



AGENDA MEMORANDUM

First Reading at City Council Meeting of February 13, 2024
Second Reading at the City Council Meeting of February 20, 2024

DATE: February 13, 2024

TO: Peter Zaroni, City Manager

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<p style="text-align: center;">Ordinance amending the FY2024 CIP, adding a Scour Protection Project and appropriating funds from TIRZ #2</p>

CAPTION:

Ordinance amending the Capital Improvement Program to add the Whitecap and Gypsy Bridges Scour Protection Project; appropriating \$1,500,000.00 from the unreserved fund balance in the TIRZ #2 Fund; and amending the FY 2024 Operating and Capital Budgets.

SUMMARY:

With the completion and dedication of the Don Patricio Bridge, concerns have been raised about fully opening the canal system and removing the earthen dams that are currently preventing flow and navigation. Fully connecting the canals will increase water exchange and enhance water quality. A consequence of increased flow is the potential for increased erosion. Analyses by two separate consultants confirm that the channel contractions at the Whitecap and Gypsy bridges will produce increased flow velocities once the canal system is fully interconnected. The expected flow velocities are sufficient that it warrants retrofitting scour protection countermeasures to the bridges.

BACKGROUND AND PURPOSE:

One of the benefits that was sought from the Don Patricio Bridge and the interconnection of the canal systems was greater water circulation which would improve the water quality and habitat. A potential downside of that is with increased water velocity, there is greater potential for scour. That is the phenomenon where the tractive forces of moving water displace soil particles in the sides and bottom of a channel. This is particularly problematic where the flow area is contracted

at locations such as culverts and bridges. This can produce scour holes that threaten adjacent infrastructure.

In August 2021, LJA Engineering in collaboration with Dr. Christopher Reed were commissioned by Diamond Beach Holdings to model the flows in the Whitecap NPI canals. In August of 2023, the City contracted LJA and Dr. Reed to prepare a supplemental report that would expand the study area to include key City assets and estimate peak velocities in the canal system based on some historical extreme events. PIPOA has separately contracted Anchor QEA to conduct a similar scope of work. One area of agreement between the two consultants was that increased flow velocities will occur at the Whitecap and Gypsy bridges.

The Whitecap and Gypsy bridges were designed in the late 1960's. The City assumed responsibility for the bridges after annexation in 1981. The bridge designs do not incorporate any scour protection countermeasures. Additionally, the bulkheads protecting the bridge abutments are very shallow so that any scour that occurs would likely mine material from behind the bulkheads. That lost soil material could result in settlement, sinkholes and damage to the bridge abutments and approaches.

In response to the scour concern, the City has engaged LJA on an existing MSA to provide a preliminary engineering report and cost estimate to retrofit scour protection and also address other existing maintenance deficiencies. LJA has advanced their work sufficiently to produce a budgetary cost estimate. This project and recommendation to amend the budget was approved by the TIRZ #2 board on January 23,2024.

PROJECT TIMELINE:

2024	2024			2024 - 2025
February - June	J	A	S	Oct - Feb
Design	Bid/Award			Construction

The projected schedule reflects City Council award in January, with anticipated construction completion by Feb 2025.

ALTERNATIVES:

Not amending FY2024 CIP Plan and appropriating the funds could delay implementing scour protection measures at the Gypsy and Whitecap bridges.

FISCAL IMPACT:

The fiscal impact in FY 2024 is in the amount of \$1,500,000.00 from the TIRZ #2 Fund. The monies will be appropriated to the TIRZ #2 Fund and transferred to the TIRZ #2 Capital Fund.

From:	To:	Amount:
TIRZ #2 Fund 1111-17-60000 Acct 548500	TIRZ #2 Capital Fund	\$1,500,000
Total:		\$1,500,000

FUNDING DETAIL:

Fund: TIRZ #2 Capital Fund 3278
Organization: 89 - CIP
Department: Infrastructure (17)
Activity: 24032 - Whitecap and Gypsy Bridges Scour Protection
Amount: \$1,500,000.00

RECOMMENDATION:

Staff recommend authorizing the request for additional funding in the amount of \$1,500,000.00 from the TIRZ #2 Fund to support the Whitecap and Gypsy bridges scour protection project and amending the Adopted FY 2024 CIP Plan to include implementation of a Scour Protection Project for the Gypsy and Whitecap Bridges.

LIST OF SUPPORTING DOCUMENTS:

Ordinance
Maps
CIP Page
Presentation