



Engineering, Operations, & Technology Committee

# Colorado River Aqueduct Erosion Control Improvements

Item 7-1

May 13, 2024

## Item 7-1

### CRA Erosion Control Improvements

#### Subject

Authorize an increase of \$2.35 million to an agreement with HDR Engineering Inc. for a new not-to-exceed total amount of \$5.15 million for final design services for erosion control improvements along the Colorado River Aqueduct (CRA)

#### Purpose

Enhance resiliency of the CRA conveyance system to storm events

#### Recommendation and Fiscal Impact

Authorize an increase to an existing agreement for final design services for erosion control improvements along the CRA

Fiscal impact of \$4.3 M

#### Budgeted

# Location Map





# Background

- Original berm & diversion devices protecting conduits have deteriorated
- High-intensity, sediment-laden storm runoff erodes soil & exposes cut-and-cover conduit
- Exposed conduits are vulnerable to structural damage from large debris and/or vehicles



CRA Conduit Exposure from Storm  
(Oct. 2018)



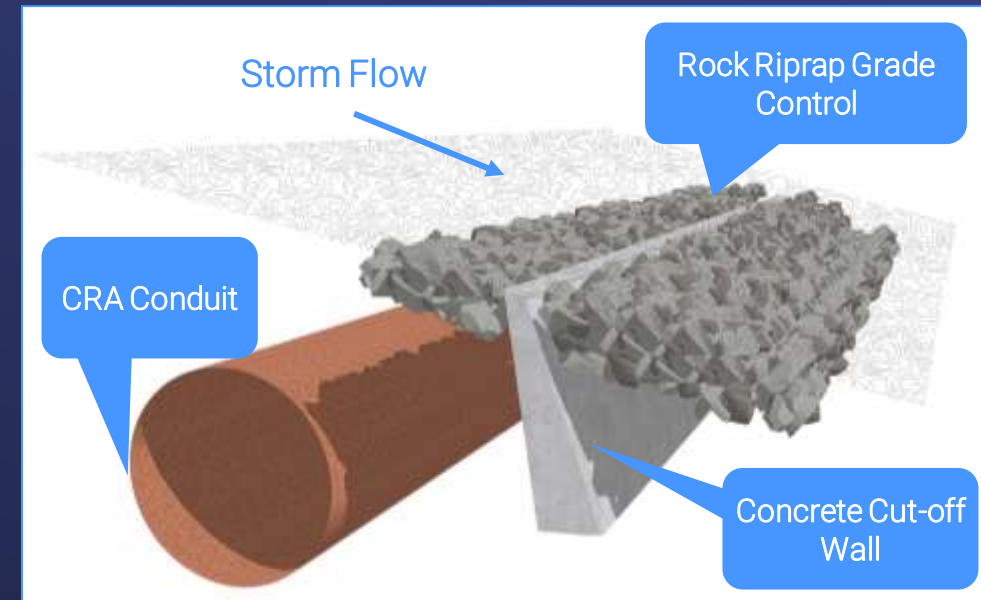
CRA Exposure from Hurricane Hilary  
(Aug. 2023)

# Planned Work

- Install permanent erosion protection features at 23 locations
  - Grade control structures
  - Concrete cut-off walls
  - Concrete slabs
  - Rock riprap revetment blankets
  - Berm improvements



Erosion Control Improvements Area



Grade Control w/ Concrete Cut-Off Wall

## CRA Erosion Control Improvements

### Alternatives Considered

- Alternative Considered – Utilize in-house Metropolitan staff to conduct final design activities
  - Limited availability of staff to conduct work
- Selected Alternative – Use consultant to develop final design
  - Metropolitan staff to provide technical input and oversight

## CRA Erosion Control Improvements

### HDR Engineering Inc. - Agreement Amendment

- Competitively selected under RFP 1286
  - Completed preliminary design
- Scope of Work
  - Develop final design drawings & specifications
  - Prepare cost estimate
  - Participate in constructability review
  - Technical assistance during permitting & bidding
- Amendment amount: \$2,350,000
- New NTE amount: \$5,150,000
- SBE participation level: 25%



## CRA Erosion Control Improvements

### Metropolitan – Scope of Work

- Provide technical oversight
- Conduct additional topographic surveys & geotechnical investigations support
- Coordinate permitting process with local jurisdictions
- Prepare environmental documentation
- Conduct constructability review
- Perform project management & project controls

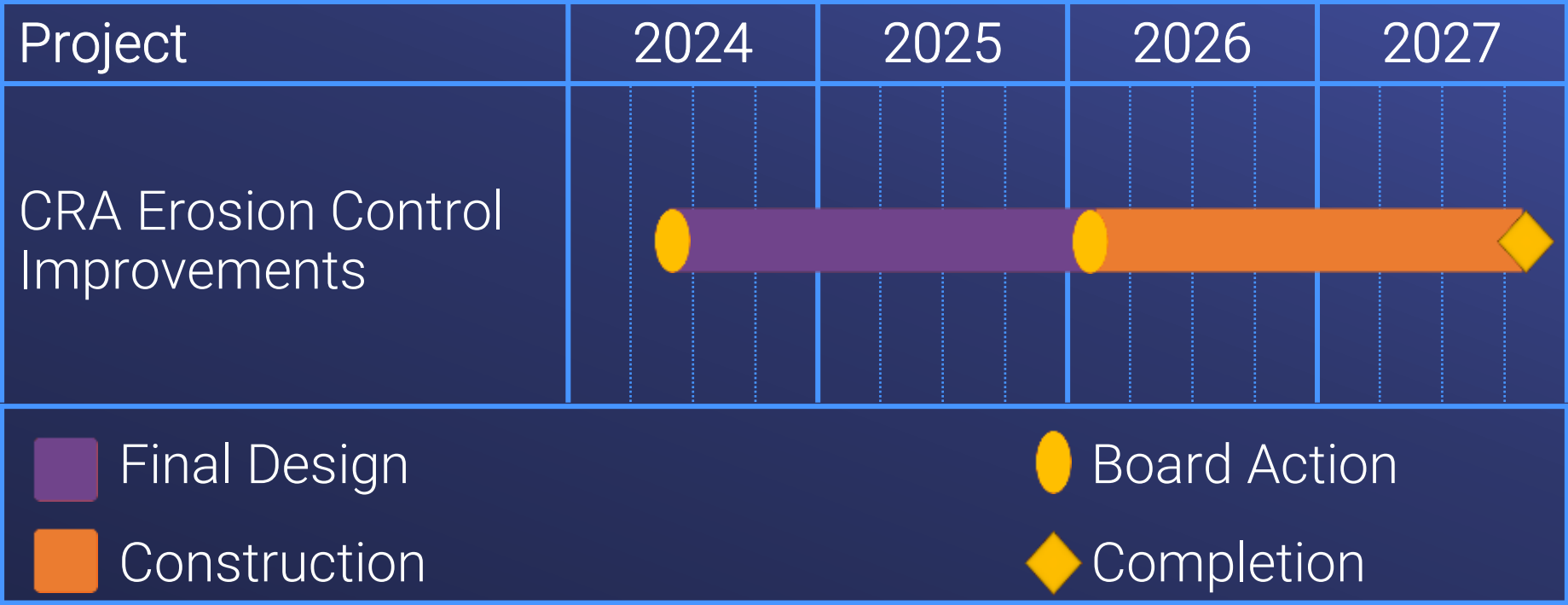


# Allocation of Funds

## CRA Erosion Control Improvements

Metropolitan Labor	
Final Design	\$ 485,000
Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	691,000
Materials & Incidentals	2,000
Professional/Technical Services	
HDR Engineering Inc.	2,350,000
Environmental Consultant	240,000
Geotechnical Investigations	220,000
Topographic Survey	50,000
Constructability Review	75,000
Remaining Budget	187,000
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Total	\$ 4,300,000

# Project Schedule



# Board Options

- Option #1

Authorize an increase of \$2.35 million to an agreement with HDR Engineering Inc. for a new not-to-exceed amount of \$5.15 million for final design of erosion control structures along the CRA system.

- Option #2

Do not proceed with this project at this time.

# Staff Recommendation

- Option #1



