

L Addison Airport - Westside FAA Safety Order
1996

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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

SW 5200.5B

SOUTHWEST REGION

2/15/96

SUBJ: AIRPORT SAFETY DURING FAA-FUNDED AIRPORT CONSTRUCTION AND FAA FACILITIES MAINTENANCE

1. **PURPOSE.** This Order establishes airport safety standards for FAA-funded construction (Airport Improvement Program and Facilities and Equipment Program) and FAA facilities maintenance.
2. **DISTRIBUTION.** This Order is distributed to the Section level in the Airports and Airway Facilities Divisions, to the Branch level in the Flight Standards, Air Traffic, and Civil Aviation Security Divisions, to the Fort Worth Flight Procedures Office, to all Southwest Region field offices and facilities, and to F & E Field Installation/Construction Representatives.
3. **CANCELLATION.** Order SW 5200.5A, Airport Safety During FAA-Funded Airport Construction and FAA Facilities Maintenance, dated 6/6/89, is canceled.
4. **EXPLANATION OF CHANGES.** This Order revises and updates safety criteria for consistency with current FAA publications and updates references to regional organizations.
5. **DEFINITIONS.**
 - a. **Airport Elevation** - the highest point on the landing surface of an airport.
 - b. **Certificated Airport** - an airport which, by law, is safety-regulated by the FAA under Part 139 of the Federal Aviation Regulations, and which operates under specific safety requirements which apply to maintenance and construction activities on the airport. Certificated airports are listed in Appendix 2.
 - c. **Displaced Threshold** - A threshold that is located at a point on the runway other than the designated beginning of the runway. A temporary displacement may be used

Distribution: A-X-3(FS,AT,AP,CS); A-X-4(AF);
A-FOF-0 (maximum); A-FAF-10; A-FAS-1

Initiated By: ASW-620

CHANGE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

SW 5200.5B
CHG 1

SOUTHWEST REGION

6/1/96

SUBJ: AIRPORT SAFETY DURING FAA-FUNDED AIRPORT CONSTRUCTION AND MAINTENANCE

- PURPOSE.** The purpose of this change is to correct telephone numbers for Flight Service Stations listed in Appendix 4 to the Order, and to add Appendix 5, Pocket Safety Guide.
- DISTRIBUTION.** This change is distributed to the Section level in the Airports and Airway Facilities Divisions, to the Branch level in the Flight Standards, Air Traffic, and Civil Aviation Security Divisions, to the Fort Worth Flight Procedures Office, to all Southwest Region field offices and facilities, and to F & E Field Installation/Construction Representatives.
- PAGE CONTROL CHART:**

REMOVE PAGES	DATED	INSERT PAGES	DATED
Appendix 4	2/15/96	Appendix 4	6/1/96
		Appendix 5	6/1/96
		(1 and 2)	



Clyde M. DeHart, Jr.
Regional Administrator

Distribution A-X-3(FS/AT/AP/CS); A-X-4(AF);
A-FOF-0 (maximum); A-FAF-10; A-FAS-1

Initiated By ASW-620

b. Bid documents for on-airport construction or maintenance projects shall include general and specific safety requirements, based on Appendix 1 to this Order, so that contractors are aware of the costs and constraints which will apply during the project to maintain a high level of aviation safety.

c. If the clearances and restrictions described in this Order cannot be maintained while construction or maintenance is underway, action will be taken as appropriate to:

- (1) close runways, taxiways, or aprons,
- (2) relocate or displace runway thresholds temporarily,
- (3) perform work at night or during periods of minimal aircraft activity,
- (4) close affected areas to certain types of aircraft,
- (5) restrict aircraft use by weight, wingspan, approach speed, or other characteristic,
- (6) shut down or restrict use of navigational or approach aids.

d. FAA employees who are responsible for construction or maintenance activities on airports shall coordinate project safety and security requirements and impacts with the airport sponsor as soon as the impacts have been identified, but before commitments are made with contractors or others to perform work on an airport. Coordination will vary from formal predesign conferences to informal contacts with the airport manager or responsible sponsor official before starting work.

7. SAFETY IMPACTS. Potentially hazardous conditions which may occur during airport construction and maintenance include the following:

- a. Excavations, trenches, and stockpiled material on or near runways, taxiways and aprons.
- b. Construction equipment on aircraft operating areas or in runway approaches or departure areas.
- c. Inadequate construction area marking or lighting.
- d. Lack of control over vehicle access to aircraft operating areas, unauthorized entry of personnel, vehicles, or animals.
- e. Inadequate vehicle marking or lighting.
- f. Deficient marking and lighting of temporary runway thresholds.

(2) The Runway OFZ is a volume of airspace extending from the runway surface up to 150 feet above the runway. It extends 200 feet beyond each end of the runway and has the following width:

Runways Serving:	Visibility Minimums lower than 3/4 mile	Other Runways
Small Aircraft	300 feet	250 feet
Large Aircraft	400 feet	

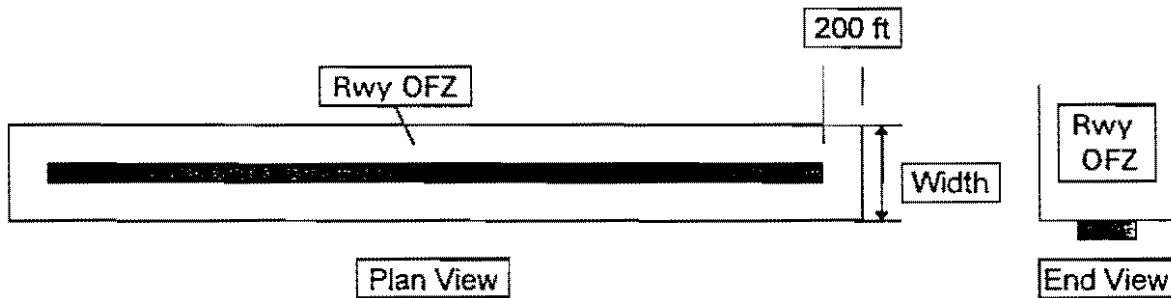


Figure 1

OFZ - Visual Runways and Runways with visibility minimums not lower than 3/4 mile

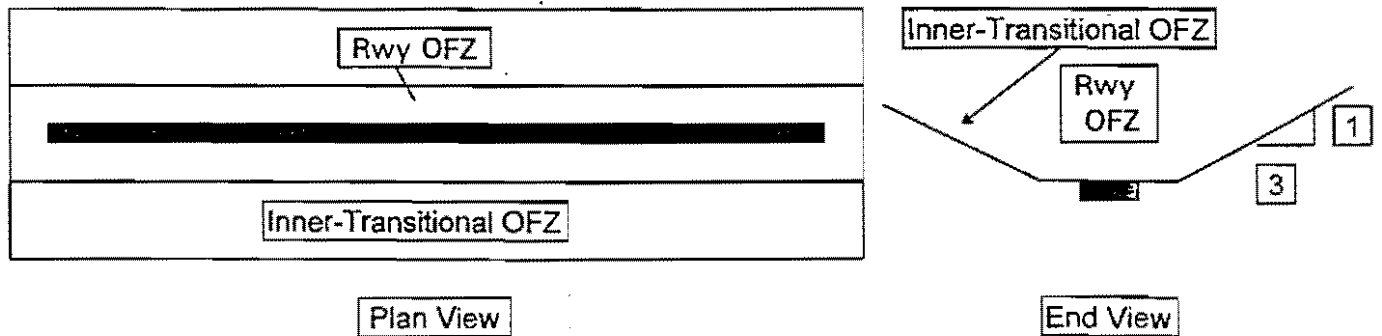


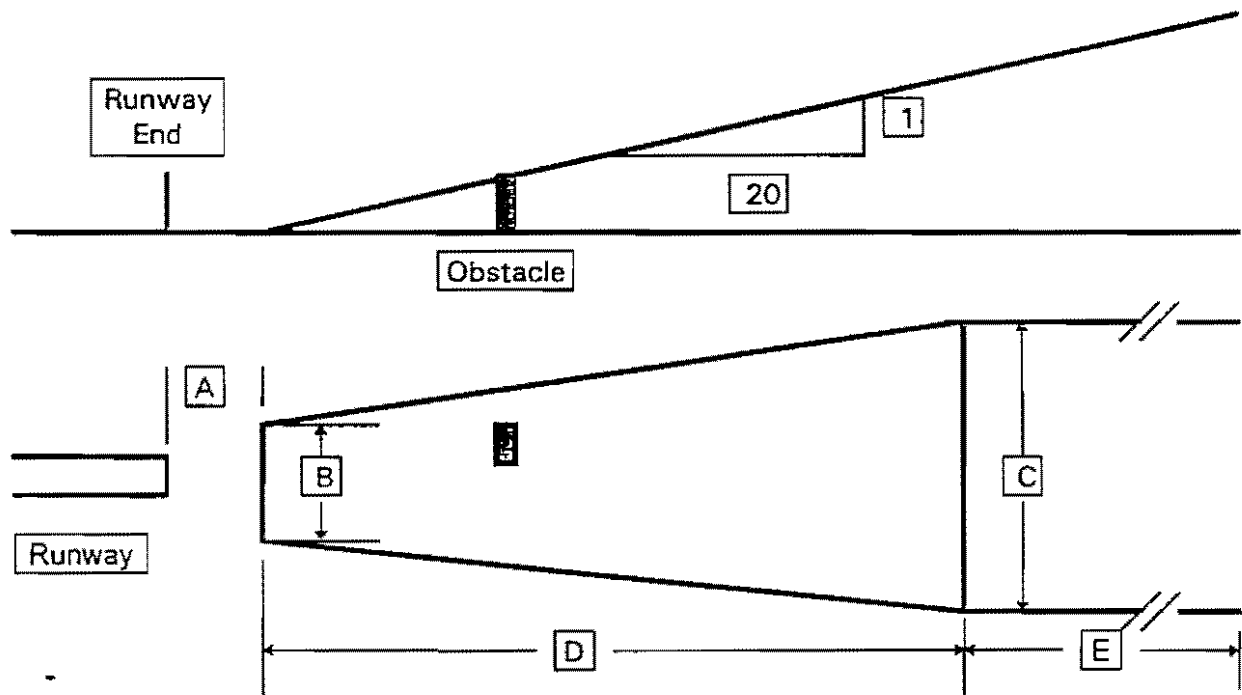
Figure 2

OFZ - Small airplanes exclusively with visibility minimums lower than 3/4 mile

b. Approach Clearance Over Equipment and Material.

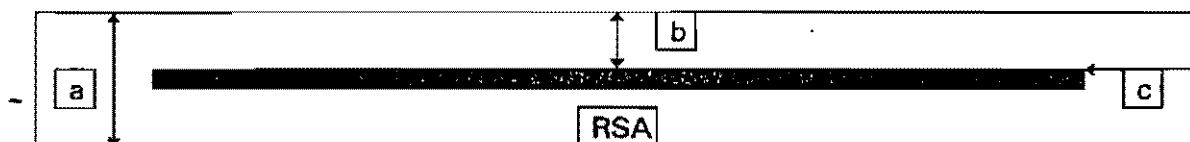
(1) Construction activity in a runway approach may result in a need to displace the landing threshold temporarily. If an object penetrates a surface shown in Fig. 5, displace the threshold to a point where the surface is not penetrated.

(2) Objects which do not penetrate these surfaces still may be obstructions to air navigation and/or may affect standard instrument approach procedures. Coordinate these with the Fort Worth Flight Procedures Office, and the Air Traffic System Management Branch, ASW-530, as necessary.



Dimension (Feet)	Small Aircraft	Large Aircraft
A	0	200
B	250	400
C	700	1000
D	2250	1500
E	2750	8500

Figure 5. 20:1 Threshold Location Surface



Aircraft Approach Category	Runway Safety Area Dimensions (Feet)				
	Airplane Design Group (See Appendix 3)				
A and B	I	II	III	IV	
visual runways and not lower than 3/4 mi approach visibility minimums	Dimen. a	120	150	300	500
	b	30	40	100	175
	c	240	300	600	1000
lower than 3/4 mi approach visibility minimums	a	300	300	400	500
	b	100	100	150	175
	c	600	600	800	1000
C and D	I	II	III	IV	V
	a			All 500	
	b			All 150	
	c			All 1000	

Note 1: Use dimension a or b, whichever results in the greater distance from the runway centerline.

Note 2: Use dimension c or the existing safety area length, whichever is less, but no less than 200 feet.

Note 3: Some certificated airports have or permit use of 400-foot wide runway safety areas during construction and maintenance. Coordinate proposals with the Airports Division, Safety and Standards Branch, ASW-620.

Figure 7. Runway Safety Areas

e. Marking and Lighting

(1) Temporary displaced runway threshold:

(a) Mark with white arrows and a white threshold bar as shown in Advisory Circular 150/5340-1, or

(b) Use alternate marking which is:

- 1 Clearly visible to the pilot,
- 2 Not misleading, confusing, or deceptive,
- 3 Secured in place to prevent movement,
- 4 Made of material which will minimize damage to aircraft which come in contact with the marking.

(2) Temporary relocated runway threshold (partial closure of a runway):

(a) Mark with yellow chevrons as shown in A.C. 150/5340-1, or use alternate marking as described in par. (1)(b) above.

(b) Runway distance remaining signs may need to be covered or removed during the closure to avoid misleading runway length indications to pilots.

(3) Temporary runway thresholds must be lighted if all or part of a runway is to be open at night during construction and maintenance. The airport operator may already have temporary threshold lighting available, but this should be determined in advance.

(a) Use light lens colors and spacing in A.C. 150/5340-24, Runway and Taxiway Edge Lighting System.

(b) Disable runway lighting on closed parts of runways and adjust amber lenses (caution zone) if necessary. On some lighting systems, it may be necessary to cover a light rather than removing the lamp or fixture.

(c) Disable visual glide slope indicators (VASI, PAPI, PLASI, etc.), REIL, and approach lights which would otherwise give misleading indications to pilots as to the threshold location. Installation of temporary visual aids may be necessary to provide adequate guidance for pilots on approach to the affected runway. These may be funded or provided by the FAA or the sponsor.

g. Notices to Airmen (NOTAM)

(1) Responsibility for issuing NOTAMs shall be determined before construction or maintenance begins. Refer to Order 7930.1, National Notice to Airmen System, or Advisory Circular 150/5200-28, Notices to Airmen for Airport Operators.

(2) NOTAMs on shutdown or irregular operation of FAA-owned facilities shall be issued and canceled only by FAA employees. Flight Data Center (FDC) NOTAMs on instrument approach procedures are issued by the Fort Worth Flight Procedures Office. NOTAMs on airport conditions and non-Federal navigational aids shall be issued and canceled only by the airport sponsor. Any person having reason to believe that a NOTAM is missing, incomplete, or inaccurate shall notify the responsible person.

h. Vehicle Identification. FAA employees who operate vehicles on an airport shall comply with the airport owner's rules for vehicle marking, lighting, and operations, unless FAA requirements are more stringent. Vehicles operated by FAA employees on active runways, taxiways, or safety areas shall be marked with orange and white flags or flashing yellow beacons during daylight hours, and with flashing yellow beacons at night. Contractors and suppliers shall be informed of the applicable requirements of the airport sponsor by the FAA or airport sponsor employee responsible for the work.

i. Controlling Access To Aircraft Operational Areas

(1) Vehicle and pedestrian access routes for airport construction and maintenance shall be controlled as necessary to prevent inadvertent or unauthorized entry of persons, vehicles, and animals. The amount of construction traffic or local security/safety rules may require use of personnel to control access through gates or fencing, or across aircraft movement areas. Radio communications may be required between these personnel and a Control Tower if equipment and personnel must enter or cross an active Aircraft Movement Area.

(2) Vehicle parking areas for FAA and contractor employees shall be designated in advance to minimize vehicle traffic in aircraft operating areas while still providing reasonable employee access to the job site.

9. STANDARD SAFETY SPECIFICATIONS. General safety provisions which apply during contract work on airports are contained in the following documents:

a. Facilities and Equipment Program (F & E) projects - Additional General Provisions, FAA P-1, Clause No. 75, "Special Precautions for Work at Operating Airports."

b. Airport Improvement Program (AIP) projects - Advisory Circular 150/5370-10, "Standards for Specifying Construction of Airports," General Provisions 40-05, Maintenance of Traffic; 70-08, Barricades, Warning Signs, and Hazard Marking; 80-04, Limitation of Operations.

Appendix 1. SAFETY SPECIFICATION GUIDE

1. General Safety Requirements: During performance of this contract, the airport runways, taxiways, and aircraft parking aprons shall remain in use by aircraft to the maximum extent possible. Aircraft use of areas near the contractor's work will be controlled to minimize disturbance to the contractor's operation. The contractor shall not allow his/her employees, subcontractor, suppliers, or any person over whom he/she has control to enter or remain in any part of the airport which would be hazardous to persons or to aircraft operations. Whenever aircraft operations require, the (Contracting Officer, Engineer, etc.) may order the contractor to suspend operations, move plant, personnel, equipment, and materials to a safe location and stand by until aircraft use is completed.
2. Obstacle Free Zone: Construction activity within an Obstacle Free Zone will require closing part or all of the affected runway. See Figures 1 - 4.
3. Approach Clearance to Runways: Runway landing thresholds shall be located to provide an unobstructed approach surface with an approach ratio over equipment and material as shown on Figures 5 and 6.
4. Runway and Taxiway Safety Areas: Construction activity within a runway safety area will require closing part or all of the affected runway. Construction activity within taxiway safety areas/object free areas is permissible when the taxiway is open to aircraft traffic if:
 - a. Adequate wingtip/empennage clearance exists between the aircraft and equipment/materiel,
 - b. Excavations, trenches, or other conditions are conspicuously marked and lighted,
 - c. Notices to Airmen are in effect concerning the activity, usually "Personnel and equipment adjacent to Taxiway ___."

Safety Area dimensions are shown on Figures 7 and 8.

5. Threshold Marking and Lighting:

- a. Temporary threshold marking is (required, not required). Threshold marking will be furnished by the (airport owner, contractor, etc.).
- b. Temporary threshold lighting is (required, not required). Threshold lighting will be furnished and maintained by the (airport owner, contractor, etc.).

Appendix 2. FAA-CERTIFICATED AIRPORTS IN SOUTHWEST REGION
(As of March 1996)

ARKANSAS

Fayetteville Drake (FYV)
Fort Smith Regional (FSM)
Hot Springs Memorial (HOT)
Little Rock Adams Field (LIT)
Texarkana Regional (TXK)

LOUISIANA

Alexandria Esler Regional (ESF)
Alexandria Intl (AEX)
Baton Rouge Ryan (BTR)
Lafayette Regional (LFT)
Lake Charles Chennault (CWF)
Lake Charles Regional (LCH)
Monroe Regional (MLU)
New Iberia Acadiana Regional (ARA)
New Orleans International (MSY)
New Orleans Lakefront (NEW)
Shreveport Regional (SHV)
Tallulah Vicksburg-Tallulah Reg. (TVR)

NEW MEXICO

Albuquerque International (ABQ)
Farmington Four Corners Reg. (FMN)
Hobbs - Lea County (Hobbs) (HOB)
Las Cruces International (LRU)
Los Alamos (LAM)
Roswell Industrial (ROW)
Ruidoso Sierra Blanca Reg. (SRR)

OKLAHOMA

Lawton Municipal (LAW)
Oklahoma City Will Rogers (OKC)
Stillwater Municipal (SWO)
Tulsa International (TUL)

TEXAS

Abilene Regional (ABI)
Amarillo International (AMA)
Austin Robert Mueller (AUS)
Beaumont Jefferson Co. (BPT)
Brownsville South Padre Is. (BRO)
College Station Easterwood (CLL)
Corpus Christi International (CRP)
Dallas/Fort Worth International (DFW)
Dallas Love (DAL)
El Paso International (ELP)
Fort Worth Alliance (AFW)
Fort Worth Meacham Intl (FTW)
Galveston Scholes (GLS)
Harlingen Valley Intl (HRL)
Houston Ellington (EFD)
Houston Hobby (HOU)
Houston Intercontinental (IAH)
Killeen Municipal (ILE)
Laredo International (LRD)
Longview Gregg County (GGG)
Lubbock International (LBB)
McAllen Miller International (MFE)
Midland International (MAF)
Paris Cox Field (PRX)
San Angelo Mathis Field (SJT)
San Antonio International (SAT)
Temple Draughon-Miller Cen. Tx (TPL)
Tyler Pounds Field (TYR)
Victoria Regional (VCT)
Waco Regional (ACT)
Wichita Falls Muni/Sheppard AFB (SPS)

Appendix 3. AIRPLANE DESIGN GROUPS

Some safety standards in this Order are based on the "Airplane Design Group" from Advisory Circular 150/5300-13, Airport Design. These Design Groups are based on aircraft wingspan, with typical aircraft in each Design Group shown below.

Design Group	Wingspan
I	<p style="text-align: center;"><u>Up to but not including 49 feet</u></p> Piper Navajo, Cessna 421, Fairchild Metro, Beech King Air, Mitsubishi MU-2, Rockwell Sabre 75, Lear 35/36, BAE/Hawker-Siddley HS-125/800
II	<p style="text-align: center;"><u>49 feet up to but not including 79 feet</u></p> Cessna 441, Embraer 120 Brasilia, SAAB 340, Rockwell Sabre 65, Cessna Citation II/III, Beech 1900 Airliner, Gulfstream I/II/III/IV/V
III	<p style="text-align: center;"><u>79 feet up to but not including 118 feet</u></p> ATR 42/72, BAE-146, Boeing 727/737, Convair 580, DeHavilland Dash 7, DC-9 (All), Fokker 100, MD-80, Fairchild F-27
IV	<p style="text-align: center;"><u>118 feet up to but not including 171 feet</u></p> Boeing 707, 757, 767, DC-8, Lockheed L-1011, DC-10/MD-11
V	<p style="text-align: center;"><u>171 feet up to but not including 214 feet</u></p> Boeing 747, 777

APPENDIX 4. FAA OFFICE DIRECTORY

Following are the FAA offices with responsibilities for construction and/or maintenance on airports:

<u>Office</u>	<u>Telephone</u>	<u>Functions</u>
Airports Division, Safety and Standards Branch, ASW-620	817-222-5620	Airport safety, FAR 139, airport design standards, Airport Improvement Program project management
Air Traffic Division, System Management Branch, ASW-530	817-222-5530	Obstruction Evaluation, Air Traffic Procedures, obstruction marking and lighting, Control Tower line-of-sight
Aviation System Standards, Fort Worth Flight Procedures Office	817-222-4131	Instrument approach procedures, Flight Data Center NOTAMs
<u>Automated Flight Service Stations (AFSS)</u> Jonesboro, AR DeRidder, LA Albuquerque, NM McAlester, OK Conroe, TX Fort Worth, TX San Angelo, TX	Administration: 501-932-4608 318-462-6111 505-242-4442 918-421-6000 409-760-4201 817-654-2205 915-944-8791	Notices to Airmen - Call 1-800- 544-1709 423-9347 525-9963NM 342-7635TX 722-4223 (OK only) 833-5602 722-6209 433-8102
Civil Aviation Security Division, ASW-700	817-222-5700	Airport Security, FAR 107
<u>Airway Facilities Division</u> Resource Mgt. Branch NAS Implementation Br. Operations Branch <u>System Maintenance Office</u> Albuquerque (NM, W. Tx) Dallas/Fort Worth (Metro) Houston (S. Tx, LA) Oklahoma City (OK, AR)	817-222-4200 817-222-4500 817-222-4700 505-764-6700 214-453-4900 713-986-7100 405-798-2000	NAVAID Planning NAVAID Implementation NAVAID Maintenance FAA Facilities Maintenance

APPENDIX 5. POCKET SAFETY GUIDE

This Pocket Guide is printed back-to-back and is intended to be cut out and used as a quick-reference guide.

POCKET GUIDE FOR AIRPORT CONSTRUCTION & MAINTENANCE SAFETY

1. Runway Obstacle Free Zone (OFZ)
No construction activity or equipment within OFZ - extends 200 feet beyond runway end and 150' above rwy

Plan View

① Visual rwys & vis min. < 3/4 mile
② Small acft, vis min. < 3/4 mile
③ Large acft, vis min. < 3/4 mile
w = 400' large acft, 300' small acft vis < 3/4 mile, 250' others

2. Approach Clearance over Object in Runway Approach

Dimension (ft)	Small Aircraft	Large Aircraft
a	0	200
b	250	400
c	700	1000
d	2250	1500
e	2750	8500

3. Equipment on the Runway - Partial Closure

500' or 1000'

Equipment

Closed area

Temporary Relocated Threshold

Small Aircraft (12,500# or less) - 500 feet
Large Aircraft (More than 12,500#) - 1000 feet

Based on equipment height of about 15 feet; higher objects may require special consideration.

4. Runway Safety Area (Use dimension a or b, whichever results in the greater distance from the runway centerline.)

Acft Appch Cat.	Runway Safety Area Dimensions(feet)				
	ADG	I	II	III	IV V
Visual Rwy's and Not Lower than 3/4 Mi Visibility	a	120	150	300	500
	b	30	40	100	175
	c	240	300	600	1000
Lower than 3/4 Mi Visibility	a	300	300	400	500
	b	100	100	150	175
	c	600	600	800	1000
C and D	All: a - 500, b - 150, c - 1000				

12-7-98

Jim Pierce

To: John Baumgartner
Subject: New Airport Tower

Jim Nelson of FAA called (817-222-4361) to check the status of the land acquisition. I told him I thought everything was "on schedule" with respect to condemnation – offers were made, with no response, and condemnation hearings were expected to take place in January. Please let me know if the info I gave him needs to be revised. Jim.