Stockton Bridge Replacement Contract Design Amendment

City Council

February 27, 2025

Stockton Bridge Replacement
Long-Term Development Process

Initial step to ensure a vehicular path of travel over Soquel Creek is maintained for future generations and flooding risk is reduced.

Community Engagement: Regular input to align with local goals.

Environmental Compliance: Meets all regulatory standards.

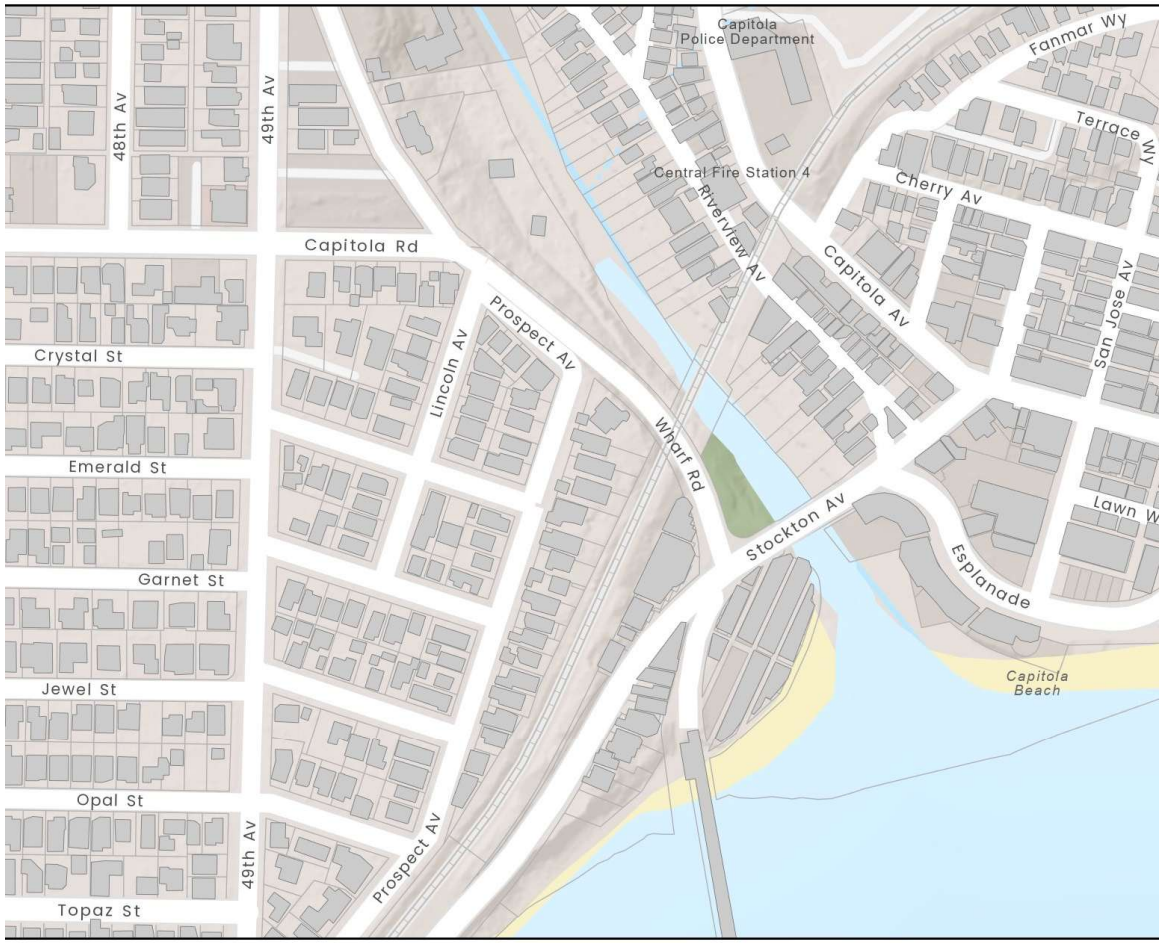
Design & Engineering: Optimizes function, aesthetics, and resilience.

Funding: Ongoing pursuit of grants and resources.

Stockton Bridge Replacement

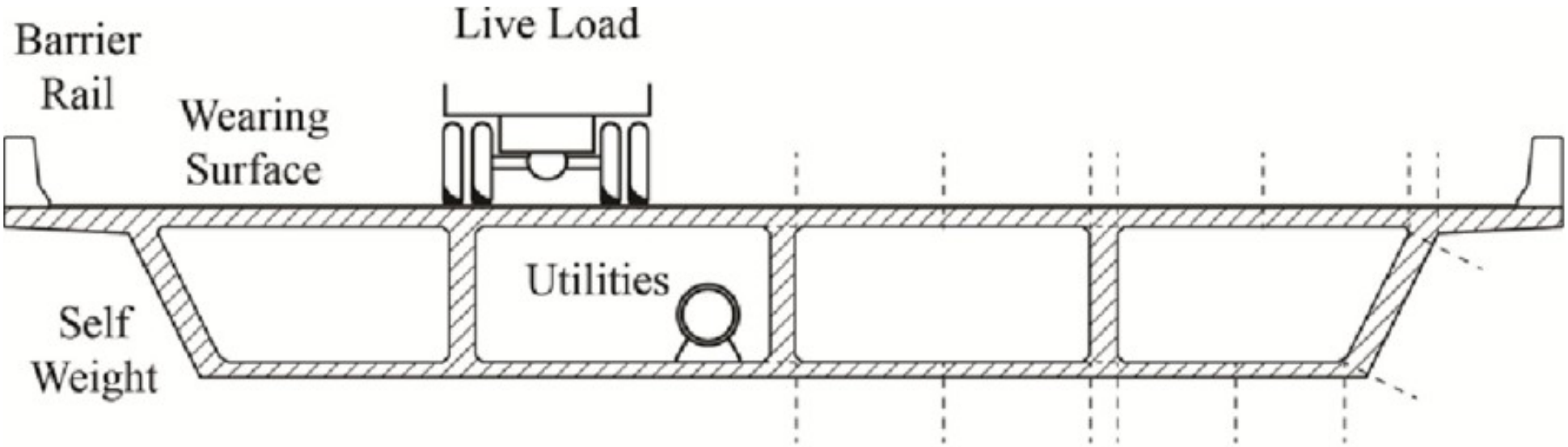
Background

- **Bridge ID**: 36C0110
- **Position**: End of Soquel Creek watershed
- **Connectivity**: Sole Capitola crossing apart from highway
- **Traffic Volume**: 15,000 - 20,000 ADT



Stockton Bridge Replacement

Background



- **Year Constructed**: 1934
  - Replaced an older iron and wood bridge; built by a 15-person WPA crew in ~150 days, costing $25,000
- **Structure**:
  - 3-span box girder design
  - Length: 138 ft (85 ft center span), Width: 42 ft


EDGEWATER
DRUGS
STEAKS & CHOPS
POPPER GRILL
FISH AND STEAKS
SOQUEL CREEK
W-53
CAPITOLA, CALIFORNIA

Stockton Bridge Replacement
Historical Context

Earliest known bridge of its type in CA

Upstream bridges replaced with clear span

- Porter Street: 1947, replaced 1994
- Soquel Drive: 1927, replaced 1956, replaced 2002
- Highway 1: 1947, replaced 1995

Long-time flooding concerns

- Flooding at Soquel Drive due to log jams: 1937,1940, 1955,1982 (also damaged Stockton Avenue)
- Documented in City Council minutes as early as 1951
- Narrowest span is 10 ft; typical debris (e.g., fallen trees) measures 15–30 ft

Stockton Bridge Replacement

Current Condition – May 2024 Caltrans Inspection

Deck

- Weathered/cracked surface
- **Rating: 4 – Poor**

Superstructure

- Cracks, patchy concrete, efflorescence (box girder soffits)
- Railings: delamination, spalling, exposed corrosion
- **Rating: 5 – Fair**

Substructure (Piers)

- Occasional cracks/patches in walls and abutments
- **Rating: 5 – Fair**

Overall

- **Sufficiency Rating: 60.6** (Funding Eligible)
- **“Structurally Deficient”**: Poor condition of key load elements

Stockton Bridge Replacement

Potential Risks

Likely Risks

- Normal wear and tear
- Coastal storms
- Concrete decay and steel rebar corrosion
- Outdated bridge design:
  - Built prior to use of pre-stressed concrete
  - Older reinforcement standards
- **Result: Ongoing reduction in load rating**

Catastrophic Risks

- Debris jam during high flow events
- Earthquake (bridge predates modern seismic codes)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Stockton Bridge Replacement

Project Identification and Funding

Project Identification

2013/2020 LHMP: Identified as critical for flood management, “facility most at risk”

2016: Due diligence memorandum recommended debris fins; concept only report

Funding Milestones

FY 2022-23 Budget: $350,000

2023 AB 102: State awarded additional $500,000 for evaluating and constructing debris diversion methods

Feasibility (2025)

Feasibility study to assess effective debris mitigation options

Council direction to move forward with replacement project

Current Step

Preliminary Engineering and design (35% design)

Public Outreach

Environmental Clearance

Stockton Bridge Replacement

Prior Feasibility Study

Professional Services Agreement CSW/ST2

Study Objectives

- Evaluate alternative mitigation measures
- Analyze debris flow patterns
- Assess hydraulic behavior

Additional Considerations

- Environmental impacts
- Permitting requirements
- Cost analysis

Feasibility Study Mitigation Options

- Diversion fins
- Cages
- Piers
- Sweepers
- Full bridge replacement

Stockton Bridge Replacement

Mitigation Option Summary

Option	Hydraulic Feasibility	Cost	Environmental/ Recreational Impact	Effectiveness
Debris Diversion Fins	Raises water levels	Moderate ($1.6M-$2.4M)	High impact	Least effective
Debris Diversion Cage	Traps smaller debris	Moderate ($1.6M-$2.4M)	Moderate impact	Moderately effective
Debris Diversion Piers	Least obstruction	Moderate ($1.6M-$2.4M)	Minimal impact	Moderately effective
Debris Sweeper	High failure risk	Low ($1.4M)	Minimal impact	Least effective
Bridge Replacement	Most effective	High ($17M-$20M)	Minimal impact	Most effective

Stockton Bridge Replacement

Historic Significance & Community Character

Stockton Bridge Replacement

Transportation & Connectivity


Existing Condition


Conceptual Rendering
(from proposal)

Stockton Bridge Replacement

Previous Council Direction

November 2024

- Council Direction
  - Staff to pursue bridge replacement
  - Best long-term flood mitigation solution
  - Requires additional steps before final engineering & construction

Design Amendment

- Amendment to CSWST2 contract
- Covers all tasks leading to, but excluding, final engineering
- Prepares project for grant competitiveness

Stockton Bridge Replacement

CSW-ST2 Engineering

CSW ST2

- Civil engineering, land surveying, and planning
- Northern California since 1952

Recent Projects

- **Mirada Road Pedestrian Bridge Replacement**
  County of San Mateo
- **Bayfront Boulevard**
  City of Hercules

Local Project (Biggs Cardosa Associates)

- **Watsonville Slough Bridge at Harkins**
  City of Watsonville

Stockton Bridge Replacement

Scope of Work

Preliminary Engineering and Design (35% Design)	Concept design development, structural & hydrology studies Utility relocation, grading & drainage
Environmental Clearance	CEQA & NEPA compliance Biological, hydrology, and cultural/historical assessments
Community Outreach	Public engagement meetings & stakeholder coordination
Technical Documentation	Hydrology, foundation studies, and cost estimates
Project Management & QA/QC	Schedule oversight & quality assurance at key milestones

Stockton Bridge Replacement

Next Steps

Project Identification	Feasibility	Preliminary Design	Final Design
Complete	Complete	35% PS&E Public Outreach Environmental Clearance	65%, 95%, and 100% PS&E Final geotechnical & structural analysis Detailed cost estimates & bid documents

Stockton Bridge Replacement
Fiscal Impact & Funding Strategy

Current project funding

- Total funding = $850,000
  - City funding = $350,000
  - State funding for this project = $500,000

Amendment

- CSW Contract increase to $840,398

Future funding opportunities:

- FEMA & infrastructure-related state/federal grants
- Future grant applications strengthened by project advancement

Recommended Action

Approve an amendment to contract with CSWST2 in the amount of $715,000, for a total contract value of $840,398, to complete all tasks outlined in the Scope of Work (SOW), excluding final engineering, for Stockton Avenue Bridge Replacement Project.