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.

As part of Phase II of the study, 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 Round 2 of alternatives evaluation, as of January 2020.
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 (Round 1) resulted in 13 airfield alternatives that moved ahead for further evaluation (Round 2), using objective and technical criteria. In Round 2, a 14th airfield alternative was identified and added for evaluation. After the Round 2 evaluation process was completed, 5 airfield alternatives remain, resulting in 23 airfield/terminal combinations.

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, and a potential 50-year concept. 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 Evaluation
Considering all ideas

Round 1A Evaluation
Input 91 Concepts
Carried Forward
Modified
Fatal Flaws
Duplicates

Round 1B Evaluation
21 Concepts

Round 2A Evaluation
13 + 1 Alternatives

Round 2B Evaluation
5 Alternatives
Flaws
Duplicates

Round 3 Evaluation
23 Airfield/Terminal Combinations
Flaws
Duplicates

Round 4 Evaluation
X Airfield Alternatives
Flaws
Duplicates

Composite Alternatives
X Alternatives
Flaws
Duplicates

Preferred Alternative

Legend:
Completed
Upcoming

January 2020
Draft - Work in Progress
Summary of Round 2 Findings
Round 2A Steps:

- Renamed 13 remaining airfield alternatives from Round 1: “A1” through “A13”
- Identified a 14th airfield alternative for evaluation: “A14”
- Modified alternatives with flaws, when possible
- Refined alternatives (added letter “R” after alternative number, e.g. A14R):
  - Added detail (runway areas, parallel taxiways, operating configurations, airport facilities)
  - Considered keeping a shortened version of Runway 4-22
  - Removed runways that would result in excess long-term capacity
  - Optimized runway separation (maximize airfield capacity, minimize impacts…)
- Evaluated alternatives
Alternatives Eliminated in Round 2A, due to:

Note: some alternatives were eliminated for more than one reason.

- Insufficient 20-year airfield capacity [3 eliminated]
- Implementability within 20 years (timing/phasing) [5 eliminated]
- Precludes independent parallel runways in 50 years [3 eliminated]
- Policy alternative [1 eliminated]

5 airfield alternatives remain
Round 2B Steps:

• Developed 10 potential terminal concepts:
  • Expand/modify existing terminal complex
  • Build new midfield terminal concourse/complex
  • Build new terminal complex north of the airfield
• Combined 5 remaining airfield alternatives with 10 potential terminal sites/concepts = 50 airfield/terminal combinations
• Evaluated combinations
Potential Terminal Concepts

Concept T1
Expand existing terminal complex

Concept T2
Expand existing terminal complex

Concept T3
Expand existing terminal complex

Concept T5
New south terminal complex

Concept T4A
New midfield parallel concourse (Min. Rwy Sep. = 2,450')

Concept T4B
New midfield parallel concourse (Min. Rwy Sep. = 2,550')

Concept T4C
New midfield terminal complex (Min. Rwy Sep. = 3,000')

Concept T4D
New midfield terminal complex (Min. Rwy Sep. = 3,200')

Concept T6
Expand existing terminal complex

Concept T7
New north terminal complex
Airfield/Terminal Combinations Eliminated in Round 2B, due to:

Note: some combinations were eliminated for more than one reason.

- Terminal site impacts proposed airfield (pavement, safety surfaces) [21 combinations eliminated]
- Only keep best suited midfield terminal concept (out of 4 midfield terminal options) for each airfield alternative [5 combinations eliminated]
- Duplicate [1 combination eliminated]

➤23 airfield/terminal combinations remain
Alternatives Moving to Round 3:

The Round 2A technical evaluation resulted in 5 airfield alternatives moving ahead to Round 2B.

Round 2B paired these remaining 5 airfield alternatives with 10 potential terminal concepts, and evaluated their viability, using objective and technical criteria. At the outcome of the Round 2B evaluation, 23 airfield/terminal combinations remain, and are moving to Round 3.

The 23 remaining airfield/terminal combinations are included in the pages that follow.
The 5 following figures represent the 5 airfield alternatives that survived the Round 2A evaluation. The terminal concepts that survived the Round 2B evaluation are shown for each airfield alternative.

Although potential 50-year runways are depicted (dashed magenta lines), evaluation criteria only apply to 20-year runways (continuous magenta lines).

The footprints of the proposed terminal concepts are depicted in continuous lines (20-year development) and dashed lines (50-year development).
Airfield Alternative A1R and Remaining Terminal Concepts Moving to Round 3

Remaining Terminal Concepts:
- A1R-T1
- A1R-T2
- A1R-T3
- A1R-T4C
- A1R-T7

Proposed Airfield:
- Extend existing Rwy 13R-31L to 10,700'
- Close existing Rwy 13L-31R
- Build new 7,300' runway at 3,000' separation
- Shorten Rwy 4-22 to 6,000'

Figure 1 – Airfield Alternative A1R and Remaining Terminal Concepts

Concepts T1, T2, T3 assume closure of Runway 4-22 post 2038, to avoid terminal overflights
Airfield Alternative A2R and Remaining Terminal Concepts Moving to Round 3

Remaining Terminal Concepts:
- A2R-T1
- A2R-T2
- A2R-T3
- A2R-T4A
- A2R-T7

Proposed Airfield:
- Keep existing Rwy 13R-31L at 8,500'
- Extend existing Rwy 13L-31R to 10,700'
- Shorten Rwy 4-22 to 6,000'
- Additional 7,300' runway is a 50-year option

Concepts T1, T2, T3 assume closure of Runway 4-22 post 2038, to avoid terminal overflights.

Figure 2 – Airfield Alternative A2R and Remaining Terminal Concepts
Airfield
Alternative A6R
and Remaining
Terminal
Concepts
Moving to
Round 3

Remaining Terminal Concepts:
• A6R-T1
• A6R-T2
• A6R-T3
• A6R-T4D
• A6R-T7 (duplicate of A6R-T4D; both are new terminal complexes north of the main runway)

January 2020
Airfield Alternative A9R and Remaining Terminal Concepts Moving to Round 3

Remaining Terminal Concepts:
- A9R-T1
- A9R-T2
- A9R-T3
- A9R-T4A
- A9R-T7

Proposed Airfield:
- Extend existing Rwy 13R-31L to 10,700'
- Close existing Rwy 13L-31R
- Build new 7,300' runway at 2,450' separation
- Shorten Rwy 4-22 to 6,000'
- Additional 7,300' runway is a 50-year option

Concepts T1, T2, T3 assume closure of Runway 4-22 post 2038, to avoid terminal overflights

January 2020
Airfield Alternative A14R and Remaining Terminal Concepts Moving to Round 3

Remaining Terminal Concepts:
- A14R-T1
- A14R-T2
- A14R-T3
- A14R-T7

Proposed Airfield:
- Extend existing Rwy 13R-31L to 10,700’
- Extend existing Rwy 13L-31R to 7,300’
- Shorten Rwy 4-22 to 6,000’
- Additional 7,300’ runway is a 50-year option
## Round 2 Through Final Plan - Overview

<table>
<thead>
<tr>
<th>Round 2A</th>
<th>Round 3A</th>
<th>Round 4</th>
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<tbody>
<tr>
<td><strong>Round 2B</strong></td>
<td><strong>Round 3B</strong></td>
<td><strong>Composite Alternatives</strong></td>
</tr>
<tr>
<td>Review of airfield impacts and constructability/phasing feasibility.</td>
<td>Evaluation of terminal concepts, including airspace penetrations of parked aircraft, walking distances, passenger convenience and experience, and rough order-of-magnitude cost estimates.</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>
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</tbody>
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**Round 3C**

**Runway Ends Siting Analysis**

Review of runway end siting impacts to roadways and railroad, achievable runway length, and runway extension timing.

**Preferred Development Plan**

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.
Resources

To learn more about the SDP:

Community members and stakeholders are encouraged to check the airport’s Strategic Development Plan (SDP) website for updates: 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

• Standard Procedure for FAA Review and Approval of Airport Layout Plans (ALP SOP)

• FAA Advisory Circular - Airport Master Plans AC 150/5070-6B