



## MEMORANDUM

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TO: Patty Wahto, Airport Manager

FROM: Mike Greene, JNU Airport Project Manager

DATE: February 3, 2025

RE: Projects Office Monthly Report

Project specific summaries of project status and activity are presented below.

**Terminal Reconstruction:** JNU continues to work on finalizing the following outstanding work items:

**Ground Source Loop Field System Modifications:** JNU Building Maintenance continues to observe contaminates/sediment within the loop field medium (methanol), even with the equipment strainers, pump strainers, by-pass filter and dirt separators in place. The continuing concern is that the system is not getting any cleaner over time, and that somehow the contaminates/sediment keeps replenishing itself. In a meeting conducted on December 12, with JNU staff, JNU Airport Maintenance and engineers from RESPEC present, it was decided that the samples of these contaminates should be lab-tested to determine what this material is. To that end, JNU has asked RESPEC for a fee proposal to have a sample of the contaminates lab tested, and to provide additional mechanical engineering services to assist with the on-going effort to cleanse the loop field system. JNU has not yet received this fee proposal. The scope of work to be completed by RESPEC will include contracting with a hydronic system fluid treatment specialist to examine the fluid chemistry, analyze the sediment, and inspect some of the piping in order to recommend or implement a treatment, cleaning, or fluid replacement plan for the distributed ground source piping system.

JNU Building Maintenance continues to work on blowing out the main pump strainers and the air separator strainers in the piping mains, cleaning branch piping heat pump strainers, and backwashing the heat pump coils. JNU Building Maintenance also continues to work on the replacement of the new flexible hoses for thirty (30) of the older heat pumps.

DOAS-1 (Dedicated Outside Air System) unit: This air-handler, originally installed in 2009, brings in outside air to the older portion of the terminal. Repairs to DOAS-1 were completed as part of the terminal reconstruction project, but additional repairs are now needed. Recent voltage spikes have damaged some of the air-handler components, including the VFD (Variable Frequency Drive) for the DOAS-1 exhaust fan. JNU Building Maintenance continues to look at repair options, but has indicated that this equipment will be able to run during the upcoming TAB work.

Heat Pumps: The approximately thirty (30) water-air heat pumps within the older portion of the terminal were installed in 2009. Many of these heat pumps have already reached the end of their serviceable life and the rest are nearing the end of their serviceable life. This has resulted in there being a number of these heat pumps that are non-operational at any given time while waiting for replacement parts to arrive and for repairs to be completed. The number of inoperable units is now low enough to allow the TAB

work to proceed. JNU Building Maintenance and JNU staff are continuing to look at funding options for a phased replacement of these older heat pumps.

**Terminal Air Balancing (TAB):** Following a review of the current operational status of the air-handlers and heat pumps, it was decided that the TAB work could now proceed. JNU has instructed Dawson Construction to proceed with the final balancing of the terminal’s new and old mechanical HVAC air-handling systems. This work will commence in mid-February 2025.

**Lighting Control Replacement:** Dawson Construction / ALCAN Electric has started work on Request for Proposal (RFP) 183 – Lighting Control Replacement. This RFP will replace the failing lighting control equipment within the older portion of the terminal. This control equipment is no longer being supported by the manufacturer and the control of much of the interior and exterior lighting in this portion of the terminal is either being done manually or is being left on 24/7. JNU Building Maintenance is working directly with ALCAN Electric to provide a network connection that will allow the new lighting control system to be interconnected to the lighting control system that has been installed in the new north wing. This connection will create a single terminal lighting control system. ALCAN Electric has advised that they intend to have this lighting control work completed by the end of March 2025.

**Terminal Power Conditioning:** JNU and JNU Building Maintenance continue to look into the need to provide additional power conditioning to protect the electrical systems within the terminal. Following a January 2025 meeting with Ben Haight with RESPEC, JNU Building Maintenance has been tasked with confirming the presence and operational status of the power conditioning equipment that was installed as part of the recent terminal electrical service upgrade project. If this equipment has not been tripped or damaged by utility power surges, then JNU intends to obtain a fee proposal from RESPEC to look into options to provide additional power conditioning to protect the electrical systems that have been recently affected by fluctuations in the utility power. The scope of this work will include a review of the power feed to the Sand-Chem building, with a focus on determining whether or not ground source heat pump GSHP-1 needs power conditioning to protect this unit’s compressors.

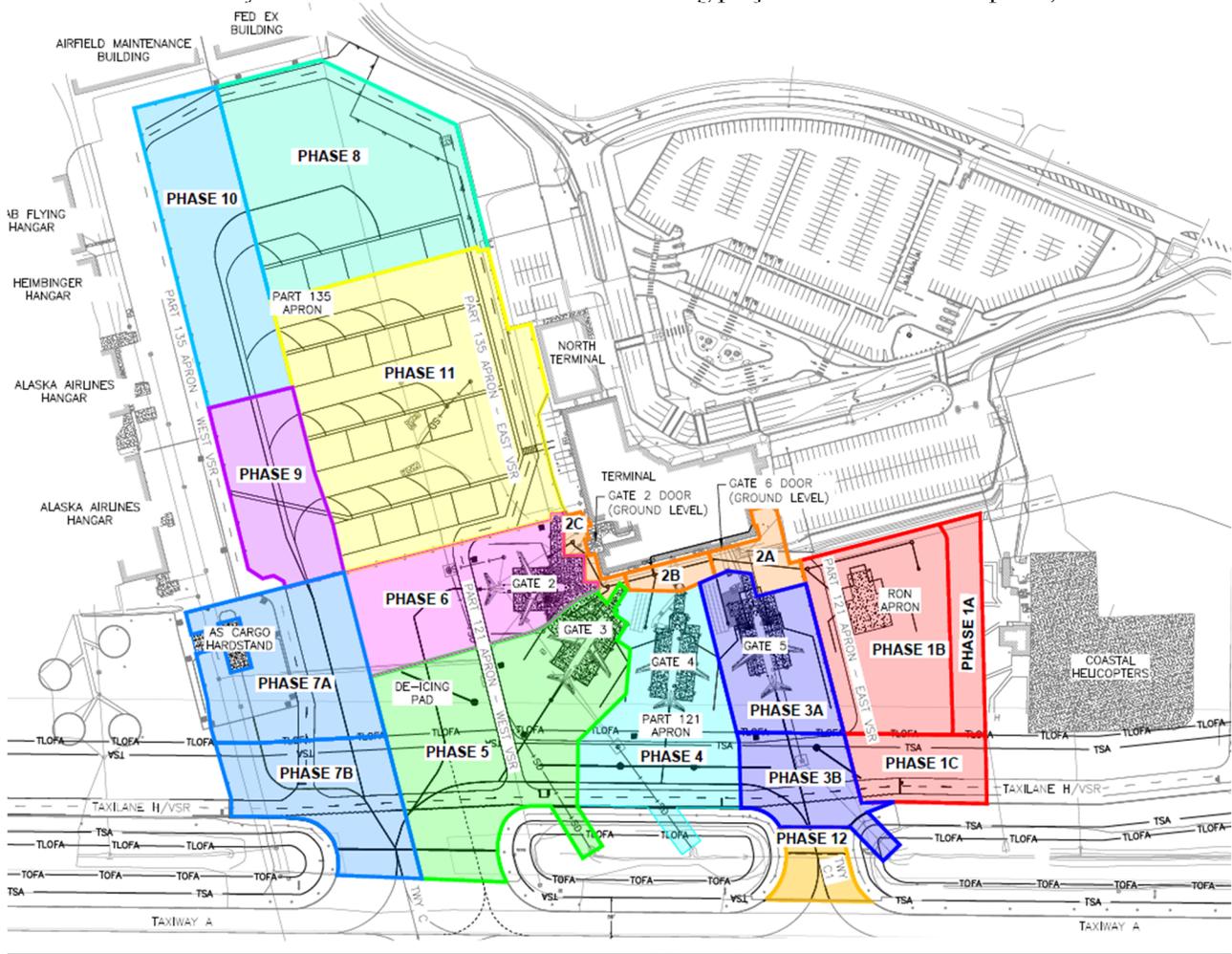
**Safety Area Grading at Runway Shoulder and Navigational Aids (NAVAIDS):** HDR Engineering continues to develop the 30% design submittal for this project. As reported earlier, they have completed the site survey field work and continue to work on their grading analysis to determine the full extent of the grading work. Per the grading analysis, the project will primarily consist of the placement of borrow (fill) to reduce the runway shoulder slopes within the project work areas. The initial estimate of borrow quantities is as shown below:

ESTIMATE OF QUANTITIES					
(LT,RT)	ITEM NO.	SPECIFICATION ITEM NO.	PAY ITEM	PAY UNIT	QUANTITY
LT	P152	P152.010.0000	UNCLASSIFIED EXCAVATION	CY	750
	P152	P152.190.0000	BORROW	CY	44870
RT	P152	P152.010.0000	UNCLASSIFIED EXCAVATION	CY	335
	P152	P152.190.0000	BORROW	CY	3895

JNU continues to work with HDR on the development of the technical specifications, and JNU has begun work on the development of the Division 00 and Division 01 front-end contract documents.

JNU has confirmed with HDR that they will still be able to meet a deliverables schedule that reflects a bid-opening date of July 1, 2025. This revised bid opening date would have an anticipated construction contract award/notice-to-proceed date in late August 2025 or early September 2025. The construction contract will be written to allow the successful bidder the option to complete the project in 2025 or in the spring of 2026.

**Rehabilitate Part 121/135 Apron and Remain Overnight (RON) Parking Apron:** This project remains in winter shutdown. The project Contractor (SECON) has advised that they intend to complete work on the repairs to the structural steel piling foundation for light pole LP-6 between March 10-20, 2025. This proposed schedule has been coordinated with Alaska Airlines and with JNU Airfield Maintenance. SECON has indicated that they intend to resume work on the remaining project work items on April 1, 2025.



SECON has advised that they intend to start work within the Phase 7A and Phase 7B (Alaska Airlines cargo hardstand) work areas in mid-April. SECON intends to combine Phase 7A and 7B into a single work phase, during which they will rehabilitate the asphalt paving. They will also expand the west side of the reinforced concrete cargo hardstand under direct contract with Alaska Airlines. This expanded work phase is now anticipated to be completed by May 10. During this work phase, and per agreement with JNU, Alaska Airlines air-cargo operations will be relocated to Gate 2.

SECON has further advised that they intend to complete the asphalt pavement rehabilitation in the Phase 7A and 7B work areas by May 1, 2025, complete work on the installation of the new apron lighting within the 121 apron and complete the remaining RFP work items (runway repairs and install culvert zinc anodes) by the end of May.

JNU has requested that SECON provide a detailed work schedule for all remaining work. This schedule is to identify the start and end dates for all remaining work, will identify when air-cargo operations will move to Gate 2 and when they return to the air-cargo hardstand. This schedule will also identify when Gates 3, 4 and 5 will need to be temporarily closed to facilitate the work needed to seal the asphalt to concrete joints in these areas.

JNU has coordinated with RESPEC who will soon be releasing a construction update to all stakeholders to advise of the pending start of construction and of the anticipated construction work schedule.

JNU has also requested a pre-construction conference to primarily review the procedures and protections that are to be put in place at the Gate 2 apron prior to the relocation of air-cargo operations. Per prior agreement with JNU, SECON will provide and place temporary steel plates for the Cochran loader to operate on, and both SECON and Alaska Airlines will be held fully responsible for any damage to the new Gate 2 apron surface as a result of air-cargo operations. This meeting date has not yet been determined.

**Culvert Condition Survey – Jordan Creek @ Runway 8-26:** As previously reported, JNU has received the condition survey as prepared by proHNS engineering for the large half-arch aluminum culvert assembly which allows Jordan Creek to pass beneath Taxiway A and Runway 8-26. In their report, proHNS stated the opinion that an immediate catastrophic failure of the culvert is unlikely. The report goes on to state that continued deterioration is likely, and that repair work is recommended, even if the source of deterioration is determined and eliminated. proHNS has identified three (3) repair-in-place options, recommending them for further study. They would not require open trenching, would not require a closure of Runway 8-26 and would not require extensive permitting.



The three recommended repair-in-place options are:

**1. HDPE (High Density Polyethylene) Slip Lining**

- Pros:
- a. Corrosion resistant structure.
  - b. Local contractors are familiar with construction installation methods.
  - c. Cost effective due to shipping and construction costs.
  - d. Would not require runway closure for construction.

- Cons:
- a. Grouting annular space where lengths are over 100' can be challenging.
  - b. 800' length push and pull resistance on pipe will be significant.
  - c. Requires large area for insertion/jacking/welding pit.
  - d. Potential to reduce flow capacity.

## 2. Carbon Fiber Lining

- Pros:
- a. Corrosion resistant structure.
  - b. Could be done while maintaining streamflow in existing pipe.
  - c. Wouldn't impact existing stream bed material, which should make for easier permitting process.
  - d. Can be designed to be structurally independent and fully withstand runway loading.
- Cons: Specialized equipment and trained personnel required, known installer (National Plant Services, Michels Trenchless), known Manufacturer (Structural Technologies).

## 3. GeoPolymer Lining

- Pros:
- a. Corrosion resistant structure.
  - b. Could be done while maintaining streamflow in existing pipe.
  - c. Wouldn't impact existing stream bed material, which should make for easier permitting process. Product has extensive research on chemical properties not affecting fish.
- Cons: Specialized equipment and trained personnel required, known installer (National Plant Services, Michels Trenchless), known Manufacturer (Structural Technologies, GeoTree)
- b. Questions on whether this product would be strong enough to fully withstand runway loading.

At this time, JNU does not have estimated construction costs for any of the three repair options. JNU has confirmed with the FAA that replacement / repair costs would not be AIP eligible because the culvert is within the 20-year useful life of grant 60-2014 and because the FAA considers this work to be a maintenance project.

JNU has requested a fee proposal from proHNS Engineering to complete the necessary design phase services and to provide bid-ready construction documents (technical specifications and drawings) based upon one of their three repair-in-place recommendations. The RFP has requested that the design consultant complete a structural analysis of the recommended repair option to verify that the repair would become a permanent load bearing replacement for the culvert in the eventuality that the old culvert fully deteriorated away. The RFP also requested that the design consultant prepare detailed construction cost estimates throughout the design process.

It was JNU's hope that proHNS' services could be obtained through CBJ's Term Consultant Contract – which has a \$50K cap. proHNS has advised that they cannot complete the identified scope for under \$50,000. proHNS also advised that based on their research into the three repair options that would not require runway shutdowns, the project is going to require specialty design services. Based on this communication, it would now appear necessary for JNU to obtain design services for this project by issuance of an official RFP for Consultant Design services through CBJ Contracting.

**Fuel Station Access Control/Fuel Monitoring/Tracking: No change since last report.** In July 2022 JNU, working through CBJ Engineering - Contracts, released an RFP for design services under CBJ's term contract for design consultant services to develop design and construction documents for the introduction of an access control system for the airfield fuel station. The RFP had identified a scope of work that included the introduction of an access control / fuel theft-prevention system, fuel monitoring and usage tracking, and the introduction of a back-up generator to provide emergency stand-by power for the fuel station.

On September 1, 2022, CBJ Engineering - Contracts advised JNU that no responses to the RFP had been received. This indicated that, at that time, there was no interest (or availability) within the design community

to work on this project. JNU is currently soliciting interest from local electrical engineers to provide a fee proposal for this project. This funding was previously approved for CARES funding by the Board.

**Airport Construction Document Archiving:** JNU Staff continues to work on sorting / culling the old archived construction documents, as-built documents and misc. reports.

End of Report