COMMISSION
AGENDA MEMORANDUM **Item No.** 4d

ACTION ITEM **Date of Meeting** September 26, 2017

DATE: September 18, 2017

TO: Dave Soike, Interim Executive Director

FROM: Dave Wilson, Director, Aviation Innovation
James Jennings, Senior Manager, Aviation Properties
Wayne Grotheer, Director, Aviation Project Management Group

SUBJECT: Tenant Network Demarcation (DMARC) Upgrade - C800841

Amount of this request: $672,000
Total estimated project cost: $2,815,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to prepare the design and construction documents for the Tenant Network Demarcation project at Seattle-Tacoma International Airport to standardize the Port's tenant communications network demarcation for an amount not to exceed $723,000 of a total estimated project cost of $2,815,000.

EXECUTIVE SUMMARY

This project will standardize the Port's tenant communications network demarcation or "DMARC packages" for existing tenants with outdated legacy communication infrastructure and provide needed new infrastructure in vacant offices within the Airport in preparation for future tenants. Current legacy communications infrastructure does not allow the Port to troubleshoot and support any tenant communication challenges.

The project's scope includes communications network equipment installation in approximately 50 locations throughout the main terminal and South Satellite to (1) upgrade spaces that do not have communications infrastructure installed or (2) replace existing outdated telecommunications infrastructure cabling that is no longer supported by CenturyLink, which is the lone telecommunications provider at the airport. With a forthcoming "Meet Me Room" capital project, the Port will be providing additional communications infrastructure to allow multiple telecommunication service providers into the Airport so that tenants can have more choices for the telephone, internet and cable TV services. But currently, if a tenant needs to move into a space that does not have this updated communications DMARC package, it can take several months to bring in a new service. This leaves the tenant without phone or internet service for an extended period of time, which is not an acceptable practice or level of service for a landlord. Once this project is complete, however, these flexible DMARC packages will

allow for quick, efficient "plug-in" portability for new or existing tenants, and provide for expansion as technology and communications adapt and change.

JUSTIFICATION

Voice and internet data communications is an integral part of facility infrastructure supporting modern business. In modern communications infrastructure, the DMARC is the point at which the publicly switched internet/telephone network ends and connects with the customer's on-premises wiring (the wall plugins). It is the dividing line which determines who is responsible for installation and maintenance of wiring and equipment—customer/subscriber, or telephone company/provider.

Today we have an unacceptable level of service for new tenants: a tenant can lease an office space, but has to wait for several months for Internet or telephone service while the legacy systems are upgraded. Each lease agreement may require an “ad hoc project” to add required infrastructure. This project identifies the remaining areas not already converted to modern telecommunications DMARCs, so in the end, all leasable tenant spaces will be on modern communications infrastructure.

DETAILS

The project scope will accomplish various objectives for both the airport and tenants, such as:

(1) Provide efficient "plug-in" portability when required by new or existing tenants
(2) Remove existing legacy vendor equipment without disrupting any tenant connectivity
(3) Keep the main terminal free of unsupported cabling
(4) Eliminate service interruptions for tenant communications
(5) Provide less cumbersome hard-wire connections for tenant communication networks
(6) Create demarcation point between existing Port communications rooms and tenant spaces (which will allow tenants greater choices in telephone/internet providers, currently limited to CenturyLink)
(7) Provide Port-managed Infrastructure which allows the quick provision of requests
(8) Provide quick technology activation from one leased space to another as tenants move

Scope of Work

(1) Design of each tenant DMARC installation package
(2) DMARC and network equipment installation in approximately 50 locations throughout tenant spaces in the main terminal
(3) Targeted demolition or removal of obsolete legacy network infrastructure and equipment
(4) Trace existing legacy vendor cable pathways from tenant spaces that will receive a DMARC to their source, identifying branches of legacy vendor cabling that support other tenant spaces that do not lie within the scope

(5) Remove legacy vendor cabling from the tenant spaces identified to receive DMARC without interrupting service to tenants
(6) Construction of conduit and network pathways from communication rooms to tenant lease spaces
(7) Installation and testing of Port provided telecommunication DMARC packages

Small Business

Elements within the scope of work above will provide opportunities for small businesses. The project team is partnering with the Port's small business group to outreach to interested small and MWBE businesses of the project through the Port of Seattle's Small Business Generator (PortGen) program efforts.

Schedule

Design start	2017 Quarter 3
Commission construction authorization	2018 Quarter 4
Construction start	2019 Quarter 2
In-use date	2021 Quarter 2

Cost Breakdown	This Request	Total Project
Design	$672,000	$672,000
Construction	$0	$2,093,000
Total	$672,000	$2,815,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Install each tenant DMARC package as each tenant prepares to occupy space in the airport leased properties.

Cost Implications: $3,550,000

Pros:
(1) Pushes out larger portions of the capital investment into the future
(2) Incrementally eliminates the necessity of telecommunication carriers and tenants from running new proprietary cabling throughout the airport

Cons:
(1) Ultimately costs the Port more money because of the incremental approach, negating any efficiencies of scale, as costs are likely to increase in the future.
(2) Follows current practice of delayed, incremental small jobs projects to install DMARC packages in lease spaces, which require long lead times on installation of voice and data communications, and does not meet our tenants' needs
(3) Legacy vendor is no longer managing their legacy wiring in-house

(4) Incremental Small jobs projects will be more costly than a scheduled, planned program of improvements
(5) If a tenant encounters a problem, the Port can't trouble-shoot, and given legacy vendor's decision to not manage their cable/fiber, the tenant would be in a situation where we would likely need to do an emergency DMARC project to keep them connected

This is not the recommended alternative.

Alternative 2 – Install Port standard tenant telecommunication DMARC packages in vacant areas of the airport only (leaving legacy systems with existing tenants).

Cost Implications: $700,000

Pros:

(1) Eliminates the necessity of telecommunication carriers and tenant from running new proprietary cabling throughout the airport
(2) Provides flexibility for new tenants in new spaces to meet emerging technology requirements which change as business opportunities expand within the airport
(3) Provides the Port the ability to move tenants into new lease spaces quickly
(4) Infrastructure is Port managed which allows us to quickly provision requests for new tenants only
(5) Ability of quick technology activation from one lease to another lease space as tenants move to different lease spaces (assuming it doesn't involve a legacy system office)
(6) Provides flexibility for new, non-legacy tenants to order telecommunication carrier circuits as their data requirements change

Cons:

(1) Does not address outdated legacy tenant communication infrastructure; limiting their ability to expand services and respond to changing technology needs
(2) Does not address risk from legacy vendor communication problems and support
(3) Requires a future project to remedy existing outdated legacy communications in spaces as they are vacated in the future

This is not the recommended alternative.

Alternative 3 – Install Port standard tenant telecommunication DMARC packages in 50 existing tenant locations with outdated legacy communications and vacant tenant leased areas.

Cost Implications: $2,815,000

Pros:

(1) Eliminates the necessity of telecommunication carriers and tenant from running proprietary cabling throughout the airport for new and legacy tenants
(2) Provides flexibility for new and legacy tenants as their technology requirements change and business opportunities expand within the airport

(3) Provides the Port the ability to move new and legacy tenants into new and legacy lease space quickly, improving customer service and maximizing revenue
(4) Infrastructure is Port managed which allows us to quickly provision requests
(5) Ability of quick technology activation from one lease to another lease space as tenants move to any different leased spaces
(6) Provides flexibility for new and legacy tenants to order telecommunication carrier circuits as their data requirements change
(7) Prepares for the future opportunity of multiple telephone/internet service providers anticipated as part of the future "Meet Me Room" project which will allow for expanded tenant communication choices and services.

Cons:

(1) Requires a larger capital investment up front, versus spreading the capital out over several years.

This is the recommended alternative.

FINANCIAL IMPLICATIONS

Cost Estimate/Authorization Summary

	Capital	Expense	Total
COST ESTIMATE			
Original estimate	$2,500,000	$0	$2,500,000
Estimate Adjustments	$315,000		$315,000
Revised Estimate	$2,815,000		$2,815,000
AUTHORIZATION			
Previous authorizations	$50,000	$0	$50,000
Current request for authorization	$672,000	$0	$672,000
Total authorizations, including this request	$722,000	$0	$722,000
Remaining amount to be authorized	$2,143,000	$0	$2,143,000

Annual Budget Status and Source of Funds

This project was included in the 2017 – 2021 capital budget and plan of finance with a cost estimate of $2,500,000. The increase will be transferred from the Aeronautical Allowance CIP (C800753) resulting in no net change to the Aviation capital budget. The funding source will be the Airport Development Fund.

Financial Analysis and Summary

Project cost for analysis	$2,815,000
Business Unit (BU)	Terminal
Effect on business performance (NOI after depreciation)	NOI after depreciation will increase

IRR/NPV (if relevant)	N/A
CPE Impact	$.01

ATTACHMENTS TO THIS REQUEST

None

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

None