



MEMORANDUM

November 1, 2017

TO: AIRPORT COMMISSION
 Hon. Larry Mazzola, President
 Hon. Linda S. Crayton, Vice President
 Hon. Eleanor Johns
 Hon. Richard J. Guggenhime
 Hon. Peter A. Stern

FROM: Airport Director

SUBJECT: Summary of the Re-Phased Delivery of the Terminal 1 Program and the Resulting Scope, Schedule, and Budget Changes to the New Boarding Area B and Terminal 1 Center Projects

The purpose of this memorandum is to describe the evolution of the Terminal 1 Program delivery plan, the merits of the resulting changes, the cost and schedule impacts, as well as the decision-making process undertaken by Staff.

The new delivery plan brings forward various elements from Phase 2 into Phase 1 to accelerate delivery of international-capable gates, reduce impact to airline operations, and deliver significant benefits to the passenger experience. The elements moved forward from Phase 2 to Phase 1 are Terminal 1 North, Terminal 1 South, and the International Terminal Building Connector.

Additionally, expanded scope of the New Boarding Area B and Terminal 1 Center projects includes construction of infrastructure to support an additional four aircraft parking positions; expanded square footage to support additional revenue-generating concessions; an upgraded state-of-the-art baggage handling system; curbside roadway improvements; expanded mezzanine level to support an additional passenger screening checkpoint; a separate employee screening checkpoint; and other amenities such as high density wi-fi and an enhanced wayfinding program.

These changes in the Program phasing and scope have resulted in an increase of \$306 million to the overall Terminal 1 Program budget, from \$2.3 billion to \$2.6 billion. The budgets for the New Boarding Area B and Terminal Center projects have increased \$862 million, from \$1.27 billion to \$2.13 billion. These changes were included in the Ascent Program – Phase I as part of the Airport’s Capital Improvement Plan, which was adopted by the Airport Commission on September 5, 2017, by Resolution No. 17-0212.

Original Phasing of the Terminal 1 Program

The original Terminal 1 Program delivery plan consisted of the following significant program phases:

- **Preliminary or Adjacent Projects** – To allow for construction of the new Boarding Area B and the Terminal 1 Center Renovation, a series of adjacent projects were

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completed. These projects included :

- Interim Boarding Area B
- Taxilanes H&M Realignment
- Utility Infrastructure Improvements
- Security Access Office Relocations
- **Phase 1** - Included the following two projects:
 - New Boarding Area B: A reconstruction of Boarding Area B to include international arrival swing gates to accommodate up to a 24-gate configuration.
 - Terminal 1 Center Renovation: A reconstruction of the central portion of Terminal 1 providing for a complete replacement of the building envelope.
- **Phase 2** – Included the following four projects:
 - Terminal 1 South: A reconstruction of the southern portion of Terminal 1 providing for a complete replacement of the building envelope and expansion of the new Baggage Handling System installed in Phase 1.
 - Terminal 1 North: A reconstruction of the northern portion of Terminal 1 providing for a complete replacement of the building envelope and expansion of the new Baggage Handling System installed in Phase 1.
 - International Terminal Building Connector: Construction of new sterile and secure connectors to the International Terminal Building to support the expansion of international operations in Terminal 1.
 - Renovation of Boarding Area C: Construction to bring this facility up to current Airport standards and code requirements.

Revised Phasing of the Terminal 1 Program

The revised Terminal 1 Program delivery plan is still a multi-phased approach and consists of the following significant program elements and added scope:

- **Preliminary or Adjacent Projects** – No Change
- **Phase 1** - Includes the following scope:
 - New Boarding Area B: Original Scope and the Added Scope as follows:
 - Additional Scope: Airside infrastructure to support an additional four aircraft parking positions; expanded concourse width to support additional revenue-generating concessions; expanded mezzanine level to support an additional airline lounge space and extension of a sterile corridor to support additional international flights; and other amenities such as high density wi-fi and an enhanced wayfinding program.
 - Terminal 1 Center Renovation: Original Scope and the Added Scope as follows:
 - Terminal 1 South: Original Scope
 - Terminal 1 North: Original Scope less the Boarding Area C Pre-Security circulation core

- International Terminal Building Connector: Original Scope
- Additional Scope: Building infrastructure to support an additional four aircraft parking positions; expanded square footage to support additional revenue-generating concessions; state-of-the-art baggage handling system; curbside roadway improvements; expanded mezzanine level to support an additional passenger screening checkpoint; separate employee screening checkpoint; and other amenities such as high density wi-fi and an enhanced wayfinding program.
- **Phase 2**
 - Renovation of Boarding Area C: Original Scope plus the Boarding Area C Pre-Security circulation core, originally part of the Terminal 1 North Project

Merits of the Revised Program

The original Terminal 1 Program was developed in 2013 alongside the Airport's most recent long-term activity forecast. The Program phasing took into account the forecasted flight schedule in the year 2023. Since 2013, growth has increased faster than originally forecasted. The Airport is approximately three years ahead of the passenger forecast and two years ahead of the operations forecast. This rapid growth due to additional flights and larger aircraft has resulted in an earlier need for the facilities approved in the 2013 Program to support this demand. The revised phasing and project scopes support the accelerated forecast demands.

The other benefits of the revised Program include:

- Delivery of up to four additional parking positions to accommodate narrow-bodied aircraft
- Earlier international operations in Terminal 1
- More flexibility for future growth and operational changes
- Improved exiting from the boarding area to the arrivals level and baggage carousels
- Additional passenger processing utilizing the latest technologies to allow greater efficiency and flexibility
- Enhanced revenue-generating concessions program that maximizes guest exposure
- Earlier connection to Boarding Area C
- Minimized impacts to Airlines and passengers due to an overall shortened construction duration for the Terminal 1 Program
- A more contiguous guest experience due to reduced construction phases
- Reduced temporary construction barriers
- Consolidated passenger security screening checkpoint on the departures level and an additional passenger security screening checkpoint on the mezzanine level

Cost Impacts to the Program

The original Terminal 1 Program budget was \$2.3 billion. The revised budget, including the additional scope, is \$2.6 billion. Of this amount, \$2.2 billion is included in the Ascent Program - Phase I Capital Plan. A portion of the Program budget was included in previous Capital Plans. The renovation of Boarding Area C is planned to be included in a future Capital Plan.

The following table reflects the original and current budgets for the projects within the Terminal 1 Program.

Program Phase	Original Budget	Revised Budget
Preliminary or Adjacent Projects		
Program Management Support	\$31,975,096	\$31,975,096
Interim Boarding Area B	\$120,379,482	\$131,800,000
Taxilanes H&M Realignment	\$38,138,080	\$38,570,000
Utility Infrastructure Improvements	\$39,606,595	\$3,387,561
Security Access Office Relocations	\$6,770,619	\$6,770,619
Subtotal Preliminary or Adjacent Projects	\$236,869,872	\$212,503,276
Phase 1		
New Boarding Area B (BAB)	\$747,814,617	\$747,814,617
• Added Scope	N/A	\$27,940,383
New Boarding Area B Subtotal	\$747,814,617	\$775,755,000
Terminal 1 Center (T1C)	\$519,557,718	\$519,557,718
• Terminal 1 South	Included in Phase 2	\$148,072,529
• Terminal 1 North	Included in Phase 2	\$213,479,398
• International Terminal Building Connector	Included in Phase 2	\$169,318,740
• Added Scope	N/A	\$302,918,615
Terminal 1 Center Subtotal	\$519,557,718	\$1,353,347,000
Subtotal Phase 1	\$1,267,372,335	\$2,129,102,000
Phase 2		
Terminal 1 South	\$148,072,529	Moved to Phase 1
Terminal 1 North	\$237,276,046	Moved to Phase 1
International Terminal Building Connector	\$169,318,740	Moved to Phase 1
Boarding Area C Redevelopment	\$279,098,076	\$302,894,724
Subtotal Phase 2	\$833,765,391	\$302,894,724
Terminal 1 Program Total	\$2,338,007,598	\$2,644,500,000

Schedule Impacts to the Program

Originally, the Terminal 1 Program planned to deliver only the center portion of Terminal 1 to support the opening of 17 aircraft gates in Boarding Area B in March 2019 and 7 additional aircraft parking positions in March 2020. The Program will now deliver 17 aircraft gates along with the southern half of the terminal in February 2020 and will deliver the northern half of the terminal in November 2022 to support all parking positions throughout the Terminal 1 facility in Boarding Area B and Boarding Area C.

The following table reflects the original and current planned delivery dates for the projects within the Terminal 1 Program.

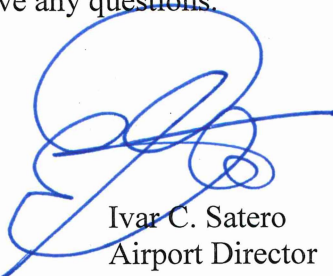
Milestone	Original Schedule	Current Schedule
Complete Preliminary or Adjacent Projects	Complete	
Deliver 9 Aircraft Gates	N/A	Jul-19
Deliver 17 Aircraft Gates	Mar-19	Feb-20
Complete Terminal 1 South	Aug-22	Feb-20
Deliver 24 Aircraft Gates	Mar-20	May-21
Complete International Terminal Building Connector (Allows International Flights in Terminal 1)	Aug-22	May-21
Complete Terminal 1 North (Includes Boarding Area C Connector for Passenger Access to the T1 Concessions Program and all remaining gates)	Jul-24	Nov-22
Complete Boarding Area C	Jul-24	TBD

Decision Making Process for Revised Terminal 1 Program

The revisions to the Terminal 1 Program were thoroughly analyzed and coordinated with all Airport Divisions before the changes were approved. Staff performed financial analysis on the re-phasing of the Terminal 1 Program and on the addition of scope to the Program. Staff intends to manage the revised Terminal 1 Program within the Cost per Enplaned Passenger (CPE) levels committed to in FY16/17. Additionally, some of the added scope resulted in a reduction of the CPE as the revenue forecasted to be generated by these project features would off-set financing costs.

Based upon the financial analysis results and the operational benefits of the revised program, and after receiving support from the Executive Committee and Executive Advisory Board, the Airport decided to proceed with the proposed re-phasing and additional scope of the Terminal 1 Program. Future agenda items for Terminal 1 Center will reflect a project budget of \$1,353,347,000 with a duration through 2022 and future agenda items for Boarding Area B will reflect a project budget of \$775,755,000 with a duration through 2021.

Please let me know if you have any questions.



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Airport Director