

**Engineering & Operations Committee** 

## Rainbow Tunnel Concrete Liner Rehabilitation

Item 7-3 November 7, 2022

## Rainbow Tunnel Concrete Liner

Rehabilitation

#### **Current Action**

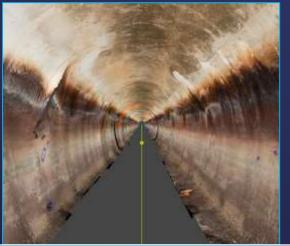
 Award a \$1,228,607.10 contract to Howard Ridley Company, Inc. for the rehabilitation of the concrete liner at ten locations within the Rainbow Tunnel segment of San Diego Pipeline No. 1

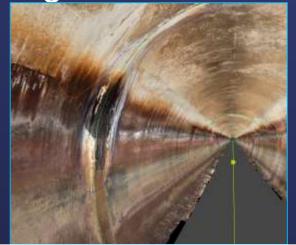
## Distribution System

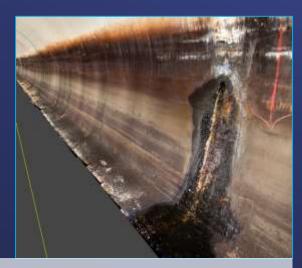


## Background

- Rainbow Tunnel
  - Tunnel section of San Diego Pipeline #1
  - Concrete-lined horseshoe tunnel
  - 77 years old
  - 4,700 feet long
  - 6-foot inside height







Rainbow Tunnel Survey Imagery

## Background

- Inspections in 2020 & 2021 identified locations of concrete degradation in the tunnel liner
  - Structural analysis of tunnel showed tunnel structurally sound
  - Several locations identified as potential leak locations
    - Sealed from the surface of the tunnel liner Met Forces
  - 10 locations of significant concrete degradation identified
    - Require complete localized liner replacement







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#### **Alternatives Considered**

- Complete tunnel relining
  - Require 4 to 6-month shutdown
  - Current limit 10 days
- Selected Alternative
  - Completed localized concrete liner rehabilitation
  - Utilizes two upcoming 10-day shutdowns
    - Jan/Feb 2023 & Feb/March 2023
  - Extends service life of current liner

## Scope of Work

- Contractor
  - Complete replacement of concrete liner at ten locations
  - Grout curtain injection
  - Temporary ventilation
  - Surface preparation at tunnel access
- Metropolitan
  - Shutdown support & continuing inspections
  - Grading & preparation of staging area
  - Submittal review, construction inspection, & project management

# Bid Results Specifications No. 2038

**Bids Received** 

No. of Bidders

Lowest Responsible Bidder

Low Bid

Other Bid

Engineer's Estimate

SBE Participation\*\*

October 4, 2022

2

Howard Ridley Company, Inc.

\$1,228,607.10

\$799,490\*

\$1,340,000

100%

<sup>\*</sup>Bid deemed non-responsive

<sup>\*\*</sup>SBE (Small Business Enterprise) participation level set at 25%

#### Allocation of Funds

#### Rainbow Tunnel Concrete Liner Rehabilitation

Metropolitan Labor			
Owners Costs (Proj. Mgmt., Contract Admin., Envir. Suppor	t)	\$	125,000
Construction Inspection & Support			202,000
Force Construction			320,000
Submittals Review, Tech. Support, Record Dwgs.			155,000
Materials & Incidentals			15,000
Contracts			
Howard Ridley Company, Inc.		1,22	28,607.10
Remaining Budget		25	54,392.90
	Total	\$ 2	2,300,000

## Project Schedule



### **Board Options**

- Option #1
  - Award a \$1,228,607.10 contract to Howard Ridley Company, Inc. to rehabilitate the concrete liner of the Rainbow Tunnel at ten locations.
- Option #2
  - Do not proceed with the project at this time.

## Staff Recommendation

• Option #1

