MANAGING MEMBERS
ACTION ITEM

Item No. 9A

Date of Meeting October 3, 2023

DATE: September 25, 2023

TO: Managing Members

FROM: John Wolfe, CEO

Sponsor: Tong Zhu, Chief Commercial & Strategy Officer

Project Manager: William Shelton, PE, Capital Project Manager

SUBJECT: T18 Dock Rehabilitation Bollard Replacement Project Authorization

A. ACTION REQUESTED

Request project authorization in the amount $4,040,000, for a total authorized amount of $4,940,000, for design work associated with the Terminal 18 (T18) Dock Rehabilitation and Bollard Replacement, Master Identification No. U00687.

B. SYNOPSIS

The T18 Dock Rehabilitation and Bollard Replacement project will replace five bollards at T18 and rehabilitate pile caps at Development Unit (DU) 7302 to preserve existing use while extending the service life of the rehabilitated components by 25 to 30 years.

C. BACKGROUND

The Terminal 18 Bollard and Terminal 18 Dock Rehabilitation projects were initiated in 2021 along with the Terminal 18 shore power project to address aging infrastructure repair, replacement, and modernization needs. Since all three projects are within or adjacent to each other in location, rely on each other for infrastructure, and have similar timing for design, permitting, and construction, the consultant services were advertised as one consultant on-call contract to enhance the quality of the design and construction. The projects are each authorized separately due to different business priorities, grant funding opportunities, and project schedules.

Terminal 18 comprises of seven separate development units (DU). In April 2023, the design consultant provided the results from their recently completed comprehensive structural visual Condition Assessment of DU 7302 and a rapid structural visual

assessment of DU 6303 and DU 6702. These development units were originally constructed in the following years:

DU 6303: 1963
DU 6701: 1967
DU 7302: 1973

The April 2023 comprehensive structural visual Condition Assessment looked at 100% of the piles, pile caps, sheet pile bulkhead wall, submerged sheet pile toe-wall, and the underside of the precast deck panels within DU 7302.

The 20% Rapid Assessment included a 20% above water visual assessment of select piles, pile caps, sheet pile bulkhead wall, submerged sheet pile toe-wall, and the underside of the precast deck panels within DU 6303 and DU 6701.

Results from the study concluded that the structural concerns at T18 that needed to be addressed immediately were the pile caps at DU 7302. The study determined that the average estimated pile cap service life at DU 7302 is 2024. This indicates that near term repairs to the pile caps at DU 7302 is warranted. Future assessments and repairs to T18 will be made on a continuous as needed basis.

Two undersized bollards failed at Berth 4 at T18. The failure of these bollards is limiting the number of usable mooring points for ships that call at T18. This decreases SSA's mooring options for ships that berth at T18 and can result in degraded efficiency in executing logistics operations depending on the ship loading at T18. There are an additional three bollards of similar construction to the two that failed in the same general area. It is recommended that these also be replaced with higher strength bollards to prevent any further failure of mooring points along T18.

D. PROJECT DESCRIPTION AND DETAILS

The scope of the T18 Dock Rehabilitation and Bollard Replacement is as follows:

- T18 Dock Rehabilitation:
  - Design and repair degraded pile caps at DU 7302
- T18 Bollard Replacement:
  - Design and replace two failed bollards and three existing failing bollards at DU 7302 and DU 7401

This request is for design only. These projects will impact SSA's logistics operations at T18 and will require coordination with SSA to finalize a phasing plan. The phasing of work to mitigate impacts to SSA has been captured in the schedule. Access hatches will need to be made on the deck of DU 7302 to access the pile caps. This will impact truck lanes and movement of shipping containers along DU 7302. The bollard replacement will also require the crane rails to be removed and replaced, preventing

movement of cranes across the impacted area. This is needed to tie the higher strength bollards into additional support structure to meet its design capacity.

Project Objectives

- Design and repair pile caps at DU 7302 to extend service life of pier.
- Design and replace damaged and undersized bollards to restore and maintain mooring options at T18.

Scope of Work

- 100% Design (Design Consultant)
- Permitting (POS)
- Procurement of construction contracts future request (POS)

Schedule

The schedule is reliant upon fish windows, permitting, award timelines, and coordination with SSA to mitigate impact to operations.

Design Start	November 1, 2023
Design Finish	June 30, 2024
Complete Permitting Process	September 30, 2024
Advertise for Bid	October 1, 2024
Open Bids	October 29, 2024
Notice of Award	November 13, 2024
Substantial Completion	March 31, 2026
Final Completion	June 30, 2026

E. FINANCIAL IMPLICATIONS

The estimated costs are high-level estimates with an expected accuracy range of -30% to + 30%. The final design will be a Class 1 cost estimate. The prior request for $900,000 covered all $600,000 in costs associated with the T18 Pier Rehabilitation condition assessment and $44,000 of the $300,000 associated with the T18 Bollard Replacement.

This request is in the amount of $4.04 million for performing the design and preparation of the bid documents for the T18 pile cap repairs and bollard replacement.

Total project costs are based on current estimate from preliminary design efforts.

	This Request	Total Project Cost	Cost to Date	Remaining Cost
Procurement	$0	$0	$0	$0
Pre-Design	$0	$900,000	$280,000	$620,000
Design	$4,040,000	$4,040,000	$0	$4,040,000
Construction	$0	$42,160,000	$0	$42,160,000
Total	**$4,040,000**	**$47,100,000**	**$280,000**	**$46,282,000**

Source of Funds

The proposed 2024-2028 Capital Investment Plan (CIP) Budget allocates $4,040,000 for the design of this project. Construction costs are not included in the current CIP.

Financial Impact

Assuming the project is completed, the design cost will result in a depreciable cost of approximately $135,000 per year for thirty years. Construction cost, if authorized, will increase the depreciable amount. T18 is a major source of income for the NWSA. T18 was budgeted to provide approximately $28.7 million in revenue in 2023.

F. ENVIRONMENTAL IMPACTS/REVIEW

Permitting: The scope of this project falls within the permit coverage of the Pile Systems Repair and Maintenance Programmatic permits. These permits are currently in the process of being renewed with an estimated renewal date by the end of 2023.The program permits will cover a 10-year period. The T18 Dock Rehab and

Bollard replacement project will still need to go through an authorization with USACE and the local Native American Tribes. This process is expected to take 6-8 weeks.

Remediation: Not applicable, no upland work is associated with this project. Working with Port of Seattle remediation staff to determine need for additional permits.

Stormwater: Obtain stormwater construction permits as required.

Air Quality: There are no anticipated air pollutants above standard construction activities for this project. No additional permitting is required.

G. ATTACHMENTS TO THIS REQUEST

None.

H. PREVIOUS ACTIONS OR BRIEFINGS

Date	**Action**	**Amount**
October 5, 2021	POS Commission Authorization for T18 Improvements Design IDIQ Contract Procurement ($15,000,000)	$0
October 5, 2021	Project Authorization for T18 Bollards Design	$300,000
October 5, 2021	Project Authorization for Condition Assessment and Pre-design for Dock Rehab Project	$600,000
TOTAL		**$900,000**

Item No.: 9A
Date of Meeting: October 3, 2023

T18 Dock Rehabilitation-Bollard Replacement Project Authorization

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Name of Presenter: William Shelton
Position: Capital Project Manager

October 3, 2023

ACTION REQUESTED

Request project authorization in the amount $4,040,000, for a total authorized amount of $4,940,000, for design work associated with the T18 Dock Rehabilitation and Bollard Replacement, Master Identification No. U00687.

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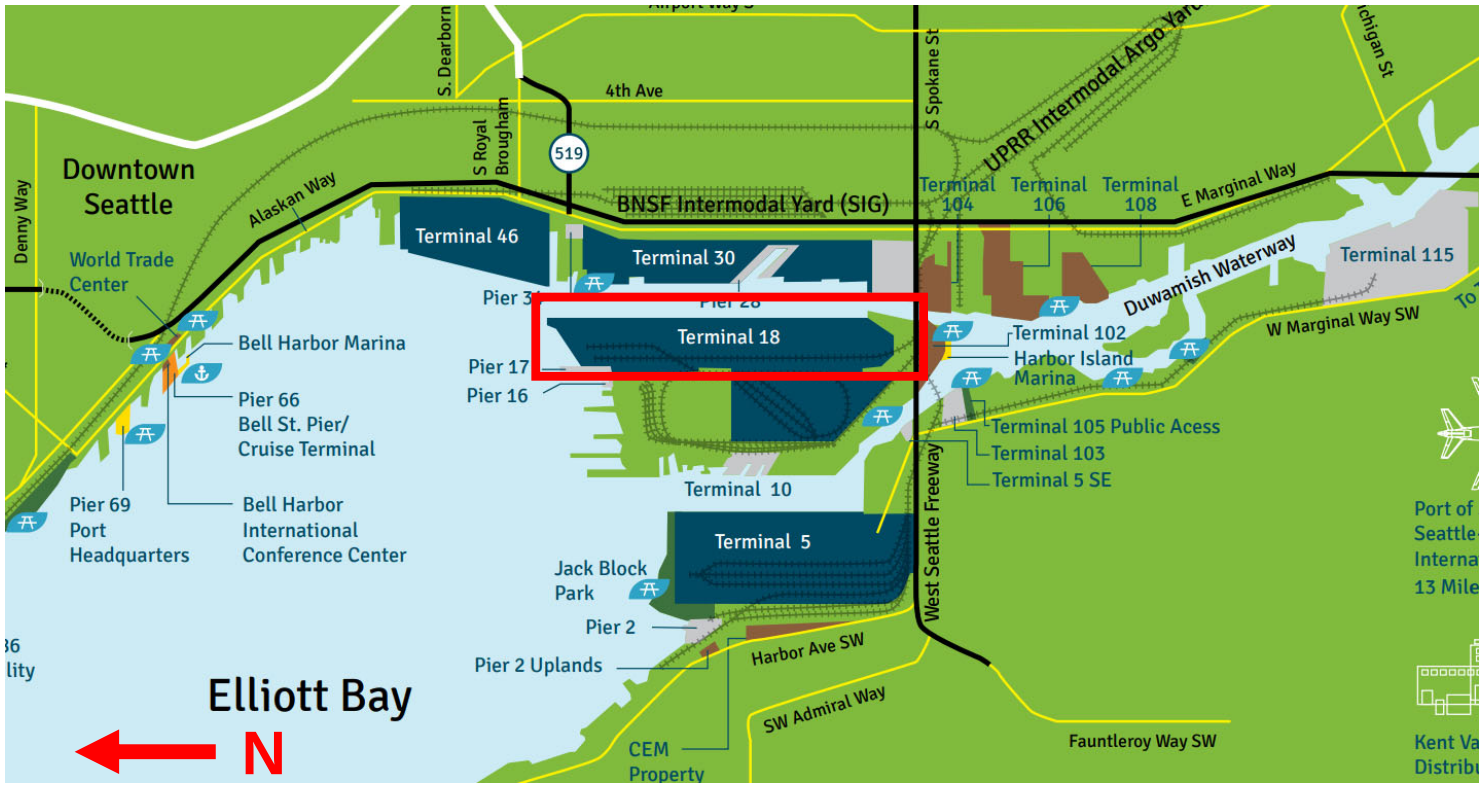
Background

A structural inspection of sections of the pier at T18 was performed in late 2022/early 2023. Findings from the study identified degraded pile caps at Development Unit (DU) 7302 that need to be repaired. Repairs to the pile caps are needed to maintain safe logistics operations at T18.

Two undersized bollards failed at DU 7302 of T18 and there are three similar sized bollards in the vicinity of the two failed bollards. The failure of these bollards is limiting the number of usable mooring points for ships that call at T18 and there is concern the three others may fail. This decreases SSA's mooring options for ships that berth at T18 and can result in degraded efficiency in executing logistics operations depending on the ship loading at T18.

Background


Downtown Seattle
Denny Way
Alaskan Way
S. Dearborn
S Royal Brougham
4th Ave
519
S Spokane St
UPRR Intermodal Argo Yard
BNSF Intermodal Yard (SIG)
Terminal 104
Terminal 106
Terminal 108
E Marginal Way
Terminal 46
Terminal 30
Terminal 18
Terminal 115
Duwamish Waterway
W Marginal Way SW
Terminal 102
Harbor Island Marina
World Trade Center
Bell Harbor Marina
Pier 66 Bell St. Pier/ Cruise Terminal
Pier 17
Pier 16
Terminal 105 Public Acess
Terminal 103
Terminal 5 SE
Terminal 10
Pier 69 Port Headquarters
Bell Harbor International Conference Center
Terminal 5
Jack Block Park
Pier 2
Pier 2 Uplands
West Seattle Freeway
Harbor Ave SW
SW Admiral Way
Fauntleroy Way SW
CEM Property
Elliott Bay
N

Background

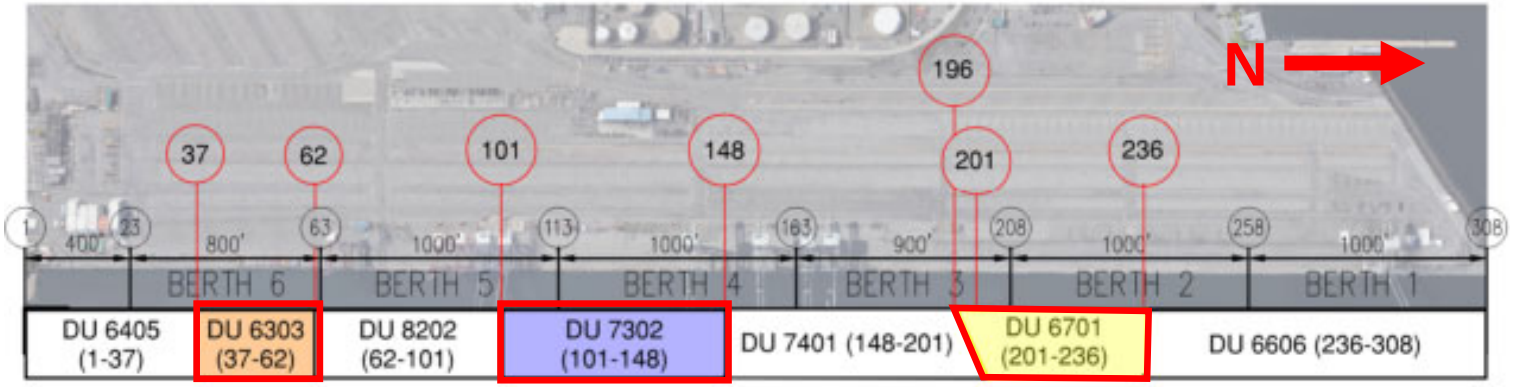


Table 4: Pile Cap (PC) Visual Rating

Development Unit (DU) [Bents]	DU 6303 [37-62]	DU 7302 [101-148]	DU 6701 [196/201-236]
PC Average Visual Rating (1-6)	4.7	3.6	4.6
PC Visual Rating (Max)	6	5	5
PC Visual Rating (Min)	2	2	2
Average PC Estimated Service Life	2041	2024	2040

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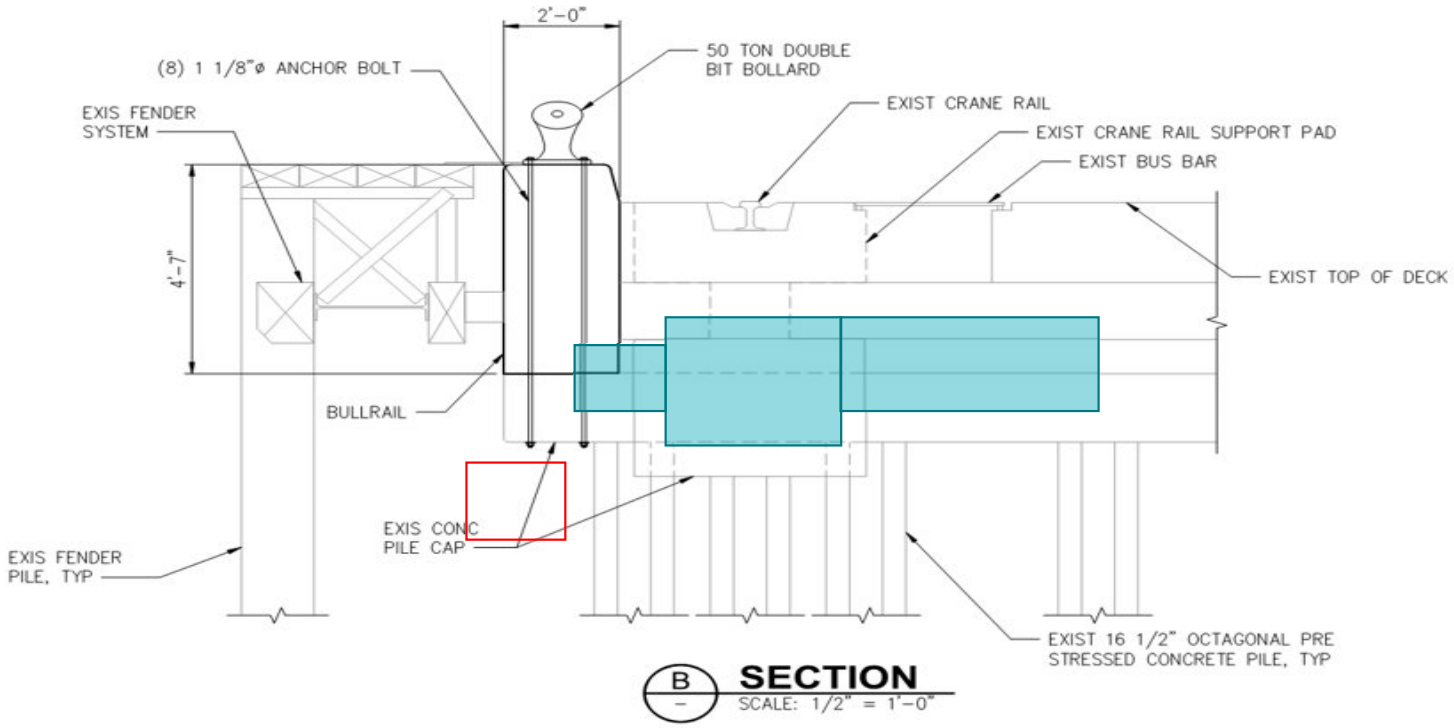
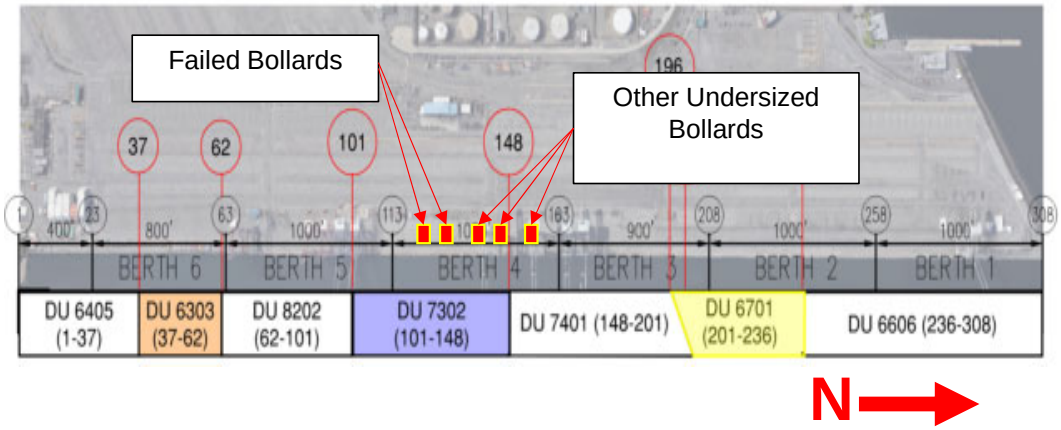
Background


2'-0"
(8) 1 1/8"ø ANCHOR BOLT
50 TON DOUBLE BIT BOLLARD
EXIS FENDER SYSTEM
EXIST CRANE RAIL
EXIST CRANE RAIL SUPPORT PAD
EXIST BUS BAR
4'-7"
EXIST TOP OF DECK
BULLRAIL
EXIS CONC PILE CAP
EXIS FENDER PILE, TYP
EXIST 16 1/2" OCTAGONAL PRE STRESSED CONCRETE PILE, TYP
B
SECTION
SCALE: 1/2" = 1'-0"

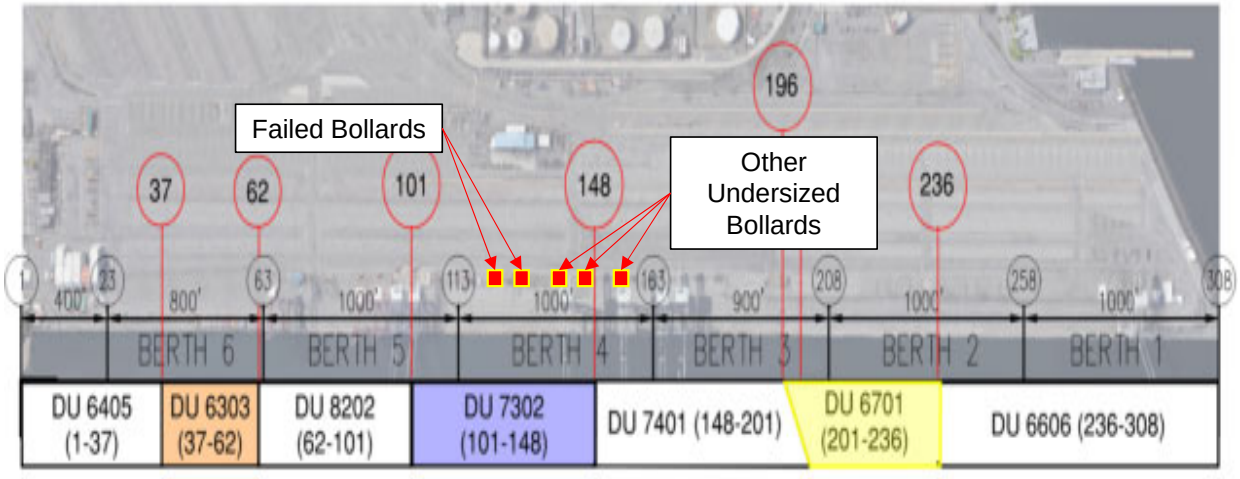
Background


Failed Bollards
Other Undersized Bollards
37
62
101
148
196
1
23
63
113
163
208
258
308
400'
800'
1000'
900'
1000'
1000'
BERTH 6
BERTH 5
BERTH 4
BERTH 3
BERTH 2
BERTH 1
DU 6405 (1-37)
DU 6303 (37-62)
DU 8202 (62-101)
DU 7302 (101-148)
DU 7401 (148-201)
DU 6701 (201-236)
DU 6606 (236-308)
N

Project Description and Details

Multiple structural deficiencies have been identified at T18 which need to be rectified as soon as possible to maintain safe logistics operations at T18.

- T18 Dock Rehabilitation:
  - Design and repair degraded pile caps at Development Unit (DU) 7302
- T18 Bollard Replacement:
  - Design and replace two failed bollards & three failing bollards at Berth DU 7302 and DU 7401



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Project Schedule

Activity	Timeframe
Design Start	November 1, 2023
Design Finish	June 30, 2024
Complete Permitting Process	September 30, 2024
Advertise Bids	October 1, 2024
Bid Opening	October 29, 2024
Contract Award	November 13, 2024
Substantial Completion	March 31, 2026
Contract Completion	June 30, 2026

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Source of Funds

- The estimated cost of the design for this project is $4,040,000
- The estimated budget for this project is $47,097,000
- The 2023-2027 Capital Investment Plan (CIP) allocates $8,000,000 for this project for deign. The construction costs are not included in the CIP
- This work and associated budget is consistent with the NWSA valuation

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Financial Summary

Item	This Request	Total Project Cost	Cost to Date	Remaining Cost
Procurement	$0	$0	$0	$0
Pre-Design	$0	$900,000	$279,711	$620,289
Design	$4,040,000	$4,040,000	$0	$4,040,000
Construction	$0	$42,157,000	$0	$42,157,000
Project Total:	$4,040,000	$47,097,000	$279,711	$46,817,289

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Environmental Impacts / Review

- Permitting:
  - Scope of project falls under permit coverage of the Pile Systems Repair and Maintenance Programmatic permits
  - Project authorization with USACE and local Native American tribes. (6-8 weeks)
- Remediation: N/A
- Stormwater: Obtain stormwater construction permits as required.
- Air Quality: No additional permitting is required

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