

DO NOT CHANGE OR MODIFY WITHOUT AIRFIELD LOB
CONCURRENCE

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 of Seattle Rules and Regulations as they pertain to this project. It is understood and accepted by the Port of Seattle 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.

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

C. Section includes:

<u>Article</u>	<u>Title</u>
1.02	Definitions
1.03	References
1.04	Related Sections
1.05	Requirements and Regulations Relating to Operation of Motor Vehicles
1.06	Requirements and Regulations Relating to Operators of Motor Vehicles
1.07	Requirements for Orientation of Contractor Personnel and Project Meetings
1.08	Security Requirements
1.09	Safety Requirements
1.10	Interruptions and Stoppages of the Work Due to Aircraft Operations and Hazardous Conditions
1.11	Requirements and Regulations Affecting the Conduct of the Work
1.12	Obstructions to Navigation
1.13	Daily Inspections
1.14	Emergency Procedures
1.15	Administrative Requirements

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

1.02 DEFINITIONS

- A. Air Operations Area (AOA): That area within the airfield perimeter security fence.
- B. Movement Area: 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.
 - 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. Taxilanes - reserved to provide taxing 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.

DIVISION 1 - GENERAL REQUIREMENTS

Section 01140 - Operational Safety on Airports

- 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. General Manager, Airfield Line of Business: 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.

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

- 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 m.p.h. 10 feet behind the aircraft; a velocity of 260 m.p.h. 100 feet behind the aircraft; a velocity of 55 m.p.h. 1,000 feet behind the aircraft; 10 m.p.h. 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).

1.03 REFERENCES

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

- A. Sea-Tac International Airport Operation Rules and Regulations.
- B. Port of Seattle Regulations for Airport Construction, Revision 1992.
- C. Federal Aviation Administration Advisory Circular 150/5370-2C, 150/5210 Appendix 1, and 70/7460 (Current Edition).
- D. Federal Aviation Regulations (FAR) Part 77.
- E. FAA order NM 5200.3.

1.04 RELATED SECTIONS

- A. Section 01500 - Temporary Facilities and Controls
- B. Section 01567 - Airport Personnel Identification/Access Control
- C. Section 01570 - Traffic Control

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

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 perimeter roads, 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.

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

2. Operation of Vehicles Within AOA:
 - 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. All vehicles (powered and non-powered) within the AOA shall be equipped with reflectors or lights on both front and rear ends and on the sides.
 - 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 150/5210-5B, Appendix 1.). 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.

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

- 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 General Manager, Airfield Line of Business, or the General Manager'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 or under escort.
- j. Contractor vehicles shall not deviate from approved haul routes specified on the drawings. No crossover between construction sites is permitted. To move from one construction site to another, vehicles must exit the AOA via the approved haul route and access point and re-enter through the approved access gate and haul route for the next construction site. Use of the Airport Service Tunnel as a connector between haul routes will require the Contractor to acquire limited access permits through the Manager-Airfield Security/Airport Security Coordinator I.
- 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 of Seattle radio car. All requests for radio cars 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 General Manager, Airfield Line of Business by way of the Engineer. A minimum of 24 hours' prior notice shall be given the

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

Engineer in each case. See Section 01500 Construction Facilities and Temporary Controls for submittal requirements.

- I. When construction vehicles, other than those routinely used in the aircraft movement area and runway approach area, are required to travel over any portion of that area, they shall be escorted by an approved Port of Seattle vehicle.

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 [4.5 meters] 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.

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 of Seattle.

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

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

the Air Operations Area will be escorted off the job site and not be permitted to re-enter until signs have been installed.

3. 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 150/5210-5B, Appendix 1.). 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.

- 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 of Seattle Identification/Access badge. See Section 01567 - Airport Personnel Identification/Access Control for Procedures required for badge issuance.
- C. Drivers designated to operate vehicles in the AOA shall receive special drivers training and be approved by the Port of Seattle before being allowed to operate within the AOA or be escorted by Port of Seattle approved escort. Drivers operating outside the AOA may operate vehicles without attending the special drivers training course.
- D. All contractors, vendors, and consultants who wish to drive unescorted on the AOA because their business cannot be accomplished by using the load dock or other areas off the airfield are required to purchase ramp permits. The permit is a decal that is attached to the identification/access badge. Forms, instructions, and insurance requirements are available from the ID/Access Office at (206) 248-4818. Before a permit can be obtained, the forms must be completed and approved, insurance requirements must be met, the employee must have successfully completed the AOA driving course, and the employee must have an identification/access badge. Companies are invoiced a nonrefundable fee of \$40 for each ramp permit. The fee is valid until expiration or termination of the identification/access badge or changes in the company or the ramp driving permit program, as appropriate.

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

1.07 REQUIREMENTS FOR ORIENTATION OF CONTRACTOR PERSONNEL AND PROJECT MEETINGS

A. Air Operations Orientation:

1. After Award of the contract has been issued, but prior to the start of the construction, 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 General Manager, Airfield Line of Business or the General Manager's authorized representative.
2. At least one (1) first-line supervisor who has attended the orientation shall be present in the vicinity of the active runways and taxiways when construction activities require men or equipment in these areas. The Contractor and Engineer shall keep a record of the individuals who have attended the orientations. Contractor employees who have not attended the Airport Operations Orientation will not be permitted to work within 250 feet of the centerline of the runways, taxiways or other areas of Aircraft Operations.

B. 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.

C. Safety and Security Meetings: An airport safety and security meeting will be conducted after the award 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

A. General Intent: It is intended that the Contractor shall comply with all requirements of the Comprehensive Airport Security Plan (CASP) and with the security requirements specified herein.

B. Security Identification Display Area (SIDA) Training: Comply with the requirements of Section 01567.

C. Identification/Access Badging: All Contractor personnel working on the proposal shall have Port-issued identification/access badges. See Section 01567 - Airport

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

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 Guards: If remote gates are used for access to/from the worksite(s), the gate must be manned by a badged guard OR the gate must be locked when not in use. The guard must be trained to perform ID checks, verification of vehicle signage and must log all escorts into the worksite. In addition, guards should log and report any and all significant incidents. The guard must also complete SIDA training prior to obtaining an identification badge. Should security guards be required, information is contained in document form, and is available through Port of Seattle Engineering or from the ID/Access Control Division for use by security hired by contractors.
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

In addition to the requirements specified in other sections, the following Safety Requirements shall also apply to the Contractor's activities:

- A. 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). See Section – 01570, Traffic Control.

DIVISION 1 - GENERAL REQUIREMENTS

Section 01140 - Operational Safety on Airports

- B. 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 General Manager, Airfield Line of Business. 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.
- C. 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. Construction may be stopped by the General Manager, Airfield Line of Business, or the General Manager'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 General Manager, Airfield Line of Business operations or the General Manager'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. Construction 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.

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

B. Intermittent Construction Operations:

1. 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 General Manager, Airfield Line of Business and 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 construction 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 General Manager, Airfield Line of Business 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.

NOTE TO DESIGNER: In the event that penetrations of FAR 77 surfaces are anticipated in the scope of the contractor's activity, or the activity is significant enough to alter the physical landscape/facilities of the area, the designer will prepare appropriate sketches of the activity. These sketches will include precise locations/elevations depicted in relation to the activity location on the Airport Layout Plan. Obtain any FAA Form 7460 approvals required during design.

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

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 airport General Manager, Airfield Line of Business, air carriers, fixed base operators, other users and appropriate representatives of the FAA. This coordination will be based on the Contractors approved 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. FAR Part 77 surfaces are associated with above ground obstacle clearance related to movement area surfaces. Each movement area surface also has an associated safety area which provides an obstacle free buffer, and smooth surface plane, around that surface. If a movement area surface can not be closed to allow nearby construction activity that impacts FAR 77 surfaces, it may be possible to conduct the activity outside the surface's safety area, via close coordination/approval with the General Manager AFLOB, or authorized designee and the issuance of Notice to Airmen (NOTAM). In no case will activity be allowed within the safety area of an open runway (250' from centerline, 1000' from threshold) or within the obstacle free area of an open taxiway (160' from centerline) without prior permission of the General Manager AFLOB or authorized designee. (Refer to 1.12 Obstructions to Navigation.)
6. Limitation of Construction Activities:
 - 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 approved by the General Manager, Airfield Line of Business and the Fire Chief through the Engineer.

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

- c. Open trenches, excavations and stockpiled material at the construction site shall be prominently marked with timber 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.
- 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 being used by aircraft.
- 3. Notification to the General Manager, Airfield Line of Business or his representative, by way of the Engineer, is required prior to beginning any construction within 500 feet of a runway centerline or 200 feet of a taxiway centerline that is being used for aircraft operations. 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.
- 2. Open trenches or abrupt drop-offs may be made adjacent to taxiway pavement edges, providing this work is temporarily covered, approved by the Engineer and coordinated with the Port of Seattle General Manager,

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

Airfield Line of Business, who will in turn coordinate the Notice to Airmen.

3. Marking and lighting of work areas adjacent to taxiways shall be required and approved by the Engineer.

D. Barricades and Marking of Barricades:

1. Barricades: Barricades shall be installed or relocated by the Contractor at the direction of the Engineer whenever the need arises throughout the duration of the Contract. Timber barricades shall be placed indicated on the drawings to separate active areas from areas under construction. Placement of the timber barricades shall be in accordance with the drawings and shall be approved by the Engineer.
2. 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.
3. Barricades shall be in place prior to commencing construction operations, and shall be maintained in good appearance for the life of the contract.
4. Timber barricades shall be relocated as directed by the Engineer.
5. When the barricades are removed for relocation or are removed from the site, the holes shall be filled with epoxy grout and finished flushed with the existing pavement to the satisfaction of the Engineer.
6. Delineator reflector lines shall be maintained at all times. Any missing or damaged reflectors shall be replaced immediately.
7. At the completion of the project, the Contractor shall remove the timber barricades from Port property. The timber barricades shall remain the property of the Contractor.

- E. Closures: No ramp, apron, taxiway, or runway area shall be closed to aircraft without approval of the General Manager, Airfield Line of Business 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, and/or debris must be removed from aprons promptly to avoid possible damage to aircraft.

F. Debris:

1. Debris Control: When Airport roadways and public highways are used in connection with construction under this contract, the Contractor shall

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

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.

G. Existing Airport Pavements and Facilities: The Contractor shall preserve and/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.

H. 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, unless prior approval is provided by the General Manager AFLOB, or the General Manager's authorized designee, and the Engineer.
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 General Manager AFLOB, or the General Manager's authorized designee and the Engineer.

DIVISION 1 - GENERAL REQUIREMENTS

Section 01140 - Operational Safety on Airports

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 yellow flashing lights and flags. Upon completion of all work, remove all and barricades, lights and flags 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 General Manager, Airfield Line of Business 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 with yellow flashing lights 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

- A. Penetrations of the imaginary surfaces defined in FAR Part 77 shall not be permitted without advance notification of and approval by the Engineer. It may be necessary to file FAA Form 7460-1 with the FAA to obtain approval prior for operation of exceptionally tall equipment, including but not limited to vehicles, cranes, or other construction equipment, structures, stockpiled materials, excavated earth, etc.
- B. When penetrations more than 15 feet above ground level (AGL) are unavoidable, they shall be brought to the attention of the General Manager, Airfield Line of Business through the Engineer, as far in advance as possible to allow proper review process. Contractor shall comply with the provisions of AC 70/7460 (Current Edition) in the marking and lighting of obstacles.

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

1.13 DAILY INSPECTIONS

The General Manager, Airfield Line of Business or the General Manager'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.

Inspectors will review potentially hazardous conditions, which may occur during airport construction, and maintenance including, but not limited to the following:

- A. Trenches, holes, or excavation on or adjacent to any open runway or related safety area.
- B. Unmarked/unlighted holes or excavations in any apron, open taxiway, open taxilane, or related safety area.
- C. Mounds or piles of earth, construction materials, temporary structures, or other objects on or in the vicinity of any open runway, taxiway, taxilane or in a related safety, approach or departure area.
- D. 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.
- E. Vehicles or equipment (whether operating or idle) on any open runway, taxiway, taxilane, or in any related safety, approach or departure area.
- F. 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.
- G. Unmarked utility, NAVAID, weather service, runway lighting, or other power or signal cables that could be damaged during construction.
- H. 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.
- I. 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.

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

- J. Misleading or malfunctioning obstruction lights.
- K. Unlighted/unmarked obstruction in an approach to any open runway.
- L. Inadequate approach/departure surfaces (needed to assure adequate landing/takeoff clearance over obstructions or work or storage areas).
- M. Inadequate, confusing, or misleading marking/lighting of runways (including displaced or relocated thresholds), taxiways, or taxilanes.
- N. 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.
- O. Inadequate or improper methods of marking, barricading, or lighting temporarily closed portions of airport operation areas.
- P. Trash or other materials with foreign object damage (FOD) potential, whether on runways, taxiways, aprons or related safety areas.
- Q. Inadequate fencing or other marking to separate construction or maintenance areas from open aircraft operating areas.
- R. Inadequate control of vehicle and human access to and non-essential, non-aeronautical activities on, open aircraft operating areas.
- S. 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).
- T. Construction/maintenance activities or materials which could hamper crash-fire-rescue (CFR) vehicle access from CFR stations to all parts of the runway/taxiway system, runway approach and departure areas, or aircraft parking locations.
- U. Bird attractants such as edibles (food scraps, etc.) trees, brush, other trash, grass/crop seeding, or pond water on or near the airport.
- V. Personnel at the construction site without proper POS identification.
- W. No escorts for persons at the job site without proper identification.
- X. Vehicles involved in the project do not meet the safety requirements of POS Rules and Regulations.
- Y. Improperly marked, lighted and flagged vehicles involved in the project.

DIVISION 1 - GENERAL REQUIREMENTS

Section 01140 - Operational Safety on Airports

All workshifts, including the nightly workshifts 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.

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 00800 - Supplementary Conditions, paragraph SC-10.13.

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, and (206) 433-5400/5380 from cellular phone. Police will coordinate with other emergency agencies as necessary.

1.15 ADMINISTRATIVE REQUIREMENTS

- A. **Applicability:** The provisions of this section shall apply to the Prime 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 Prime 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

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) (Lump Sum price bid for the Project).

DIVISION 1 - GENERAL REQUIREMENTS
Section 01140 - Operational Safety on Airports

END OF SECTION