About the Alternatives Evaluation Process

The San Antonio Airport System started a Strategic Development Plan (SDP) in 2018 to examine whether the existing San Antonio International Airport (SAT) site could accommodate expected long-term growth and expansion needs. The first phase of the data-driven study determined that the 50-year airport could be made to fit at the current location.

Potential policy and development alternatives were developed for SAT and are now being evaluated to produce, by the end of 2020, a preferred airport development plan for the airfield, terminal, and airport access. This document represents the results of the first round of alternatives evaluation, as of December 2019.
Alternatives Evaluation Process Highlights

**The goal** of the Strategic Development Plan (SDP) Sketch Planning process was to get all ideas about development of SAT on the table. Six technical sketch planning sessions took place which included 107 participants who identified a total of 91 initial airfield concepts.

**The SDP technical team screened** the 91 concepts to identify technically feasible alternatives that will undergo further evaluation. This two-step screening resulted in 13 airfield alternatives that are moving ahead for further evaluation, using objective, technical criteria, rather than popularity, opinions, or subjective criteria.

**There will be multiple rounds** of evaluation. The final results will be the basis for preparing the Preferred Development Plan, illustrating SAT’s proposed projects for the 20-year planning period. The plan will depict proposed airfield, terminal, access, support, and tenant facilities, and include high-level phasing for the 6, 10, and 20-year planning periods.

**The proposed projects** that will eventually be recommended can proceed only if the need actually materializes. All eventual SDP proposed projects will be subject to further financial and environmental approvals.
Concept Development Combined Input

This map depicts all 91 concepts on top of each other to provide a general visual of the extent of the broad range of ideas received, drawn up, and considered.
Summary of Round 1 Findings
Concepts (by Category) Eliminated in Round 1A, due to:

- Insufficient airfield capacity [1 eliminated]
- Does not provide a 10,700-foot runway [7 eliminated]
- Conflicts with Randolph Air Force Base [35 eliminated]
- Intersecting runways [34 eliminated]
- Major airspace penetrations [5 eliminated]
- Impacts to elevated roadways or requires railroad realignment [32 eliminated]
- Not implementable in 20 years [2 eliminated]

Note: some concepts were eliminated for more than one reason.
Concepts (by Category) Eliminated in Round 1B, due to:

- Additional airspace impacts [8 eliminated]
- Inability to provide 50-year airfield capacity [6 eliminated]
- Proposed 20-year runway off airport property [6 eliminated]
- Excessive airfield capacity [8 eliminated]
- Major public park impacts [1 eliminated]

Note: some concepts were eliminated for more than one reason.
Concepts Moving to Round 2A:

The Round 1 technical evaluation resulted in 13 airfield concepts moving ahead for further evaluation.

The evaluation will use objective, technical criteria, rather than popularity, opinions, or subjective criteria.

Each of the 13 concepts, goals, and descriptions are included in the pages that follow.
About the Sketch Maps

On the following maps, the concept numbers (e.g., 4-3M) reflect the Sketch Planning small group work session or table, followed by the number of the group’s concepts, and the letter reflecting the modifications made by the technical team to eliminate flaws.

For example, Concept 4-3M is from small group or table "4", their third concept, and “M” represents the first modification. All sketches were submitted anonymously.

Legend for the Sketch Maps:

- Existing Airport Property
- Existing Runway
- Proposed 20-Year Runway
- Proposed 50-Year Runway
- Closure of Existing Runway

List of Acronyms:
- GA: general aviation
- IFR: instrument flight rules
- RND: Randolph Air Force Base
- VFR: visual flight rules

SAT Runway Layout:

[Diagram of SAT Runway Layout]
Concept 0-3MM
Moving to Round 2

Goals:
• Decouple from Runway 4-22
• Limited impacts to existing facilities
• Dual independent IFR operations

Concept Description:
• Two parallel runways:
  • Extend Runway 13R-31L to 10,700'
  • Build new 7,300' arrival runway
• Close Runways 4-22 and 13L-31R

Figure 1 – Concept 0-3MM

[Map showing runway extensions and closures]

December 2019
Draft - Work in Progress
Concept 0-5MM
Moving to Round 2

Goal:
• Dual independent IFR operations

Concept Description:
• Two parallel runways:
  • Keep existing Runway 13R-31L
  • Build new 10,700' runway
• Close Runway 13L-31R
• Close or shorten Runway 4-22
• Long term: third parallel 7,300' runway

December 2019

Figure 2 – Concept 0-5MM
Concept 0-14MM
Moving to Round 2

Goal:
• Use of existing facilities

Concept Description:
• Two parallel runways:
  • Keep existing Runway 13L-31R
  • Extend Runway 13R-31L to 10,700'
• Close or shorten Runway 4-22
• Long term: third 7,300' parallel runway

Figure 3 – Concept 0-14MM

December 2019
Concept 1-1
Moving to Round 2

Goals:
• Do not increase airspace conflicts with RND
• Midfield terminal
• Dual independent IFR operations

Concept Description:
• Build two new parallel 10,700' runways
• Close existing runways
• Long term: third 7,300' parallel runway

Figure 4 – Concept 1-1
Concept 2-6
Moving to Round 2

Goals:
• Dual independent IFR operations
• Do not increase airspace conflicts with RND

Concept Description:
• Build two new parallel commercial service runways:
  • One 10,700’ runway
  • One 7,300’ runway
• Close existing runways
• New terminal complex in existing location
• Cargo/GA operations relocated to Stinson Airport
• Long term: third parallel runway (10,700’)

Figure 5 – Concept 2-6
Concept 3-1
Moving to Round 2

Goals:
• Dual independent IFR operations
• Do not increase airspace conflicts with RND

Concept Description:
• Extend Runway 13L-31R to 10,700'
• Close existing Runways 13R-31L and 4-22
• Long term: parallel 7,300' runway
Concept 4-3M
Moving to Round 2

Goals:
• Avoid park and sewer line
• Dual independent VFR operations

Concept Description:
• Build two new parallel runways:
  • One 10,700' commercial service runway
  • One 7,300' runway
• Separation = 1,300'
• Close existing runways

December 2019
Concept 5-4MM
Moving to Round 2

Goals:
• Dual independent IFR operations
• Do not increase airspace conflicts with RND

Concept Description:
• Build two new parallel runways:
  • One 10,700' commercial service runway
  • One 7,300' runway
• Close existing runways

Figure 8 – Concept 5-4MM
Concept 6-2MM
Moving to Round 2

Goals:
• Dual independent IFR operations
• Do not increase airspace conflicts with RND

Concept Description:
• Two parallel runways:
  • Extend Runway 13R-31L to 10,700'
  • One new 10,700' runway
• Close existing Runways 13L-31R and 4-22
• Long term: Third parallel 7,300' runway

December 2019
Draft - Work in Progress
Concept 9-1
Moving to Round 2

Goals:
• Use of existing facilities
• Do not increase airspace conflicts with RND

Concept Description:
• Extend existing parallel runways to 10,700' commercial service runways
• Close Runway 4-22

Figure 10 – Concept 9-1

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Concept 12-1MM
Moving to Round 2

Goals:
• Do not increase airspace conflicts with RND
• Stay on Airport property

Concept Description:
• Build two new parallel runways:
  • One 10,700' runway
  • One 7,300' runway
• Close existing runways

December 2019
Concept 14-2
Moving to Round 2

Goal:
• Optimize airfield capacity by relocating existing runway exits

Concept Description:
• Keep Runway 13L-31R
• Shorten Runway 4-22 to 5,000' (general aviation only)
• Extend Runway 13R-31L to 10,700'
• Relocate runway exits to optimal location
**Concept 14-7**

**Moving to Round 2**

**Goals:**
- Change RND mission to eliminate airspace interactions with Runway 4-22 at SAT
- Decouple runways

**Concept Description:**
- Extend Runway 4-22 to 10,700'
- Shorten Runway 13R-31L to 7,300’
- Keep Runway 13L-31R

*Figure 13 – Concept 14-7*
## Round 2 Through Final Plan - Overview

<table>
<thead>
<tr>
<th>Round 2A</th>
<th>Round 3A</th>
<th>Round 4</th>
<th>Preferred Development Plan (Final)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Airfield)</td>
<td>(Airfield)</td>
<td>(Airfield &amp; Terminal)</td>
<td>Will illustrate SAT’s proposed projects for the 20-year planning period and will depict proposed airfield, terminal, access, support, and tenant facilities, and include high-level phasing for the 6, 10, and 20-year planning periods.</td>
</tr>
<tr>
<td>Review of comparative costs, major environmental concerns, ease of implementation, and operational flexibility.</td>
<td>Final review of airfield alternatives modification, aviation safety, noise contour analysis, and drainage analysis.</td>
<td>Preferred airfield alternatives (two or three) will be matched with the final terminal alternatives.</td>
<td></td>
</tr>
<tr>
<td>Round 2B</td>
<td>Round 3B</td>
<td>Composite Alternatives</td>
<td>Develop overall composite alternatives for all airport functional areas, combining the preferred airfield and terminal alternatives with the preferred access and support alternatives.</td>
</tr>
<tr>
<td>(Terminal)</td>
<td>(Modified Terminal Concepts)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review of long-term flexibility, ease of phasing, comparative cost, and financial feasibility.</td>
<td>Evaluation of terminal concepts, including walking distances, passenger convenience and experience, constructability, interface with aircraft, connections with ground access.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

December 2019

Draft - Work in Progress
Following the initial analysis of the 91 concepts and 13 technically feasible alternatives, the SDP technical team decided that an additional concept needed to be included and evaluated. This 14\textsuperscript{th} remaining alternative is shown on the next slide, and is similar to an option considered in previous studies.
Concept 16-1MM
Moving to Round 2

Goals:
- Modified 1998 Master Plan
- Closely-spaced parallels (easier to build?)

Concept Description:
- Extend Runway 13R-31L to 10,700'
- Extend Runway 13L-31R to 8,500'
- Close or shorten Runway 4-22
- Long Term: 3rd parallel runway (7,300')
Resources

To learn more about the SDP:

Community members and stakeholders are encouraged to check the airport’s Strategic Development Plan (SDP) website frequently for updates: [www.sanantonio.gov/SATfuture](http://www.sanantonio.gov/SATfuture)

Email: SATfuture@sanantonio.gov

Phone: 210-207-3403

In Person: Brook Hollow Library
  530 Heimer Rd
  San Antonio, TX 78232
  210-207-9030

FAA guidance materials:

- FAA Advisory Circular - Airport Design [AC 150/5300-13A Airport Design](https://www.faa.gov/other_docs/advisory_circulars/150_5300_13a/index.shtml)
