Inspiring Precedents:
5 Model Projects in California & NY

Successful Adaptive Reuse of Historic Railroad Trestles to Create Community Assets

Precedent Project Research Report

Prepared for the Trestle Promenade Steering Committee

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About This Report

Petaluma, California seeks adaptive reuse of its historic timber-pile railroad trestle alongside the bank of the Petaluma River in its downtown. A community vision is to renovate and adapt the trestle to create a wide pedestrian promenade on the riverfront. Residents seek to find a viable solution to preserve the historic structure and use it to create a riverfront pedestrian promenade –a downtown amenity with a positive economic impact for Petaluma and the City.

Petaluma is at year 16 of an effort that began with the 2010 Coastal Conservancy grant. Reaching a shovel-ready design in FY25/26, as the City stated its goal in 2025, puts a realistic public opening in 2028–2030 — provided funding is secured promptly and that a design is completed this year.

The five projects profiled in this report are the closest available precedents discovered for the Petaluma project. However, all are trestles that cross a river, rather than sitting parallel to shore.

This research included a review of the 2025 Foth report commissioned by the City of Petaluma, which pointed only to demolition and rebuilding of the same structure.

Projects are ranked by how closely they mirror Petaluma's specific situation: downtown riverfront setting, deteriorating creosote-treated timber substructure, and a pedestrian-promenade outcome.

Each profile includes project dates, lead consulting firm, consultant contract budget, total project budget, and construction schedule. It also contains direct links to source documents your team can reference when drafting the next phase of Petaluma's procurement. A comparison table and summary takeaways follow the five profiles.

1. San Lorenzo River Trestle Trail

City of Santa Cruz, California

San Lorenzo River Trestle Trail — cantilevered promenade, 2019 Source: m-me.com — MME project page

Why this is the closest analogue

Historic timber railroad trestle (1905) over a river running through a downtown.

Pedestrian pathway over trestle was widened to promenade scale using a cantilevered FRP-decked structure hung off the existing trestle rather than demolition/replacement. This required no new construction in the river and no modification to existing pilings or abutments. This made the project far easier, faster, and less expensive to get permitted and approved.

Similarities: Creosote-era timber, tidal river influence, urban context, city-led procurement with grant stacking from state, county, and nonprofit sources.

The engineering strategy is directly applicable to Petaluma and was specifically developed to avoid disturbing existing pilings and abutments — the exact environmental-permitting problem Foth has flagged in Petaluma.

Key Project Data

Project Timeline: 2015 (Land Trust-funded structural feasibility study) → November 13, 2018 (construction contract awarded by City Council) → Fall 2018–Spring 2019 (construction) → May 22, 2019 (opened to public, ahead of schedule)

Lead Design Consultant: MME Civil + Structural Engineering (Santa Cruz, CA) — Engineer of Record, under contract with City of Santa Cruz Public Works

Construction Contractor: Cushman Contracting Corporation

Decking Supplier: Composite Advantage (FiberSpan FRP composite panels)

Consultant Contract Budget: Not publicly itemized; Land Trust of Santa Cruz County funded the preliminary structural feasibility that proved cantilevering was viable. City contract with MME available on request to City Engineer Chris Schneiter, P.E.

Total Project Budget: $2.03 million (final)

Construction Duration: ~7–8 months (Fall 2018 to Spring 2019), completed ahead of schedule

Awards: ASCE San Francisco Section 2019 Outstanding Bikeways and Trails Project of the Year; ACEC 2020 Special Projects Award of Merit

Funding Sources

The **San Lorenzo River Parkway Trestle Trail** project, completed by the City of Santa Cruz in May 2019, cost **$2.03 million**. It is designated as **Segment 8** of the larger 32-mile Coastal Rail Trail network.

The project was financed through a mix of state, regional, and local sources:

- **California Natural Resources Agency (Proposition 13):** This was the primary funding source through the River Parkways Grant Program.
- **Transportation Development Act (TDA):** Provided a portion of the secured regional funds.
- **Measure D (Local Sales Tax):** Funded by both the City of Santa Cruz and the Santa Cruz County Regional Transportation Commission (SCCRTC).
- **Land Trust of Santa Cruz County:** Contributed **$1.5 million** for the broader Segment 8 & 9 pre-construction efforts, including a critical structural analysis study that proved the bridge could be cantilevered rather than entirely rebuilt.

Project Scope

- **Design:** A 340-foot-long, 10-foot-wide multi-use path.
- **Construction:** The path was cantilevered off the existing railroad trestle using steel supports and lightweight fiberglass decking.
- **Connectivity:** Links the Santa Cruz Beach Boardwalk and the San Lorenzo Riverwalk levee path to the Seabright neighborhood.

Source Documents

- City of Santa Cruz Coastal Rail Trail project page — cityofsantacruz.com
- MME project profile (PDF) — m-me.com project sheet
- MME bridges project portfolio — m-me.com/our-projects/bridges
- City of Santa Cruz News Release (ASCE Award) — cityofsantacruz.com newsroom
- Coastal Watershed Council project summary — coastal-watershed.org
- FRP decking supplier project page — coastlinecomposites.com

2. Pudding Creek Trestle

California State Parks, Fort Bragg (Mendocino County), California

Pudding Creek Trestle — rehabilitated pedestrian/equestrian path, 2007

Why this is a strong analogue

A 515-foot, 12-foot-wide timber stringer railroad trestle (1915) in a coastal tidal/creek-mouth setting was rehabilitated and opened as a pedestrian/bicycle/equestrian path.

Structural condition issues mirrored Petaluma's (pile rot in the tidal zone, creosote and environmental permitting constraints, endangered-species habitat including coho salmon, steelhead, and tidewater goby).

Innovative engineering used helical piles driven through sand to bedrock to avoid disturbing the creek bed, repair of existing old-growth timbers, and reuse of salvaged timbers from a Santa Cruz trestle.

Final surface uses Trex composite decking with redwood and stainless-steel cable railings — a close parallel to materials Petaluma will consider.

Key Project Data

Project Timeline: 2001 (condition study commissioned by Senator Wesley Chesbro) → October 2003 (CEQA filing) → 2003 ($235,000 Prop 40 funds allocated for preliminary plans and working drawings) → 2004 ($1.939M Prop 40 construction funds secured) → January 17, 2007 (construction start) → November 16, 2007 (opened to foot traffic) → 2010 (expanded with Old Haul Road connection)

Lead Design Consultant: Buehler Engineering, Inc. (structural engineering), with California State Parks Northern Service Center leading overall project management (Project Manager Michael Romo)

Construction Contractor: Abacus Construction Co. (Redding, CA)

Consultant Contract Budget: $235,000 (2003, for preliminary plans and working drawings, Prop 40 funds). A useful benchmark: a project of similar structural scope was brought to shovel-ready design for roughly a quarter million dollars in 2003 (≈$400K today)

Total Project Budget: ~$2.17 million ($235K design + $1.939M construction). Additional costs were incurred during construction when piles were found to be worse than anticipated — a risk Petaluma should plan for

Construction Duration: ~10 months (January–November 2007)

Award: 2007 ASCE Structural Engineering Institute Award

Source Documents

- CEQA filing (CEQAnet 2003102051) — ceqanet.opr.ca.gov
- California State Senate Concurrent Resolution SCR-140 (naming/history) — leginfo.legislature.ca.gov
- California Coastal Commission permit file (detailed construction scope, F16a-11-2007) — documents.coastal.ca.gov
- Buehler Engineering project page — buehlerengineering.com

FUNDING

The following funding sources were utilized for the Pudding Creek Trestle's significant **$3.5 million** rehabilitation to convert it into a pedestrian and bicycle path:

- **California State Parks Funds**: State Parks assumed ownership of the trestle in 1992 and spearheaded the project as part of the MacKerricher State Park trail system.
- **Grant Secured by State Senator Wesley Chesbro**: A specific grant was secured through legislative efforts to fund the bridge's renovation; the trestle was renamed in his honor in 2014 to recognize this contribution.
- **Repurposed Materials**: Although not a direct cash source, the project achieved cost efficiencies by using old-growth redwood salvaged from a dismantled bridge in Santa Cruz.

3. Capitola Trestle

Santa Cruz County Regional Transportation Commission (SCCRTC), California

Capitola Trestle complex — crossing Soquel Creek and downtown streets

Local history page: https://corvidsketcher.com/2024/09/30/capitola-trestle-and-soquel-creek-bridge/

Why this is a strong analogue

Construction targeted to begin 2027. A complex of five connected historic railroad bridges crossing Soquel Creek and three streets in downtown Capitola. SCCRTC is a regional agency (not a city), but institutionally it operates similarly to how Petaluma must coordinate across SMART, Caltrans, the Coastal Conservancy, and other partners.

The project illustrates the cost of a multi-stage RFP approach (corridor planning → engineering study → environmental → design) and the reality of professional services budgets running well above $1 million before construction.

The retrofit for bicycle/pedestrian use is live — worth tracking as Petaluma's procurement advances.

SCCRTC Capitola Trestle Fact Sheet (PDF)

Key Project Data

Project Timeline: 2017 (Kimley-Horn contracts begin) → 2019 (Kimley-Horn phase ends) → 2020 (HDR Engineering phase begins) → 2021 (pedestrian-trail feasibility report; HDR phase ends) → 2022 ($17M engineering study RFP released) → 2023–2026 (ongoing staff and consultant work) → December 2025 (RTC approves Interim Trail configuration; directs staff to pursue Capitola Trestle retrofit) → June 2027 (construction start target, tied to $96M state grant deadline)

Lead Design Consultants: Kimley-Horn and Associates (Raleigh, NC) — 2017–2019; HDR Engineering, Inc. (Omaha, NE) — 2020–2021

Consultant Contract Budgets (publicly reported): Kimley-Horn: ~$575,000 (2017–2019). HDR Engineering: ~$640,000 (2020–2021). RTC internal labor: $960,000+ (2023–2026). Full Coastal Rail Trail corridor engineering/environmental study: ~$17 million (2022 RFP)

Total Project Budget: Trestle complex construction estimated at $15–30 million (SCCRTC staff, 2022). Full Coastal Rail Trail program (including Capitola Trestle): $4.5 billion. $96 million in state grants at risk if construction doesn't begin by June 2027

Construction Duration: TBD; construction targeted to begin 2027

Source Documents

- SCCRTC Capitola Trestle Fact Sheet (detailed technical summary) — sccrtc.org Capitola Trestle FAQ
- SCCRTC Monterey Bay Sanctuary Scenic Trail project page — sccrtc.org trail project page
- SCCRTC December 2025 Interim Trail decision — sccrtc.org news
- Good Times news coverage (consultant spending figures) — goodtimes.sc
- Pajaronian coverage of 2022 RFP release — pajaronian.com

The primary funding for the **Coastal Rail Trail Segments 10 & 11**, which includes the area surrounding the Capitola Trestle, comes from a massive state grant and local sales tax revenue. Note that while the segments are funded, the specific crossing over the **Capitola Trestle** itself has often been handled as a separate project or budget item due to its high cost and complexity.

Primary Funding Sources

- **Active Transportation Program (ATP): $67.6 million.**
  This is a competitive state grant awarded by the California Transportation Commission (CTC) in December 2022. At the time, it was the largest ATP grant ever awarded in California.
- **Measure D (Local Sales Tax): ~$4 million.**
  Local Measure D Regional Active Transportation funds provide the necessary local match to leverage larger state and federal grants.

Additional Funding Details

- **Federal RAISE Grant: $8.5 million.**
  Recent updates indicate that federal RAISE grant funding is also part of the broader financial package supporting these segments.
- **Capitola Trestle Specifics:** While Segments 10 and 11 are largely funded, initial estimates for just the trestle rehabilitation or replacement have ranged from **$7 million to $11 million**, leading the RTC to explore "interim" configurations to make the project more financially feasible in the short term.

4. Coyote Creek Trestle (Senter Railroad Trestle)

City of San Jose, California

Coyote Creek Trestle — 1922 Western Pacific timber pile bent trestle

San José Spotlight article (current photo) **San Jose residents rally to save railroad trestle, article, April 14, 2026**

Why this is a strong analogue

Current project, at about the same phase of forming a citizen coalition to save it. 250-foot 1922 Western Pacific Railroad timber pile bent trestle over Coyote Creek — eligible for the NRHP, CRHR, and San Jose City Landmark designation.

Same era, same material (creosote-treated timber), same structural condition issues, and same rarity status (the consulting report describes it as one of only two extant pile bent trestles in Santa Clara County) as the Petaluma trestle.

The ongoing debate between demolition and preservation closely mirrors Petaluma's current process, and the three-alternative framework (retrofit only / demolish and replace / retrofit plus adjacent new bridge) is directly applicable as a template for how Petaluma's forthcoming alternatives analysis might be structured.

Key Project Data

Project Timeline: 2012 (City acquires trestle with 9-acre rail corridor) → 2021 (major fire event damages structure) → June 2023 (draft structural report finds "danger of imminent failure"; City closes trail) → July 2023 (community meetings begin) → 2024–2025 (three-alternative evaluation completed) → March 2026 (Historic Landmarks Commission presentation) → April 2026 (decision pending; all options on the table)

Lead Design Consultant: Structural consulting report prepared for San Jose Parks, Recreation and Neighborhood Services. Specific firm not named in public coverage; final reports posted on the City's Five Wounds Trail webpage

Consultant Contract Budget: Not publicly disclosed. Available via records request to San Jose PRNS. Contracts of this type (structural + historic evaluation + alternatives analysis for a bridge of this scale) typically run $150,000–$400,000

Total Project Budget: Not yet determined. **Consultant report found that keeping the trestle in place entails lower construction costs and shorter timelines than demolition-and-replacement**, but higher long-term staff and maintenance costs — an important finding for Petaluma's alternatives analysis

Construction Duration: TBD (decision pending)

Cautionary Note: 14+ years from City acquisition (2012) to an unresolved decision (April 2026).

Petaluma should aim to move faster through alternatives analysis to avoid continued deterioration during indecision.

Source Documents

- City of San Jose Coyote Creek Trail page (links to reports) — sanjoseca.gov Coyote Creek Trail
- Keep Coyote Creek Beautiful trail and trestle analysis (with extended report excerpts) — keepcoyotecreekbeautiful.org
- San José Spotlight April 2026 news coverage — sanjosespotlight.com
- Local News Matters April 2026 news coverage — localnewsmatters.org

5. Walkway Over the Hudson

Walkway Over the Hudson (nonprofit) + NY State Parks partnership — Poughkeepsie, NY

Walkway Over the Hudson — 1.28-mile elevated pedestrian park, 2009

Why this is included despite being much larger and a steel, not timber, bridge

This massive 2004-2009 project is the most heavily documented adaptive-reuse railroad bridge precedent in the United States. The procurement model (nonprofit-led feasibility study → public-private funding → state-agency ownership at completion) is highly relevant to how Petaluma might structure future phases.

The engineering approach — precast concrete deck panels installed on the existing superstructure with no work below the existing piers — is a direct parallel to the "don't touch the substructure" strategy that worked at the San Lorenzo River Trestle and is recommended for Petaluma.

The Bergmann Associates + McLaren Engineering consultant deliverables list is essentially a canonical scope of work for this project type.

This project illustrates that even a massive project can be done with the right support, planning, and a philanthropic foundation plus State financing support funding model.

Key Project Data

Project Timeline: 2004 (initial $70,000 feasibility study funded by NY State, Dutchess County IDA, Dyson Foundation) → November 2007 (Bergmann Draft Design Report; construction estimated at

$25M at that point) → February 2008 (Bergmann Final Design Report) → early 2008 (construction begins) → September 4, 2009 (final deck panel installed) → October 3, 2009 (opens to public)

Lead Design Consultant: Bergmann Associates (prime consultant — planning, design, construction inspection; Locally-Administered Federal-Aid procedures)

Key Subconsultant: McLaren Engineering Group (dive inspection, SPRAT climbing inspection, structural analysis; later the elevator tower design)

Construction Contractor: Harrison & Burrowes Bridge Constructors, Inc.

Precast Deck Supplier: Fort Miller Company

Consultant Contract Budget: Initial $70,000 feasibility study (2004). Full design and construction inspection services ran into the low single-digit millions over 2005–2009, funded substantially by the Dyson Foundation's overall $20M project commitment

Total Project Budget: $38.8 million final construction cost. Funding stack: Dyson Foundation $20M (plus $8.1M in loan guarantees and $2.3M for later elevator), State of New York $22.5M, federal agencies $3.5M, Scenic Hudson $1M, plus other charitable gifts. The demolition-only alternative was estimated at $50M+ — a key data point supporting rehabilitation over demolition

Construction Duration: 18 months (early 2008 to October 2009) — fast for a structure of this scale, achieved through precast deck panels fabricated off-site while steel repairs proceeded on-site

Awards: 2009 ACEC New York Excellence in Engineering; 2010 NYSSPE Project of the Year Roebling Award; 2010 Preservation League of New York State Excellence in Historic Preservation; 2010 International Bridge Conference Historic Structure Preservation Award

Source Documents

- Bergmann Draft Design Report, November 2007 (PDF, hosted by NY State Parks) — parks.ny.gov Draft Design Report
- Walkway Over the Hudson State Historic Park (NY State Parks) — parks.ny.gov
- Walkway Over the Hudson nonprofit financial disclosures — walkway.org/financials
- Bergmann project page — bergmannpc.com
- McLaren Engineering project page — mgmclaren.com
- Fort Miller precast deck case study — fortmiller.com
- American Trails detailed project summary (funding breakdown) — americantrails.org

Summary Comparison Table

Project	Years	Lead Consultant	Consultant Contract	Total Project Cost	Construction
San Lorenzo River Trestle Trail (Santa Cruz)	2015–2019	MME Civil + Structural	Not public; contract with City Public Works	$2.03M	~7–8 months
Pudding Creek Trestle (CA State Parks)	2001–2007	Buehler Engineering	$235K (design)	$2.17M+	~10 months
Capitola Trestle (SCCRTC)	2017–ongoing	Kimley-Horn; HDR	$575K + $640K + $960K+ staff	$15–30M est.	TBD; target 2027
Coyote Creek Trestle (San Jose)	2012–ongoing	Unnamed (report available)	Not public	Not determined	TBD
Walkway Over the Hudson (Poughkeepsie, NY)	2004–2009	Bergmann Associates	$70K initial study	$38.8M	18 months

Key Takeaways for Petaluma

1. Design-phase budgets cluster in the low-to-mid six figures

The Pudding Creek $235,000 design-phase budget (2003 dollars, inflation-adjusted ~$400K today) and the Walkway-Over-the-Hudson $70,000 initial feasibility study (2004 dollars) provide concrete benchmarks for what Petaluma's next professional services procurement should cost.

Even for a complex riverfront site with environmental permitting challenges, the design-through-shovel-ready phase is typically in the low-to-mid six figures — not seven.

2. The cantilever "don't touch the substructure" strategy is the single most transferable approach

The San Lorenzo River Trestle approach — cantilevering a new FRP-decked promenade off the existing trestle with no in-river work and no pile modification — explicitly sidesteps the creosote-pile environmental permitting problem currently driving Foth to recommend demolition in Petaluma. Asking the next consultant to seriously study a cantilevered-promenade alternative could reopen the preservation option that the 2025 Foth options analysis closed off. The Walkway Over the Hudson project proves the same strategy works at a much larger scale.

3. Construction costs cluster in two tiers

Timber trestle rehabs that reuse the substructure tend to cluster in the $2–3 million range (San Lorenzo at $2.03M; Pudding Creek at $2.17M+).

Projects pursuing full replacement run $15–30+ million (Capitola).

Petaluma's $5 million 2013 estimate was in the right ballpark for the reuse option; estimates should be refreshed for inflation. The reuse approach remains the cost-effective path to complete the project – but not necessarily for the long term cost to the City and the owner.

4. Realistic schedule: 4–6 years when funding is secured early; 10+ years when it is not

The typical total timeline from formal design kickoff to ribbon-cutting is 4–6 years when grant funding is secured early (San Lorenzo: ~4 years; Walkway Over the Hudson: 5 years).

It is 10+ years when it is not (Capitola, Coyote Creek — both still unresolved).

Petaluma is approximately at year 15 of an effort that began with the 2010 Coastal Conservancy grant. Reaching shovel-ready in FY25/26 as the City now intends puts a realistic public opening in the 2028–2030 window — provided funding is secured promptly after design is complete.

5. The Coyote Creek alternatives framework is a ready-to-adapt template

San Jose's three-alternative structure — (1) retrofit only, (2) demolish and replace, (3) retrofit plus adjacent new bridge — can be adapted directly into Petaluma's next RFP scope.

The Coyote Creek consultant's finding that preservation entails lower construction costs and shorter timelines than demolition-and-replacement (even though long-term maintenance is higher) is directly relevant evidence for Petaluma's City Council deliberations.