School Site Selection and Approval Guide

Prepared by the
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Proximity to Airports

In the State Aeronautics Act, Division 9, Part 2, Section 21013, an *airport* is defined as "an area of land or water that is used, or intended for use, for the landing and takeoff of aircraft (including helicopters) and any appurtenant areas that are used, or intended for use, for airport buildings or other airport facilities, or rights of way, and all airport buildings and facilities located thereon." The responsibilities of the school district, the State Department of Education, and the Department of Transportation (Division of Aeronautics) concerning school site proximity to airports are contained in *Education Code* sections 39005 through 39007.

As part of the site selection prescreening process, the district should determine the proximity of the site to airports. If the site is within two miles of an airport runway, the following procedures must be followed before the site can be approved:

1. With its request to the Department of Education for acquisition of the site, the district must include two maps on which the location of the site and its relationship to the airport are indicated.
2. The Department of Education will request the Department of Transportation (Division of Aeronautics) to investigate the site and make recommendations to the Department.
3. If the Department of Transportation does not recommend against the site, the Department of Education will contact the district and advise the district to complete the necessary documents required for approval.
4. If the Department of Transportation and the Department of Education do not favor the site acquisition, the governing body may not acquire title to the property until 30 days after the Department's report is received by the school district and until the report has been read at a public hearing. If state, county, or school district funds are to be used for school site acquisition and the report of the Department of Transportation is unfavorable, the recommendation may not be overruled without the express approval of the Department of Education and the State Allocation Board. (*Education Code* sections 39005 and 39007)

When making its evaluation, the Division of Aeronautics will be concerned with factors such as accident exposure and aircraft noise. Appendix B, "Office of Airports Procedures," contains a description of the procedures used by the Division of Aeronautics after receiving a request from the Department of Education for an inspection of a proposed school site.

Proximity to High Voltage Power Transmission Lines

Power companies have usually been good neighbors; however, the electric power transmission lines maintained by power companies are potentially hazardous. Those lines may carry over 700,000 volts of electricity, and lines capable of carrying more than one million volts are being developed and rated for use. Consequently, school districts must be concerned about the health and safety aspects relating to overhead transmission lines.

Little research exists on the effects of electromagnetic fields on human beings. Although a link between exposure to electromagnetic fields and adverse health effects has been discovered, the statistical correlations linking exposure and adverse health are weak, and no scientific consensus supporting such findings exists. Nevertheless, school districts should take a conservative approach when reviewing sites situated near power transmission line easements.

Appendix B

Office of Airports Procedures

When reviewing a site located within two miles of an airport runway, the School Facilities Planning Division will request the Department of Transportation, Division of Aeronautics, to investigate the site and make recommendations. The following procedures are used by the Division of Aeronautics to conduct the investigation. These procedures are contained in the *Office of Airports Manual*, which is published by the Department of Transportation.

Title: Evaluation of Proposed School Site

No. A-3.3
Date: July 1, 1987
Proposed School Site Inspections, Undated

Approved by:

3.300 Background

The purpose of this document is to provide procedural guidance to Division of Aeronautics personnel in conducting inspections of proposed school sites pursuant to the provisions of *Education Code* sections 39005, 39006, 39007, 81036 and *Government Code* Section 15854.5.

The above-cited code sections establish the requirement for the Division of Aeronautics to investigate and make recommendations on the acquisition of property for a new school site or for an addition to a present site located within two (2) miles of an airport/heliport runway. Such recommendations must be made to the Department of Education within 30 working days of receipt of the request.

3.310 Procedure

1. When a request for a school site investigation is received, it will be routed to the Chief, Office of Airports, for assignment to an aviation consultant.
2. The aviation consultant will plot the location of the proposed school site on a large scale map and measure the distance by air line to the closest runways of airports/heliports within the area established.
   a. If the site is not within two miles of a permitted airport or heliport, a full evaluation/site visit is not normally required, and the requesting

agency will be so advised. Further evaluation will be made only upon request.

b. By definition, a heliport is an airport and subject to the above codes. However, its more limited airspace requirements suggest a lesser impact on adjacent school sites. If a proposed school site is within 1/4 mile of an established heliport or its approach/departure paths, a full investigation is required. If not, a "desktop" evaluation can normally be made without a site visit.

3. The appropriate airport file record and other documents/publications will be consulted to determine the airport/heliport traffic patterns, instrument approach/departure routes, traffic volume, types of aircraft, airport master plan, airport compatible land use plan, and other factors that may impact on the proposed site.
4. As a minimum, a physical inspection of the proposed site will be made. As part of the visit, the consultant should plan to fly the traffic patterns of the affected airports to ascertain the impact on the site. In addition, local school officials may be contacted prior to the visit and offered the opportunity to accompany the consultant on the inspection.
5. The consultant will coordinate with the Division Airport Environment Specialist, who will evaluate the airport/heliport noise impact on the proposed site and make recommendations.
6. The owner and/or operator of all airports/heliports located within two (2) miles of the proposed site will be notified of the proposal. (The format letter in Attachment A may be utilized. A copy shall be sent to the local ALUC [Airport Land Use Commission] and to the local planning department.)
7. The consultant shall consider all factors in the evaluation; however, the determination need not be based on a "worst case" scenario. The types of aircraft, volume of traffic, attitude of overflight and phase of flight should all be considered. For example, at a busy airport, the crosswind runway may be little used. A site under the downwind leg might be little impacted by the occasional use.

3.311 Primary Factor Evaluation

1. Primary factors in site evaluation are aircraft accident exposure and aircraft noise. To provide consistent and valid assessment of these factors, guidelines extracted from the following publications will be used:
   a. *Airport Land Use Planning Handbook*
   b. FAR Part 77, "Objects Affecting Navigable Airspace."
   c. FAA Advisory Circular AC 150/5300-AB (Utility Airport Design Guide).
   d. FAA Advisory Circular AC 150/5390-1B (Heliport Design Guide).
   e. Current airport master plans and compatible land use plans for involved airports.
   f. Military Air Installation Compatible Use Zone (AICUZ) studies.
   g. *Jeppeson Airway Manual.*
   h. United States Standard for Terminal Instrument Approach Procedures (TERP).
2. Although much of this evaluation is based on current conditions, future compatibility must also be considered. The school site should not limit planned airport development, nor should future airport development adversely affect the school site.

3.312 Aircraft Accident Exposure and Airport Safety Areas
(See Attachment B.)

1. For evaluation purposes, a safety area will be established surrounding each runway. This area effectively combines the traffic pattern/overflight and rectangular safety areas depicted in the *Airport Land Use Planning Handbook*. Length and width will be measured perpendicular to or along the extended runway centerline of each runway. The final overall shape and dimensions of the safety area will depend on the runway layout (single, multiple, parallel, crossing), approach/departure paths, and the types of aircraft operating to or from the airport (single engine-prop; twin-engine; jet/large cargo).
   a. Airports will be categorized according to the layout class of aircraft which regularly use or are planned to use the airport. For example, one business jet per week would not constitute a "jet/large cargo" class airport. If, however, ten percent of the operations were jet or large cargo, that would justify using the jet column of the chart.
   b. Length will be measured outbound from the runway end along the expanded runway centerline, can vary from 2,650' to 5,280', and will conform to published departure paths, where appropriate.
   c. Width will be measured on either side of the extended runway centerline, and specific distances will depend on whether the published traffic pattern utilizes both sides of the runway. See Attachment B for dimensions and sample illustration.
2. An extended runway centerline (ERC) area will be established for all precision and nonprecision instrument runways and will measure 1,000' wide by 10,000' long as measured from the runway threshold. This area may be realigned to fit an instrument approach/missed approach flight path. The TERP manual establishes clearances and maneuvering areas for aircraft on approaches. Consideration should be given to potential overflight at low altitudes in missed approach segments.
3. The above guidelines can vary, depending on the local conditions. However, large deviations from the stated parameters will be brought to the attention of the Chief, Office of Airports, for resolution.
4. If the school site is located within any of the above safety areas for a planned or useable runway, or within the missed approach maneuvering area of a published instrument approach within two miles of the airport, the site will, in most cases, be recommended against.
5. Other sites within two miles of the airport will be evaluated carefully for conditions which present a specific hazard upon which to base a negative recommendation.
6. If the airport in question is a military airport, the unit public affairs office should be contacted and a copy of the airport's AICUZ study obtained. The recommendations of the AICUZ study will normally be accepted in the evaluation.

3.313 Location—Noise Exposure

1. School sites located in a safety area or under any runway approach surface, as described in FAR Part 77.25 through 77.29, this office manual, or otherwise located within one mile of any portion of planned or visible runways, will be evaluated by the Airport Environmental Specialist. Future airport growth and expansion will also be considered. The result of the evaluation will become a factor in the final determination.

2. If analysis of the noise exposure indicates that the airport will impact unfavorably on the site, the site may be considered acceptable subject to a noise study and/or a recommendation for noise attentuation construction, and the issuance of an easement for noise from the school district to the airport proprietor.
3. School sites not located in a safety area or under any runway approach surface and located more than one mile from any portion of a planned usable runway will normally not be recommended against unless flight operations create special circumstances.

3.314 Mitigation Measures

In the event that the site is not desirable, appropriate action should be considered to overcome or mitigate the problem if possible. Actions can be taken by the airport operator or the school district. Examples include selection of an alternate site, noise attenuation construction, notices to airmen, relocating traffic patterns or limiting runway use. The consultant should become a feilitator to attempt to resolve any conflict prior to recommending against a site.

3.315 Report of Investigation

1. A complete report will be prepared for each proposed site and will include a detailed explanation of the reasons for the recommendation. Specific facts pertaining to distances in relation to runway locations, flight patterns, noise exposure, accident potential, or any other factors leading to the recommendation will be documented in the report. The report will contain a summary of the airport owner/operator's comments on the proposal, which will be considered in the Department's evaluation. The report should "build a case" for the recommendation.
2. In evaluating a site, the consultant will complete a worksheet confirming that all appropriate factors have been considered. Special assurances should be made that the evaluation does not conflict with ALUC guidelines, the CLUP or AICUZ study.
3. It is completely appropriate to contact the proponent and, if possible, fly the area with a qualified representative of the school district so [that] our recommendation is more readily understood and accepted.
4. A memo confirming the investigation, with the Division's recommendation, will be completed in sufficient time to reach the requesting agency [SDE] within 30 working days of the date the request was received. The report will be prepared and signed by the consultant and coordinated with the Chief, Office of Airports.
5. It is important that the evaluation results in a recommendation which will provide guidance to the school district to acquire or not acquire the site. Necessary mitigating factors can be included as a condition of the recommendation. Terms such as "approved," "disapproved," or "unacceptable" are not appropriate as a determination of the evaluation, although "no objection" is a valid response.
6. The memo to Department of Education will include the following paragraph in all favorable recommendations:

   The Department cannot guarantee the safety of this (or any) site. Based upon our evaluation of existing conditions and planning development, this site is considered to provide the level of safety suitable for a school.

7. If a time limit is imposed for site acquisition, it should be consistent with the airport master plan and normally allow at least five years for acquisition.

3.316 Records

The initial request, all correspondence pertaining to the request, and a file copy of the investigation report and the Division's recommendation will be filed in the school site study file identified by the county name and school district and in the airport file.

Attachment A

FOR DRAFT ONLY
Original Letter to be Typed

(Date) _____

_____
_____
_____
_____

Dear _____

A proposed school site is being considered for acquisition/construction within two miles of the _____ Airport.

Under Section 39006 of the Education Code, the Department of Transportation must give notice to the owner and operator of any airport within two miles of the site, who shall be afforded the opportunity to comment on the proposed school site.

In preparing comments, please consider not only existing conditions but also planned airport expansion. If acquired, the site should be able to continue to exist compatibly with the airport.

Enclosed is a map directing the location of the site. Please ensure that your comments are received by the Division by _____, 19____, to meet our mandated suspense date. If no reply is received by this date, it will be assumed that no comment or objection is forthcoming.

Sincerely,

Chief, Division of Aeronautics

_____
Aviation Consultant

Enclosure

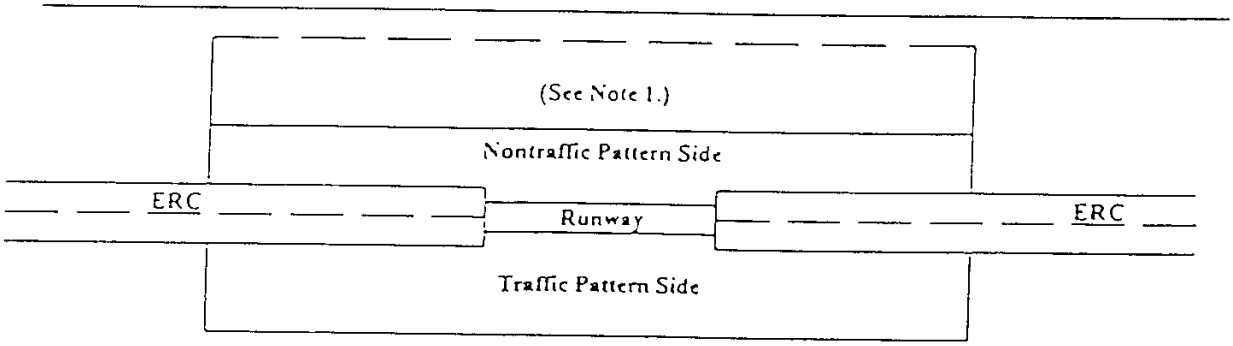
Attachment B

Airport Safety Area Dimensions

Airport safety area	*Single-engine propeller*	*Twin-engine propeller*	*Jets/large cargo*	*ERC area (instrument runway)*
Length beyond end of runway	2,650'	4,000'	5,280'	10,000'
Width (traffic pattern side)	3,150'	3,500'	4,000'	500'
Width (nontraffic pattern side)	750'	1,300'	1,500'	500'

Notes:

1. Dimensions are for public-use and multiowner/user airports. Private (one-aircraft) airports may not affect same area.
2. Above guidelines can vary, depending on local conditions.
3. Length and width will be measured as perpendicular to or along the extended runway center for each runway.
4. The extended runway centerline (ERC) area should be aligned with instrument approach/departure/missed approach path.



Notes:

1. Extension on nontraffic pattern side denotes shape of area if published pattern encompasses both sides of runway.
2. The final, overall shape and dimensions of the safety area will depend on layout of runway(s) approach/departure paths, types of aircraft operating.