

Item No.	7b_supp
Date of Meeting	July 22, 2014

North Satellite Renovation & STS Lobbies Project (CIP 800556)



Briefing Content

- Shared Port / Alaska Airlines Vision and Goals
- Design Complexity
- Drivers For North Satellite (NSAT) Expansion
- NSAT Expansion Design
- Project Contracting Delivery Approach
- Financial Update - Expansion
- Video Simulations of North Satellite

Shared Vision & Goals

Port / Alaska Airlines

- Create a Northwest sense of place
- Support Port and Alaska Airlines (AAG) business goals
- Provide travelers with user-friendly innovations fostering ease of use, intuitive wayfinding and hassle-free travel
- Provide exemplary level of passenger service using passenger survey results and International Air Transportation Association (IATA) standards
- Accommodate future airline growth
- Incorporate sustainable design

Design Complexity Challenges

- Limited Available Interior Space
- Low Level of Service
- Constrained Vertical Circulation
- Difficult Wayfinding
- Aging Infrastructure

Design Complexity

Limited Available Interior Space

Challenge	Solutions
<p data-bbox="146 479 852 605">Limited Available Interior Space</p> <ul data-bbox="146 619 913 791" style="list-style-type: none"><li data-bbox="146 619 913 791">• Balance Airline (AAG), airport dining & retail and traveler needs	<p data-bbox="991 479 1634 605">Consolidate and Share Space</p> <ul data-bbox="991 619 1779 1110" style="list-style-type: none"><li data-bbox="991 619 1634 662">• Consolidate holdrooms<li data-bbox="991 676 1634 791">• Centralize passenger circulation path<li data-bbox="991 805 1634 919">• Create gate lobby and concession nodes<li data-bbox="991 933 1779 1110">• Share seating (airport dining & retail, public, holdroom); all visible to gates

Design Complexity Level of Service

Level of Service Level E



Level of Service Level B+



Design Complexity

Level of Service

Challenge	Solutions
Low Level of Service <ul style="list-style-type: none">• IATA of Levels of Service range: (A-F)• Improve NSAT current level of service from D/F to B+	Consolidate and Share Uses <ul style="list-style-type: none">• Consolidate and integrate uses to reduce required floor area and enable shared use of space• De-centralize restrooms• Provide easier and intuitive wayfinding

Design Solution Consolidated & Shared Space



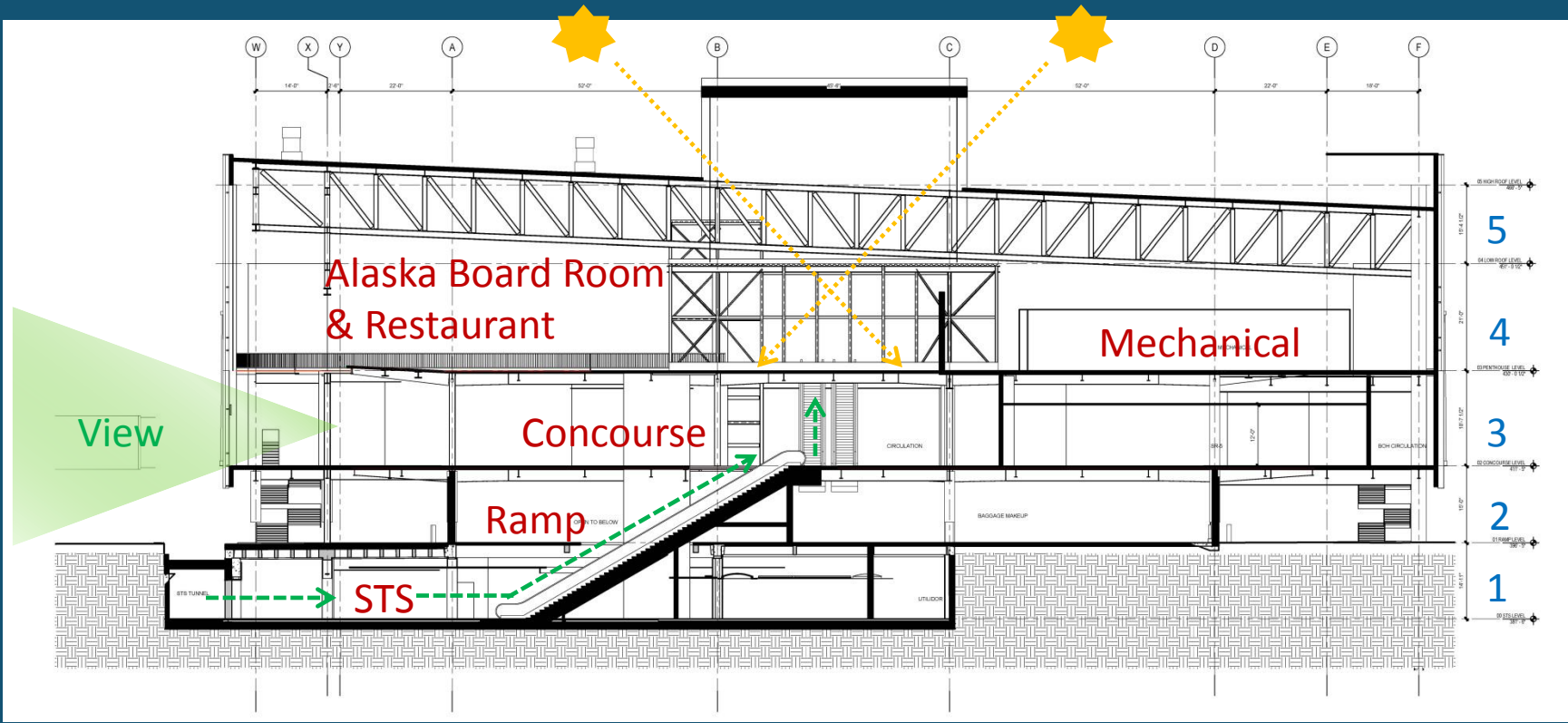
Design Complexity

Constrained Vertical Circulation

Challenges	Solutions
Constrained Vertical Circulation <ul style="list-style-type: none">• Improve passenger flows through NSAT and STS stations• Improve deliveries and operations• Improve access to all levels• Link vertical infrastructure cores (HVAC, etc.)	Locate Elevators and Escalators to Match Flow Patterns <ul style="list-style-type: none">• Increase number and visibility of elevators• Co-locate passenger and service elevators• Locate elevators and escalators where needed most

Design Solution

Improved Vertical Circulation



Design Complexity

Difficult Wayfinding

Challenges	Solutions
Difficult Wayfinding <ul style="list-style-type: none">• Provide more intuitive wayfinding for passengers within NSAT• Provide more intuitive wayfinding for passengers connecting between NSAT, Concourse C and the Main Terminal	Improve Wayfinding <ul style="list-style-type: none">• Create open sight lines• Provide open and unobstructed travel paths• Improve sign placement and sign terminology• Create markers (art, signage, design features) in STS stations and on Concourse level

Design Solution

Consolidated & Shared Uses



Design Complexity

Aging Infrastructure

Challenges	Solutions
Obsolete Facility and Infrastructure <ul style="list-style-type: none">• Aging HVAC and systems infrastructure (40+ years)• Confined passenger areas• Inadequate back of house support space• Uncomfortable and crowded gate lobbies	Improve Building Infrastructure <ul style="list-style-type: none">• Seismically reinforce NSAT for life safety• Install energy efficient systems• Provide larger and better located support areas• Upgrade data and wi-fi performance / coverage

Drivers for NSAT Expansion

- Airlines
- Travelers
 - Level of Service (LOS) Rating (Using IATA Standards)
 - LOS Without Expansion: D through F
 - LOS With Expansion: B+; allows for growth
 - Dining, beverage and retail areas
 - Current Area: Approximately 19,000 SF
 - Projected Need: Approximately 48,000 SF
 - With Expansion: Approximately 46,000 SF

Recommendation

Expand NSAT to 20 Contact Gates

- Least cost option for adding gate capacity at Sea-Tac
 - Expand SSAT or Concourse A - demolition of hangars (AAG,DL)
 - Expand Concourse D – relocation of expressway for only 3 gates
 - No opportunity to expand Concourses B and C
- Consistent with long-range airport expansion plan
- Airlines approved this project
- Greatly enhances LOS for North Satellite passengers
 - Restrooms, holdrooms, concessions and passenger amenities)
- Without expansion:
 - Airport-wide gate capacity requirements not met
 - Increases hardstand passenger loading & unloading
 - Increases holding passengers on aircraft more frequently

NSAT Expansion Design

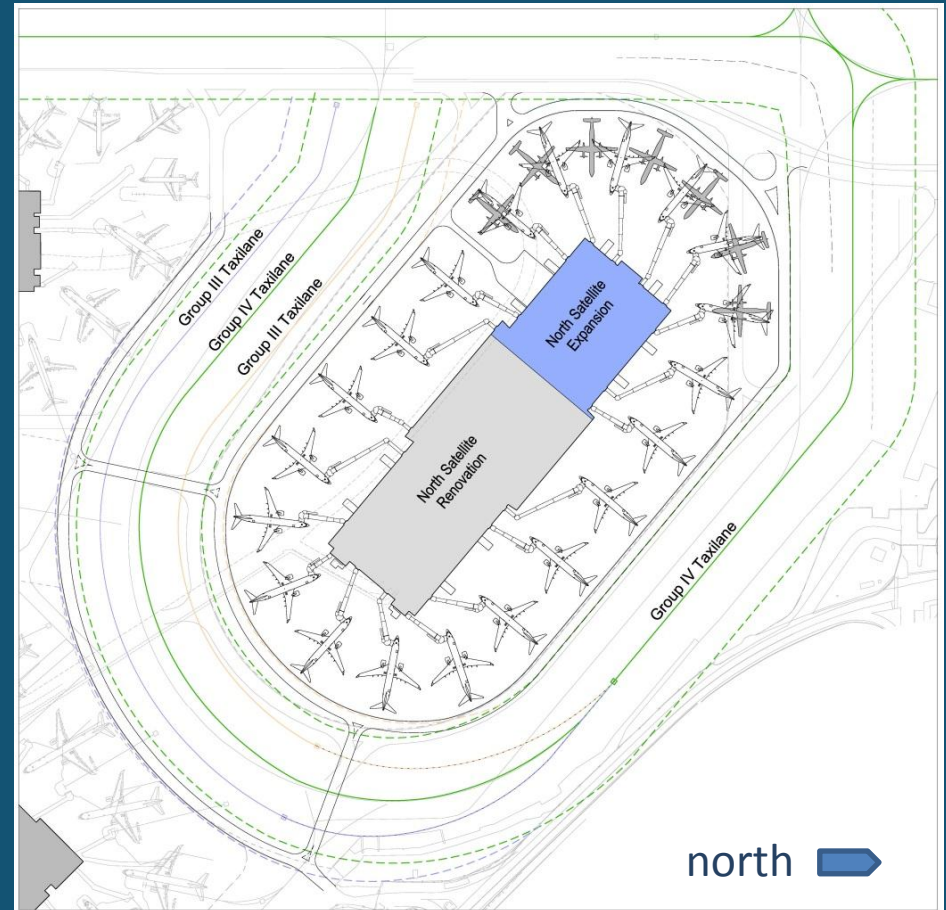
20 Gate Layout

Aircraft Positions

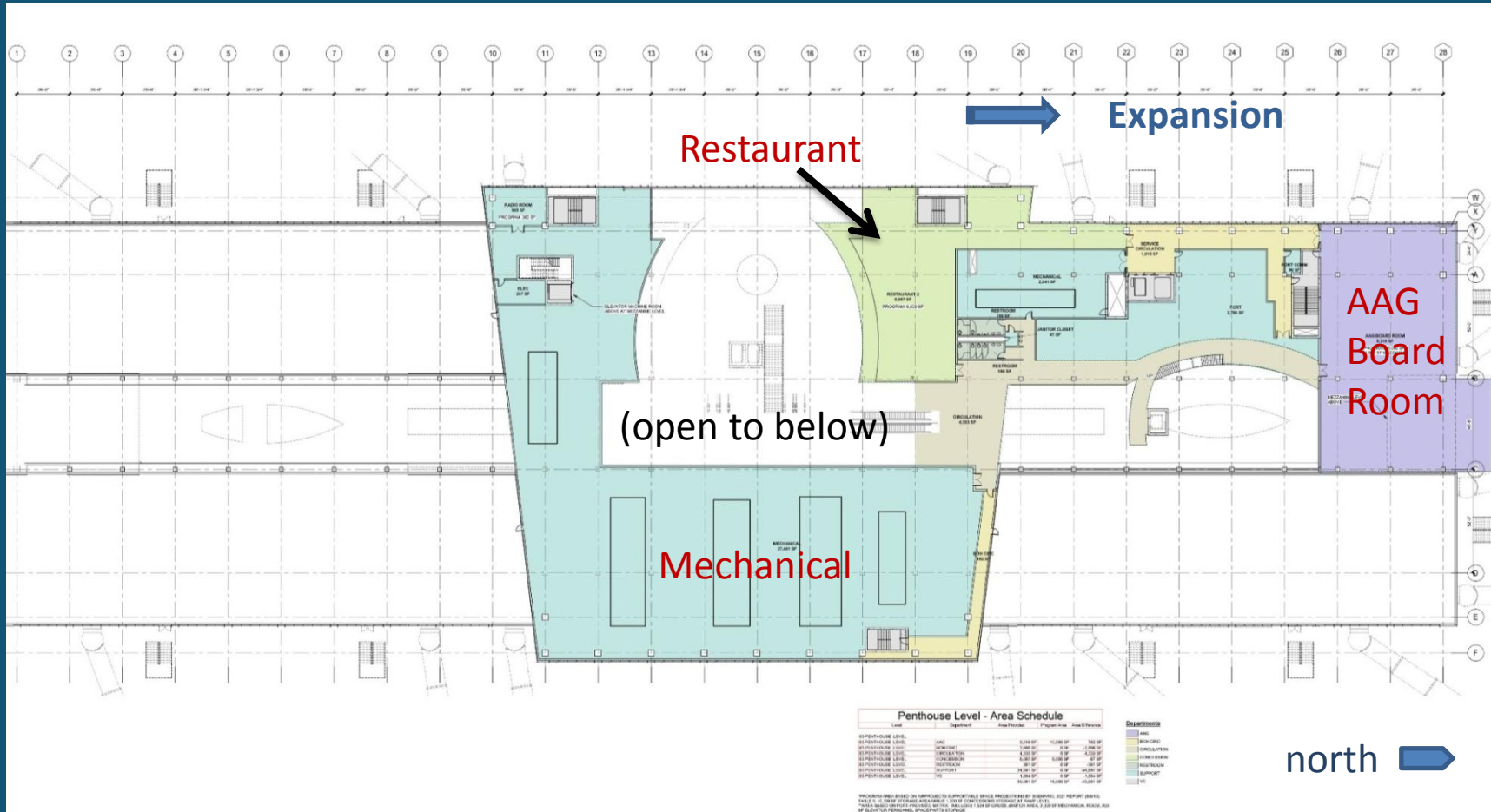
Loading Bridge = 20*

Ground Load = 7*

* North end will accommodate both 6 loading bridge positions and 7 ground load positions for flexibility



NSAT Expansion Design Mezzanine



Mechanical

Circulation

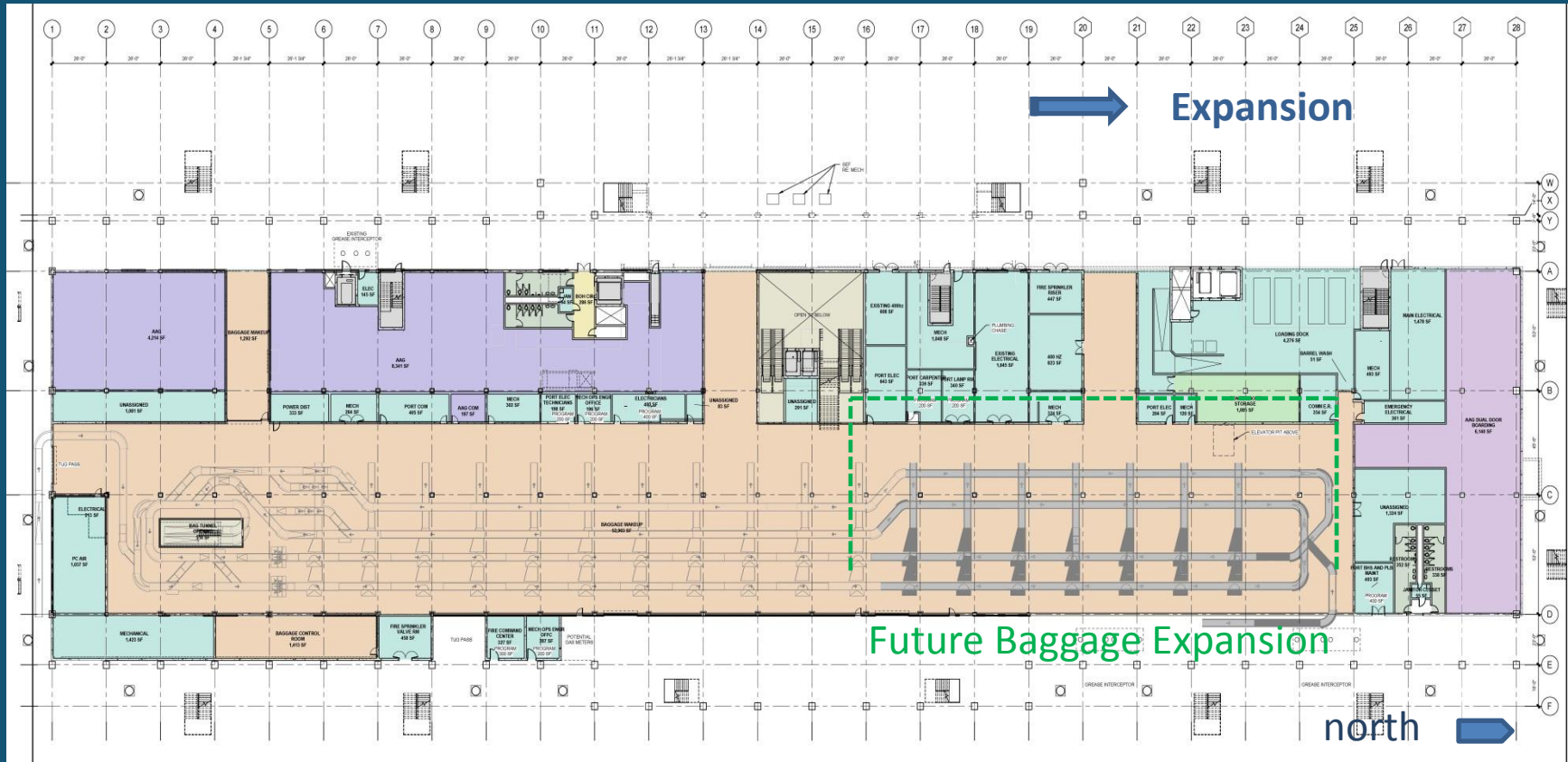


Restaurant

AAG Board Room

NSAT Expansion Design

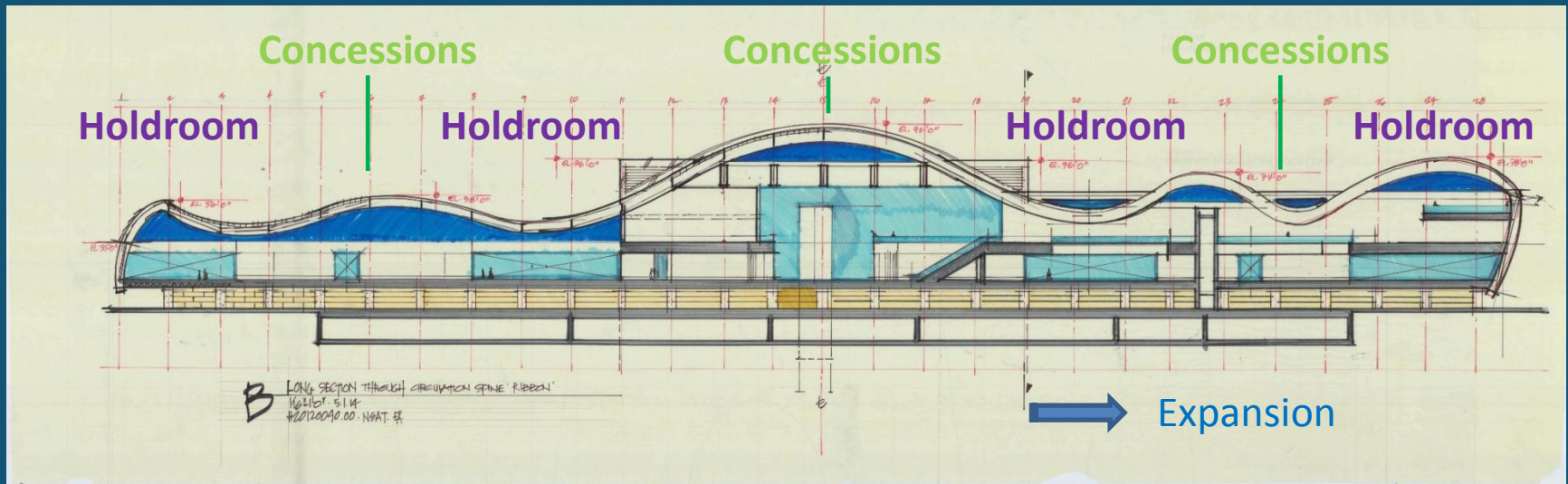
Ramp & Space for Future Baggage Expansion



- Infrastructure
- Baggage Operations
- AAG Operations

NSAT Expansion Design

Benefits of Roof Form



NSAT Expansion View From Airport Drives



Sustainability In Design

- High Performance Building Systems (HVAC, Lighting)
- High Performance Glass and Building Envelope
- Water Conserving Fixtures
- Interior Daylighting
- Regionally Sourced Materials
- Materials with High Recycle Content
- White “Cool” Roof Materials for Heat Reflection
- Informative / Interactive Opportunities for Passengers

Project Contracting Approach

Recommendation:

Use General Contractor/Construction Manager (GC/CM) with Prequalified Mechanical & Electrical Subcontractors

The Project Meets RCW 39.10.340 Criteria

- Complex scheduling, phasing and coordination
- Facility must continue to operate during construction

Benefits of GC/CM

- Early involvement by general contractor, electrical & mechanical subcontractors improves the design and value engineering process
- Opportunity to perform early work or long lead procurement
- Potential to minimize operational impacts
- Input into construction phasing plans
- Confirmation of construction costs in parallel with design completion
- Opportunity to use 3-dimensional modeling during design phase to reduce systems conflicts, lower costs, and reduce the potential of change orders

North Satellite Financial Update

July 29, 2014, Commission Authorization Request:

- Current Project Budget..... \$214.2 M
 - Renovate existing building, add 3 PLB gates (15 total)
- Requested Budget Increase..... \$191.3 M
 - NSAT Expansion
 - Expand building by 9 structural bays (240 feet)
 - Add 181,000 square feet & 5 additional gates (20 total)
 - Vertical circulation for passenger aft loading/unloading
 - Includes Outside Services
 - Legal Support for GC/CM Procurement
 - GC/CM Contracting Approach
 - Preconstruction Services
- Total NSAT Project Budget..... \$405.5 M



NSAT Exterior - Concept

- Video to play

NSAT Interior - Concept

- Video to play

