

# INTERNAL AUDIT REPORT

Operational Audit – Capital

North Satellite Renovation and Expansion Project



*Source: Port of Seattle*

June 2018 – May 2022

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## Executive Summary

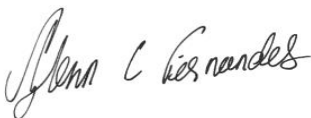
Internal Audit (IA) completed an audit of the North Satellite Renovation and Expansion Project (NSAT) for the period June 2018 through May 2022. The audit was performed to assure the quality of the Port of Seattle's (Port) monitoring of NSAT, to assess if it was meeting project management standards, and to determine if change orders were allowable, properly approved, and reasonable.

The North Sea-Tac Airport Renovation Program (NorthSTAR) was a collaborative effort between the Port and Alaska Air Group, Inc. (Alaska Airlines). NorthSTAR opened in July 2021, creating an efficient "Curb to Gate" operation at the north end of the Seattle-Tacoma International Airport. The NSAT Project is the largest segment of the NorthSTAR Program. The Port's portion of NSAT totaled \$712 million. Alaska Airlines contributed an estimated \$41 million. A General Contractor/Construction Manager (GC/CM) approach was used to deliver the project. The Port selected Hensel Phelps as the GC/CM for the construction portion with an initial construction contract of \$458 million. During the project, there was a net total of \$30 million in change orders resulting in a total construction contract cost of approximately \$488 million. The Port also contracted with the firm, R.L. Townsend and Associates, LLC, to perform independent construction cost control and cost verification consulting services.

Although NorthSTAR was completed on time, a significant amount of overtime was incurred to mitigate schedule delays, expedite the construction schedule, and meet construction milestones. Overtime related Force Account Change Orders (CO) and Written Authorizations (WA) totaled approximately \$2.3 million. We identified numerous instances when contractors worked 12 – 16 hours and upwards of 20 – 23 hours in a day. There were also instances in which contractors worked 24 – 25 days in a row. Construction work is a physically demanding and dangerous job. Overtime can increase stress and fatigue, while decreasing alertness and good judgement. Excessive overtime has dangerous consequences. We reviewed the Project Safety Incident Reports for this project and found the use of overtime did not result in a negative impact on safety.

In general, Port management's monitoring aligned with policies and procedures. However, our audit identified opportunities where internal controls could be enhanced or developed. These opportunities are listed below and discussed in more detail, beginning on page six of this report.

1. **(Medium)** Overtime costs were not properly reviewed to assure payment accuracy and compliance with both Port Standard Operating Procedures and Washington State Law. Lack of supporting documentation and billing errors resulted in questioned costs of \$79,118.
2. **(Low)** The Port does not have a policy limiting contractors from working extended hours and consecutive days, causing an increased risk of negative impacts on safety and performance.



Glenn Fernandes, CPA  
Director, Internal Audit

### Responsible Management Team

Nora Huey, Director, Central Procurement Office  
Tina Soike, Chief Engineer and Director, Engineering Services  
Janice Zahn, Assistant Engineering Director, Construction

## Background

Alaska Air Group, Inc. (Alaska Airlines) is the largest airline at the Seattle-Tacoma International Airport and serves as Alaska Airlines primary hub. The North Sea-Tac Airport Renovation Program (NorthSTAR) opened in July 2021 and was a collaborative effort between the Port of Seattle (Port) and Alaska Airlines to improve traveler experience and customer service. The North Satellite Renovation and Expansion Project (NSAT) is the largest segment of NorthSTAR Program. The NSAT component addresses the expansion of the North Satellite from 12 to 20 contact gates, increasing the total airport gate count by 10. Services and operability improvements include the first permanent nursing suite, first permanent secure site pet relief, the first purpose-build airside loading dock and increases the Airport Dining and Retail program by 10 stores. Modernization of the existing North Satellite facility includes the North Satellite and Concourse C Satellite Transit Stations. NSAT also expands the baggage system to accommodate the satellite expansion.

Funding sources for the project were a combination of the Airport Development Fund, revenue bonds and Passenger Facility Charge revenues. The Port's portion of NSAT totaled \$712 million: Design totaled \$87 million and construction totaled \$625 million. Alaska Airlines contributed an estimated \$41 million to build a new lounge and employee spaces.

NorthSTAR was delivered through a General Contractor/Construction Manager (GC/CM) approach. This approach used an architect engineer (AECOM) to produce the design and used a GC/CM (Hensel Phelps) for construction. A GC/CM was procured through a multi-part selection process that included consideration and evaluation of the GC/CM bidder qualifications and experience, together with some cost elements. The GC/CM was selected early in design and assisted the Port in evaluating the project during the design phase and then provided construction management services. Once the drawings were complete, the GC/CM entered into a construction agreement and assumed the risk for the construction means and method (i.e., the GC/CM became the general contractor and hired the subcontractors directly).

Washington State Law (RCW 39.10.385) requires an independent audit of subcontractor costs, when subcontractors are selected through an alternative means. R.L. Townsend & Associates, LLC (Townsend) was engaged early by the Construction Management (CM) team to assist the Port and contractors with establishing appropriate protocols and controls. Townsend performed the audit for Hermanson (Mechanical Contractor/Construction Manager (MC/CM)) and VECA (Electrical Contractor/Construction Manager (EC/CM)). Procedures performed by Townsend included reviewing job cost accounting records; reviewing subcontracts for alternates, allowances, and unit rates; reviewing subcontractor Change Order supporting documentation for correct fees, labor rates, potential duplicates, math errors, or any unusual items; and reviewing monthly MC/CM and EC/CM pay application requests for accuracy, allowable expenses, and proper support. The results of the audit are listed below:

Description	Agreed to Credit	Cost Avoidance	Total
MC/CM Audit Items	\$ 355,837	\$ 490,448	\$ 846,285
EC/CM Audit Items	668,234	636,240	1,304,474
<b>Total</b>	<b>\$ 1,024,071</b>	<b>\$ 1,126,688</b>	<b>\$ 2,150,759</b>

NSAT construction continued during the COVID-19 pandemic. To increase COVID-19 precautions, the Port compensated contractors for the purchase of health and safety supplies (such as face shields, masks, and sanitizing sprayers), added additional portable restrooms and hand washing stations, and increased the frequency of busses to and from the construction site. Additionally, the Port reimbursed the costs of a full-time COVID Supervisor, and authorized subcontractors to charge the Port an additional 20 minutes per person per day for cleaning their tools and work area. COVID-19 related expenses totaled approximately \$4.5 million.

## **Audit Scope and Methodology**

We conducted the engagement in accordance with Generally Accepted Government Auditing Standards and the International Standards for the Professional Practice of Internal Auditing. Those standards require that we plan and conduct an engagement to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our engagement objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our engagement objectives.

In some cases, we used a judgmental method to determine the samples selected for our audit test work. The results of this work cannot be projected to the population as we did not select a statistical based random sample.

The period audited was June 2018 through May 2022 and included the following procedures:

### Change Orders

- Obtained an understanding of the Port's change order review process, including creation, negotiation, and approval.
- Verified approvals were obtained by required personnel.
- Confirmed that approved change order amounts tied to the Change Order Log.
- Reviewed for reasonableness and compliance with contract requirements.
- Reviewed supporting documentation and claim submissions, specifically errors/omissions, scope changes, overtime, and COVID-19 expenses.

### Project Close-Out

- Reviewed close-out Standard Operating Procedures and contractual requirements.
- Reviewed Townsend's audit report, discussed the engagement scope, and identified areas of risk for our audit.
- Obtained a copy of the Certificate of Occupancy status and checklist.
- Confirmed the final punch-list items had been completed.
- Reviewed training documents and maintenance logs to assure training had been provided and the Port had maintenance documents.
- Verified substantial completion has been issued for Phase I and Phase II, and physical completion was issued.

### Prior Audit Recommendation Follow-Up

- Reviewed the prior recommendation and supporting documentation to determine the recommendation was addressed.

## Schedule of Findings and Recommendations

### 1) Rating: Medium

**Overtime costs were not properly reviewed to assure payment accuracy and compliance with both Port Standard Operating Procedures and Washington State Law. Lack of supporting documentation and billing errors resulted in questioned costs of \$79,118.**

Force Account Change Orders and Written Authorizations total more than \$2.3 million. Overtime was incurred to help mitigate and reduce schedule delays because of project changes requested by the Port. Standard Operating Procedure 40.04 defines Force Accounting as a process that ensures an organized, identifiable, verifiable, and accountable method of compensating the contractor for costs and expenses, including labor, material and equipment expended by the contractor and tracked on a daily basis. Overtime was performed by multiple subcontractors on a frequent, reoccurring basis from 2018 through 2020. Contractors regularly worked more than 12 to 16 hours a day. We also noted instances in which contractors worked upwards of 20 to 23 hours a day and over 88 hours in a seven-day period. We were not always able to confirm contractors were on-site for these extended work shifts because the Port does not require contractors to have a daily attendance log, sign-in sheet, or other means to document when contractors were working, however, we did confirm that the Port paid for these hours in the pay applications. See **Appendix B** for additional information.

Hensel Phelps was contracted as the project's GC/CM to perform monitoring and oversight functions, including overtime hours and invoice review. The Port's Standard Operating Procedure 40.04 requires overtime performed through Force Account to be both pre-approved and post-approved. Overtime pre-approvals are required to be maintained as change order supporting documentation. The change order documentation we reviewed did not contain any pre-approvals. The customized Force Account sheets used on this project included initial and signature lines for post-approval of overtime. Our testing showed instances in which required initials and signatures were missing from the Force Account sheets, and therefore, the overtime should not have been approved for payment. We confirmed payment was still made for overtime hours that were missing required pre-approvals and post-approvals. It is the GC/CM's responsibility to assure accurate billings through adequate monitoring and oversight.

The Port has a responsibility to assure accuracy of final costs and compliance with overtime requirements. In addition to the Standard Operating Procedure requirements, Washington State Law (RCW 43.09.200) requires all transactions to be supported through receipts, vouchers or other documentation. We found several areas of non-compliance, billing errors and lack of supporting documentation that were not identified by the Port's review process, totaling \$79,118 in questioned costs. The Port has an opportunity to enhance the review process to ensure compliance with overtime requirements and payment accuracy.

### Recommendations:

- Enhance the review process to assure compliance with Force Account overtime requirements and payment accuracy. Also, hold the GC/CM accountable for adequate oversight and correct billings.
- Implement a policy that requires contractors on Port projects to maintain a way to track on site personnel to prevent fraud, waste or abuse as it relates to time theft. Examples may include badge swiping at arrival and departure from the job site or sign in and out sheets.
- Construction Management should seek and recover any amount due to the Port from overbillings and unsupported costs.

**Management Response/Action Plan:**

Response #1 – Force Account Requirements

Port Engineering – Construction Management, Central Procurement Office (CPO), Project Management, and Legal will meet to consider modifications to the Force Account process in future contracts.

Response #2 – Policy to track contractor personnel on site

Port Engineering – Construction Management, Central Procurement Office (CPO), Project Management, and Legal will meet to consider adding a requirement for Contractors to track all personnel on site in future contracts.

Response #3 – Recover any Overbilling

In coordination with Hensel Phelps, Port Engineering – Construction Management will ensure validation of actual costs incurred by the contractor. The items identified by Internal Audit shall be addressed as part of the validation process and we will deduct any amounts overpaid.

**DUE DATE: 12/31/2022**

**2) Rating: Low**

**The Port does not have a policy limiting contractors from working extended hours and consecutive days, causing an increased risk of negative impacts on safety and performance.**

NSAT incurred a significant amount of overtime, which allowed contractors to work an excessive number of hours in a day and in an overall week. Overtime and the number of hours contractors work each day is not tracked and monitored by the Construction Management team, and therefore, Port personnel are not aware of how many hours contractors are working. Construction work is a physically demanding and dangerous job. Overtime can increase stress and fatigue, while decreasing alertness and good judgment. We reviewed the Project Safety Incident Reports for this project and found the use of overtime did not result in a negative impact on safety. Although there were no negative safety impacts, the Port can take steps to increase worksite safety by limiting the number of hours contractors may work. See **Appendix C** for additional information.

Internal Audit requested a copy of Hensel Phelps (HP) safety policy, specifically for contractors working extended hours on the project. We also asked HP if there is a policy limiting the number of hours a contractor can work in a day and additionally, the number of consecutive days in a row that a contractor can work. HP does not have a policy to limit the number of hours or consecutive days contractors can work on a project.

Long work hours can have negative impacts on both safety and performance, causing an increased risk of accidents and decreased productivity at worksites. According to the Construction Executive article *Overworked Employees Don't Add Up*, written by Jonathon Kessler on February 10, 2020, "Many tests conducted over the years have found that increased productivity does not have a direct correlation with increased number of hours worked. Quite simply, well-rested employees are more productive. With increased overtime comes a diminishing return in quality and safety, both to the laborer and to their coworkers. This affects not only project timing, but also the possibility of decreased profits on a project. There also may be an unintended consequence of diminishing the reputation of a company." In addition, Kessler states "Overworked, tired or fatigued employees are not only prone to bad judgment, burnout and stress, but they are also more likely to take unnecessary shortcuts to circumvent tasks that may be too strenuous as the week goes on. With construction already known for being one of the most dangerous, if not the most dangerous occupation; OSHA has reported that the industry accounts for nearly 20% of all private-industry worker fatalities."

The National Institute for Occupational Safety and Health (NIOSH) published a report in April 2004 titled, *Overtime and Extended Work Shifts: Recent Findings on Illnesses, Injuries, and Health Behaviors*. The report states, "In 16 of 22 studies addressing general health effects, overtime was associated with poorer perceived general health, increased injury rates, more illnesses, or increased mortality." Additionally, "A pattern of deteriorating performance on psychophysiological tests as well as injuries while working long hours was observed across study findings, particularly with very long shifts and when 12-hour shifts combined with more than 40 hours of work a week. Four studies that focused on effects during extended shifts reported that the 9th to 12th hours of work were associated with feelings of decreased alertness and increased fatigue, lower cognitive function, declines in vigilance on task measures, and increased injuries."

Occupational Health and Safety Administration (OSHA) does not limit the number of hours an employee can work per day or per week. The Fair Labor Standards Act (FLSA) only limits the number of non-overtime hours to 40 per week. However, the Port should have policies in place to limit the number of hours in a day and hours a week a contractor can work, to assure safety at the worksite.



**Recommendations:**

- Review the Port's safety policies to determine if there should be a limit on the number of hours a contractor can work in a day and the number of consecutive days a contractor can work at the Port.

**Management Response/Action Plan:**

Port Engineering - Construction Management, Engineering - Construction Safety, Engineering - Construction Labor, Risk Management, Legal, and Project Management will meet to consider adding a limit to hours/days worked for contractor personnel to future contracts.

**DUE DATE: 12/31/2022**

## Appendix A: Risk Ratings

Findings identified during the audit are assigned a risk rating, as outlined in the table below. Only one of the criteria needs to be met for a finding to be rated High, Medium, or Low. Findings rated Low will be evaluated and may or may not be reflected in the final report.

Rating	Financial Stewardship	Internal Controls	Compliance	Public	Commission/ Management
<b>High</b>	Significant	Missing or not followed	Non-compliance with Laws, Port Policies, Contracts	High probability for external audit issues and / or negative public perception	Requires immediate attention
<b>Medium</b>	Moderate	Partial controls Not functioning effectively	Partial compliance with Laws, Port Policies, Contracts	Moderate probability for external audit issues and / or negative public perception	Requires attention
<b>Low</b>	Minimal	Functioning as intended but could be enhanced	Mostly complies with Laws, Port Policies, Contracts	Low probability for external audit issues and/or negative public perception	Does not require immediate attention

## Appendix B: Overtime

Overtime was a common occurrence to assure milestones and deadlines were met. We noted numerous instances in which contractors were working upwards of 12 plus hours in a day; some instances in which contractors were working 20 to 23 hours in a day. For tasks that take longer than a standard work shift to complete, an alternative to overtime would be scheduling two shifts at straight time, which would increase safety and reduce overtime costs. In addition, we found multiple instances on Written Authorizations (WA) 257 and 351 when contractors did not work 40 hours on this project, but billed overtime to this project on Fridays and Saturdays (see table below). Although this complies with labor agreements, this could be a reason that overtime was incurred.

Contractor	Description
Performance Abatement Services	WA 257: 60 instances of 75 contractors over an 18-week period. WA 351: 26 instances of 58 contractors over a 29-week period.
Northwest Partitions	WA 257: 60 instances of 21 contractors over a four-week period.

### Pre-Approval

For the NorthSTAR project, the customized Daily Force Account Field Documentation Form Notes requires:

*“All overtime or double time work must be pre-approved by the Port of Seattle and performed at the project indicated at the top of this form, as noted in specification section 00 70 00.G-08.05.1.D. Attach authorization with Force Account documentation.”*

Additionally, change order documents may state overtime requirements. For example, Change Order 721 requires:

*“Weekly notification to the Resident Engineer (RE) of the projected overtime (OT) activities and how the planned OT activities are associated with the impactful Construction Bulletins (CB-s) and Request for Information (RFI-s) is required.”*

None of the overtime change orders we reviewed included pre-approval authorizations with the Force Account documentation, as required. We asked the NorthSTAR Construction Management (CM) team how overtime was monitored by the Port personnel and they stated the overtime approvals occurred as a phone call or e-mail conversation between Hensel Phelps and the CM team. We were unable to obtain documentation to support pre-approvals for overtime incurred on this project.

### Post-Approval

Overtime Not-To-Exceed Change Orders require daily Force Account sheets to be completed by the subcontractor. The customized Daily Force Account Field Documentation Form Notes used on this project requires:

*“Owner Rep., Contractor, and GC must initial page 1 of 2, and sign, date, and print on page 2 of 2 in order to be considered a complete Daily Force Account Documentation.”*

We reviewed approval initials and signatures for two change orders. We found multiple instances in which the Force Accounts lacked the required approvals. Force Account invoices should not have been paid without the required approvals.

Change Order 721	Approval Present	Approval Missing
Owner Rep Initials	86	71
Subcontractor Initials	144	13
GC Initials	82	75
Owner Rep Signature	88	69
Contractor Signature	154	3
Total	554	231

North Satellite Renovation and Expansion Project

Change Order 1096	Approval Present	Approval Missing
Owner Rep Initials	131	22
Subcontractor Initials	149	4
GC Initials	101	52
Owner Rep Signature	132	21
Contractor Signature	145	8
Total	658	107

Review Process

Washington State Law (RCW 43.09.200) requires:

*Local government accounting – Uniform system of accounting: “The accounts shall show the receipt, use, and disposition of all public property, and the income, if any, derived there from; all sources of public income, and the amounts due and received from each source; all receipts, vouchers, and other documents kept, or required to be kept, necessary to isolate and prove the validity of every transaction; all statements and reports made or required to be made, for the internal administration of the office to which they pertain; and all reports published or required to be published, for the information of the people regarding any and all details of the financial administration of public affairs.”*

Standard Operating Procedure 40.04 Procedures - Sub Section K: Number 3 states:

*“When the full scope of each Force Account (FA) allowance is completed, the FA documentation is to be included in the Reconciliation CO file.”*

Furthermore, the Oversight/Administrative Controls section requires:

*“All information should be scanned into the System of Record as part of the Reconciling Change Order (304.05) file.”*

We identified instances in which supporting documentation was inaccurate or not present:

Record	Contractor	Description	Questioned Costs
WA 257 and WA 351	Performance Abatement Service (PAS)	Supporting documentation was not located in the change order records, pay application file (PA 86) nor provided after multiple requests.	\$ 38,077
WA 351	PAS	Certified Payroll reports did not match hours reported on the Daily Force Account Field Documentation.	19,889
WA 257 and WA 351	NW Partitions	Certified Payroll reports did not match hours reported on the Daily Force Account Field Documentation.	1,848
CO 1096	MidMountain Contractor’s, Inc.	Contractors inaccurately billed overtime hours instead of straight time hours. Overtime paid for contractors that were not found on payroll records. Invoice was missing for a materials charge. Full invoice for 30 workers was paid, although the Inspector wrote on the invoice that there were only 23 workers. Full invoice for 26 workers was paid, although the Inspector wrote on the invoice that there were only 13 workers. Full invoice for 26 workers was paid, although the Inspector wrote on the invoice that there were only 17 workers.	12,081
CO 721	MidMountain Contractor’s, Inc.	No supporting documentation was found in the change order records. We located records in seven pay applications, but documentation for a portion of the change order could not be located. Overtime for contractors was not found on payroll records. Overtime on billings did not match payroll records.	7,223
<b>Total</b>			<b>\$ 79,118</b>

*Note: Questioned costs include all applicable GC/CM and subcontractor markups.*

## Appendix C: Safety

### Extended Work Shifts

There were 1,657 instances in which MidMountain Contractors worked 12 or more hours in a day on the project. Our review showed some contractors worked upwards of 20 to 23 hours in one day. Internal Audit reviewed the Project Safety Incident Reports for this project and found the use of overtime did not result in a negative impact on safety.

Hours Worked in a Day	Number of Instances
12	780
13	274
14	224
15	157
16	76
17	83
18	36
19	11
20 - 23	16

### Consecutive Days

Our testing showed MidMountain Contractors worked upwards of 25 days in a row, with an average total of 10 to 11 hours each day.

Contractor	Consecutive Days	Hours	Daily Average (Hours)
1	25	257	10
2	24	261	11
3	24	250	10
4	24	249	10
5	24	247	10
6	17	166	10
7	16	159	10
8	15	155	10
9	12	128	11
10	12	102	9
11	11	108	10
12	10	109	11
13	9	100	11
14	9	97	11
15	9	96	11
16	8	92	12
17	8	88	11