

THE NORTHWEST SEAPORT ALLIANCE
MEMORANDUM

MANAGING MEMBERS
ACTION ITEM

Item No. 7G
Date of Meeting September 8, 2021

DATE: August 25, 2021

TO: Managing Members

FROM: John Wolfe, CEO

Sponsor: Tong Zhu, Chief Commercial & Strategy Officer

Project Manager: Brett Ozolin, Engineering Project Manager II

SUBJECT: Wapato Creek Bridge and Culvert Removal Project Cost Overage

A. ACTION REQUESTED

As referenced in NWSA Resolution No. 2020-02, Exhibit A, Delegation of Authority Master Policy, Paragraph 8.c.iii., states project costs exceeding \$300,000 require approval from Managing Members.

Request project authorization in the amount \$230,000, for a total authorized amount of \$3,300,000, for work associated with the Wapato Creek Bridge and Culvert Removal, Master Identification No. 201070.01.

B. SYNOPSIS

On August 13, 2021, Port staff notified the Managing Members that the cost of this project would exceed the authorized amount resulting from unforeseen issues encountered during construction. The unforeseen issues primarily included encountering soils contaminated by arsenic and blast furnace slag, an unidentified Tacoma Public Utility (TPU) fiber line, increased pavement costs and difficult drilled shaft excavation conditions. Additionally, removal of the failed culvert required installation of cofferdams to exclude tidal waters to keep the work area dry to control turbidity and meet permit obligations. The cofferdams failed on July 26th, 2021, primarily due to water seepage through the soft streambed sediments. The seepage caused scour of sediments beneath the cofferdam and resulted in the cofferdam becoming undermined and partially collapsing. The release of water through the failed cofferdams scoured a bank of the creek, requiring repairs and additional staff time. While this memo presents the notable unforeseen conditions that increased project costs, project authorization was not anticipated to be exceeded prior to the discovery of contaminated soils and the cofferdam failure. Contaminated soils and associated trucking and disposal fees are the primary cause of project budget exceedance.

C. BACKGROUND

The Portac site on Parcel 15, is leased by Everport Terminal Services and used by Pierce County Terminal (PCT) as a truck queue staging area. On December 21, 2018, the culvert under the access road over Wapato Creek showed signs of failure. An emergency was declared on January 9, 2019, and a temporary repair was constructed that reduced loading on the culvert and provided a temporary bridge over Wapato Creek for access to the Portac site. Construction Authorization was given by the Managing Members on June 2 and August 4, 2020, for construction of a new bridge, demolition of the temporary bridge and failed culvert, and restoration of the creek. The construction contract was issued on August 31st, 2020, and substantial completion is anticipated to be issued on August 30th, 2021. Unforeseen conditions and cost increases for the project are discussed in the following sections. While all the notable project unforeseen conditions are discussed, authorization was not anticipated to be exceed prior to the discovery of contaminated soils and the cofferdam failure. The majority of project budget exceedance is due to contaminated soil trucking and tipping fees.

Contaminated Soils

After the emergency temporary bridge structure was removed site soils were tested for regulated material. One sample returned higher than permissible levels of arsenic that necessitated a portion of the fill material to be disposed at a licensed facility. Continuing excavation resulted in exposure of blast furnace slag in a substantial portion of the culvert backfill. Port environmental staff inspected stockpiled material and concluded that all excavated material from the culvert removal operation was required to be disposed of at a licensed landfill to meet regulatory obligations. The August 12, 2021, Managing Members Staff Briefing – Notification of Cost Increase memo had assumed 1,040 tons of contaminated material, but 1,392 tons of regulated soils were disposed of at the landfill. The additional 352 tons of contaminated dirt resulted in additional project cost including costs for landfill tipping fees, additional material handling, and trucking.

Fiber Line

A TPU fiber line was not identified by the Contract Documents in the overhead transmission corridor. Extremely tight crane clearance requirements and minimal slack in the system necessitated temporarily relocating the line. TPU provided an estimate to complete this work, but substantially exceeded their cost estimate.

Increased Pavement Costs

Paving costs were influenced by two change orders that covered multiple unforeseen conditions. When surface soils were removed in the old Alexander Ave alignment, the contractor exposed old asphalt pavement. The pavement had been previously covered and was not visible, resulting in increased excavation and disposal costs. During right-of-way inspections with the city, the Contractor was directed to extend the asphalt demolition and replacement further into the current city-owned roadway due to pavement condition at the Port-to-City pavement interface. An area of pavement approximately 270 square yards in area at the critical westward bridge approach was observed to be soft due to poor soil conditions. The pavement structure was thickened in this area to improve load bearing capacity. Lastly, actual paving tonnage was reconciled with a 112-ton overage. Reconciliation is typical for paving projects to account for variations in site topography. Although typical, this overage was

larger than anticipated due to thicker than anticipated tie-in pavement depth. The thicker tie-in resulted in an overall paving section closer to 4¾-inches in lieu of the specified 4-inch overlay.

Drilled Shaft Schedule

Production rate of the drilling operations was approximately 50% of what was anticipated by both the Engineer and the Contractor. Extremely tight overhead limitations due to high energy power lines necessitated excavating shaft soils by bucket up to depths of 75 feet. Soils at the bottom of the shafts were fluid or soupy, impacting production rates.

There were no change orders on the drilled shafts, however continuous port inspection, continuous special inspection by the geotechnical engineer as required by the building permit and continuous inspection by the archeologist increased staff and consulting costs.

Cofferdam Failure

The final phase of project construction included removal of the failed 96-inch culvert and slope restoration (excavation/slope armoring/planting). The in-water portion of the work was designed to be executed “in the dry” by isolating the work area using temporary upstream and downstream cofferdams combined with a dewatering and pumping bypass system. The contractor-installed cofferdams failed, leading to additional Port staff, consultant and site stabilization costs. The cofferdam failure required modifying the project schedule and developing an alternative construction approach. The Port spent additional staff time over two weeks assisting in the development and review of revised construction approaches, notifying and coordinating with permitting agencies, and providing additional fish salvage services as required by the contract and project permits.

The failure of the cofferdam had a substantial impact on the original construction approach and schedule for the Contractor. However, these impacts were actively managed with the implementation of a revised plan that expedited remaining construction activities and mitigated the potential for construction claims. While the Contractor primarily bore clean up and schedule costs, the Port funded construction change orders to help support bank scour repairs that resulted from the cofferdam failure. The change order to cover repairs is anticipated to be approximately \$20,000. The Contractor followed a Port approved plan and consultant provided reference details. The negotiation is ongoing, but the Port has indicated acceptance of this agreement in general to facilitate project close-out and eliminate further discussion of creek bed soil conditions.

D. PROJECT DESCRIPTION AND DETAILS

The Contractor completed construction activities the week of August 16, 2021, excluding final punch list items. Substantial completion will be issued once all outstanding City of Tacoma permits are recorded which is anticipated to be August 30, 2021. Remaining work consists of final willow planting for stream bank stabilization. This work is currently planned for October 2021 for conformance with project permit requirements. Project final completion is expected at the end of October after willow planting.

Overall project objects and scope of work are summarized in the following sections.

Project Objectives

The objective of this project is to maintain access to the Portac site for truck traffic. Specifically, this project will further this goal by:

- Completing a temporary bridge over a failing culvert (Completed)
- Providing a two-lane freeway-type bridge over Wapato Creek (Completed)
- Providing for enhanced fish passage under the structure meeting state requirements (Completed)
- Removing failing culvert, fish barrier and temporary bridge (Completed)

Scope of Work

The scope of work includes:

- Construction of a new bridge and associated driveways
- Removal of old culvert and temporary crossing
- Stream restoration

Schedule

Advertise for Bid	June 24, 2020
Open Bids	July 21, 2020
Notice of Award	August 5, 2020
Substantial Completion	August 30, 2021
Final Completion	October 31, 2021

E. FINANCIAL IMPLICATIONS

Project Cost Details

	This Request	Total Previous Requests	Total Project Cost	Cost to Date	Remaining Costs
Pre-Design	\$ -	\$ 108,655	\$ 108,655	\$ 108,655	\$ -
Construction - Interim	\$ -	\$ 242,480	\$ 242,480	\$ 242,480	\$ -
Design	\$ -	\$ 379,820	\$ 379,820	\$ 377,950	\$ -
Construction - Permanent	\$ 230,000	\$ 2,339,045	\$ 2,569,045	\$ 2,178,705	\$390,340
Total	\$ 230,000	\$ 3,070,000	\$ 3,300,000	\$ 2,907,790	\$390,340

Source of Funds

The current Capital Investment Plan (CIP) Budget allocates \$2,350,000 for this project. The budget will be adjusted during the 2022 budget cycle.

On December 2, 2020, the Port of Tacoma received a flood district grant for \$931,640 to support the project.

	Total Project Cost	Flood District Grant	Net Cost
Total	\$ 3,300,000	\$ 931,640	\$2,368,360

Financial Impact

Project costs associated with the new bridge (approximately \$2,739,000) will be capitalized and depreciated over an estimated useful life of 20 years. Annual depreciation expense will be \$137,000. Project costs of \$330,857 for the temporary bridge were recorded as operating expense in 2019.

The grant has been recorded as non-operating grant income in 2021.

This work is associated with a maintenance/repair and will not result in additional revenues. PCT provides approximately \$19.4 million in revenue per year to the NWSA.

F. ENVIRONMENTAL IMPACTS/REVIEW

Not applicable for this action request.

G. ATTACHMENTS TO THIS REQUEST

Attachment 1: August 12, 2021, Managing Members Staff Briefing – Notification of Cost Increase.

H. PREVIOUS ACTIONS OR BRIEFINGS

<u>Date</u>	<u>Action</u>	<u>Amount</u>
January 2, 2019	Executive Authorization	\$100,000
April 25, 2019	Executive Authorization	\$200,000
June 2, 2020	Managing Members Authorization	\$2,050,000
August 4, 2020	Managing Members Authorization	\$720,000
TOTAL		\$3,070,000

<u>Date</u>	<u>Action</u>	<u>Amount</u>
December 2, 2020	Flood District Grant Acceptance Authorization	\$931,640

THE NORTHWEST SEAPORT ALLIANCE
MEMORANDUM

MANAGING MEMBERS
STAFF BRIEFING

DATE: August 12, 2021
TO: Managing Members
CC:
FROM: Brett Ozolin, Engineering Project Manager II
SUBJECT: Wapato Creek Bridge and Culvert Removal Project cost overage

A. NOTIFICATION OF COST INCREASE

In accordance with Master Policy Resolution No. 2020-02, Paragraph 8.c.vi, this is notification that the Managing Members authorized amount of \$3,070,000 for the Wapato Creek Bridge and Culvert Removal Master Identification Number 201070.01, as authorized, will be exceeded.

B. BACKGROUND

This overage was recently identified, and the project is nearing completion. Staff are finalizing staffing and consultant support costs internally, as well as contractor costs for a cofferdam failure and unforeseen construction conditions.

Cofferdam Failure

The final phase of project construction includes removal of a failed 96-inch culvert and shoreline restoration (excavation/slope armoring/planting). The in-water portion of the work was designed to be executed "in the dry" by isolating the work area using temporary cofferdams combined with a dewatering and pumping bypass program. The contractor installed cofferdam failed leading to additional Port staff, consultant and site stabilization costs. The failure of the cofferdam had a substantial impact on the original construction approach and schedule, but these impacts are being actively managed with the implementation of a revised plan that expedited remaining construction activities.

Unforeseen Construction Conditions

After the emergency temporary bridge structure was removed site soils were tested for regulated material. One sample returned higher than permissible levels of arsenic that necessitated a portion of the fill material to be disposed at a licensed facility. Continuing excavation resulted in exposure of blast furnace slag in a substantial portion of the culvert backfill. Port environmental staff inspected stockpiled material and concluded that all excavated material was required to be disposed at a licensed landfill to meet regulatory obligations. Currently 800 tons of material are anticipated to be trucked offsite, resulting in increased trucking and disposal costs.

Despite these issues, the primary focus has been on completing the project as quickly as possible to complete the work and restore Wapato Creek to a natural state. The current estimate of the overage is between \$165,000 to \$215,000. Final costs will be presented to the Managing Members in September for authorization.

C. CURRENT STATUS

The majority of construction activities will be completed the week of August 9, and the contractor will start demobilization and final site cleaning. A modified notice of substantial completion notice will be issued by the end of August.

D. ATTACHMENTS TO THIS NOTIFICATION

- June 2, 2020 Managing Members Action Item Memorandum.
- August 4, 2020 Managing Members Action Item Memorandum.

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