



Iowa Department of Transportation

DEVELOPMENTAL SPECIFICATIONS FOR AIRPORT SAFETY REQUIREMENTS

Effective Date
October 20, 2009

THE STANDARD SPECIFICATIONS, SERIES OF 2009, ARE AMENDED BY THE FOLLOWING ADDITIONS. THESE ARE DEVELOPMENTAL SPECIFICATIONS AND PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

09004.01 EQUIPMENT RESTRICTIONS.

At all airport locations specified in the plans, do not use painting equipment that exceeds the following maximum axle weight configurations:

<u> V </u>	<u> V </u>	(Single/Single)
12,000 lbs.	12,000 lbs.	
<u> V </u>	<u> V V </u>	(Single/Tandem)
12,000 lbs.	16,000 lbs.	
<u> V </u>	<u> V V V </u>	(Single/Tandem)
12,000 lbs.	36,000 lbs.	

09004.02 TRAFFIC CONTROL REQUIREMENTS.

Place traffic control for the removal and placement of pavement marking as shown in the contract documents, with the following additional requirements:

- Leave traffic control devices in place from the time removal operations have started through the completed curing time of the newly applied pavement markings.
- Do not remove traffic control devices until the newly applied pavement markings are track free.
- Do not close any longer length of area than can be adequately removed and replaced in a single working day.
- At no time is an unmarked section of the airport to be opened to traffic.

09004.03 SAFETY REQUIREMENTS.

A. General.

1. The safety requirements specified herein are applicable to all airport locations specified in the plans.

2. During the construction project, the Airport Operator at each airport is responsible for full compliance with the requirements of Federal Aviation Regulations (FAR) Part 139 for certificated airports. The Engineer will review and forward to the Contractor all safety comments from the Airport Operator.
3. Pay particular attention to aircraft movements around the aprons and taxiways during work activities. During an emergency, the Contractor is responsible for the location and movement of their equipment and employees.

B. Coordination of Airport Construction Activities.

1. Submit a written Temporary Runway/Airport Closure Plan a minimum of two weeks before the preconstruction meeting. Include, as a minimum, the following items:
 - Notifying the Fixed Base Operator (FBO) and/or Airport Manager.
 - Checking the sky for approaching aircraft prior to entering airfield.
 - Entering the airfield.
 - During work activities, continuously checking the sky for approaching aircraft
 - Placing the crosses at the ends of the runway.
2. Prior to the preconstruction meeting, submit the working schedule to the Engineer. The Engineer will submit the working schedule to the Federal Aviation Administration (FAA).

C. Safety Considerations.

- Minimize disruption of standard operating procedures for aeronautical activity.
- Contact the Airport Operator before the painting operations, and the Airport Operator will initiate and cancel the Notice to Airmen (NOTAMs).
- Adequately light all construction equipment.
- Mark construction areas and closed airfield pavement areas.
- Identify all construction personnel and equipment.
- Phase the painting work as needed.

D. Hazardous and Marginal Conditions.

Analysis of past accidents and incidents has identified many contributory hazards and conditions. Minimize the safety concerns identified below:

- Heavy equipment, stationary or mobile, operating or idle near airport operations areas or in safety areas.
- Proximity of equipment or material that may degrade radiated signals or impairs monitoring of navigational aids.
- Holes, obstacles, loose pavement, trash, and other debris on or near airport operation areas.
- Improper marking or lighting of runways, taxiways, and displaced thresholds.
- Attractions for birds such as trash, grass seeding, or ponded water on or near airports.
- Inadequate or improper methods of marking temporarily closed airport operations areas, including improper and unsecured barricades.
- Obliterated markings on active operational areas.

E. Assuring Operational Safety.

The Airport Operator is responsible for establishing and using procedures for the immediate notification of airport users and the FAA of any conditions adversely affecting operational safety at the airport.

F. Vehicles on Airports.

Keep vehicular activity on airport movement areas to a minimum. Where vehicular traffic on airport operation areas cannot be avoided, carefully control it. A basic guiding principle is that the aircraft always has the right-of-way. Some aspects of vehicle control and identification are discussed below. Recognize that every airport presents different vehicle requirements and

problems and therefore needs individualized solutions so that vehicle traffic does not endanger aircraft operations.

1. Visibility.

Any vehicle operating on airport operations areas must be equipped with a yellow (amber) identification beacon according to the Society of Automotive Engineers (SAE) Standard J578, Color Specifications for Electric Signal Lighting Devices.

2. Movement.

During painting operations, the control of vehicular activity on airport operation areas is of the highest importance. Airport management is responsible for vehicle operations to ensure aircraft safety during construction. This requires coordination with airport users and air traffic control. Consider the use of two-way radio, signal lights, traffic signs, flaggers, escorts, or other means suitable for the particular airport. Coordinate the selection of a frequency for two-way radio communications between the Contractor's vehicles and the air traffic control (ATC) tower with the ATC tower chief. At non-tower airports, ensure two-way radio control between the Contractor's vehicles and fixed-base operators or other airport users avoids frequencies used by aircrafts. Remember that even with the most sophisticated procedures and equipment, systematic training of vehicle operators is necessary to achieve safety. Give special consideration to training intermittent operators, such as construction workers, even if escort service is being provided.

G. Inspection.

During painting operations, the Airport Operator, or a representative, will perform frequent inspections during critical phases of the work to ensure that the Contractor is following the prescribed safety procedures. The Engineer will pass all of the Airport Operator's comments on to the Contractor.

H. Safety Responsibilities of the Contracting Authority.

The Contracting Authority has specific responsibilities regarding operational safety on airports before and during periods of construction activity. Special attention will be directed toward construction within safety areas. The Engineer will be involved in the following functions:

- Reviewing safety plans to determine limits of work and possible safety problem areas.
- Ensuring users of the facilities have ample warning of the proposed construction so that they may make advanced plans to change their operations.
- Participating in the preconstruction meeting to review and approve the safety plan. Also, participating in inspections of the Contractor's work to determine that there are no safety violations to FAR Part 139.

I. Other Safety Requirements.

1. Runway Ends.

Do not allow construction equipment to penetrate the 20:1 approach surface.

2. Taxiways and Aprons.

Locate construction activity setback lines a distance of 25 feet (7.62 m) plus one-half the wingspan of the largest predominant aircraft from the centerline of an active taxiway or apron.

3. Stockpiled Material.

Constrain stockpiled material in a manner to prevent movement resulting from aircraft blast or wind. Do not store material near aircraft turning areas or movement areas.

4. Construction Vehicle Traffic.

With respect to vehicular traffic, aircraft safety during construction is likely to be endangered by four principal causes: increased traffic volume, nonstandard traffic patterns, vehicles without radio communication and marking, and operators untrained in airport procedures.

09004.04 METHOD OF MEASUREMENT AND BASIS OF PAYMENT.

This work will not be measured and paid for separately. The cost is incidental to the bid item Painted Airport Pavement Markings.