

I Want To... Extend My Runway

Aviation Division

Overview

Runways are one of an airport's most critical assets. The number of runways, length, and orientation all contribute to the overall capacity of an airport. Many general aviation (GA) airports in Texas are older and unless they are a converted military site and/or are serving a metropolitan area, they most likely have a runway under 5000 feet in length. Texas as a whole is experiencing tremendous growth, and as a result many GA airports are finding that they have a need or desire for a longer runway.

There are many reasons why an airport may wish to extend a runway, including:

- Increased capacity and/or capability to handle a larger class of aircraft
- Attracting new customers
- Improved safety
- Increased operational resilience

Whatever the reason, there are many steps and considerations that must be addressed before an extension can be considered by TxDOT.

Getting Started

At the Sponsor Level: Major aspects that will need to be addressed by a sponsor prior to requesting an extension include a runway length analysis, justification, and land and environmental considerations. The runway length analysis needs to be completed per FAA AC 150/5325-4B, or individual airport planning manuals. The analysis must be consistent with aircraft shown to use the airport per Traffic Flow Management System Counts (TFMSC); if the analysis is not supported by TFMSC, then LOIs from users/tenants will be required detailing why an extension is required. For land and environmental (ENV) considerations, evaluate if an extension will require the purchase of land and if so, whether or not the land is compatible for such use; additionally, the proposed land use must comply with any applicable ENV regulations (for both existing and new land).

At the State Level: For a *justifiable* extension project, the Aviation division (AVN) will:

- Evaluate estimated costs and consider if it can be supported financially
- Evaluate the project against other requests for the same fiscal period
- Evaluate the runway location within a 30 mile buffer of other airports
- Weigh any implications from the project in regard to potential other issues

At the Federal Level: The FAA will evaluate AIP eligibility, evaluate submitted documentation, review forecasts, validate demand, and document the decision process and findings.



Contacts

Your Designated Airport Planner

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Is My Project Justified?

Per FAA Order 5100, there are three basic tests to determine justification:

- The project advances an AIP policy
- There is an actual need
- The project scope is appropriate

Examples of projects that do not meet the basic justification tests:

- An extension will attract new clientele, but adequate capacity already exists and will continue to exist *without* an extension (does not advance an AIP policy, does not meet a need)
- The extension need is speculative and not based on documented future need (actual need does not exist)
- There are other airports within 30 miles that have a runway longer than yours (actual need does not exist)

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AC 150/5325-4B, Runway Length Requirements

The following excerpts from AC 150/5325-4B are included as guidance to determine recommended runway lengths.

Critical Design Airplanes: This is the listing of airplanes, or a single airplane, that will result in the in the longest recommended runway length. The listed airplanes will be evaluated either individually or as a single family grouping to obtain a recommended runway length.

Substantial Use Threshold: Federally funded projects require that critical design airplanes have at least 500 or more annual itinerant operations at the airport for an individual airplane or a family grouping of airplanes. Under unusual circumstances, adjustments may be made to the 500 total itinerant operations threshold after considering the circumstances of a particular airport (i.e., seasonal traffic variations or special needs of isolated/remote areas).

Procedure and Rationale for Determining Recommended Runway Lengths: Identify the list of critical design airplanes that will make regular use of the proposed runway for an established planning period of at least five years. For federally funded projects, the definition of “substantial use” quantifies the term “regular use”.

Planning Information Needed for FAA Review

The following excerpts from “Planning Information Needed for FAA Headquarters Review of Benefit Cost Analysis (BCA)” are included as guidance for justification required at the state and/or federal level.

Project Justification: Include the following, as applicable:

- Airline/user support letters or contracts for new air service (by aircraft type), based aircraft or change in facility use. The support letter should specify the following and be signed by persons in a position to authorize such operations:
 - Current constraints placed on a potential user
 - Projected number of annual operations by specific aircraft if the project is built
 - Stage length of projected operations
 - Date service is expected to start
 - Airfield and landside facilities needed to meet the anticipated activity level, including runway length and approach minima
- Special planning studies conducted for the project or development program.

Helpful Links

TxDOT Aviation Division: <https://www.txdot.gov/about/divisions/aviation-division.html>

FAA AC 150/5325-4B, Runway Length Requirements for Airport Design:
https://www.faa.gov/airports/resources/advisory_circulars/index.cfm/go/document.current/documentnumber/150_5325-4

Traffic Flow Management System Counts (TFMSC) Manual:
https://aspm.faa.gov/aspmhelp/index/TFMSC_Manual.html

TxDOT Aviation Policies and Standards:
https://ftp.txdot.gov/pub/txdot-info/avn/policies_standards.pdf

FAA AC 150/5190-4B, Airport Land Use Compatibility Planning:
https://www.faa.gov/airports/resources/advisory_circulars/index.cfm/go/document.current/documentnumber/150_5190-4

At A Glance

Land Acquisition

Extending your runway may require purchasing one or more parcels of land. The FAA AC 150/5190-4B on land use compatibility is a great resource for information. TxDOT AVN also has land acquisition checklists available. For more information on acquiring land, see our how to document entitled “I Want To... Acquire Land”.

Funding

If the project is eligible, justifiable, and feasible, funding is available up to 90%.

Environmental Impacts

What you do at your airport matters, so be sure to consider environmental impacts and regulations, and reach out to TxDOT for support if needed.

Scheduling/Programming

TxDOT Aviation will work with you to program your project into the CIP and finalize a reimbursable amount.

Traffic Monitoring and Justification

Aircraft usage must follow TFMSC guidance in addition to a traffic monitoring system, which may be RAMP eligible. Runway extensions should be justified by an independent justification project or as part of an airport master plan/ALP update.

Project Selection Priority

Last but definitely not least, AVN has a project selection priority in line with the AIP handbook, placing safety, preservation, and standards above all other projects. After that, AVN will consider projects involving upgrades, capacity, new access, and new capacity.