for the day to ensure that areas surrounding the sites are safe for aircraft operations. Inspector(s) will be watchful for Foreign Object Debris (FOD) that can be ingested into aircraft engines, loose polyethylene and other light materials capable of being blown onto aircraft movement areas by wind, unlighted construction and obstruction lights, vehicles and equipment left outside construction areas, construction areas left unlocked, access gates left open, weak partitions or fences, etc. All discrepancies shall be corrected before workers depart from the work site.
 1. The Contractor or Port Inspector shall be responsible for contacting Airport Operations to schedule the daily inspections. Based on the current workload and location of the Airport Operations Specialist, the Contractor should anticipate approximately 30-minutes of waiting time.
- B. Inspectors will review potentially hazardous conditions, which may occur during airport construction, and maintenance including, but not limited to the following:
 1. Trenches, holes, or excavation on or adjacent to any open runway or related safety area.
 2. Unmarked/unlighted holes or excavations in any apron, open taxiway, open taxi lane, or related safety area.
 3. Mounds or piles of earth, construction materials, temporary structures, or other objects on or in the vicinity of any open runway, taxiway, taxi lane or in a related safety, approach or departure area.
 4. Pavement drop-offs or pavement turf lips (either permanent or temporary) which would cause, if crossed at normal operating speeds, damage to aircraft that normally use the airport.
 5. Vehicles or equipment (whether operating or idle) on any open runway, taxiway, taxi lane, or in any related safety, approach or departure area.
 6. Vehicles, equipment, excavations, stockpiles, or other materials which could impinge upon NAVAID critical areas and degrade or otherwise interfere with electronic signals from radios or electronic NAVAIDs or interfere with visual NAVAID facilities.

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7. Unmarked utility, NAVAID, weather service, runway lighting, or other power or signal cables that could be damaged during construction.
 8. Objects (whether marked/flagged or not) or activities anywhere on or in the vicinity of airport which could be distracting, confusing, or alarming to pilots during aircraft operations.
 9. Unflagged/unlighted low visibility items (such as tall cranes, drills, etc.) in the vicinity of an active runway, or in any approach or departure area.
 10. Misleading or malfunctioning obstruction lights.
 11. Unlighted/unmarked obstruction in an approach to any open runway.
 12. Inadequate approach/departure surfaces (needed to assure adequate landing/takeoff clearance over obstructions or work or storage areas).
 13. Inadequate, confusing, or misleading marking/lighting of runways (including displaced or relocated thresholds), taxiways, or taxi lanes.
 14. Water, snow, dirt, debris, or other transient accumulation which temporarily obscures pavement marking, pavement edges, or derogates the visibility of runway/taxiway marking, lighting or of construction and maintenance areas.
 15. Inadequate or improper methods of marking, barricading, or lighting temporarily closed portions of airport operation areas.
 16. Trash or other materials with foreign object damage (FOD) potential, whether on runways, taxiways, aprons or related safety areas.
 17. Inadequate fencing or other marking to separate construction or maintenance areas from open aircraft operating areas.
 18. Inadequate control of vehicle and human access to and non-essential, non-aeronautical activities on, open aircraft operating areas.
 19. Improper radio communication maintained between construction/maintenance vehicles and air traffic control tower or other on-field communications facility (e.g., FAA Flight Service Station (FSS) or unicom radio).
 20. Construction/maintenance activities or materials which could hamper Aircraft Rescue and Fire Fighting (ARFF) vehicle access from the ARFF stations to all parts of the runway/taxiway system, runway approach and departure areas, or aircraft parking locations.
 21. Bird attractants such as edibles (food scraps, etc.) trees, brush, other trash, grass/crop seeding, or pond water on or near the airport.
 22. Personnel at the construction site without proper POS identification.
 23. No escorts for persons at the job site without proper identification.
 24. Vehicles involved in the project do not meet the safety requirements of POS Rules and Regulations.
 25. Improperly marked, lighted and flagged vehicles involved in the project.
- C. All work shifts, including the nightly work shifts are totally inclusive of the Contractor moving onto the site, performing work activities, performing all clean-up, having the work area and haul routes inspected and approved by the

inspector(s) and moving off the site. The Contractor shall provide adequate lighting for the needs of the inspection personnel.

- D. Any Aircraft Movement Surface or adjoining runway, taxiway or taxilane safety area that does not pass inspection must remain closed until such time cleanup is performed and approved. Damages will be assessed for any delays in the opening of the surface as defined in Document 00 80 00 - Supplementary Conditions.

1.14 EMERGENCY PROCEDURES

- A. The Contractor shall familiarize itself with airport emergency procedures and shall conduct his operation so as not to conflict with such events. Clear routes for Airport Rescue and Fire Fighting (ARFF) equipment shall be maintained in operational condition at all times.
- B. In case of an emergency caused by an accident, fire, or personal injury or illness, Port Police are to be immediately notified by calling 9-911 from airport phone (Port Police Dispatch), 911 from outside phones. Police will coordinate with other emergency agencies as necessary.

1.15 ADMINISTRATIVE REQUIREMENTS

- A. Applicability: The provisions of this section shall apply to the Contractor, subcontractors at all tiers, suppliers and all others which may have access to the Air Operations Area by way of the Contractor's activities.
- B. Exclusion From Claims: Impacts caused by failure of the Contractor, subcontractors at all tiers, and all others to comply, implement and maintain the provisions of this section shall not be cause for a claim of delay or increased cost to the Port.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the Schedule of Unit Prices or Lump Sum price bid for the Project.

End of Section
