



COUNCIL BUDGET
STAFF REPORT
CITY COUNCIL of SALT LAKE CITY

TO: City Council Members

FROM: Sam Owen, Policy Analyst

DATE: August 9, 2022

RE: Resolution: Updated Salt Lake City
International Airport Master Plan

Item Schedule:

Briefing: August 9, 2022

Public Hearing: n/a

Potential Action: TBD

ISSUE AT-A-GLANCE

The proposed 2022 Airport Master Plan (AMP) is a blueprint for Salt Lake City International Airport (SLCIA) future improvements and expansion to meet anticipated aeronautical demand now and for the next 20 years. Federal Aviation Administration (FAA) regulations create the structure and sequence for airport master plans and the recommendation process. Staff is confirming with the City Attorney's Office that the Council's role as the policy and budgeting body for the City is to approve this plan, similar to other City master plans. The elements of the airport master plan and layout are described and justified based on the following:

- **Existing conditions.** The plan assumes that capital projects underway now are complete, and uses those as a baseline for future expansion needs. Completion of these current projects is the fulfillment of the previous master plans. The existing conditions report does not, for example, assume completion of a forthcoming 16-gate expansion, or other projects specifically discussed in this report. The section also discusses airport revenue sources, which include: airline landing fees, airline terminal usage fees, other non-airline aeronautical revenues, and concessions-related sources like fees on rental cars, or airport land leases.
- **Aviation activity forecasting.** The plan models a number of scenarios for air passenger and air cargo activity levels over the horizon of the planning timeline.
 - o There are three planning activity levels the airport recognizes as determining priority for projects on the horizon of the current plan. The plan anticipates the airport reaching these activity levels and then describes the course of capital improvements appropriate for each activity level.
 - o Increased activity forecasts are associated with increased revenue in categories like those listed above. Increased revenue from activity is used to justify capital project expenses.
 - o The Airport looks at historical customer and cargo activity to inform future activity projections.
 - o The report describes the statistical methodology in detail.
- **Facilities assessment and alternatives analysis.** Separate sections of the plan evaluate the adequacy and life of existing facilities to support air travel. This assessment looks at the capacity of parking, runways, rental accommodations and elements of a terminal. The assessment makes



recommendations about changes or additions needed based on airport activity projected to increase now and in subsequent decades. The alternatives analysis explores different configurations of capital improvements and forwards the preferred scenario for each capital improvement or addition.

- **Strategic vision, or development and implementation plan—Includes short, medium and long term capital planning requests.** Capital projects outlined below are proposed for the short term, or 1-5 year horizon. Cost justification for the facility improvements comes from the aviation activity forecast and corresponding anticipation of revenue that will support the facilities development. Council Members have signaled the need for more discussion on the 2023 landside program below, in particular the new proposed parking lot.

The report also includes sections on environmental assessment and federal process for airport capital expansion.

AMP, page 352. Capital projects proposal for 1-5 year horizon. The “ROM” category signals estimated cost of the proposed improvement (ROM signals “rough order of magnitude”).

Table 5-1: Project Programming

Year	Program	ROM	Project
Short Term 1-5 Years			
2021/2022	Cargo Expansion Program	\$25,000,000	North Cargo Area Expansion
2023	Landside Program	\$28,400,000	Public Parking Phase I - Employee Lot
2023	Runway/Taxiway Safety Program	\$1,900,000	Remove Runway 14-32
2023	Runway/Taxiway Safety Program	\$14,700,000	Taxiway K2 Crossfield Connection
2023	Runway/Taxiway Safety Program	\$1,100,000	TWY Q Removal
2024	Deicing Enhancement Program	\$15,000,000	16L North Deicing Pad Facilities Upgrades

Note: Council Members may want to clarify the proposed \$28.4m 2023 project for employee parking. Recent policy guidance from the Council, as well as a contingency on the FY 23 budget, has been that they would prefer enhanced conversations/service with UTA rather than add additional impervious surface to airport property to facilitate parking for employees.

OTHER KEY ITEMS

Table 1—Describes activity forecasts by commercial airline operations.

Includes high and low bounds. The activity forecasts determine operational and capital expansion requests for the life of the plan. Activity forecasts determine revenue projections as well.

LOW FORECAST	ARRIVALS AND DEPARTURES	INTERNATIONAL
2022	400	13
2027	422	16
2032	438	18
2037	450	20
HIGH FORECAST	ARRIVALS AND DEPARTURES	INTERNATIONAL
2022	413	14
2027	480	24
2032	517	29
2037	561	32

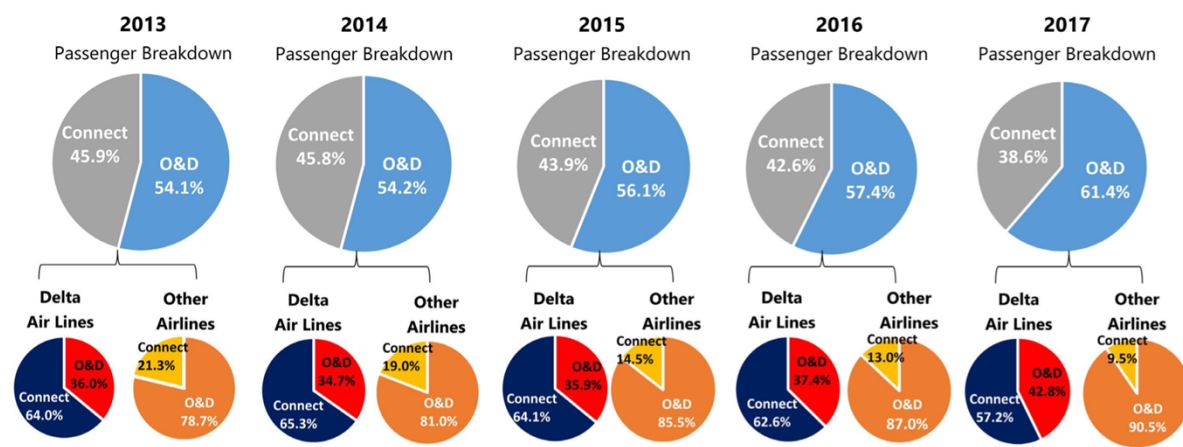
AMP, page 352. The total capital projects proposal over the life of the plan. These projects and the alternatives analysis for each one are discussed by the plan.

Table 5-1: Project Programming

Year	Program	ROM	Project
Short Term 1-5 Years			
2021/2022	Cargo Expansion Program	\$25,000,000	North Cargo Area Expansion
2023	Landside Program	\$28,400,000	Public Parking Phase I - Employee Lot
2023	Runway/Taxiway Safety Program	\$1,900,000	Remove Runway 14-32
2023	Runway/Taxiway Safety Program	\$14,700,000	Taxiway K2 Crossfield Connection
2023	Runway/Taxiway Safety Program	\$1,100,000	TWY Q Removal
2024	Deicing Enhancement Program	\$15,000,000	16L North Deicing Pad Facilities Upgrades
Mid Term 6-10 Years			
2026	Cargo Expansion Program	\$8,200,000	Initial 4000W Roadway Relocation
2027	Taxiway U&V Program	\$13,100,000	West Portion V Construction
2028	Taxiway U&V Program	\$26,200,000	East Portion V Construction
2029	Taxiway U&V Program	\$39,300,000	Full Taxiway U construction
2030	Deicing Enhancement Program	\$38,300,000	Taxiway S Deice Pad
Long Term 11-20+ Years			
2031	Cargo Expansion Program	\$46,300,000	North Cargo Area Expansion/RON
2032	Taxiway L Extension Program	\$29,000,000	Taxiway L Extension Phase I
2033	Runway 16L-34R Extension Program	\$25,700,000	Full Roadway Relocation
2034	Airport Enhancement & Readiness Program	\$40,000,000	Powerline Mitigation
2035/2036	Runway 16L-34R Extension Program	\$53,000,000	Runway & Taxiway Complex Extension
2037	Runway 16L-34R Extension Program	\$14,700,000	16L Deice Pad Extension
2038	Taxiway L Extension Projram	\$14,400,000	Taxiway L Extension Phase II
2039	Taxiway L Extension Projram	\$29,700,000	Taxiway L Extension Phase III
2040	Runway/Taxiway Safety Program	\$8,000,000	Taxiway K5 Enhancement
Demand Driven Airfield Projects Not Programed			
	Deicing Enhancement Program	\$107,000,000	16R North Deicing Pad
	Airfield Enhancement Program	\$105,400,000	SEAT Construction

AMP, page 122. An illustration of Delta’s share of traffic as the major hub airline at SLCIA.

Figure 2-15: Historical O&D and Connecting Enplanements (2013-2017)



Source: Bureau of Transportation Statistics T-100 segment data, 2013-2017

Fiscal Year	Delta Air Lines			Other Airlines			All Airlines		
	O&D	Connecting	Total	O&D	Connecting	Total	O&D	Connecting	Total
2013	1,989,061	3,536,473	5,525,534	3,195,702	862,525	4,058,227	5,184,763	4,398,998	9,583,761
2014	2,005,015	3,768,784	5,773,799	3,391,844	796,810	4,188,654	5,396,859	4,565,594	9,962,453
2015	2,242,318	4,001,808	6,244,126	3,670,263	623,732	4,293,995	5,912,581	4,625,540	10,538,121
2016	2,449,728	4,103,010	6,552,738	3,850,978	576,397	4,427,375	6,300,706	4,679,407	10,980,113
2017	3,007,367	4,024,807	7,032,174	4,057,990	424,847	4,482,837	7,065,357	4,449,654	11,515,011

Source: Bureau of Transportation Statistics T-100 segment data, 2013-2017

Topics covered in the plan that may be of additional interest to the Council and public:

- General aviation refers to private and other commercial airport use. The additional hangars that facilitate private aircraft are in high public and commercial demand. In 2018, the wait time for these hangars was over 500 days on average. Airport staff report similar high demand for general aviation accommodations at the other airports, South Valley and Tooele. General aviation is a major focus of the master planning process for the South Valley and Tooele airports.
- Master planning that addresses the system’s other two airports, South Valley and Tooele, is underway now.
- The plan contemplates possible TRAX expansion south and west of the Airport on the end of its planning horizon, about 2035. The plan references ongoing regional transportation planning efforts. In fact, “Capital projects within this plan ultimately impact the connectivity to SLCIA from the statewide transportation network, but only those [improvements] found within the Wasatch Front Regional Council project lists have noticeable impacts to development of SLCIA.” See policy questions for discussion on incentivizing transit.
- “Air cargo at SLCIA includes the movement of freight and mail. In 2017, 382.2 million pounds of total cargo was handled by the tenants of SLCIA.” See the Executive Summary, page 16 for projections for cargo growth.
- The plan’s note on green house gas (GHG) emissions. “Research has shown there is a direct correlation between fuel combustion and GHG emissions. In terms of U.S. contributions, the Government Accountability Office (GAO) reports that “domestic aviation contributes about three percent of total

carbon dioxide emissions, according to EPA data, “compared with other industrial sources, including the remainder of the transportation sector (20%) and power generation (41%). The International Civil Aviation Organization (ICAO) estimates that GHG emissions from aircraft account for roughly three percent of all anthropogenic GHG emissions globally.”

- The Airport Director previously indicated to the Council that the Airport works regularly with UTA to identify opportunities to expand employee transit access to the airport, but there are barriers to the wide use of transit by employees. Council staff understands that current limitations include, but may not be limited to:
 - o the limited hours of operation of transit;
 - o the additional time it takes to ride transit rather than drive oneself;
 - o Airport employees reside over a very wide area—there isn't an area with a concentration of Airport employees.
- UTA shared with Council staff some potential opportunities to address both the hours of operations and convenience issues (please note that this is Council staff's summary wording, based upon informal inquiries):
 - o A van share program is available, wherein groups of employees would have a van available to them on a long-term basis to commute at any hour.
 - o UTA and Amazon jointly provided a special express route at times that coincided with shift change. Once the route had adequate ridership, UTA was able to take on full funding of the service.
 - o There is also potential to work with UDOT and UTA to establish one or more Park and Ride lots along the 5600 West area extending to West Jordan.
 - o Express service could be provided, reducing the transit commute time. Other public transit programs include on-demand service that may provide an opportunity for collaboration here also.

POLICY QUESTIONS

1. The Council adopted the FY23 budget with a requirement the Airport explore additional transit options for employees prior to dollars being released to expand parking lots. Council Members might ask about the status or next steps on this.
2. Could Airport staff describe the current timeline and projected completion of people movers that will eventually connect the concourses? The reported amount of walking from Airport entrance to airplane gates has been a focus.
3. Can the landside capital improvement program be changed so the employee parking lot is built long-term, or not at all?
 - a. Consider for example the new parking garage or other parking expansions contemplated in the medium and long term capital improvement program proposal. Could that capacity instead be added first to relieve the strain on public parking without paving existing open space?
4. The Council adopted resolution 14 of 2020, which lays the groundwork for Council expectations on city master plans. The questions & answers included as an appendix to this report show the symmetry between FAA master plan requirements, and those outlined in resolution 14.
 - a. Would the airport report to the Council on the status of the master planning process for the other SLC Department of Airports facilities, South Valley and Tooele?
5. Given the FAA approval of the proposed airport layout plan, is there a process for making changes if policy or budget concerns arose with any aspect of the layout?

APPENDIX

Airport staff answers to Council staff questions

- 1. Please, would you provide a short summary of how a person would best understand the concept of PAL? And the same for “daily operations” tallies?**

Planning Activity Levels or PALs represent future levels of activity used to assess future airport facility demand. PALs are divided into four categories: (1) annual passenger boardings; (2) aircraft landings and take-offs; (3) airfield capacity and delay; and (4) annual air cargo tonnage. PAL levels provide the bases for determining future facility requirements including the type, size, and timing of aviation development.

A daily operation is defined as a take-off and landing of an aircraft. So, the tally of daily operations is the number of take-off and landings per day.

- 2. Please discuss the FAA conditional approval document that was submitted with the transmittal. A high-level timeline of agency review and process steps for the plan would also be informative.**

The FAA approves two parts of an airport master plan: (1) the forecast; and (2) the Airport Layout Plan (ALP). The ALP shows all existing and proposed airport development over a 20-year period. The FAA requires all on airport development to be carried out in accordance with the FAA approved ALP.

At this time, the FAA has approved both parts of the master plan. However, “conditional approval” is given to ALPs where an environmental analysis for all future airport development shown on the ALP under the National Environmental Policy Act (NEPA) has not been completed. Because the ALP shows projects that will take place over the next 20 years and NEPA approvals or Findings of No Significant Impact (FONSI) are only valid for three years after the FONSI is issued, the FAA “conditionally” approved the ALP. Almost all ALP approvals nationwide are conditional approvals.

- 3. Please discuss the sequence of landside public parking projects, including the following points: While many projects are outlined in the landside public parking program, some are proposed to occur before others, and in fact only one is proposed for actual planned implementation. Page 348. Why are the landside projects proposed to be ordered the way the plan outlines?**

Project implementation for all airport projects is based on forecasted planning activity levels, or PAL levels. Page 348 lists three landside projects, which are planned to be completed in the following sequence: (1) Public Parking Phase III; (2) Commercial Vehicle Staging, and Park ‘n’ Wait lot relocation; and (3) Public Parking Garage Phase IV. All three of these projects are listed as long-term projects. While all of these projects are landside parking projects, they are used by different segments of airport customers and are at different levels of current capacity and future demand.

Because the existing employee lot is consistently at capacity, the first step, prior to the implementation of any of the landside projects listed on page 348, is to relocate and expand the existing employee parking lot on the old golf course site. After the employee parking lot is moved, the old employee lot will become an additional public economy parking lot. This

transition will accommodate forecasted growth in economy parking for the next several years and allow for implementation of the three landside parking projects listed on page 348, in the sequence listed below:

Project 1: The Public Parking Phase III project is an expansion to the current airport economy parking lot. The Public Parking Phase III project will increase the capacity of the economy parking lot when demand dictates.

Project 2: Demand indicates a need for expansion of the Park 'N' Wait lot in its current location now, so it will be expanded by approximately 100 stalls this fiscal year. However, the relocation of the current Commercial Vehicle Staging will be implemented as demand dictates.

Project 3: This project expands the parking garage. This project will be done as demand dictates. Currently, the parking garage is at approximately 50% of its capacity.

- 4. Page 139 indicates a low limit for enplanement projections. The low limit for international traffic is lower than the low limit projection for traffic altogether. Please discuss—why are international flights more responsive to the lower limit in those models?**

The low case forecast was a scenario considering what passenger demand might look like after a cataclysmic global event that weakened the global economy. International air travel at U.S. airports will typically have greater declines than domestic air travel after catastrophic events happening outside the U.S. The low case scenario forecast reflects this effect and estimates a steeper decrease in demand than would be anticipated by domestic passenger traffic.

- 5. Does DOA coordinate with other City departments on matters of EPA regulation?**

The Department of Airports works directly with City departments on a variety of EPA regulations including the Clean Water Act, the Clean Air Act, and the Toxic Substances Control Act.

The Department of Airports works with the Department of Sustainability and participates in many working groups with the City, including Energy Management Steering Committee, World Resources Institute (WRI) 24/7 Carbon-Free Energy City Cohort, Electrified Transit Subcommittee/Smart Mobility Subcommittee, Fleet Electric Vehicle Charging Infrastructure Subcommittee, Green Infrastructure Steering Committee.

The Department of Airports also works closely with the Department of Public Utilities to meet Utah Pollutant Discharge Elimination System permit and the Municipal Separate Storm Sewer System permit requirements.

- 6. Resolution 14 of 2020 outlines the Council and public engagement process required for master plan processes. Did this master plan process conform with some or all of the aspects of the resolution? Please discuss or provide examples.**

Although the airport master plan process for this plan started in February 2018, before Resolution 14 was passed, the airport master plan process aligns closely with Resolution 14. The airport master plan process also follows similar steps outlined in Advisory Circular 150/5070-6B, as required by airports receiving federal funds.

The Councils resolution states the master planning process should consist of the following steps:

Each step has an activity, deliverable and council role associated with it.

- 1. Planning Preparation*
- 2. Assess Existing Conditions*
- 3. Public Engagement*
- 4. Draft Plan*
- 5. Adoption*
- 6. Implementation*

Similarly, the FAA requires the following steps, and the final master plan document contains the following chapters:

- 1. Pre-planning*
- 2. Assessing Existing Conditions and Aviation Forecasts*
- 3. Evaluating Facility Requirements*
- 4. Identification of Alternatives*
- 5. Development Plan and Implementation*
- 6. Environmental Overview of the Plan and Identifying NEPA Process*
- 7. Airport Layout Plan and Conditional FAA Approval*

The airport master planning process also includes a capital improvement program and a public involvement program. For instance, the airport master planning process for the SLCIA master plan consisted of 1 virtual engagement room, 3 public information meetings, 7 airport board meetings, 6 working papers, 40 technical meetings, 65 stakeholder meetings, 350 public participants and over 20,000 hours of planning conducted.

7. The plan asserts that in service of helping to meet Plan Salt Lake goals, the ARP will bring more revenue to the city. Please discuss. Page 82

Plan Salt Lake's purpose is to "create a shared [v]ision for the future of Salt Lake City for the next 25 years." The airport master plan is a transportation component of Plan Salt Lake's vision and provides a roadmap for the airport to serve the citizens of Salt Lake City and the Intermountain West for the next 20 years and beyond.

According to the July 2020 Economic Impact of Salt Lake City International Airport, prepared by Javiation, SLC supports an estimated 124,407 jobs with an associated payroll of approximately \$4.3 billion. SLC also supports a total annual spending of \$7.2 billion and total annual economic activity estimated at approximately \$11.5 billion.

8. Does the airport police information in the plan represent the current organization of the Airport Police? Some of the information in the plan is from earlier times.

Information regarding the airport police was obtained during the existing conditions phase of the master plan and represents how the airport police division was organized in early 2018.

9. Please discuss the compensation structure for the commercial transportation staging parking lot the Airport provides. What entities use this lot, and how is does the airport recoup the value?

Automated vehicle identification (AVI) fees are accrued each time a registered vehicle enters the airport. These fees (see link below) are paid by all registered users which may include but are not limited to taxi's, charter buses, independent operators, etc. Transportation network companies (TNC) users (such as Lyft and Uber) pay a separate fee that is not listed on the AVI rate schedule. Their fees are set under annual operating permits. Unlike other registered

users, TNCs pay a pick-up AND a drop-off fee. Under the current operating permit for TNCs, the TNCs pay \$3.00 per pick-up and drop-off.

Lastly, users who are not registered and are not considered a TNC pay an entry fee. These operators are generally charter buses that are not local, and only may be here a few times throughout the year. These operators pay as they go, and those fees are daily, weekly, or monthly. The current structure is \$50/daily, \$250/weekly, or \$500/monthly.

All of the users described above use the staging lots as either a “staging” point, or a pass-through point to access the commercial curbs. Operating as a cost recovery system, the fees are set to recover expenses.

10. The report makes assumptions about existing conditions in the context of ongoing construction.

- a. Are there any assumptions not reflected in actual physical things built today, and what are those?**
- b. In other words, does the plan consider built anything that is not currently built?**
- c. For example, existing conditions method description page 41.**

During the Existing Conditions phase of the master plan, the parking garage, terminal building, concourses, central utility plant, and elevated roadway system were all under construction. The master plan considered all of these facilities complete. Since that time, the parking garage, terminal building, central utility plant, elevated roadway and the first phase Concourse A and B have opened.

There are still two facilities currently under construction that the master plan considered complete. First, the 22-gate Concourse A expansion to the east. The first four gates of this expansion will open in May 2023 with the remaining gates opening in fall of 2023. Second, the eight-gate Concourse B expansion. The first four gates of this expansion will open in the fall of 2024 and the remaining four gates will open in the fall of 2025.

11. What are unscheduled passenger operations of larger aircraft?

Irregular operations or IROPS is when a commercial airline or charter aircraft has to make an unscheduled landing at SLC. This is usually due to bad weather at the destination airport, a mechanical problem with the aircraft, a medical issue on board the aircraft, or sometimes an unruly passenger.

12. What are future general aviation activities most compatible with commercial activity? Would this reduce access for other potential user groups?

The current and future general aviation activity most compatible with commercial activities is business jets with similar approach speeds as commercial aircraft. Business aircraft with similar approach speeds maximizes the capacity and safety of the airport runway and taxiway systems. During heavy commercial aircraft banks, slower general aviation aircraft are ground-held until the surrounding airspace is clear of larger, faster commercial activity for safety and capacity related issues.

13. What obstacles or opportunities has the airport experienced with the expansion of employee bicycle storage, like the facilities noted on page 36 [46].

The Department of Airports has a strong commitment to the City’s sustainability goals, and incorporates the City’s goals in airport facilities. The NEW SLC and all other facilities have a goal of achieving at least a LEED Gold certification through the USGBC (a LEED certifying agency). This created an immediate opportunity to install 210 bicycle racks along with 18 showers and changing areas in the NEW SLC. The bicycle racks and shower facilities serve the airport staff, tenants and any passengers or visitors. The racks are located conveniently in the

parking garage, 100 feet from the entrance to the airport. These facilities are heavily used by airport employees.

14. Is there a competitive process for corporate tenants who secure private hangar space at the airport, such as those inventoried on page 53? Is it first come first serve?

There is not a competitive process for securing private hangar space. However, available hangar space is extremely limited, and a preference is given to existing tenants who wish to build new larger hangars.

15. The plan discusses changes to airport overlay B to allow more residential development. Where does this overlay occur? Would this conflict at all with recent city policy statements and actions in the city's northwest? Page 82

On page 82, the current Northwest Community Plan is referenced as suggesting changes to the Airport Flight Path Protection (AFPP) Zone B. AFPP Zone B prohibits residential uses, except in agricultural zones with air circulations systems and at least twenty-five (25) dBs of sound attenuation. However, the Department of Airports understands that a new Northwest Community Plan is currently in development. The Department of Airports does not support any changes to the AFPP overlay in any of the zones that would allow for additional residential development under critical flight paths, patterns, or areas exposed to high levels of aircraft noise.

ATTACHMENTS

1. Transmittal
2. Airport master plan
3. Plan executive summary
4. Work session presentation
5. FAA conditional approval, airport layout plan