

PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA

Item No.

6b

ACTION ITEM

Date of Meeting

August 5, 2014

DATE: July 29, 2014

TO: Tay Yoshitani, Chief Executive Officer

FROM: Michael Ehl, Director Airport Operations
Wayne Grotheer, Director Aviation Project Management Group

SUBJECT: North Satellite Renovation & North Satellite Transit Station Lobbies Project (CIP #C800556)

Amount of This Request:	\$ 15,717,800	Source of Funds: Airport Development Fund and Future Bond Proceeds
Est. Total Project Cost:	\$405,532,944	
Est. State and Local Taxes:	\$ 27,830,600	

ACTION REQUESTED

Request Commission authorization for the Chief Executive Officer to take the following actions related to the North Satellite Renovation & North Satellite Transit Station Lobbies Project at the Seattle-Tacoma International Airport:

- (1) increase the project scope to expand the building, add 5 additional aircraft gates, and add additional vertical circulation to facilitate aircraft boarding and deplaning, increasing the budget by an estimated \$191,323,143 for a revised total budget of \$405,532,944;
- (2) complete the design for an additional \$15,717,800 and execute amendments to existing design, planning and program management consulting contracts accordingly;
- (3) execute future consulting contracts for construction testing and inspection, safety services, alternative contracting procurement support, and gate planning and utilization analysis; and
- (4) use General Contractor/Construction Manager (GC/CM) alternative public works contracting, prepare and advertise for a GC/CM contractor.

This request is for \$15,717,800 of an estimated total project cost of \$405,532,944.

SYNOPSIS

The North Sea-Tac Airport Terminal Renovation Program (NorthSTAR) includes the consolidation of Alaska Air Group (AAG) operations within Concourse C, a north end renovation of the Main Terminal ticketing level, and a renovation and expansion of the North Satellite (NSAT) which includes enhancements to the three stations in the north loop of the Satellite Transit System (STS). The program, which is a collaboration of the Port and AAG, intends to create and promote a user-friendly “curb-to-seat” passenger experience through the

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integration of facility improvements, technology, and airline services. The scope of the NorthSTAR program was initially defined by a study prepared by AAG and its consultant. The Port and AAG refined the scope of this study by applying recent gate allocation and capacity data to support forecasted Airport-wide gate demand and capacity.

The North Satellite project is the largest piece of the NorthSTAR program. At the completion of the 15% conceptual design of the north satellite project and the airport-wide gating analysis the Port and AAG made a collaborative recommendation not only to renovate the North Satellite, but to expand the facility's size to meet program requirements and capacity to 20 gates in response to projected increases in airport-wide activity for all domestic and international growth updates to Sea-Tac Airport's capacity projections. This decision results in an approximate \$191,323,143 increase to the current estimated project cost, for the North Satellite project a part of the NorthSTAR program, of \$214,209,801 for a revised total project cost of \$405,532,944 for the project. The current estimated NorthSTAR overall program budget, including the total NSAT project cost is \$505,835,444. Staff will return later in 2014 to request authorization for preconstruction services and to award the preconstruction services contract with the selected GC/CM contractor.

BACKGROUND

The NSAT is over 40 years old and has had only limited upgrades to the building and its infrastructure. The building's mechanical, electrical, plumbing, and communication systems need modernization, renewal, and replacement. Additionally, the proposed renovation will seismically reinforce the building to current building code compliance.

After the Letter of Agreement between the Port and AAG was signed on April 5, 2012, the NSAT scope as originally defined by the AAG conceptual study has been steadily refined by validating NSAT scope elements through an extensive planning and design process to ensure the project will meet Port and AAG long-term facility enhancement and capacity needs. These efforts included an Airport-wide analysis of near and long-term gate capacity and demand coupled with the NSAT design facility program requirements.

The 15% conceptual design of the north satellite began in January 2013 and resulted in the development of 16 concepts that included 3 new aircraft contact gates (from the current 12 to 15 gates consistent with AAG's conceptual study). These concepts were evaluated based on how well each of them met the functional and operational requirements for holdrooms, concessions, passenger amenities, circulation, and terminal efficiency. Options that did not adequately respond to these requirements were eliminated, and the team further refined four original concepts. These new expansion concepts were developed to address concerns that the areas needed for holdrooms, concessions and amenities could not be provided or balanced within the limitations of the existing building envelope or on one floor level. In October 2013, these four concepts were reviewed and evaluated by Port and AAG staff. Of these, the two viable concepts recommended by the project team were presented to and independently approved by the executive level Port and AAG Steering Committees. These two recommended options included: 1) a concept within the original building envelope, and 2) a concept which expanded the existing building area or "footprint."

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Concurrent with the development of these two recommended design concepts for the NSAT, Port staff recognized a need to update the airport-wide gate demand analysis as part of the long-term planning process. This was due to changes in domestic and international gate demand and a May 2013 request by AAG for an additional 5 gates on Concourse D. This analysis objectively approached terminal development based on an airport-wide assessment of near-term and long-term gate need, and not just the growth of a single airline.

The study evaluated whether the anticipated gate shortage could be managed operationally, or if additional aircraft gates would be required. The study determined where additional gates were needed and how these gates could be best accommodated. The study incorporated not only anticipated domestic and international activity, but also the concurrent operational impacts on gate availability due to:

- AAG's sole tenancy of the NSAT and its request for an additional 5 mainline gate positions on Concourse D beyond those originally planned as part of NorthSTAR.
- Additional gates needed to accommodate American Airlines/US Airways, Southwest/Air Tran, and United/Continental mergers. (Note: While mergers consolidate operations, additional gates may be needed due to coincident flight schedules and differing aircraft types – wide-body vs. narrow-body during peak times at contiguous gate locations).
- Large scale concurrent construction projects of the NorthSTAR and International Arrivals Facility (IAF) Programs which will temporarily close gates on Concourse A, the South Satellite, and the NSAT in years 2015 through 2020.

On October 3, 2013, Port staff presented the Airport-wide Gating Analysis to AAG and Aviation Division leadership. The analysis found:

- There are significant challenges posed by near-term dynamic gate demand and construction impacts over the next 5 to 7 years.
- Sufficient near and long-term gate capacity could not be created through operational measures.
- An additional five contact gates at the NSAT beyond the three additional contact gates included in the NorthSTAR program are needed to satisfy both the near-term constraints on gate availability and anticipated gate demand.
- The NSAT is the most viable location to add gate capacity without impacting other airport facilities.
- A NSAT terminal expansion not only meets AAG's operational needs with a total of 20 NSAT gates, but also provides a capacity buffer between the NorthSTAR Program and the contemplated future NSAT expansion for 30 gates in the current Airport Master Plan.
- A larger facility more directly contributes to AAG's vision of a "frictionless" passenger experience and AAG's vision of an improved "curb-to-seat" level of service.

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On October 17, 2013, AAG executive leadership provided written concurrence to renovate and expand the NSAT to accommodate 20 contact gate positions, based on the findings of the Airport-wide Gating Analysis and the benefits of expanding the NSAT.

On January 14, 2014, Airport staff briefed the Commission on the details of the Airport-wide gate analysis and provided an overview of the scope increases resulting from the recommendation to expand the satellite. AAG also spoke in support of this important decision. In July 2014 a Majority-In-Interest ballot for the recommendation to expand the NSAT for 20 contact gate positions was approved by signatory airlines. On July 22, 2014, Airport staff updated the Commission on the refined details of the recommendation, increased scope, architectural theme, building massing, floor plans, aircraft parking layout, and the estimated increase in the cost for the expansion and the total project. Staff also recommended General Contractor/Construction Manager (GC/CM) alternative contracting be used to construct the NSAT expansion and renovation.

This authorization request includes the addition of vertical circulation (escalators/escalators) and ramp-level vestibules to accommodate passenger loading and unloading from the rear (i.e. aft) doors of gated aircraft. Both the Port and AAG staff have determined that this capability has positive airport-wide impacts and operational benefits. Providing passenger access to ramp level aft aircraft door loading and unloading results in an additional non-contact aircraft parking position (a 21st non-contact “gate”) as well as facilitates contiguous or “swing” operations of regional and mainline aircraft at the north end of the satellite. This will improve gate-use efficiency and corresponding airport-wide gate capacity. In addition, should train service to the satellite be disrupted due to a long duration outage, these apron level hold rooms may serve as vestibules for busing operations to the main terminal.

PROJECT JUSTIFICATION AND DETAILS

Since its construction in 1971, NSAT infrastructure improvements have been limited to minor plumbing and electrical upgrades. The remaining infrastructure and interior finishes need renewal and replacement to improve the building’s utilization, increase operational efficiencies, reduce energy consumption, improve sustainability and sustainable asset management, enhance customer comfort and service, and ensure compliance with applicable building codes. The renovation and expansion will accommodate Port and AAG’s goal to improve passenger experience from the curb (drop-off) to the gate and will provide needed increases in gate capacity to meet current and forecasted gate demand through 2025.

Project Objectives

- Extend the length of NSAT by approximately two hundred forty feet to improve customer service and accommodate additional aircraft and passengers.
- Seismically strengthen NSAT and expand the existing infrastructure.
- Balance and integrate NSAT functional areas and requirements (concessions, holdrooms, amenities, airline operations and airline services) through a renovation and expansion of the NSAT’s terminal area to achieve acceptable levels of service.
- Align near term and forecasted airport-wide gate use and capacity by providing a total of 20 contact gates at NSAT.

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- Optimize gate door contact points, loading bridges and aircraft parking positions, including fuel hydrants and other support utilities.
- Accommodate the future expansion of NSAT and minimize impacts to operations when constructed.
- Meet or exceed current sustainability goals with potential Leadership in Environmental and Energy Design (LEED) certification.
- Create a “frictionless” and stress-free passenger experience within NSAT.
- Create an exciting and attractive facility integrating holdrooms, diverse amenities and numerous concessions.
- Maintain and promote a Northwest sense of place through the design of architectural finishes and connected technologies.

Scope of Work

This request includes the following design elements at the NSAT and, as noted below, certain elements at Concourse C and the Main Terminal:

- Renovation of concourse level finishes, structure, and amenities
- Expansion of the NSAT STS, baggage and concourse levels by up to nine structural bays
- Addition of 5 new NSAT aircraft gates with passenger loading bridges to be provided by AAG (for a total of 20)
- Seismic reinforcement
- Addition of an Alaska Airlines premium traveler lounge (Alaska Board Room)
- NSAT Train System lobby enhancements construction (including the NSAT, Concourse C and Main Terminal stations)
- Expansion, renewal and replacement of mechanical, electrical, plumbing, vertical transportation, and communication systems
- Aircraft taxi lane changes around the NSAT
- Significant sustainability features and components
- Addition of vertical circulation (escalators/elevators) and ramp-level vestibules to facilitate passenger loading and unloading.

Alternative Contracting Methodology General Contractor/Construction Manager

The Port is also requesting Commission authorization to use the General Contractor/Construction Manager (GC/CM) contracting method including electrical and mechanical subcontractors for public works projects as a certified public body in compliance with RCW 39.10.340. This alternative contracting methodology may be used for public works projects where at least one of the following conditions is met:

1. Implementation of the project involves complex scheduling, phasing, or coordination.
 - The NSAT is a 24 hour, 7 days per week complex operating terminal located within and surrounded by a restricted and secured airport operating area. The renovation and expansion of this facility will require multiple construction phases, airline and tenant coordination and technical control requirements.

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2. The project involves construction at an occupied facility which must continue to operate during construction.
 - The NSAT will remain operational during construction, with construction activities occurring in and around terminal operations and occupied areas. Detailed construction planning will be required to assure safe and unobstructed airport operations as the facility is expanded and systems installed and upgraded.
3. Involvement of the general contractor/construction manager during the design stage is critical to the success of the project.
 - GC/CM involvement during the design stage is critical in developing an appropriate design approach to construction and assist in the development of early construction packages before the design is fully complete. Design stage engagement will allow the Port, AAG, GC and subcontractors to collaborate on constructability, value engineering, construction phasing, early work packages and recommendations to keep costs in line with approved budgets. Early review of drawings and specifications will also identify more cost efficient design detailing prior to bidding and performing work, and reduce the potential for change orders.
4. The project encompasses a complex or technical work environment.
 - The NSAT is a 40-year old facility which requires substantial updating, installation and coordination of sustainable, complex building systems. Construction activities will be undertaken within a highly congested and technically challenging operating environment. Advance involvement with the contractor in identifying and applying the appropriate means and methods of construction within this environment is critical to the success of this project.
5. GC/CM Mechanical and Electrical Subcontractor Selection
 - In compliance with RCW 39.10.340, the Port intends to include alternative mechanical and electrical subcontractor procurement as part of the GC/CM alternative contracting procedure. These key subcontractors are selected based on qualifications and hired early to participate in the preconstruction phase. The benefit of selecting mechanical and electrical contractors in this alternative methodology lies in the same level of advance participation and involvement these trades gain by participating in the design and advance packaging development as afforded the GC/CM. This will allow the Port to leverage the expertise of the mechanical and electrical contractors to streamline the utility coordination and reduce the design conflicts and associated risks. The phasing out of old mechanical and electrical systems and phasing in of brand new mechanical and electrical systems for the whole satellite while maintaining service and comfort for the passengers, 24hr a day 7 days a week, will be a major challenge of the project and having these subs input in to early planning and phasing will be vital.

It is anticipated that the GC/CM delivery methodology will provide more opportunities for cost savings due to construction schedule improvements that reduce cost escalation than the traditional Design-Bid-Build procurement approach. Staff will return later in 2014 to request

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authorization for preconstruction services and award of the preconstruction services contract with the selected GC/CM contractor.

Schedule

GC/CM preconstruction activities and construction on advance work packages would occur before NSAT design completion. This is reflected in the following schedule:

GC/CM Selection	November 2014
Authorize Preconstruction Services	December 2014
Construction on Advance Work Packages	Fall 2015
Design Completion	Summer 2016
All Phased Construction Complete	Summer 2019

FINANCIAL IMPLICATIONS:

Project Breakdown:

	Previous Budget	This Budget Request	Total Project Budget
Construction Phase	\$157,753,600	\$158,253,000	\$316,006,600
RMM/ERL	\$5,800,000	\$0	\$5,800,000
Design Phase	\$37,573,601	\$18,322,143	\$55,895,744
State & Local Taxes	\$13,082,600	\$14,748,000	\$27,830,600
Total	\$214,209,801	\$191,323,143	\$405,532,944

Authorizations:

	Capital	Expense	Total Project
Original Budget	\$194,300,000	\$5,000,000	\$199,300,000
Prior adjustments to Budget *	\$14,109,801	\$800,000	\$14,909,801
Current Budget	\$208,409,801	\$5,800,000	\$214,209,801
Proposed Budget Increase/Decrease	\$191,323,143	\$0	\$191,323,143
Revised Project Budget	\$399,732,944	\$5,800,000	\$405,532,944
Previous Authorizations	\$32,997,000	\$200,000	\$33,197,000
Current Request for Authorizations	\$15,717,800	\$0	\$15,717,800
Total Authorizations - Incl. This Request	\$48,714,800	\$200,000	\$48,914,800
Remaining Budget to be Authorized	\$351,018,144	\$5,600,000	\$356,618,144

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** Note: Reflects movement of scope associated with Program Management, Biometric Access Control Doors, two elevators and eight escalators, grease interceptor, STS station remodels plus added budget for new NSDF freight elevator.*

Budget Status and Source of Funds

This project was included in the 2014 - 2018 capital budget and plan of finance with a budget of \$206.5 million, which incorporated budget and funding for several other capital projects transferred into this CIP and integrated into the NSAT project. The increased costs will be included in the 2015 – 2019 capital budget and plans of finance. The Airport Development Fund (augmented as needed with the issuance of commercial paper) is the initial source of funds for this authorization but funding for the entire project will include Passenger Facility Charge revenues (PFCs) and future bond issues. The Port anticipates issuing revenue bonds in late 2014 or early 2015.

The terms under which AAG will participate in the Port's NorthSTAR Program costs have been established via an April 5, 2012 Letter of Agreement between the Port and AAG. The airlines were briefed on December 18, 2013, with regard to the decision to expand the NSAT and the resultant increase in budget. The formal Majority-In-Interest (MII) project approval process outlined in Signatory Lease and Operating Agreement (SLOA) was followed with the airlines voting in favor of this expansion and the project in July 2014.

Financial Analysis and Summary

CIP Category	Renewal and Replacement
Project Type	Terminal Infrastructure
Risk adjusted discount rate	N/A
Key risk factors	N/A
Project cost for analysis	TBD – approximately \$406 million
Business Unit (BU)	Terminal
Effect on business performance	NOI after depreciation will increase
IRR/NPV	N/A
CPE Impact	Estimated \$1.39 in 2020

The long-term funding plan will likely include the use of PFCs to pay a portion of the revenue bond debt service, thus reducing the costs to be recovered through terminal rents. This could significantly reduce the future CPE impacts of this project.

Annual operating and maintenance costs will be analyzed during the completion of the final project definition notebook.

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STRATEGIC OBJECTIVES:

This project promotes the Port's business goals to "Ensure Airport and Seaport Vitality" and "Be a Catalyst for Regional Transportation Solutions." This is one of a number of projects that are directly tied to the One-Time Reallocation (Airline Realignment) program, that are in alignment with AAG's plan to consolidate its gate operations onto the NSAT and Concourses C and D. The NSAT expansion is also in alignment with Airport master plan development objectives that identify the NSAT as the most logical location for near-term expansion of airport capacity.

TRIPLE BOTTOM LINE

This project will increase the long-term ability of the Airport to serve a growing number of passengers and airlines. Long-term vitality of the Airport benefits the regional economy and nearby communities. The sustainable aspects of this project will benefit the local environment.

Small Business Participation

The project managers will collaborate with the Office of Social Responsibility to maximize small business participation opportunities including, but not limited to Small Contractors and Suppliers (SCS) participation in accordance with the Small Business Resolution 3618.

Environmental Responsibility

This project will incorporate environmental elements that are currently being analyzed. These elements, or environmental performance criteria, aim to reduce energy and water consumption and minimize lifecycle costs of the NSAT. As these elements are evaluated, they will be incorporated into the project definition and design of the project. The pursuit of the United States Green Building Council's Leadership in Energy and Environmental (LEED) certification is also being evaluated.

Community Benefits

This project improves operations, building safety, and customer service at what will be the primary location for the Airport's largest airline tenant.

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Proceed with Original Scope (Not Recommended): Even though the NSAT would be renovated per the original project scope, not expanding would result in increased operational costs and potential delays due to limited peak-time gate availability. AAG would not be able to consolidate its operations within Concourses C, D, and the NSAT and other airlines would be required to operate in non-contiguous terminal areas. This option would not help meet the need for gates airport-wide to accommodate growth and would result in a deteriorated level of service.

Expand Elsewhere (Not Recommended): Provide additional gate capacity at Concourses A, B, C, D or at the South Satellite. Expansion of the South Satellite or Concourse A would require costly and lengthy relocations of existing cargo and aircraft maintenance facilities. Concourses B, C, and D cannot be expanded due to site and operational constraints and costly adjacent facilities and roadways.

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NSAT Expansion (Recommended): Increase the size of the NSAT by extending the length of NSAT by approximately two hundred forty feet to the northwest end of the existing building and adding vertical circulation (escalators/escalators) and ramp-level vestibules to accommodate passenger loading and unloading from the rear (i.e. aft) doors of gated aircraft. This will accommodate the addition of five contact gates for a total of twenty that would provide Alaska Airlines capacity to meet long-term demand and remain operationally consolidated beyond 2025. This expansion is within the Airport's current master plan and can be done without significant impacts to adjacent concourse operations. This expansion will accommodate a future expansion of the NSAT to a 30-gate capacity as identified in the master plan.

ATTACHMENTS TO THIS REQUEST

- None

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

- July 22, 2014 - NSAT Expansion Briefing
- April 16, 2014 – Seattle-Tacoma International Airport Capital Program - Briefing
- January 14, 2014 – NorthSTAR Program status update and initial NSAT expansion briefing.
- September 24, 2013 – NorthSTAR Program status update.
- September 24, 2013 – The Commission authorized staff to: (1) advertise, award, and execute a major public works contract for the construction of the NSAT Refurbish Baggage System Project; and (2) authorize the use of Port crews.
- June 25, 2013 –NorthSTAR Program status update.
- May 28, 2013, Commission authorized the execution of separate service agreements for Construction Management Services and Commissioning Services, of approximate values of \$10 million and \$1.5 million.
- April 9, 2013 – The Commission authorized the Chief Executive Officer to enter into a project labor agreement covering the NorthSTAR program's five major construction projects.
- March 26, 2013 –NorthSTAR Program status update.
- December 11, 2012 – The Commission was briefed on the Vertical Conveyance Modernization Project Aero Phases 1 and 2 and the possibility of adding the specified elevators and escalators to the NorthSTAR program.
- July 24, 2012 - Commission authorized \$32,000,000 for the design of the NorthSTAR NSAT Renovation and NSTS Lobbies project.
- June 26, 2012 - The Port Commission was briefed on the NorthSTAR program by Wayne Grotheer, Director Aviation Project Management Group.
- April 10, 2012 - The Commission authorized the execution of consultant contracts for design and construction support services; program management services; and the completion of site surveys for regulated materials management, in the amount of \$1,200,000.