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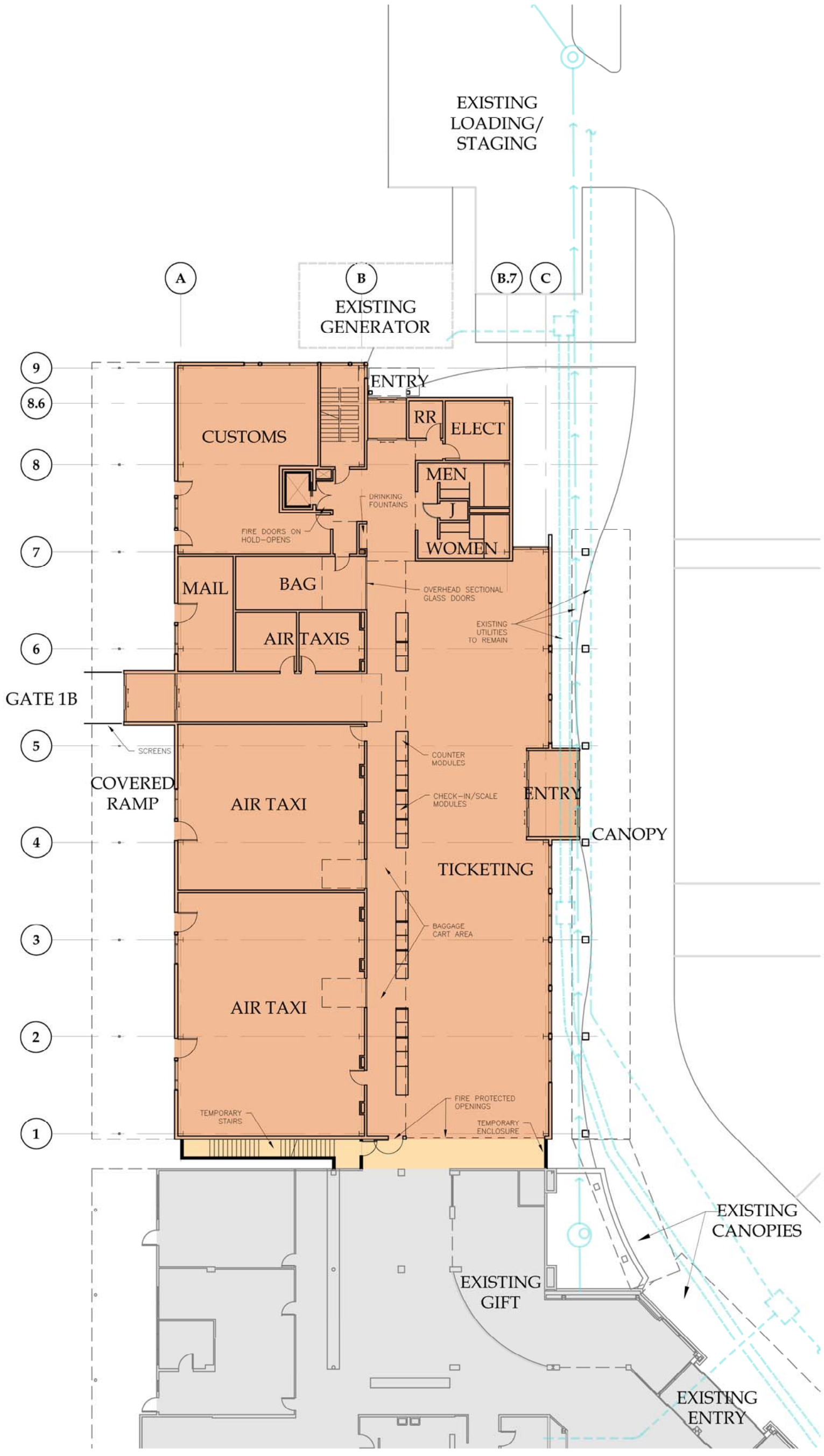

First Level

NORTH WING REPLACEMENT CONCEPT

Juneau International Airport Renovation - Phase II

September 4, 2014

SCALE: 0 4' 8' 16' 32'

Jensen Yorba Lott Inc.

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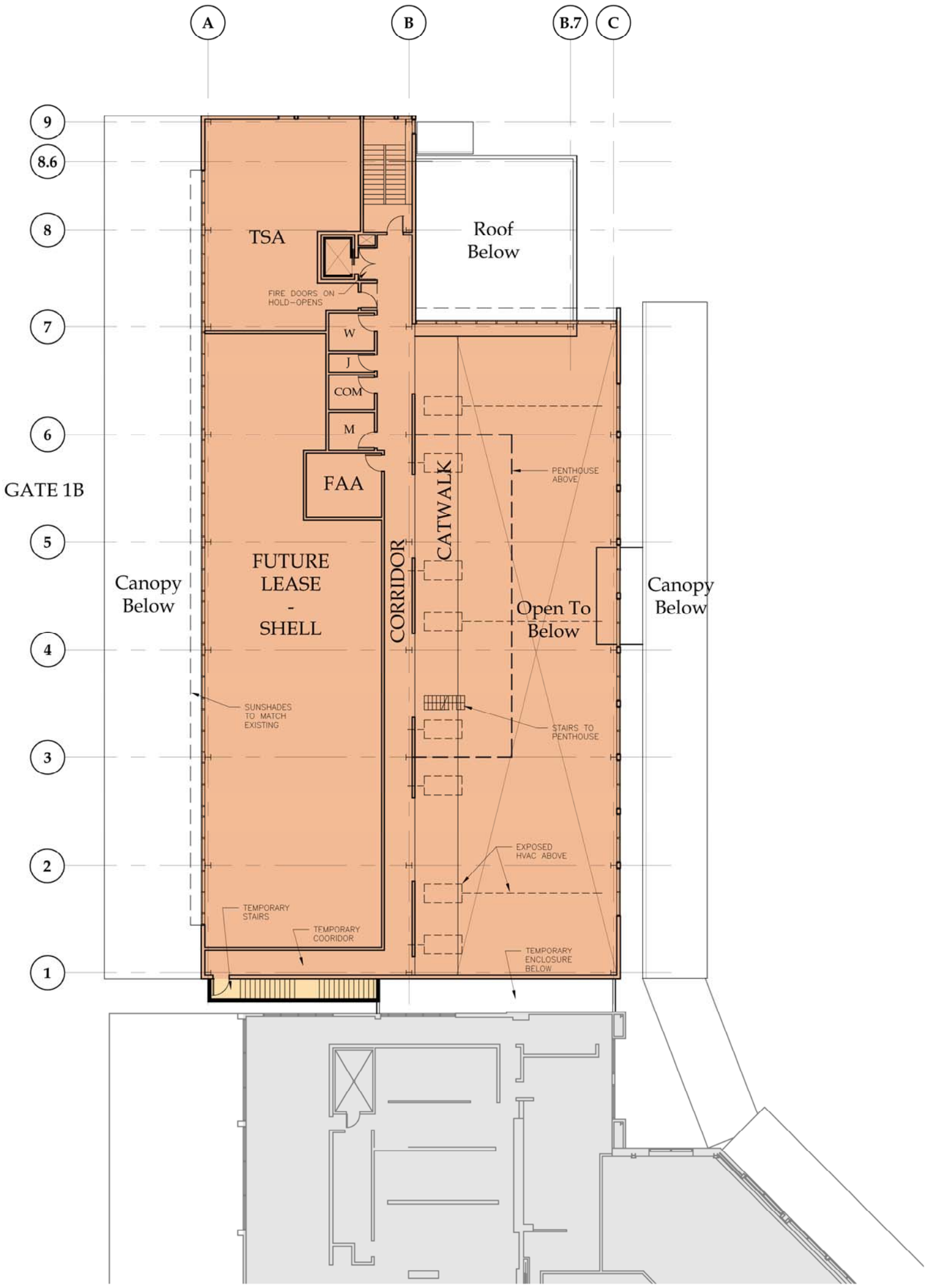

Second Level

NORTH WING REPLACEMENT CONCEPT

Juneau International Airport Renovation - Phase II

September 4, 2014

SCALE: 0 4' 8' 16' 32'

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HMS Project No.: 14037

CONCEPTUAL DESIGN COST SUMMARY

	Material	*Labor*	*Total*
01 - SITE WORK	$ 505,223	$ 546,113	$ 1,051,336
02 - SUBSTRUCTURE	196,619	165,254	361,873
03 - SUPERSTRUCTURE	578,571	562,640	1,141,211
04 - EXTERIOR CLOSURE	533,524	261,151	794,675
05 - ROOF SYSTEMS	309,848	165,327	475,175
06 - INTERIOR CONSTRUCTION	309,991	309,234	619,225
07 - CONVEYING SYSTEMS	78,600	31,510	110,110
08 - MECHANICAL	420,855	382,980	803,835
09 - ELECTRICAL	467,496	451,779	919,275
10 - EQUIPMENT	27,233	6,921	34,154
11 - SPECIAL CONSTRUCTION	0	0	0
SUBTOTAL:	*$ 3,427,960*	*$ 2,882,909*	*$ 6,310,869*
12 - GENERAL REQUIREMENTS			1,756,084
SUBTOTAL:			*$ 8,066,953*
13 - CONTINGENCIES			1,480,931
TOTAL ESTIMATED CONSTRUCTION COST (BID JUNE 2015):			***$ 9,547,884***
COST PER SQUARE FOOT:			*$ 486.42 /SF*
GROSS FLOOR AREA:			*19,629 SF*

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Jensen Yorba Lott Inc.

Juneau International Airport
North Wing Replacement

Conceptual Narrative – Architectural

September 4, 2014

GENERAL PROJECT DESCRIPTION

The Juneau International Airport terminal was originally constructed around 1948. Several additions and renovations have occurred over the years, with major ones around 1957, 1973, 1984, and 2010. The latest 2010 renovations are part of a master plan to renovate the 1984 areas and replace all other areas.

The proposed current phase of work is the north wing replacement. This is the original 1948 building, currently used for Part 135 Air Taxis, Customs and other miscellaneous offices. The goal of this phase is to bring the Part 135 area up to the same standards and quality of construction, energy efficiency and space as the 2010 renovations.

To accomplish this, the original 1948 building will need to be demolished, as it is too out-of-date to support modern HVAC systems, has structural limitations that prevent additions or modifications, and has many code and operational deficiencies. There will be approximately 20,300 s.f. of complete demolition; which includes existing canopies and a phased demolition of 600 s.f. of the existing generator room. The proposed replacement structure is 20,600 s.f.; which includes shell space and a mechanical penthouse. There is an additional 4,300 s.f. of new canopies. This building will contain space for (4) Air Taxi services, ticketing and waiting areas, Customs, TSA break and training area, miscellaneous offices, restrooms, janitor closets and utility rooms. It also includes shell, or unfinished, space for future office leases on the second floor. The work area is proposed to be securely fenced along the airfield side so that the construction crew, in general, will be limited in the use of security badges.

PHASING

Due to the requirement to maintain services and utilities throughout construction, the project will be constructed over approximately 18 months, starting in the Fall so as to impact only one Summer season.

The initial work will prepare temporary facilities in the existing terminal to accommodate the Air Taxi services and other tenants of the current North Wing. See the attached Temporary 135 Services drawings. A new temporary Gate 1/Waiting area will be crafted out of existing back-of-house space. The new Gate 1/Waiting area will require the demolition of a small service elevator and machine room and the exterior wall at this location, new finishes and an extended exterior wall with doors and windows will be required. These temporary renovations will reuse as many components – such as doors and windows – as possible.

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Once tenants are relocated to other areas of the terminal, the next phase encompasses the demolition of the 1948 area – with the exception of the existing generator room – and the construction of the new building. A temporary light-gauge framed enclosure and exit stair will be built to connect the new building with the existing terminal to remain.

The existing generator room will be demolished near the end of construction, once the new generator and electrical are in place. Site work will be completed at this time. The following outline provides general scope and design assumptions about the project.

DEMOLITION

- Existing Generator Room to remain during construction, shored as required.
- The remainder of the 1948 building and a portion of the 1973 addition to be demolished in entirety.
- The covered ramp and curbside canopy is to be demolished in entirety.
- Existing electrical conduits, communication conduits and sewer line – all along curbside – are to remain and be protected.
- A temporary air handler placed on the roof of the existing terminal to remain will replace the air handler being demolished, connecting into the existing ductwork outside of the north wing.
- Hazardous materials to be abated include pipe fittings.

EXTERIOR CONSTRUCTION

Roof, R-46, see attached SK-3 Roof Assembly:

- Pre-colored, galvanized sheet metal coping and flashing
- Single-ply, PVC fully adhered membrane
- Sloped rigid foam insulation
- Vapor barrier over substrate board
- Metal decking, see structural
- Integral drains and overflow in a single sump

Walls, R-26, see attached SK-1 Wall Assembly and SK-2 CMU Wainscot:

- Dri-design, pre-colored, galvanized sheet metal panel system in (2) colors to match the existing
- Weather barrier
- Galvanized “Z” girts with rigid insulation fit in-between
- Metal studs attached to structural frame with batt insulation
- Vapor barrier
- Gypsum wall board
- West and north elevations to have a 48” high 16x8x4 CMU veneer wainscot.

Floors, R-10

- Concrete slab on grade
- Rigid insulation
- Vapor barrier
- Sand base

Windows:

- Kawneer 1600UT 4-sided, thermally broken curtain wall
- Dual glazed, low-e glass

Doors:

- Automatic sliding doors at entry vestibules with emergency break-out function.
- Insulated steel doors, factory primed and field finished.

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INTERIOR CONSTRUCTION

Partitions:

- Metal studs, ran from floor to roof/floor deck above.
- Acoustical batt insulation
- Gypsum wall board, single layer each side; (2) layers each side at demising walls
- Paint, (2) colors
- Tile at Restrooms
- FRP wainscot at Janitor closets

Doors:

- Solid core wood doors with narrow lite at suite entrances
- Brushed chrome hardware, levers
- Pre-colored, knock-down metal door frames
- Overhead sectional doors with lites in each section; smaller sectional doors at Air Taxis to have obscure glazing.

Floors:

- Ticketing/Waiting, Air Taxis, Bag, Mail, Customs (partial), Restrooms, Janitor closets, stair enclosures, utility rooms and first floor corridor to have exposed and sealed concrete, with exposed aggregate
- Customs (partial), TSA, FAA and second floor corridor to have modular carpet tile, type 6,6, (2) patterns or colors
- Vestibules to have walk-off carpeting

Stairs:

- Metal stairs with concrete filled tread and landing pans
- Rubber treads and risers and flooring at landing with cork for anti-slip
- See specialties for guardrails and handrails

Ceilings

- Ticketing/Waiting, corridors, Mail, Bag and Utility rooms to have exposed structure, ductwork and electrical; painted (1) color
- Ticketing/Waiting to have acoustical cloud ceilings suspended approximately 6” from structural decking; panels to be finish grade plywood with CNC custom cutouts, stained with black acoustical fabric and insulation above and painted wood trim at edges
- Gate 1 corridor to have suspended 2x2 grid and acoustical tiles; grid to extend approximately 3’ into Ticketing/Waiting area with side trim
- Air Taxis, Customs, TSA and FAA to have a suspended 2x2 grid and acoustical tiles
- Restrooms and Janitor closets to have a suspended gypsum board lid

Casework

- Particleboard and plywood cabinets with plastic laminate veneers
- Plywood counters with plastic laminate veneers
- Solid surfacing counters at restrooms

Toilet Accessories

- Stainless steel accessories; air hand dryers in lieu of paper towel dispensers
- Stainless steel grab bars at accessible toilets
- Mirrors over each sink
- Bobrick Sierra Series solid reinforced composite toilet partitions, floor to ceiling mounted

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Specialties

- Guardrails to be welded wire mesh, 2x4 galvanized fencing grade, in a painted metal frame.
- Handrails to be stainless steel with screwed connections
- Elevator to be ThyseenKrupp Endura MRL twin post, above ground, single stage; floor – carpet, walls – plastic laminate panels with stainless steel handrail at rear, ceiling – stainless steel panels with LED downlights

SITE & LANDSCAPE

The existing north loading zone will be extended approximately 16' towards the new building. New walkways will be placed along the curb side of the new building, extending around the north side to the lot and new dog walk. The existing fence/secure line will be extended to the new building, jogging to make room for a new dog walk. The new landscaping, in general; dog walk; and site furnishing will be provided by the airport, not the contractor.

Paving:

- Concrete walkways with a curved edge and sparkle additive curb side
- Asphalt paving, patched into existing, air field/secure side

Plant Materials

- River rock, from 3" – 6" diameter, between walkway and building front

Fencing

- Chain link with razor wire to match existing at secure line

ATTACHMENTS

- SK-1 Typical Wall Assembly
- SK-2 CMU Wainscot
- SK-3 Typical Roof Assembly

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Juneau International Airport
North Wing Replacement

Conceptual Design – Structural Narrative

The North Wing Replacement structural system will be designed and constructed in accordance with the following criteria:

Code

Design and construction shall be in accordance with the International Building Code, 2009 Edition, as amended by the City and Borough of Juneau and the State of Alaska. The structural occupancy category will be IV for a building designated to be an essential facility.

Loads

Design loads include the following:

Snow: 70 psf ground snow load
Importance factor, I = 1.2 for essential facilities
Exposure coefficient, Ce = 0.9 for wind exposure C, exposed not sheltered
Thermal Coefficient, Ct = 1.0 for main building, 1.2 for canopies that are unheated
Flat Roof Snow Load: 53 psf at main building, 64 psf at canopies
Drifting per ASCE 7-05

Floor Live Loads:

Second Floor (unless noted otherwise)	100 psf
Mechanical catwalk and penthouse:	150 psf

Dead Loads:
All applicable dead loads

Wind Load:
105 miles per hour, 3 second gust
Exposure C
Importance factor, Iw = 1.15 for essential facilities

Seismic Loads
Site class D for stiff soil
Importance, Ie = 1.5 for essential facility
Site acceleration:
Ss = 0.63g, Fa = 1.43, Sds = 0.61 g
S1 = 0.30g, Fv = 2.81, Sd1 -= 0.56g

Response coefficient = 8 for main building special moment resisting frames
Cs = 0.11 g

Response coefficient = 1.25 for sidewalk canopy for cantilevered column steel system
Cs = 2.75 g

ATTACHMENT #1

Juneau International Airport
North Wing Replacement

Materials

Foundations shall bear on compacted crushed gravel fill complying with Alaska Department of Transportation and Public Facilities Standard Specifications for Highway Construction, 2004 Edition, Section 7.03, aggregate for base course, gradation C1 or suitable on site material stockpiled after existing building foundation demolition.

At canopy footings, and Grid C, this will be a 4 inch minimum thickness layer placed over compacted native soils. At grid lines A and B there will be a 3 foot wide by 4 foot deep grade beam and the C1 material should be extended 6 feet on either side of the grade beam, placed in 6 inch maximum lifts with each lift compacted to 95% maximum density prior to placing subsequent lifts. The additional fill on each side of the grade beam is to minimize the risk of slab cracking due to differing stiffness of the soil and grade beam under the slab.

Foundations shall be made of concrete with a 28 day strength of 4,000 psi, reinforced with new billet steel reinforcing conforming to ASTM A615 grade 60.

Preliminary calculations indicate that at Grid A the footings will be 6'x6'x15" at Grid 1 and 9 and all others 7'x7' x 18 inches. Footings will be under the grade beam which will have a top elevation of 8 inches below the top of the floor slab, therefor top of footings will be 4'-8" below the top of slab.

At the ramp canopy, column footings will be 3' x 3' x 12 inch footing with a 18" x 18" pedestal extending 2 feet above grade. Exterior footings will have a bottom of footing elevation 2'-8" below grade.

At Grid B the footing at Grid 1 will be a 6'x6'x15" footing. The footings on Grid 2 to Grid 8 will be 9'x9'x24 inches. The footing at Grid 9 will be a 4' x 6' by 18 inch footing oriented to avoid conflicts with the existing generator. All footings on Grid B will be below the grade beam with top of footing 4'-8" below top of slab.

At Grid C there will be a 3'x3'x12 inch footing at Grids 1 and 7 and the other column footings will be 4'x6' x 15 inch footings oriented so that the long side is parallel to Grid C. Footings will have a bottom of footing elevation of 2'-8" below top of slab.

At the building perimeter, other than at Grid A, there will be a 6 inch foundation wall on an 8" high by 16 inch wide footing. The bottom of the footing will be 2'-8" below final exterior grade. At Grid A the grade beam will serve as the foundation wall.

The foundation for the columns at the sidewalk canopy will be 40 foot long, 16 inch diameter, pipe piles driven by an impact hammer and with a conical tip. These will have a steel cap plate to which the steel canopy columns will be field welded. Piles were chosen so that conflicts between existing electrical and communication conduit will be avoided. The conduit will need to be exposed with an excavator prior to driving the piles. An additional pile at Grid 2 is likely needed as the conduit is directly under the proposed column location. The two piles will be capped with steel plates and a fabricated steel boxes beam spanning between the piles.

The entire ground floor will have a 5 inch thick concrete slab on grade over a compacted C1 base course. The slab will be reinforced with No 4 bars at 18 inches on center each way. The slab will have construction joints at numbered and lettered grids and the contractor will be required to cast the slab in alternating strips or in checkerboard sequence. At columns there will be isolation joints in a diamond pattern at the interior and a triangular pattern at exterior columns.

Steel framing will consist of steel columns supporting steel beams at the floor and roof level. Beams will have steel end plates so that they can be bolted to the sides of columns to create rigid moment frames. A total of 8 bolts will transfer the end moment and 3 to 6 bolts will be used to transfer beam end shear at the web using a

shear plate. Bolts will be high strength bolts. Where beams frame into the side of the column, that is not at the flange, there will need to be a vertical knife plate at the center of the column and a stiffener welded to each flange and the web. The stiffener plates will match the top and bottom flanges of the beam. The stiffeners will be extended to a plate, at least as thick as the column flange that can be bolted to the beam end plate. All the plate welding will occur in the shop. Preliminary column and beam sizes are indicated on the attached sketches.

At columns on Grids A and B the columns will be set on the footings and extend through the grade beams. Each face will have steel studs on the flanges to transfer flange forces into the concrete grade beams.

The second floor mechanical catwalk, the second floor and the penthouse floor will consist of a 1.5 inch deep, type B, composite, steel deck with a concrete cover. At the catwalk the thickness will be 4 inches. At the remainder of the floor decks the total thickness will be 5 inches. The concrete will be reinforced with No 3 bars at 12 inches on center each way. Crack control joints will be cut over numbered grid lines.

Second floor joists spanning between numbered grids will be W12x26 steel beams at 6'-8" on center. They will be bolted through the web at each end to single shear plates shop welded to the beams on the numbered grids. The beams on the numbered grids will be W21 x 111.

At the mechanical catwalk the slab will span in the east-west direction and be supported by W12x26 beams spanning between the numbered grids. The W12x26 beams will be field bolted through the web to steel shear plate connectors at the cross beams on numbered grids. The cross beams will be W12 x 26 sections. At the Grid B columns the cross beams will be field bolted to steel shear plate connectors shop welded to the column. At the east end of the cross beam a 3 inch diameter standard pipe will suspend the beam from the roof beams above. The pipe will have a plate on each end with four bolts connecting the end plate to the beams.

The penthouse floor framing will consist of W12x35 beams at 6'-8" on center spanning between beams on numbered grids.

Roof beams and the penthouse floor beams will be as noted on the attached sketches.

The penthouse roof beams will be supported on the columns on Grid B and tube steel columns at the east wall bearing on the W beams spanning between grid B and C.

The ramp canopy roof will have W12x30 steel beams on numbered grids supported on exterior 4" x4" x 13/16 inch tube steel columns and the columns on Grid A. The beams will support tube steel joists spaced at 2 feet on center near Grid A and after 12 feet from Grid A be at 4 feet on center. The tube steel joists will have shop welded end plates and knife plates that will be field bolted to shear plates shop welded to the beams on the numbered grids. The joists will support a steel deck, type B, 1.5 inches deep. Tube steel joists were selected to avoid bird nesting on joist bottom flanges.

The sidewalk canopy framing will mimic that built at the main entry. Columns will be 16 inch by 16 inch tube steel and beams will be tapered 18x12 inch tubes. Tube steel joists with shop welded end plates and knife plates will support the glass roof. The tube steel will be field bolted to the tapered beams. Rod cross bracing under the joists will transfer lateral loads to the columns.

ATTACHMENT #1

Juneau International Airport
North Wing Replacement

To create the "Waiting Room at the new Gate 1", the elevator pit will need to be in-filled; the concrete walls east , south and west of the elevator shaft be demolished; the walls south and west of the elevator equipment room be demolished and the wall south of the 1957 garbage room be demolished. The original exterior wall will also have to be demolished. The walls to be demolished support the second floor slab and will require steel beams to be placed under the slab at the wall location to support the second floor. Steel posts will need to be used at the exterior wall to support the existing column (that supports the roof and second floor) that will be removed. While some beams can be supported at their ends to concrete to remain, some steel posts and new footings will be needed. The area is approximately 15'-6" wide by 25 feet. There will need to be one beam at the south wall of the elevator shaft and equipment room, approximately 25 feet long and a beam at the exterior wall and a beam at the existing corridor wall.

ATTACHMENT #1

Juneau International Airport – North Terminal Renovation
Conceptual Narrative – Mechanical Systems
August 20, 2014

Mechanical Systems Demolition
All mechanical systems are to be demolished from the Northern Terminal. These systems include AHU/RF/EF and associated ductwork, hydronic heating piping and heating units (finned pipe convectors, unit heaters, and entry cabinet unit heaters), domestic cold, hot, and hot water recirculation piping, all plumbing fixtures, all wet and dry sprinkler piping, and all pneumatic controls.

Utility Mains
Connect to cold water, wet and dry sprinkler, and geothermal GS & GR mains at existing Pump/Geo Room, approximately 100 feet from the south edge of the renovation. Piping mains are to be routed down Catwalk area with geo mains feeding heat pumps and domestic water mains to feed plumbing fixtures.

Heating and Ventilation Systems
The Northern Terminal heating systems are to be an extension of the existing geothermal heating system utilizing water-to-air heat pumps for zone heating and cooling via forced air ventilation similar to the Large Commercial renovation that recently occurred. In addition, water-to- water heat pumps will be utilized for radiant floor heating of the Ticketing/Toilet Rooms area in conjunction with the water-to-air heat pumps.

14 water-to-air (W-A) heat pumps would be utilized for forced air ventilation, heating, and cooling. 8 of these W-A heat pumps would be located in the Utilidor space adjacent to the second floor corridor. 5 W-A heat pumps would be located in the Penthouse and these would serve second floor areas. 1 heat pump would be located above the ceiling. Average size of the W-A heat pumps is 1800 cfm and 50 MBH each. See plans for diffuser and grille layouts. Heat pumps would utilize a 20% methanol-water mixture. Condensate drain from each heat pump would be routed to service sinks or floor sinks. OSA and Supply air ductwork to be insulated. DDC thermostat to control each heat pump.

Four zones of radiant floor heating would be utilized for the First Floor. 3 zones would serve the Ticketing area and 1 zone the Toilet room area & North Entry.

The penthouse would include 1 Water-to-Water (W-W) heat pump for the radiant heating system (70 MBH) and 2 W-W heat pumps (250 MBH each) for the exterior snowmelt sidewalk heating system. Each W-W heat pump would have its own circ pump (80 gpm, 10 hp). Snowmelt heat pumps would inject heated propylene glycol water into a single 350 gallon insulated storage tank. A single circ pump would then circulate glycol mixture to snowmelt system. System would have Radiant system circ pump sized at 30 gpm, 3 hp. See plans for snowmelt and radiant heating areas.

ATTACHMENT #1

The penthouse would also include the DOAS unit, a dedicated outside air/exhaust air heat pump, and plate type heat exchanger. (5500 cfm and 220 MBH capacity) This unit would provide outside air and exhaust air for the northern terminal. Outside air would be ducted to each W-A heat pump and the exhaust air would be taken from the occupied spaces and toilet rooms.

Existing Geo Pump Room
Add a 3rd base mounted pump (450 gpm, 12 hp, VFD) and two pipe mounted primary pumps (350 gpm, 10 hp, VFD each). Change system in Geo Room to primary-secondary pumping system, revise piping.

Plumbing System
Extend 2-inch cold water main to toilet room fixtures and Mech Penthouse. Locate 50 gallon electric hot water in Mech Penthouse for plumbing fixture use in Northern Terminal. Locate hot water recirc pump and tempering valve at tank.

Plumbing fixtures are to be low flow commercial type. Water closets to be 1.6 gpf flush valve type. Urinals to be 1.0 gpf flush valve type. Lavatories to be low flow ADA type with individual tempering valves. Drinking fountain is to be dual type with bottle filler. Service sink to be corner type enameled cast iron. Three wall hydrants on north end for service and landscaping use.

Mechanical Penthouse would include 3 floor sinks for drainage.

Sprinkler Systems
Extension of wet and dry sprinkler mains to renovated areas. Wet sprinkler system is to serve interior areas. Dry sprinkler system is to serve exterior canopies.

Controls
Extend existing DDC system to renovation area. Locate new DDC terminal in Mech Penthouse. Estimate 100 points.

Elevator
A sump pump would be located in the elevator sump with discharge routed to service sink.

Temporary AHU
A roof top AHU (2500 cfm, 140 MBH hot water coil, mixing dampers, 7.5 hp motor VFD) would be located just south of the renovation area and would serve the 1957 terminal. Connect to existing hot water mains for heating coil in ceiling below. Connect to existing supply and return ductwork in ceiling below.

ATTACHMENT #1

Juneau International Airport
North Terminal Renovation
Electrical Systems
Scope of Work
August 2014

Demolition

Power Systems:

- Construct a new temporary distribution panel, located just inside the retained area near the front of the building. Use this panel to feed the existing branch circuit panels to be retained in the portion of the facility south of the project area.
- Construct a new temporary feeder from the existing switchboard to the temporary panel. Include a stepdown transformer (150 KVA, 480:208Y/120V). Route the feeder along the street side of the project site.
- Construct new feeders from the new temporary distribution panel to the retained panels and strategically transfer to minimize outage durations.
- Remove the existing main distribution switchboard (North Terminal MDP) and its stepdown transformer from the original electrical room.
- Construct new temporary feeders from the existing service switchboard into the existing facility just south of the project area to intercept the existing feeders to the FAA Tower. Route with the feeder to the temporary distribution panel on the street side of the project site.
- Strategically transfer the FAA Tower to the new temporary feeders with only outages as required to switch from one circuit to the other.
- Recircuit all devices and equipment outside the project area that are fed from panels inside the project area to panels retained within the facility outside the project area.
- Remove all branch circuits and branch circuit devices from the project area.
- Remove all branch circuit panels from the project area.
- Remove all feeder circuits from the project area.
- After completion of construction of the new terminal, and the installation of the new remote generator module, but before decommissioning the existing generator, transfer the remaining feeders from the existing service distribution switchboard to the new service distribution switchboard inside the new electrical room. Also transfer the temporary feeders for the FAA Tower to the new service distribution switchboard.
- Decommission the existing generator and service distribution switchboard. Demolish the existing electrical room.

Lighting Systems:

- Recircuit all luminaires outside the project area that are fed from panels inside the project area from panels retained within the facility outside the project area.
- Remove all luminaires and controls from within the project area.
- After completion of the new electrical room and distribution system, transfer the parking area lighting circuits to a panel in the new electrical room.

Low Voltage Systems:

- Remove all data and communications circuits and devices from the project area.
- Remove all fire detection and alarm devices and circuits from the project area. Modify circuits and test the system accordingly.
- Remove all public address speakers and circuits. Modify circuits and head-end equipment accordingly.

New Power System

- Provide new service and switchboard equipment in the new Electrical Room (2000A, 480Y/277V). Include revenue and customer metering, main circuit breaker, and a feeder distribution section. Provide a new service from AEL&P's transformer.
- Provide a new remote generator (500 to 650 KW) classified to provide Emergency power, circuited to a transfer switch configured within the service distribution switchboard. Include remote alarm and status annunciation in the Maintenance facility per NFPA.
- Transfer existing feeders for the retained portion of the facility to the new switchboard.
- Provide a stepdown transformer to feed the branch panels serving receptacles and small equipment. Rate adequately to serve the future renovation (225 KVA). Locate in the Electrical Room.
- Provide a 208Y/120V main distribution panel to feed branch circuit panels (800A). Locate in the Electrical Room.
- Provide new branch panels, one (208Y/120V) for each floor (3 each), plus a (480Y/277V) panel for lighting and one for the HVAC equipment in the penthouse.
- Provide new receptacles as defined by the drawings with circuits from the branch panels accordingly.
- Provide branch and feeder circuits to the HVAC equipment and the lighting.
- Provide motor control equipment for the HVAC equipment as required.

New Lighting System

- Provide new luminaires and controls as illustrated in the drawings.
- Provide 277V circuits for power.

New Data/Communications System

- Provide new service entrances for ACS and GCI with their demarc equipment in the Communications Room on the second floor.

- Provide new backboards for equipment in the Communications Room.
- Provide a new rack for equipment in the Communications Room. Include a patch panel and position for a switch to support the Airport facility and administration network.
- Provide Cable tray from the Communications Room to the retained existing facility.
- Provide new network and communications cables from the Communications Room to the retained existing tenants as required.
- Provide fiberoptic cable from the Communications Room to the existing network equipment in the Eastern Penthouse.
- Provide data terminal boxes and raceways into ceiling spaces in the tenant areas.
- Provide a public address system with speakers in the Ticketing Area and headend equipment in the Communications Room rack as required. Integrate with the existing equipment in the Eastern Penthouse.

New Fire Detection and Alarm

- Provide new manual pull stations and notification devices in the project area.
- Provide duct mounted smoke sensors in the ventilation equipment as required.
- Provide sprinkler system flow, tamper, and supervisory devices as required.
- Provide a new remote panel as required and integrate with the existing system.