

# SeaTac International Airport



## NorthSTAR Program

**Program Commission Update  
Second Quarter 2014**



# NorthSTAR Program

The **North Sea-Tac Airport Renovation** (NorthSTAR) Program is an unprecedented working arrangement between the Port of Seattle and Alaska Airlines with the goal to better serve passengers and improve operational efficiency. This program brings together the north satellite expansion and renovation and several parallel projects, including related main terminal improvements; refurbished north satellite baggage system; and new exterior walkways, stairs and elevators at Concourse C.

## Purpose:

- Improve the travel experience from airport drop-off to flight departure
- Improve working environment for employees

## Outcome:

- Facility modernization
- Seismic refinement of North Satellite
- Enhanced traveler amenities
- New Contact Gates
- Long term energy savings and operational efficiencies

# NorthSTAR Program

## ACTIVE PROJECTS

◆	C800554	WP 104802	NS NorthSTAR Program Management	George England, Program Mgr
◆	C800556	WP 104791	NS NSAT Renovation NSTS Lobbies	Greg Vouros, Project Mgr
●	C800547	WP 104784	NS Conc C Vertical Circulation	Joe Nessel, Project Mgr
●	C800545	WP U00042	NS Main Terminal Improvements	Joe Nessel, Project Mgr
▲	C800555	WP 104792	NS Refurbish Baggage System	Ken Warren, Project Mgr

## PENDING PROJECTS

C800554      WP TBD      NS Exterior Stairs Conc C&D

## EXPENSE PROJECTS

	WP 104656	Alaska NSAT & Conc C (CLOSED)	
●	WP U00072	NorthSTAR TI Work	Doug Honeyman, Project Mgr
●	WP U00094	PLB Relocation at C14	Joe Nessel, Project Mgr
◆	WP U00095	eGSE Relocation at Concourse C	Doug Honeyman, Project Mgr
●	WP U00129	CM Office	Joe Nessel, Project Mgr
●	WP U00130	BHS RMM	Ken Warren, Project Mgr
●	WP U00137	Project Activation	Doug Honeyman, Project Mgr

### Legend:

- ◆ - Reflects Additional Budget Required or Behind Schedule
- ▲ - Reflects concern on Budget and No Float remaining on Schedule
- - Reflects Good Status on Budget and Schedule

# Estimated Capital Cost: \$506M \*

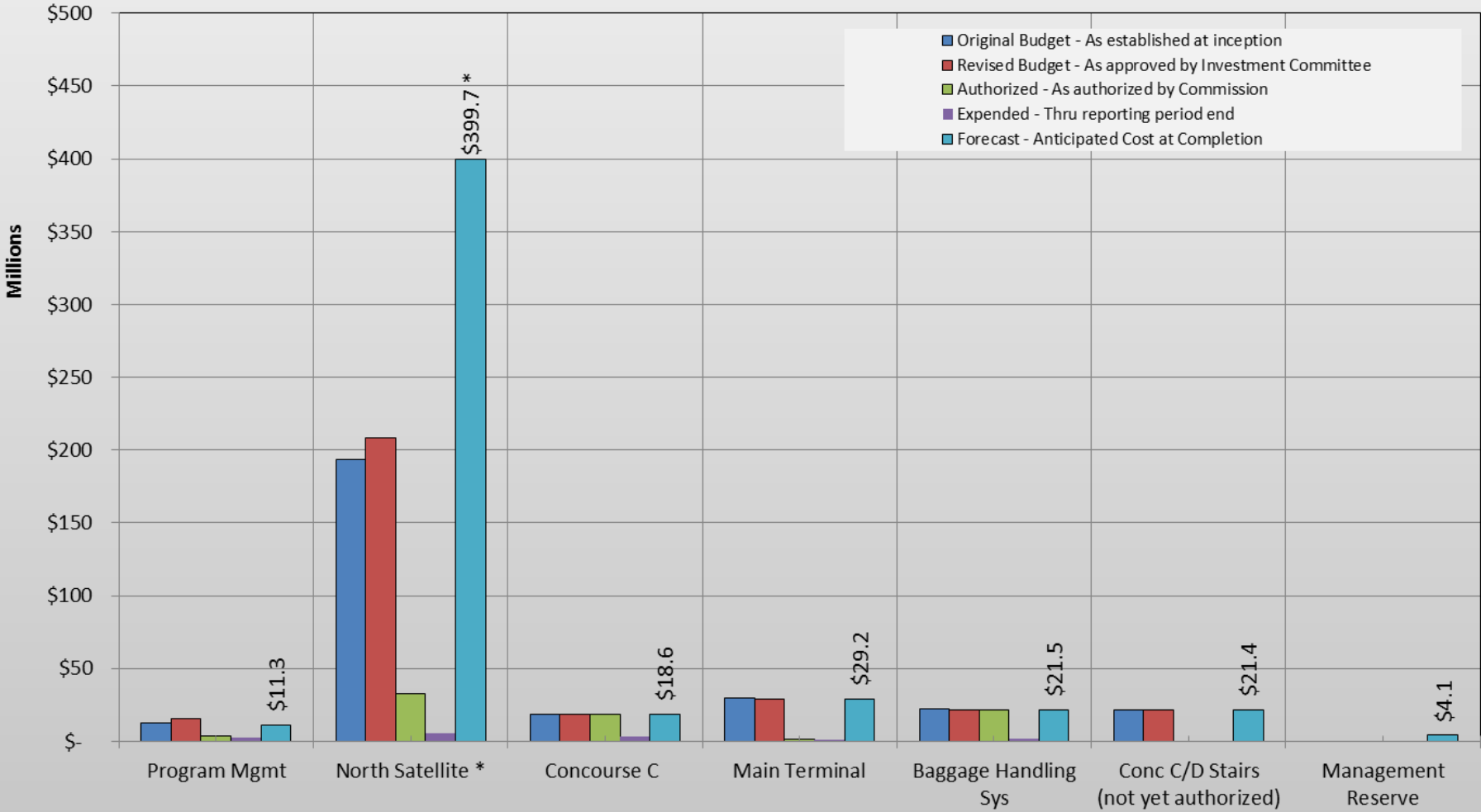
\* Forecasted cost include added aircraft gates and square footage at North Satellite for passenger hold rooms, concessions and increased level of service.

# NorthSTAR Program Overall Budget

FINANCIAL STATUS: NorthSTAR Program									Variance (over) / under CIP Bdgt
	Original Budget	Approved Transfers/Trends	Current Budget	Current Authorization	Pending Transfers/Trends	Remaining Contingency	Expended to Date	Forecast at Completion	
	\$	\$	\$	\$	\$	\$	\$	\$	\$
<b>C800544</b>									
NS NorthSTAR Program	\$ 13,000,000	\$ 2,400,000	\$ 15,400,000	\$ 3,600,000	\$ -	\$ 238,963	\$ 2,335,368	\$ 11,268,758	\$ (4,131,242.00)
<b>C800545</b>									
NS Main Terminal Improvements	\$ 30,000,000	\$ (800,000)	\$ 29,200,000	\$ 1,500,000	\$ -	\$ 2,606,000	\$ 66,887	\$ 29,200,000	\$ -
<b>C800547</b>									
NS Conc C Vertical Circulation	\$ 19,300,000	\$ (700,000)	\$ 18,600,000	\$ 18,600,000	\$ -	\$ 3,324,804	\$ 2,860,481	\$ 18,600,000	\$ -
<b>C800555</b>									
NS Refurbish Baggage System	\$ 22,000,000	\$ (497,500)	\$ 21,502,500	\$ 21,502,500	\$ -	\$ 4,552,612	\$ 1,727,205	\$ 21,502,500	\$ -
<b>C800556 *</b>									
NS NSAT Renov NSTS Lobbies	\$194,300,000	\$ 14,109,801	\$208,409,801	\$ 32,997,000	\$ 191,323,143	\$ 42,624,767	\$ 5,433,325	\$399,732,944	\$191,323,143.00
<b>MANAGEMENT RESERVE</b>	\$ -				\$ -	\$ 4,131,242		\$ 4,131,242	\$ 4,131,242.00
<b>Subtotal</b>	<b>\$278,600,000</b>	<b>\$ 14,512,301</b>	<b>\$293,112,301</b>	<b>\$ 78,199,500</b>	<b>\$ 191,323,143</b>	<b>\$ 57,478,388</b>	<b>\$ 12,423,266</b>	<b>\$484,435,444</b>	<b>\$ 191,323,143</b>
<b>C800554</b>									
NS Exterior Stairs Conc C&D	\$ 21,400,000	\$ -	\$ 21,400,000	\$ -	\$ -	\$ 3,168,779	\$ -	\$ 21,400,000	\$ -
<b>Total</b>	<b>\$300,000,000</b>	<b>\$ 14,512,301</b>	<b>\$314,512,301</b>	<b>\$ 78,199,500</b>	<b>\$ 191,323,143</b>	<b>\$ 60,647,167</b>	<b>\$ 12,423,266</b>	<b>\$505,835,444</b>	<b>\$ 191,323,143</b>
Expense / 104656 Alaska NSAT & Conc C			\$ 278,891	\$ 278,891	\$ -	\$ -	\$ 278,891	\$ 278,891	\$ -
Expense / U00072 NS Tenant Impvmt			\$ 315,400	\$ 315,400	\$ -	\$ -	\$ 143,463	\$ 315,400	\$ -
Expense / U00094 Conc C - PLB			\$ 275,000	\$ 275,000	\$ -	\$ -	\$ 80,076	\$ 133,200	\$ (141,800)
Expense / U00095 Conc C - eGSE			\$ 500,000	\$ 500,000	\$ -	\$ -	\$ 161,543	\$ 825,700	\$ 325,700
Expense / U00129 CM Office			\$ 10,000	\$ 10,000	\$ -	\$ -	\$ -	\$ 10,000	\$ -
Expense / U00130 BHS - RMM			\$ 500,000	\$ 500,000	\$ -	\$ -	\$ -	\$ 500,000	\$ -
Expense / U00137 Project Activation			\$ 50,000	\$ 50,000	\$ -	\$ -	\$ 443	\$ 50,000	\$ -
Expense / TBD NSAT - RMM			\$ 5,800,000	\$ 500,000	\$ -	\$ -	\$ -	\$ 5,800,000	\$ -

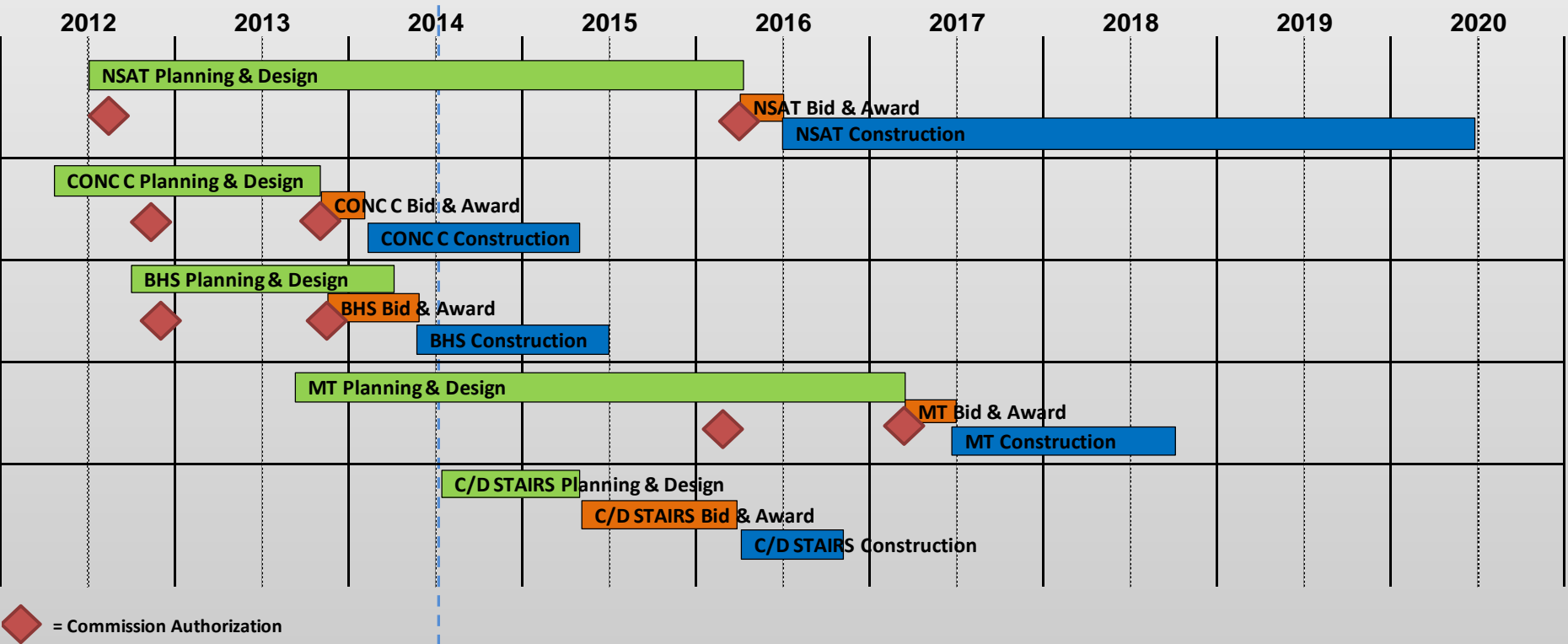
# NorthSTAR Program Overall Capital Budget

Estimated : \$506M \*



\* Forecasted cost include added aircraft gates and square footage at North Satellite for passenger hold rooms, concessions and increased level of service. Does not include \$5.8M of RMM "expense" costs.


# NorthSTAR Program Overall Schedule



North STAR Program Progress				
	Design Phase		Construction Phase	
	Plan	Actual	Plan	Actual
North Satellite/STS Renov.	71%	26%	0%	0%
Conc C Vertical Circulation	100%	100%	7%	12%
Refurbish Baggage Handling	100%	100%	71%	1%
Main Terminal Improvement	0%	0%	0%	0%
Conc C/D Exterior Stairs	0%	0%	0%	0%

# NorthSTAR Program Mgmt

## **CIP: C800544 – NS NorthSTAR Program Management**

 Program Behind Schedule

Management of the overall NorthSTAR Program to provide oversight, coordination, controls, consistency of approach and support at the programmatic level between stakeholders and projects to help ensure an efficient and successful execution of the entire program's objectives.

### **Accomplishments:**

- Finalized AAG program lead transition with Greg Smith
- Completed first quarter 2014 Commission briefing

### **Progress:**

- Continuing to update the Master Schedule to reflect most current baseline inclusive of changes to project design durations and scope
- Aviation programmatic linkage coordination reviews underway to assure airport-wide gate availability is not compromised during construction

### **Issues:**

- Tracking programmatic cost impacts due to current progress delays on specific NorthSTAR projects.

# NorthSTAR Program Mgmt

## CIP: C800544 – NS NorthSTAR Program Management (continued)

### Metrics:

Overall Program Progress	Actual	Planned /Forecast
Cashflow (for 2nd Qtr 2014)	\$261k	\$438k
Budget	\$15.4 M	\$15.4 M
Total Contingency Remaining *	\$4.36 M	\$0.84 M
SCS Participation (Program Mgmt)	33.1%	27.0%

\* - Includes Management Reserve

Note: This metric table reflects status for C800544 ONLY.

Prior Schedule metric was eliminated as it does not provide value for this CIP.

### Risks:

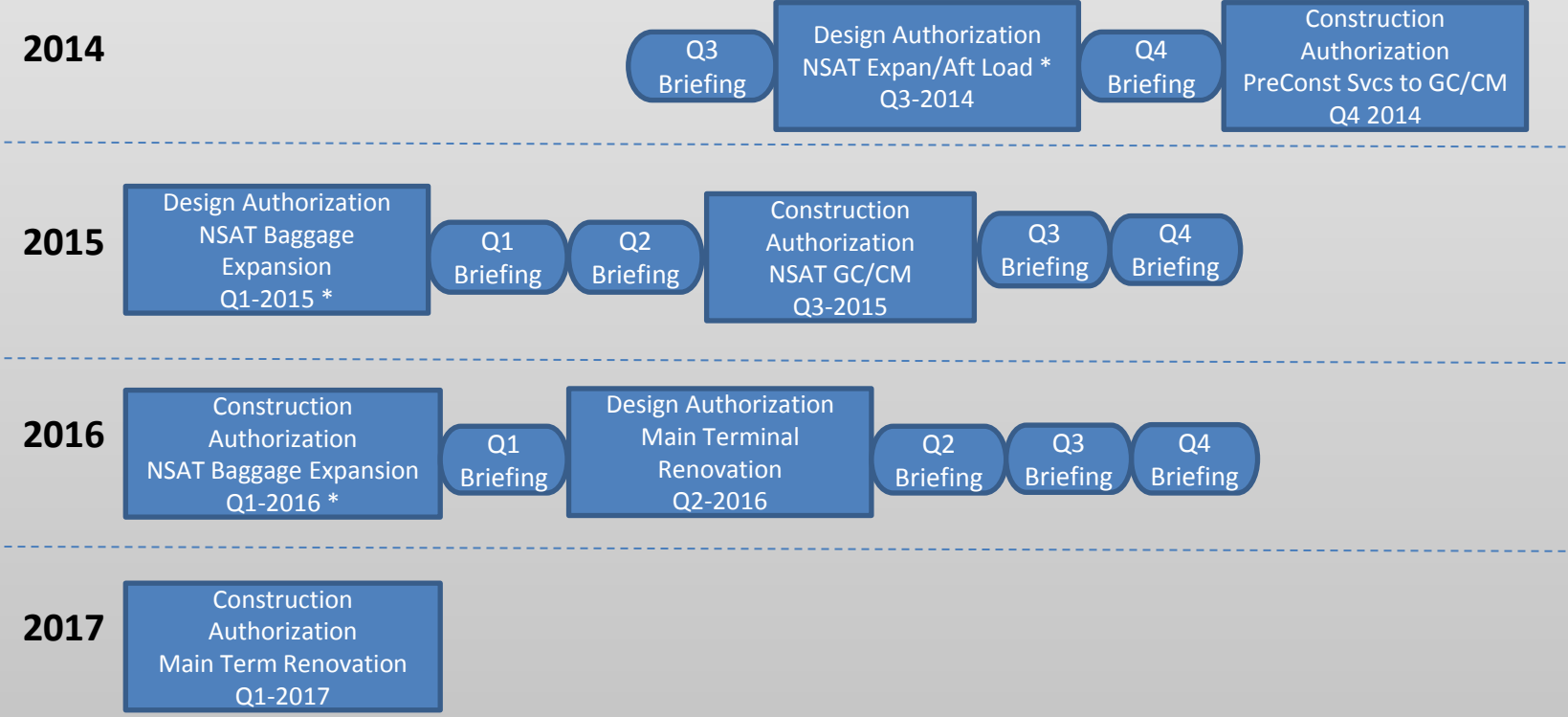
- Communication and coordination between multiple teams, stakeholders and people.
- Assure baseline schedule concurrence of all stakeholders.



# NorthSTAR Program Mgmt

**CIP: C800544 – NS NorthSTAR Program Management (continued)**

## ANTICIPATED COMMISSION ACTIONS



\* NSAT Baggage Expansion not included in current NorthSTAR scope or budget.

# NS NSAT Renovation & NSTS Lobbies

◆ Project Behind Schedule  
Budget Action Pending

## CIP: C800556 - NS NSAT Renovation & NSTS Lobbies

Renovation and expansion of the entire North Satellite, including infrastructure, seismic reinforcement, gate relocations, north loop STS stations, and new penthouse shell to provide an improved travel experience for customers, improved working environment for employees and long-term energy savings and operational efficiencies.

### Accomplishments:

- Completed analysis of STS North Loop passenger capacity, showing the system can handle the expansion.
- Completed and submitted MII ballot to airlines for expansion and the associated budget increase.
- Completed analysis of future NSAT baggage system capacity.
- Presented NSAT to Architectural Review Committee.

### Progress:

- Continuing to evaluate gate utilization and availability during construction
- Continuing to prepare acquisition documents for General Contractor/Construction Manager (GC/CM) alternative contract delivery method
- Finalizing sustainability analysis for presentation to Port and AAG steering committees.
- Assisting AAG on analysis of aircraft layouts and ground equipment at NSAT gates.

## Future North Satellite View from North Entry Drives

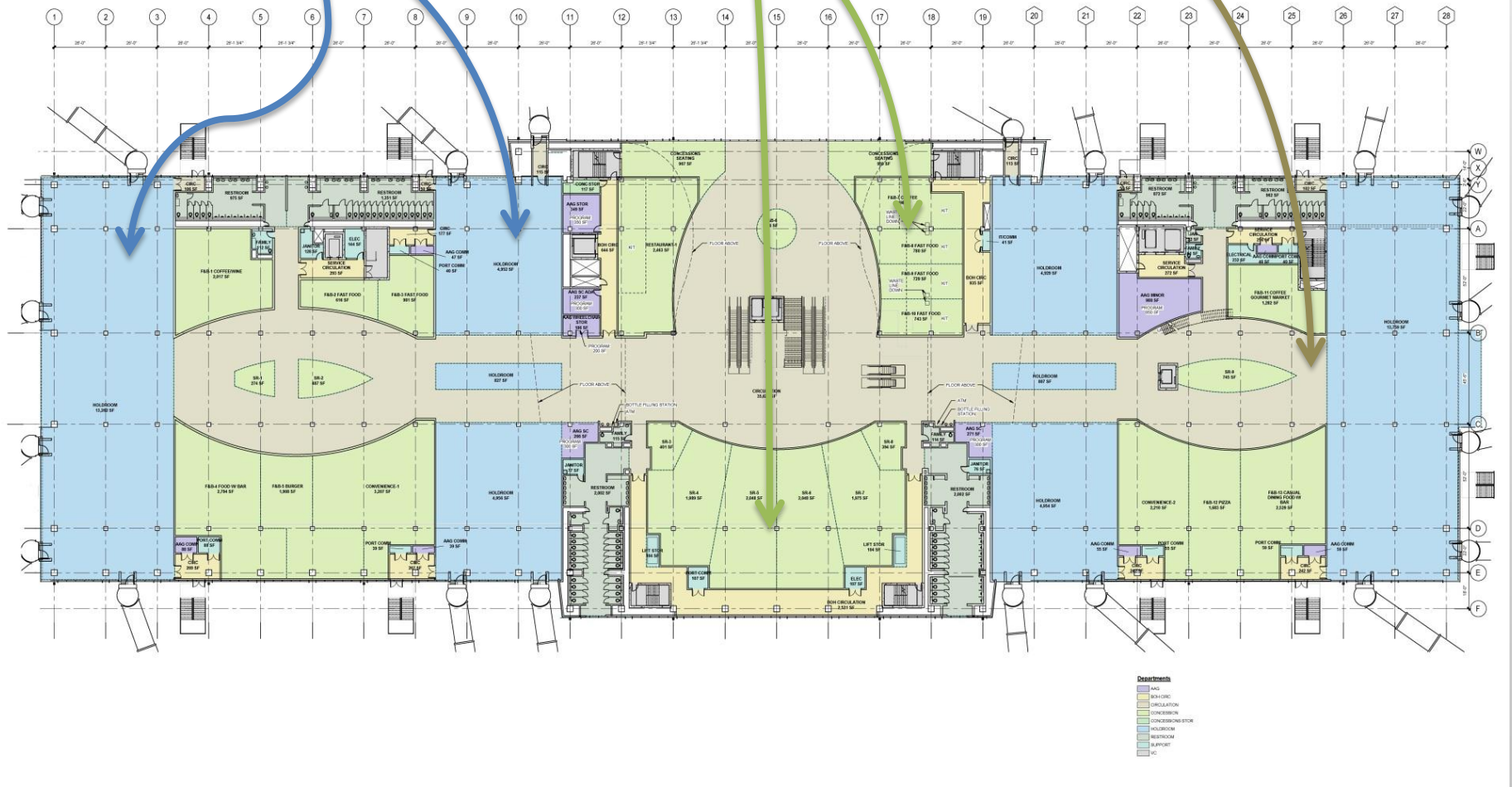


# North Satellite Concourse Floor Plan

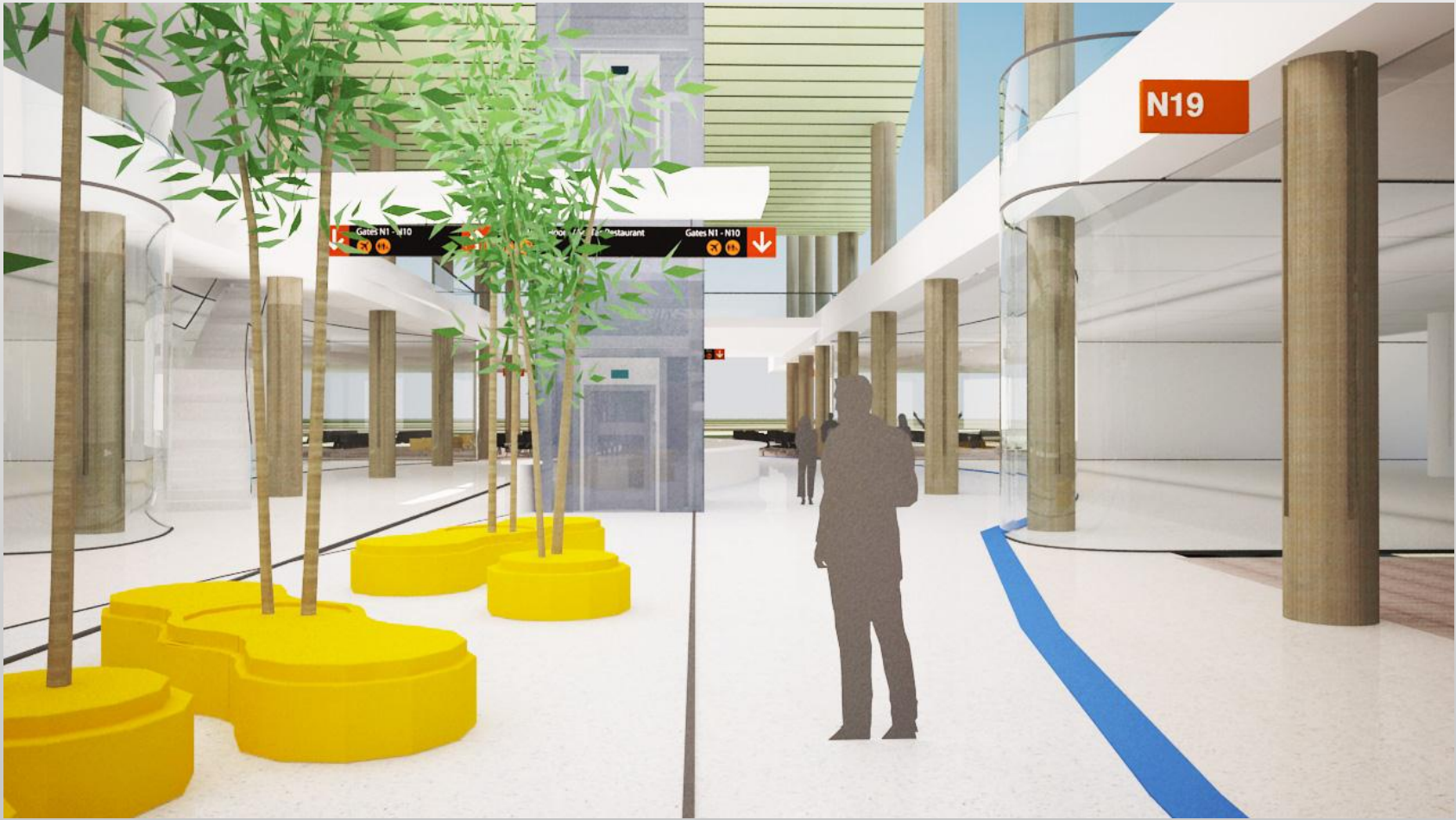
Improved Hold Rooms

Improved Concessions Space

Improved Traveler Wayfinding



# North Satellite Conceptual Interior Rendering



Center walkway receives daylight from above and provides better visibility and wayfinding for travelers.

# NS NSAT Renovation & NSTS Lobbies

## CIP: C800556 - NS NSAT Renovation & NSTS Lobbies (continued)

### Issues:

- Current forecasted construction completion date is Q1 2020 based upon expansion.
- Future NSAT baggage system capacity as needed to allocate adequate space for additional piers.

### Metrics:

Project Metrics	Actual	Planned /Forecast
Cashflow this reporting period	\$1.0 M	\$1.6 M
Project Contingency Remaining	\$42.6 M	\$40.7 M
SCS Participation (Design)	25.6%	6.0%
SCS Participation (Const)	0.0%	0.0%

### Risks:

- Existing mechanical and electrical capacity may not be adequate for NSAT expansion.
- Mitigation of the existing 400Hz motor generators condition may increase costs.
- Baggage handling system refurbishment requirement may be impacted by expansion decision.

# NS Concourse C Vertical Circulation

## **CIP: C800547 - NS Concourse C Vertical Circulation**

 Project Status Good

Increase efficiency and improve customer service through improved vertical circulations at Concourse C .  
Includes 1:20 walkways with elevators at C2/4, C10 and C14.

### **Accomplishments:**

- Forma Construction began construction activity. Micropiles and grade beams installed at C2 & C16, elevator pit excavated at C2, and excavation started at C10
- Project schedule re-baselined after receipt and acceptance of Forma Construction schedule
- Temporary walkway installed at all three locations by AAG/PCL
- eGSE chargers removed from C2 and design at 90% for relocation
- Investment Committee approved replacement of exterior wall panels at PLB doors & removal of unused exterior gate signs.
- Underground grease interceptor piping scope and funds transferred into the project due to similar work and to minimize disruption to airline

### **Progress:**

- Construction activity proceeding at C2, C10 and C16
- Finalizing plans for directional static signage in walkways

**CIP: C800547 - NS Concourse C Vertical Circulation - Progress photos**



**C2 – Elevator Pit and Stem Wall Excavations**



**C16 – Grade Beam Excavations and Panel Removals**



**C2 – Micropile Installation**



**C10 - Removal of Pavement for Waterline Relocation**



# NS Concourse C Vertical Circulation

## CIP: C800547 - NS Concourse C Vertical Circulation (continued)

### Issues:

- none

### Metrics:

Project Metrics	Actual	Planned /Forecast
Delayed Outbound Bags	0	0
Delayed Outbound Flights	0	0
Safety Hazard Reports (Level 2+)	1 *	0
Customer Complaints Received	0/mo	<5/mo
Project Contingency Remaining	\$3.3 M	\$2.0 M
SCS Participation (Design)	31.8%	34.9%
SCS Participation (Const)	0.0%	6.0%

\* Flight attendant tripped on construction survey marker resulting in injury and lost work time.

### Risks:

- Unforeseen underground utilities

# Main Terminal Improvements

## CIP: C800545 - NS Main Terminal Improvements

 Project Status Good

Curbside revisions, ticket lobby upgrades, reconfiguration of Main Terminal North Checkpoint (#5), signage and dynamic messaging to improve the customer experience, operating efficiencies and overall aesthetics of the North Main Terminal.

### Accomplishments:

- Selected Landrum & Brown for Facility Determination Analysis

### Progress:

- Contract paperwork submitted and rate analysis is underway

### Issues:

- Coordination with the NSAT design concept to ensure a cohesive look/feel.
- Coordination with AAG & TSA on Checkpoint 5 reconfiguration.
- Coordination with upcoming Sustainable Master Plan and Terminal Development Strategy.


### Metrics:

- TBD

### Risks:

- Least defined scope relative to the program budget.

# NS Refurbish Baggage System

 Project has no float remaining on the Schedule

## **CIP: C800555 - NS Refurbish Baggage System**

Refurbishment of existing baggage system in support of Alaska Air Group (AAG) operations on the North Satellite and Concourse D extending the service life of part of the C92, C88 North Satellite and C88 tunnel systems.

### **Accomplishments:**

- CPO awarded construction contract to MD Moore. First construction meetings held
- Central Equipment Room power under construction by PCS for Main Baggage Controls
- Construction of NSAT tunnel completed by PCS

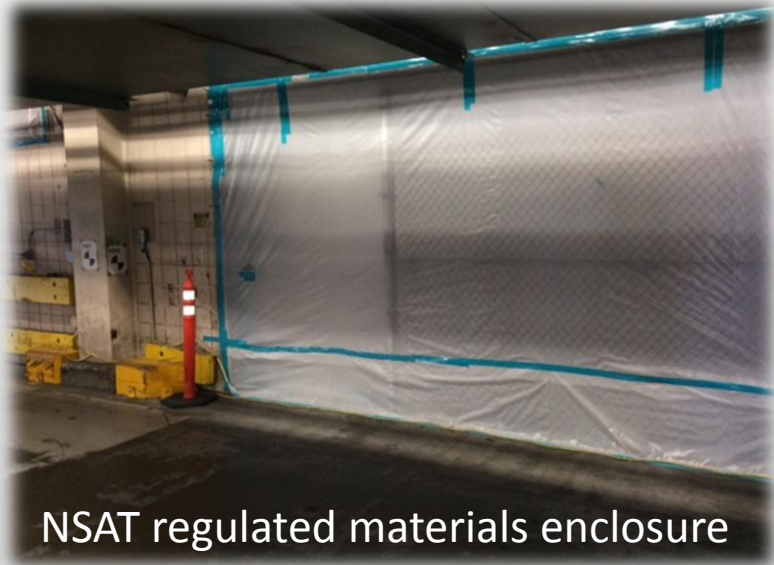
### **Progress:**

- Closing existing design service directives and consolidating construction support effort in one service directive
- Began work resolving Motor Control Panel issue

### **Issues:**

- Design consultant performance resulted in schedule delays to overall project schedule and prompted closer scrutiny of deliverables for quality and design intent
- Motor Control Panel room may need to be relocated to avoid future conflict with seismic improvements.

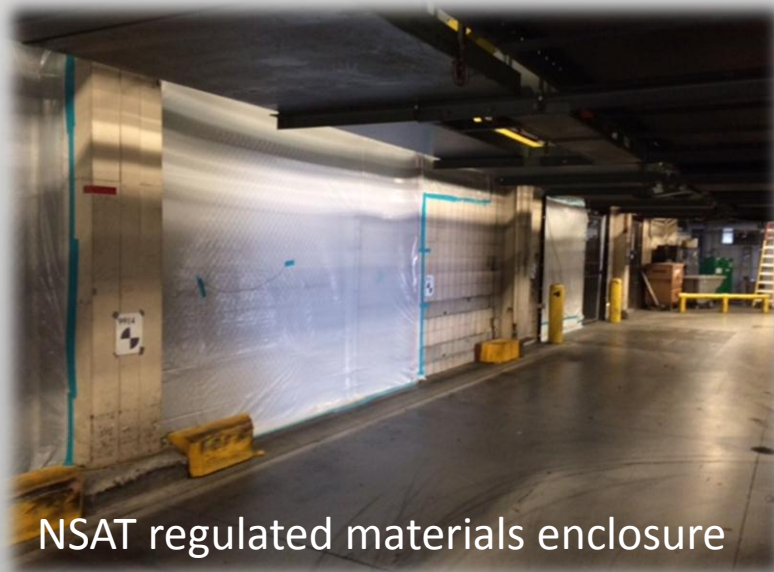
# CIP: C800555 - NS Refurbish Baggage System - Progress photos



NSAT regulated materials enclosure



NSAT regulated materials enclosure



NSAT regulated materials enclosure



Concourse D Conveyor Demolition

# NS Refurbish Baggage System

## CIP: C800555 - NS Refurbish Baggage System (continued)

### Metrics:

Project Metrics	Actual	Planned /Forecast
System Shutdowns	1	10
Operational Impacts	0	8
Unplanned System Downtime < 15 min	0	0
Construction Change Orders processed	0	0
Project Contingency Remaining	\$4.6 M	\$1.3 M
SCS Participation (Design)	19.0%	14.3%
SCS Participation (Const)	0.0%	5.0%

### Risks:

- NSAT expansion decision may impact baggage handling system refurbishment requirements as to capability to handle forecasted bag volume and speed. Evaluating mitigation options
- TSA baggage optimization may have impacts to overall project schedule and scope

## NS Concourse C&D Exterior Stairs

### **CIP: C800554 - NS Concourse C&D Exterior Stairs**

Addition of exterior stairs to Concourse C & D to enable Dual Door enplaning & deplaning loading of aircraft at locations identified by Alaska Air Group (AAG).

### **Accomplishments:**

- This is a Status 1 prospective project. A decision whether to include in the program will be made in the future.