

# Engineering, Operations, & Technology Committee Allen-McColloch Pipeline Urgent PCCP Rehabilitation

Item 8-1 February 12, 2024 Item 8-1 Allen-McColloch Pipeline Stage 1

### Subject

Authorize increases in change order authority for three contracts to conduct urgent rehabilitation of prestressed concrete cylinder pipe on the Allen-McColloch Pipeline: (1) a \$12 million increase for a Northwest Pipe Company contract, (2) a \$10.5 million increase for a J.F. Shea Construction Inc. contract, and (3) a \$2 million increase for a Structural Preservation Systems

#### Purpose

This action promptly responds to urgent rehabilitation work required along portions of the Allen-McColloch Pipeline

#### **Recommendation and Fiscal Impact**

Authorize increase in change order authority for three contracts Fiscal Impact of \$31.546 M

#### Budgeted

#### **Distribution System**



Engineering, Operations, & Technology Committee

Allen-McColloch Pipeline (AMP)

From Diemer Plant to El Toro Reservoir

- Completed: 1981
- Acquired: 1995
- Length: 26 miles
- PCCP diameters from 54" to 78"



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### 2023 PCCP Inspections and Immediate Actions

- Nov 2023 Conducted electromagnetic inspections
  - 81 new distressed pipe segments
    - 44 critical (20 to 130 wire breaks each)
  - Requires urgent rehabilitation
- AMP pressure reductions
  - In coordination with Municipal Water
    District of Orange County
  - Dec 2023 Adjusted gates Diemer
  - Jan 2024 Began OC-88 sectionalizing valve bypass line replacement



Bypass line replacement as of Jan 2024 (top), 3D rendering of completed line (bottom)



Alternatives Considered

# **Initial Option**

Rehabilitate as many pipe segments as possible within 3-week shutdown in April 2024

- Target pipe segments with highest number of wire breaks
- Unable to reline most pipe segments with elevated wire breaks
- Requires continued pressure reductions/hydraulic restrictions

# **Selected** Option

Stage 1:

- April 2024: Install bulkhead downstream of OC-88, reline all critical segments upstream of OC-88 in 3-week shutdown
- May 2024: Continue relining small portion downstream of OC-88
  Stage 2:
- June-Dec 2024: Complete relining all PCCP downstream of OC-88

#### **Selected** Option



#### Selected Approach – Use of Existing Contracts

Existing Contract	Board Date	Contract Amount	Original Change Order Authority	Contract Scope of Work
Contract No. 2002 Northwest Pipe	Nov. 2023	\$16,050,000	\$802,775	Lakeview Pipeline – furnish steel pipe
Contract No. 2026 J.F. Shea Construction Inc.	Jan. 2023	\$68,850,000	\$3,442,350	Second Lower Feeder PCCP rehabilitation – steel liner
Contract No. 2088 Structural Preservation Systems	Aug. 2023	\$1,960,000	\$250,000	Sepulveda Feeder PCCP rehabilitation – carbon fiber

# **Change Order Authority Increases to Existing Contracts**

- Contract 2002 Northwest Pipe Company
  - Fabricate 3.45 miles of 48-inch to 72-inch diameter steel liner
    - Includes straight pipe, specials, & transition pieces
    - Sufficient pipe for both Stage 1 and 2 relining work
  - Change order authority increase: \$12 M
- Contract 2026 J.F. Shea Construction Inc.
  - Line approx. 4,400 ft. of existing PCCP with steel liner in Stage 1
  - Traffic control
  - Access pit excavation, backfill & site restoration
  - Change order authority increase: \$10.5 M



Pipe Fabrication Lakeview Pipeline



**SLF** Rehabilitation

# **Change Order Authority Increases to Existing Contracts**

- Contract 2088 Structural Preservation Systems
  - Line three PCCP segments with carbon fiber in Stage 1
    - 66, 69 & 78 inches in diameter
  - Change order authority increase: \$2 M
- Summary
  - Recommended change order prices are appropriate & cost effective



Carbon Fiber Rehabilitation Second Lower Feeder

Change Order Authority Increase for AMP Urgent PCCP Rehabilitation

# Metropolitan Scope of Work

- Shutdown of feeder, disinfection & return to service
- Construction management, fabrication inspection
- Contract administration, technical support during construction, submittal review & preparation of record drawings
- Coordination with member agencies, permitting, environmental monitoring, public outreach & project management

#### Allocation of Funds

#### AMP Urgent PCCP Rehabilitation

Metropolitan Labor

Owner Costs (Proj. Mgmt., Contract Admin., Envir. Suppor	rt) \$ 674,000
Construction Inspection & Support	2,622,000
Force Construction	1,490,000
Submittals Review, Tech. Support, Record Dwgs.	460,000
Professional/Technical Services	600,000
Contracts	
Northwest Pipe Company	12,000,000
J.F. Shea Construction Inc.	10,500,000
Structural Preservation Systems	2,000,000
Remaining Budget	1,200,000
	Total \$31,546,000

# **Project Schedule**

AMP Rehabilitation	2023	2024	2025	
Stage 1				
North of OC-88				
South of OC-88				
Stage 2			$\diamond$	
Final Design		📙 Board A	Action	
Construction				

# **Board Options**

• Option #1

Authorize increase in change order authority for three contracts to conduct urgent rehabilitation of prestressed concrete cylinder pipe on the Allen-McColloch Pipeline, as follows:

- a. Authorize increase in change order authority of \$12 million to Contract 2002 with Northwest Pipe Company.
- b. Authorize increase in change order authority of \$10.5 million to Contract 2026 with J.F. Shea Construction Inc.
- c. Authorize increase in change order authority of \$2 million to Contract 2088 with Structural Preservation Systems.

### **Board Options**

#### • Option #2

Do not authorize increases in change order authority to perform urgent rehabilitation of the AMP.

#### Staff Recommendation

• Option #1

