



**COMMISSION
AGENDA MEMORANDUM**

Item No. 6d

ACTION ITEM

Date of Meeting May 12, 2020

DATE: April 17, 2020

TO: Stephen P. Metruck, Executive Director

FROM: Laurel Dunphy, Director, Aviation Operations
Wayne Grotheer, Director, Aviation Project Management

SUBJECT: 2020 Airfield Pavement Program Acceleration (CIP # C800483)

Amount of this request: \$2,800,000
Total estimated project cost: \$28,630,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to (1) transfer \$2,800,000 of programmed funds and associated scope from the 2021-2025 Airfield Pavement and Infrastructure Program to the 2016-2020 Airfield Improvement Program; and (2) execute Change Order 02 to Contract MC-0319856 for an amount Not-To-Exceed \$2,300,000.

EXECUTIVE SUMMARY

This budget transfer and change order would capitalize on the current decrease in airport operations by accelerating planned airfield pavement and utility improvements scheduled for 2021-2025 into this year's 2020 Airfield Pavement Replacement Project and reduce future impacts to airlines.

The 2020 project is currently under construction and the Contractor has an approved, project-specific COVID-19 safety plan. Additionally, the contractor will not be bringing on additional workers to complete this added work. The current schedule has two distinct work windows (spring and fall) to avoid airfield impacts during the summer months. Due to the lowered aircraft traffic expected, the contractor can keep their crew on the job, working through the summer. In the event of an early recovery in airport operations, the additional work has been planned with multiple off-ramps that can be taken should this portion of the airfield need to be returned to full service.

This proposed change order would expand the amount of pavement and utility work directly adjacent to, and underneath of, the current 2020 work area at the of the South Satellite Taxiway and Taxiway W, known as "Spot 88". There are three specific work items associated with the change order: (1) Replace additional 50-year old pavement adjacent to the current pavement

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replacement area; (2) Add utility sleeves underneath the taxilane pavement replacement to accommodate future planned utility replacements; and (3) Replace a failing channel drain adjacent to the current pavement replacement area. This failed channel drain recently came loose and punctured a fuel tank on a fuel truck. These three items are currently programmed and budgeted as part of the next cycle of airfield pavement and utility replacements. Performing this additional pavement and utility work now reduces the future impact to airlines at Spot 88 by completing this work while airport operations are low. Aviation Operations is requesting this work be accelerated from its current planned replacement window currently scheduled for between 2021 and 2025.

A Change Order is required to direct the Contractor to proceed with the additional work. This Change Order will be issued for an amount Not-To-Exceed \$2,300,000. This also requires a budget transfer of \$2,800,000 of programmed funds from the 2021-2025 Airfield Pavement and Infrastructure Program (CIP C800930) to the 2016-2020 Airfield Improvement Program. Additionally, the base project work is receiving Federal Aviation Administration (FAA) Airport Improvement Program (AIP) Grant Funding and the project team has requested FAA participation in the change order work to the maximum extent available through FAA discretionary funding.

JUSTIFICATION

The 2020 Airfield Pavement Replacement Project is the last construction project of the 2016-2020 Airfield Improvement Program (CIP C800483) and is a continuation of the programmatic approach of replacing distressed airfield pavement and utilities having exceeded their planned lifespan. Replacing damaged infrastructure on the airfield maintains the integrity of airfield pavements and enables continuing airport operations. Deferring damaged pavement and utility replacement increases risk to airfield operations, damage from Foreign Object Debris (FOD), increases the likelihood of emergency work, and drives costs higher in the future.

Rapidly deteriorating infrastructure and recent incidents on the airfield (i.e., where a channel drain grate came loose and punctured a fuel tank) have identified the need to accelerate portions of work forward to this year. Performing this work now also reduces the future impact to airlines by completing planned work while airport operations are low. The proposed change order work is immediately adjacent to, or underneath of, the existing 2020 pavement work and there are cost efficiencies and savings on escalation to doing the work now.

Planned future disruptions to airfield operations at the Spot 88 taxilane intersection due to construction will still occur if no action is taken. Also, taking no action will lead to additional unplanned disruptions and potential future safety incidents resulting from continued failing infrastructure. Finally, should the utility portion of the work not happen concurrent to the planned pavement work, there will be added Port cost for having to go back and install utilities in new pavement.

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Diversity in Contracting

This project includes federally assisted funding that requires the use of the federal Disadvantaged Business Enterprise (DBE) program rules and regulations which includes the setting of DBE Goals. A DBE goal of 9.08% has been established for this construction project. The nature of the change order work is of the same type as the base construction project and as such the DBE goal can be extended to the change order work.

DETAILS

This Commission action capitalizes on reduced operational activity at the airport to advance needed paving and utility work at Seattle-Tacoma International Airport via a Not-To-Exceed Change Order of \$2,300,000. A total of \$2,800,000 will be transferred from the 2021-2025 Airfield Pavement and Supporting Infrastructure Replacement Program (CIP#C800930) to the current 2016-2020 Airfield Pavement Program (CIP#C800483) to cover the change order amount plus sales tax, design, construction management, testing and inspection, and access controller costs associated with this work.

Scope of Work

There are three distinct work activities that would be added to this year’s project adjacent to the current work area:

1. Added Pavement Work: Replace approximately 2,200 square yards of 50-year old distressed pavement located immediately south of the base work area. *(Recommended)*
2. Added Utility Work: Install approximately 320 linear feet of utility ductbanks and sleeves to accommodate future sanitary sewer, domestic water, and power/communication lines across the South Satellite Taxilane area. *(Recommended)*
3. Replace Most Critically Damaged Channel Drain: Replace 550 linear feet of failing channel drain serving the gates along the west side of Concourse B. *(Recommended)*

Schedule

The 2020 Airfield Pavement Project is currently under construction. The work area for the base scope at Spot 88 is scheduled to start in mid-May. Executing this change order now will enable the project team to provide direction to the Contractor prior to them needing to start the added work. Due to the lowered air traffic expected this year, the Contractor can keep their crew on the job, working through the summer on this additional work. This change order work would wrap up by September 2020, when normal airfield construction is slated to resume.

Commission design authorization	2018 Quarter 4
Design start	2018 Quarter 4
Commission construction authorization	2019 Quarter 4
Construction start	2020 Quarter 2
In-use date (<i>Change Order Work</i>)	2020 Quarter 3

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Cost Breakdown	This Request	Total Project
Design	\$0	\$2,755,000
Construction	\$2,800,000	\$25,875,000
Total	\$2,800,000	\$28,630,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Do not execute the change order

Cost Implications: \$7,000,000

This estimate is based on not executing the change order work and performing the work on its original schedule in the year’s 2021 to 2025. This cost estimate includes escalation and having to replace newly installed pavement to install the utility sleeve work. This cost will increase if any portion of the change work must be performed as an emergency declaration.

Pros:

1. No added project costs in 2020.
2. No additional disruptions to airfield operations in 2020.

Cons:

1. Continued use of the 50-year old pavement and failing channel drains creates additional safety hazards for airfield safety incidents and higher likelihood of unplanned disruptions to operations due to infrastructure failures.
2. This change order work will need to be performed as a stand-alone work area if delayed beyond 2020. This would result in contracting inefficiencies and more impacts to airfield operations.
3. Deferring this work would drive costs higher in the future by adding escalation costs and having to impact airline gate operations multiple times.

This is not the recommended alternative.

Alternative 2 – Execute change order to perform additional scope adjacent to “Spot 88” including scope of work items 1 through 3 (most critical), plus continue with programmatic replacement of an additional 550 linear feet older channel drain just north of the proposed change order work

Cost Implications: \$3,500,000

Pros:

1. Capitalize on the current reduced aircraft traffic by performing this planned work now and reduce future impacts.
2. The replacement of damaged airfield infrastructure helps with ensuring safe aircraft operations and reduced likelihood of unplanned disruptions due to infrastructure failures.

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3. Opportunity to receive additional FAA discretionary grant funds allocated for Seattle-Tacoma International Airport for 2020 calendar year.
4. Avoid the escalation costs that would have applied if the work is deferred.

Cons:

1. Increased risk of this additional scope being considered a “cardinal change” due to the Change Order dollar magnitude and a finding that the Port should have separately competed this work as originally planned.
2. Earlier capital spending than the alternative 1.

This is not the recommended alternative.

Alternative 3 - Execute change order to perform only the most critical additional scope items adjacent to “Spot 88” (scope of work items 1 through 3)

Cost Implications: \$2,800,000

Pros:

1. Capitalize on the current reduced aircraft traffic by performing this planned work now and reduce future impacts.
2. The replacement of damaged airfield infrastructure helps with ensuring safe aircraft operations and reduced likelihood of unplanned disruptions due to infrastructure failures.
3. Opportunity to receive additional FAA discretionary grant funds allocated for Seattle-Tacoma International Airport for 2020 calendar year.
4. Avoid the escalation costs that would have applied if the work is deferred.

Cons:

1. Earlier capital spending than alternative 1.

This is the recommended alternative.

FINANCIAL IMPLICATIONS

Cost Estimate/Authorization Summary

Capital

Expense

Total

COST ESTIMATE			
Original Estimated Budget	\$25,830,000	\$0	\$25,830,000
Budget Additions <i>(to be transferred from CIP#C800930 to CIP#C800483)</i>	\$2,800,000	\$0	\$2,800,000
Current Budget	\$28,630,000	\$0	\$28,630,000
AUTHORIZATION			
Previous authorizations	\$25,830,000	\$0	\$25,830,000
Current request for authorization	\$2,800,000	\$0	\$2,800,000

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Total authorizations, including this request	\$28,630,000	\$0	\$28,630,000
Remaining amount to be authorized	\$0	\$0	\$0

Annual Budget Status and Source of Funds

The Airfield Pavement Program (C800483) is included in the 2020-2024 capital budget and plan of finance with a budget of \$25,830,000. The budget of \$2,800,000 will be transfer from C800930 2021-2025 Airfield Pavement to perform most critical additional scope of work to capitalize on the current reduced aircraft traffic and reduce future impacts. The funding sources for the 2020 work will be the Airport Development fund, Airport Improvement Program grant and existing revenue bonds.

Financial Analysis and Summary

Project cost for analysis	\$28,630,000
Business Unit (BU)	Airfield Movement Areas
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	\$.06 in 2021

Future Revenues and Expenses (Total cost of ownership)

Annual Operating and Maintenance costs are not anticipated to change appreciably. The estimated life expectancy for this project is 40 years for concrete pavement and associated utilities. Replacing this infrastructure will result in maintenance cost avoidance.

ATTACHMENTS TO THIS REQUEST

- (1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

November 12, 2019 – The Commission authorized advertisement and execution of a major works construction contract for the replacement of damaged pavements, joint seal and

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related utilities for the 2020 Airfield Pavement portion, the final year of the 2016-2020 Airfield Pavement Replacement Program.

March 12, 2019 – The Commission authorized advertisement and execute of a major works construction contract for the replacement of distressed pavements and related utilities for the 2019 portion of the 2016-2020 Airfield Pavement Replacement Program.

November 27, 2018 – The Commission authorized design and preparation of construction documents for the replacement of distressed pavements and related utilities for the 2020 Airfield Pavement portion of the 2016-2020 Airfield Pavement Replacement Program.

October 9, 2018 – The Commission authorized design funds for construction documents for replacement of distressed pavement and related utilities the 2019 portion of the 2016-2020 Airfield Pavement Program.

November 14, 2017 – The Commission authorized advertisement and execution of a single construction contract which included the 2018 Airfield Pavement Replacement as part of the 2018 Taxiway Improvement Projects and approved non-use of PLA.

May 9, 2017 – The Commission authorized design funds for construction documents for replacement of distressed pavement and joint sealant replacement in the 2018 portion of the 2016-2020 Airfield Pavement Program, and approved use of PLA.

October 25, 2016 – The Commission authorized advertisement and execution of contract for retrofits of 400 Hz In-ground power units and reconstruction of existing pavement at Cargo 2.

February 24, 2015 – The Commission authorized design funds for construction documents, for replacement of distressed pavement and joint seal in the 2016 portion of the 2016-2020 Pavement Program.