



**COMMISSION
AGENDA MEMORANDUM**

Item No. 6h

ACTION ITEM

Date of Meeting October 13, 2020

DATE: October 5, 2020

TO: Stephen P. Metruck, Executive Director

FROM: Eileen Francisco, Acting Director, Aviation Facilities and Capital Programs
Wayne Grotheer, Director, Aviation Project Management Group

SUBJECT: Main Terminal Infrastructure Upgrades Preliminary Design Funding (CIP# C801202)

Amount of this request: \$4,850,000
Total estimated project cost: \$300,000,000 to \$400,000,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to (1) execute a contract for Architecture and Engineering (A&E) services in the amount not-to-exceed \$4,500,000. The amount of this request is \$4,850,000 for a total estimated project cost of \$300M-\$400M. The Main Terminal Infrastructure Upgrades project was briefed to Commission on September 22, 2020. This is the first of multiple action requests as the project progresses in design and then construction.

EXECUTIVE SUMMARY

This project will update and upgrade the Main Terminal to ensure compliance with current life safety and building codes.

The existing Main Terminal was built in the 1970s, with an extension to the north added in the 1980s, and Gina Marie Lindsay Arrivals Hall added in the 2000s. Although some improvements have been made in the Main Terminal, there has not been a comprehensive renovation. The different sections of the Main Terminal met the building codes that were in place at the time they were constructed. Over the last couple of decades, building codes have evolved to provide additional safety measures. These new safety measures include fire sprinklers and smoke control. Projects in the Main Terminal have installed fire sprinklers in the areas where the work was completed; however, large areas in the Main Terminal are still deficient in multiple areas including the following life safety systems: fire sprinklers, smoke control (including emergency power upgrades), fire standpipes, and emergency exit signage.

This project will bring the Main Terminal up to current code, which is required for future projects in the Main Terminal to move forward, including a new restroom renovations project, replacing aging bag claim devices, and the zones 6 & 7 renovation. This project will update life safety

Meeting Date: October 13, 2020

systems to current code. In addition, this project will include full asbestos removal from the ceiling.

Staff will return to the Commission following the completion of the preliminary design work. At this time staff will provide an updated project cost estimate and request authorization to move forward with the next phase of project delivery. Staff will also request authority to add significant money into the design contract amending it to authorize the design team to complete full design and be available to provide design support during construction.

JUSTIFICATION

For the Main Terminal building to meet current code, the entire building must have a sprinkler system installed. This will involve removing the existing ceiling, abating asbestos in the area, and putting in new ceiling and lighting on ticketing, baggage claim, and the skybridge level. New lighting controls to improve efficiency will also be included.

In addition to sprinklers, a fully-integrated smoke control system will need to be installed. The smoke control system will include adding exhaust fans and connecting to an upgraded emergency power system. The existing emergency power is not sufficient to meet the demand of the new smoke control system and will require significant upgrades.

The existing emergency power system supports the Main Terminal; Concourses B, C, and D; and the South Satellite. The total future emergency power need of these spaces is currently unknown. Therefore, the preliminary design will focus on designing the smoke control system for all areas except the South Satellite and evaluate any other code-required emergency power needs to determine the total system requirement. The South Satellite will get its own dedicated emergency power and smoke control systems when it is renovated. The future C1 building will also be incorporated into the total emergency power needs.

All of this must be completed in a facility that is operational 24 hours a day, every day of the year. Although currently passenger traffic is reduced, it is anticipated that traffic numbers will have returned to 2019 levels by the time of construction and the project will need to be able to limit impacts when that occurs. This is a complex project and the preliminary design is an important first step to help mitigate some of the unknown risks to be able to provide a better cost estimate and schedule. As part of the preliminary design we will conduct an operational impact analysis.

In addition to the design of smoke control and emergency power, the preliminary design will include an updated cost estimate. The \$4,500,000 not-to-exceed amount represents 50% above the initial estimate, that is \$3,000,000 for the preliminary design. Full design is estimated at \$40,000,000.

Project Scope and Budget Controls

Meeting Date: October 13, 2020

The total program budget for the ‘Main Terminal Infrastructure Upgrades Preliminary Design’ is estimated at \$300M to \$400M. At this early stage of the project, planning and budgeting is of the most importance for a successful initiative. The team will have project controls in place to ensure project scope, costs, and schedule are successfully managed. The project team has implemented several strategies similar to other successful design projects. Those strategies are as follows:

1. The original cost estimate was prepared by the Aviation Project Management estimating manager. A second independent estimate will be performed by a cost estimating firm under a different contract to the Port.
2. Project designer will be directed to design to budget and produce an updated construction estimate at all major design milestones.
3. Subject to further authorization by the Port Commission, the Port intends to procure a General Contractor, Construction Manager (GC/CM) firm. The same firm would be used for the entire project to maintain predictability, budget, and scope.
4. Design review comments will be limited to identified key individuals representing the different stakeholders. This will provide additional controls on scope creep.

Aviation Capital Programs and Aviation Project Management have implemented a formal change management system (applicable to all projects) that will require budget and schedule impact analysis and formal approval for any discretionary scope increases beyond the scope established in the Project Definition Document.

Diversity in Contracting

The project team with the Diversity in Contracting Department determined a Women and Minority Business Enterprise (WMBE) participation aspirational goal of fifteen percent (15%) for the design contract.

DETAILS

This project will update the Main Terminal to ensure life safety and building code requirements are met to ensure passenger safety. Asbestos removal will occur in all areas that the project is conducting work. The preliminary design will focus on the emergency power system and smoke control system.

Scope of Work

The following life safety issues will be addressed:

- (1) Fire sprinklers throughout all levels of the Main Terminal;
- (2) Fire sprinklers above both arrivals and departures drives;

Meeting Date: October 13, 2020

- (3) New emergency power system for the main terminal and new feeders for Concourses B, C, and D;
- (4) Smoke control system added to the main terminal;
- (5) Fire doors on the terminal side of the skybridges to ensure proper operation of the smoke control system;
- (6) New fire standpipes throughout the main terminal to meet NFPA requirements;
- (7) Replacing and adding emergency exit signage to meet current codes; and
- (8) Asbestos abatement in all areas under construction.

Schedule

Activity

Preliminary design start	2021 Quarter 1
Commission full design authorization	2022 Quarter 1
Full design start	2022 Quarter 2
Commission construction authorization	2025 Quarter 2
Construction start	2025 Quarter 2
In-use date	2030 Quarter 2

Cost Breakdown

	This Request	Total Project
Design	\$4,850,000	\$40,000,000
Construction	\$0	\$321,206,000
Total	\$4,850,000	\$361,206,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Initiate full design for the project.

Cost Implications: \$40,000,000

Pros:

- (1) Potentially shorten the schedule.

Cons:

- (1) Several unknowns exist within the Main Terminal which will likely cause increased costs during design without adequate planning.
- (2) Total emergency power loading is unknown.
- (3) Does not provide information for stakeholder buy-in on operational impact analysis.
- (4) Does not provide third-party estimate for construction.

This is not the recommended alternative.

Meeting Date: October 13, 2020

Alternative 2 – Conduct preliminary design to determine options for the emergency power system and smoke control of the Main Terminal.

Cost Implications: \$5,000,000

Pros:

- (1) Will develop initial smoke control design for the Main Terminal and Concourses B, C, and D which helps provide total emergency power requirements for the project.
- (2) Evaluates existing emergency power system and will provide alternatives for replacement.
- (3) Provides alternatives to operational impacts.
- (4) Will allow sufficient information for stakeholder buy-in.
- (5) Provides comprehensive existing conditions for full project design.
- (6) Will provide third-party estimate for construction cost.

Cons:

- (1) Potentially increases design schedule.

This is the recommended alternative.

FINANCIAL IMPLICATIONS

Following a third-party cost estimate, as part of the preliminary design, the project will update the revised estimate for total project cost.

<i>Cost Estimate/Authorization Summary</i>	Capital	Expense	Total
COST ESTIMATE			
Original estimate	\$350,000,000	\$11,206,000	\$361,206,000
AUTHORIZATION			
Previous authorizations	\$150,000	\$0	\$150,000
Current request for authorization	\$4,850,000	\$0	\$4,850,000
Total authorizations, including this request	\$5,000,000	\$0	\$5,000,000
Remaining amount to be authorized	\$345,000,000	\$11,206,000	\$356,206,000

Annual Budget Status and Source of Funds

This project, CIP C801202, was open with a new CIP that has a new scope and is estimated at \$350M which was included in the 2021-2025 capital budget and plan of finance. The remediation liability would be budgeted in the operating budget.

Financial Analysis and Summary

Project cost for analysis	\$356,206,000
Business Unit (BU)	Terminal Building

Meeting Date: October 13, 2020

Effect on business performance (NOI after depreciation)	NOI after depreciation will increase due to inclusion of capital (and operating) costs in airline rate base.
IRR/NPV (if relevant)	N/A
CPE Impact	\$1.24 in 2030

Future Revenues and Expenses (Total cost of ownership)

The addition of a new emergency power system and smoke control system will increase maintenance costs as additional assets come online; however, the removal of asbestos in the ceiling will make maintenance easier and faster as asbestos control will no longer be required for ceiling entry.

ATTACHMENTS TO THIS REQUEST

- (1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

September 22, 2020 – The Commission was briefed on the overall project and intended use for the preliminary design funding request.