Willow Glen Trestle

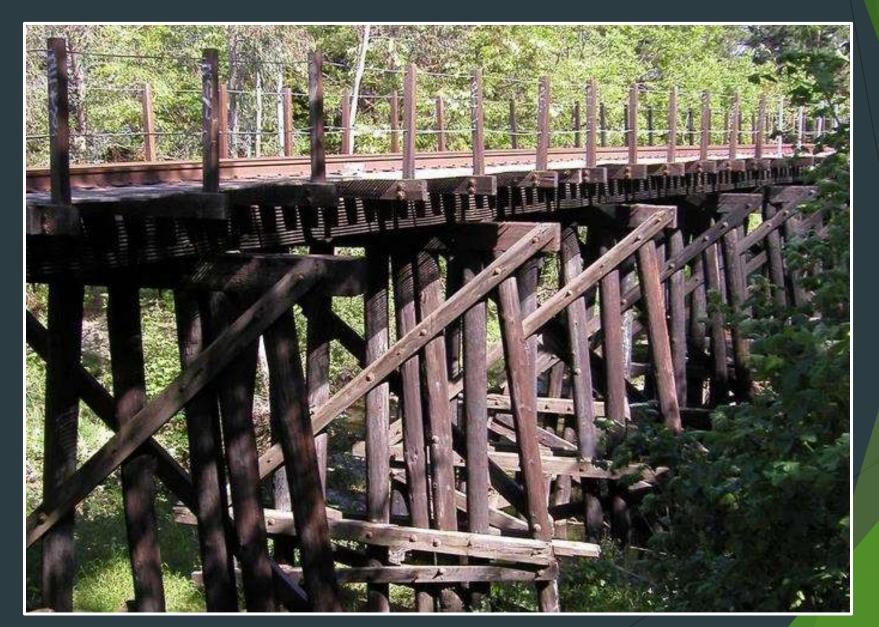
Larry Ames

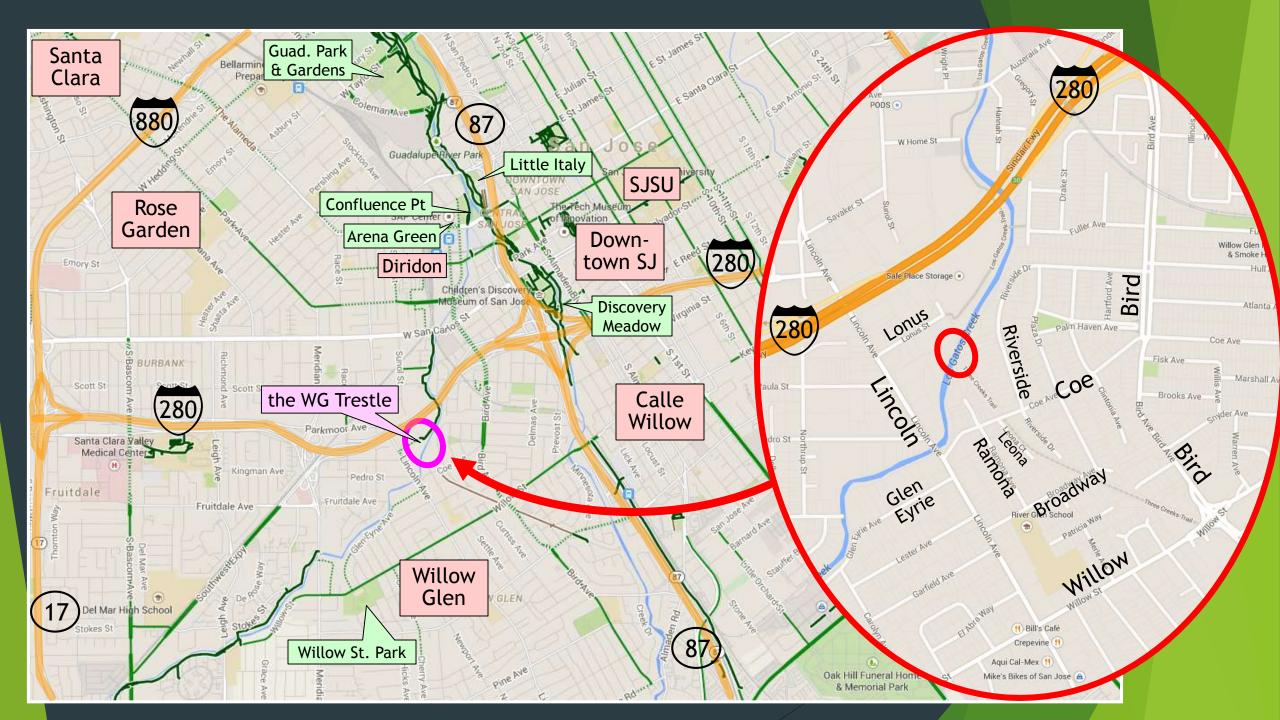
and the Friends of the WG Trestle

www.WGTrestle.org

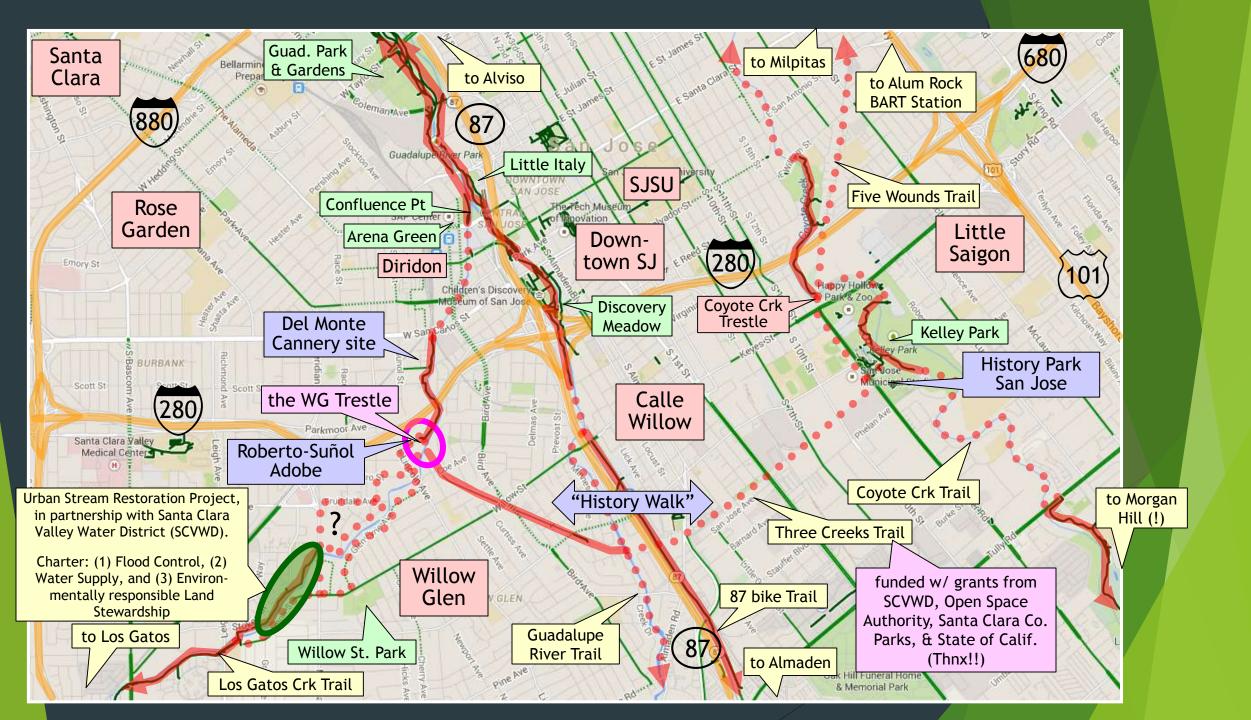
March 2, 2015

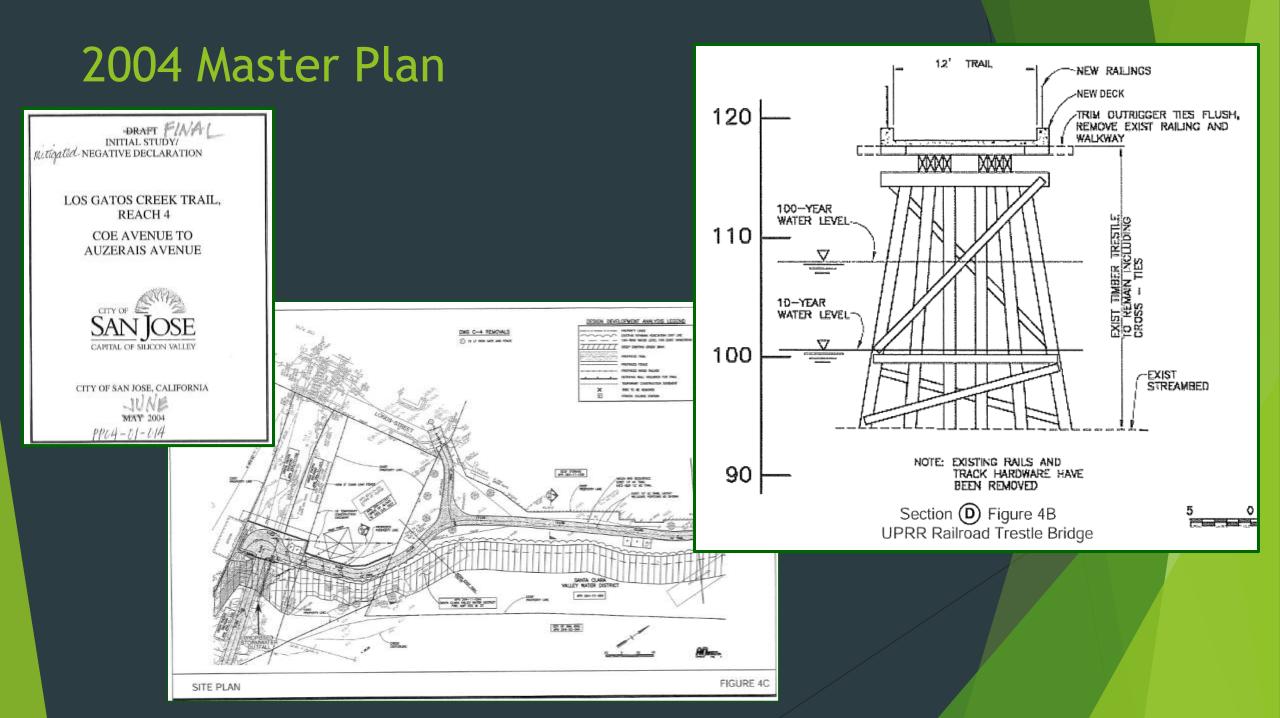
The Willow Glen Trestle



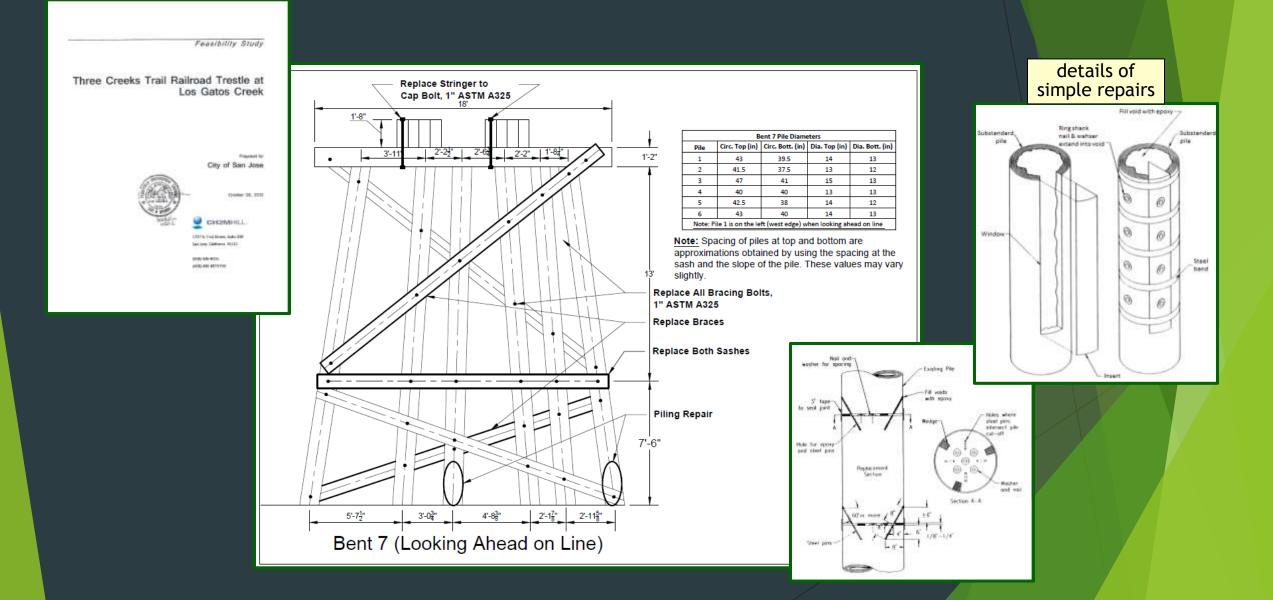








2012 City-Commissioned Engineering Report



Restoration Plans were derailed

- City departments are set up to procure and install standard-model items
 - Departments do not have the capacity to include old & historic structures that have significance to the community: even they recognize that they "don't do history" well
 - Thought that nobody knew or cared about the old trestle it wouldn't be missed...



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City departments are set up to procure and install standard-model items

- Departments do not have the capacity to include old & historic structures that have significance to the community: even they recognize that they "don't do history" well
- Thought that nobody knew or cared about the old trestle it wouldn't be missed...
- City has limited budget for maintenance
 - New items are easier to maintain: it's better to spend \$10 of "other people's money" than \$1 from a Dept. Budget
 - But either way, that money comes from us, the taxpayers...
- The Consultant was hired by the City, and, like any business, they want to keep their customers happy
 - Sensed wish to justify new bridge, so the trade matrix was "tweaked" and then used to justify desired finding in the Executive Summary
- Recommendation was brought to Council for decision just days before arbitrary deadline for major grant
- Council: the decision has been made; can't waste time reconsidering.

We and the community are pleased to support the City as it works with Senator Jim Beall on extending and using this grant.

> Sometimes it is worth the effort to reconsider something important.

It's <u>not</u> too late to save the WG Trestle!

Public input?

The public was never given an opportunity to discuss the decision

- There have been various official presentations and working group meetings, but all were limited to discussing design details of the new bridge, never whether there was the wish or need to replace the existing trestle.
- City released the "Initial Study / Mitigated Negative Declaration" (IS/MND), Nov. 2013
 - Public was invited to comment, BUT...
 - since this was just an IS/MND and not an Environmental Impact Report (EIR), there was no requirement that public questions be addressed -- and they weren't
- In order to get an opportunity for public comment, the Friends of the Willow Glen Trestle had to sue the City.

As a result of our successful lawsuit, City has had to prepare an EIR.

Draft Environmental Impact Report (DEIR)

- 512 pages total:
 1.5" thick (double-sided), weight: 3 lbs 10 oz
 - Online at www.sanjoseca.gov/index.aspx?NID=2434
 - Send comments to John Davidson at john.davidson@sanjoseca.gov by March 13th, 2015. <u>Now is the</u>

<u>Now</u> is the time to ask questions: City is required to address concerns and questions submitted by March 13th

- The DEIR describes two alternatives:
 - "Project Alternative" -- the new prefab bridge; and
 - "Retrofit Alternative" the preserved trestle.
 - It is filled with good technical information, although some important details are missing...
- And the DEIR's "Executive Summary" mischaracterizes the report's findings, and continues to recommend the prefab bridge
- The final decision is to be made by the City Council.



<u>Now</u> is the time to write to the Mayor and all the Councilmembers! Sign our petition! Make phone calls!

Quick Summary of the DEIR

- Fire
- Flood
- Toxics
- Estimated Life
- Construction time
- Historic Significance
- Inspection and Maintenance
- Total Cost
- Use of an Unweighted Trade Matrix

Fire

- The trestle is constructed of old-growth redwood - very fire resistant (as evidenced by it still standing after 90+ years)
- Retrofit plans include sprinkler system, alarm system, and fire-retardant treatments
- Fire fighters have ready access over the full length of the trestle, and there are three fire stations within two miles of the trestle
- While steel doesn't burn, it does lose its strength when heated to brush-fire temperatures
- The steel bridge is a truss structure, and, like a chain, it is only as strong as the weakest link: the whole bridge could collapse
- The proposed steel bridge doesn't even include any fire-protection measures no sprinklers, no alarms, and no debris and brush removal

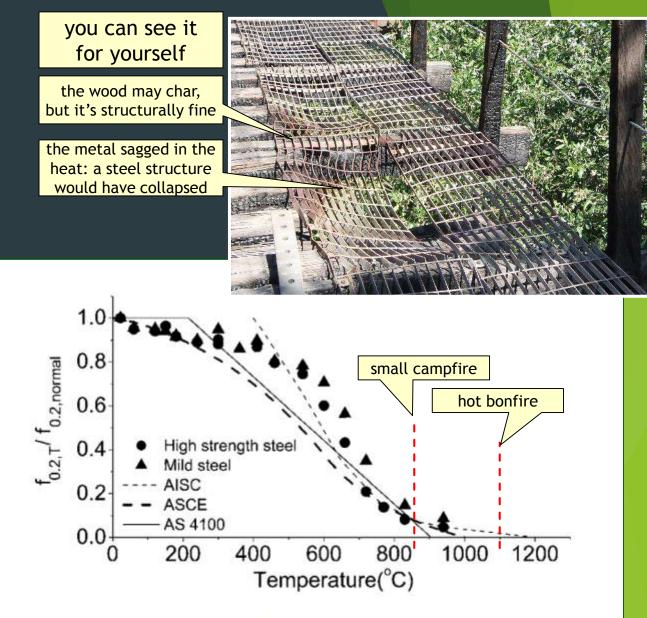


Fig. 5. Comparison of reduction factors of 0.2% yield strength predicted by AISC, ASCE, and AS 4100 with test results

http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1345&context=engpapers

Fire Precautions

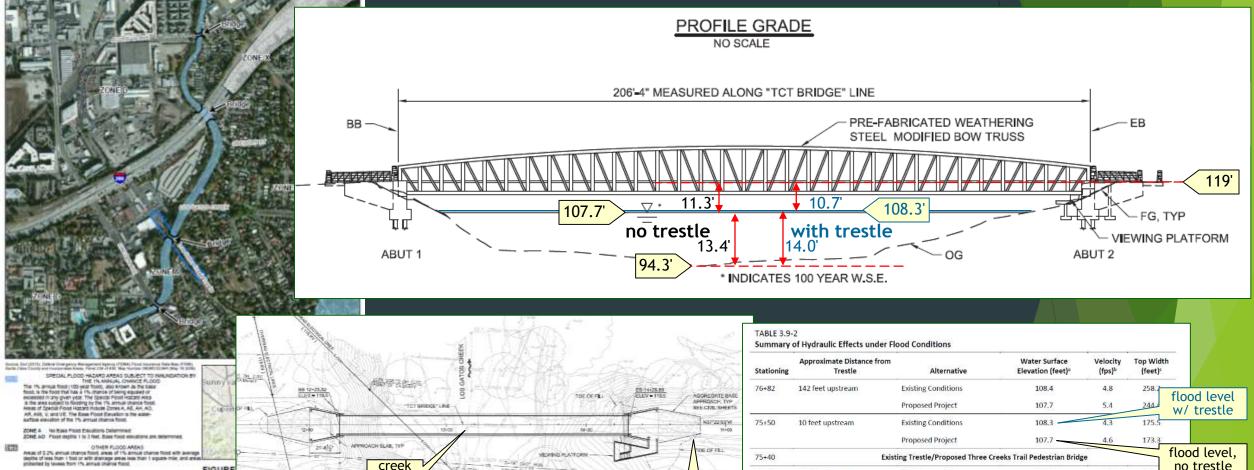
The DEIR recommends the removal of debris and tree limbs within 25' of trestle

- ► A reasonable precaution
- Should also be done for other bridges across town (but isn't)
- > Should also be done for prefab steel bridge, to reduce probability of metal heat yield

DEIR Executive Summary penalizes the "Retrofit Alternative" because of this tree trimming

- Doesn't mention that prefab steel bridge requires clearing of trees to make 20 ft. wide access road on upstream side, and that nearby trees on downstream side are nearly all invasive exotics that need to be removed regardless
- The "Project Alternative" should be scored equal or inferior to the "Retrofit Alternative", since the Retrofit Alternative includes a sprinkler system and debris removal, and the Project Alternative doesn't.

Impact on stream flow, with trestle in place



"Less than significant"

ETC HERE D



bottom:

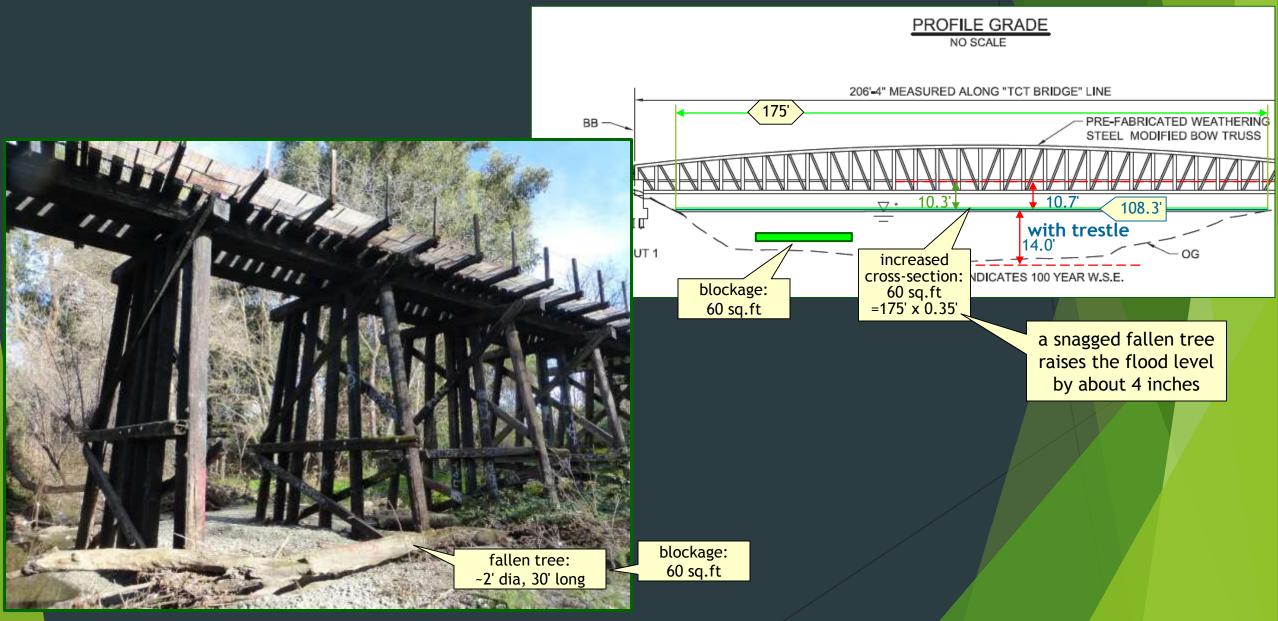
94.3

Stationing	Approximate Distance from Trestle	Alternative	Water Surface Elevation (feet) ^a	Velocity (fps) ^b	Top Width (feet) ^c	
76+82	142 feet upstream	Existing Conditions	108.4	4.8	258.2	flood level
		Proposed Project	107.7	5.4	244	w/ trestle
75+50	10 feet upstream	Existing Conditions	108.3	4.3	175.5	
		Proposed Project	107.7	4.6	173.3	
75+40	Existing Trestle/Proposed Three Creeks Trail Pedestrian Bridge					
75+30	10 feet downstream	Existing Conditions	107.7	4.6	173.3	no trestle
		Proposed Project	107.7	4.6	173.3	

^bVelocity refers to the average velocity in the channel.

"Top width refers to the top width of the water surface at the elevation specified.

Blockage by stream-borne debris



Toxics

Appendix D Ecological Toxicology Report

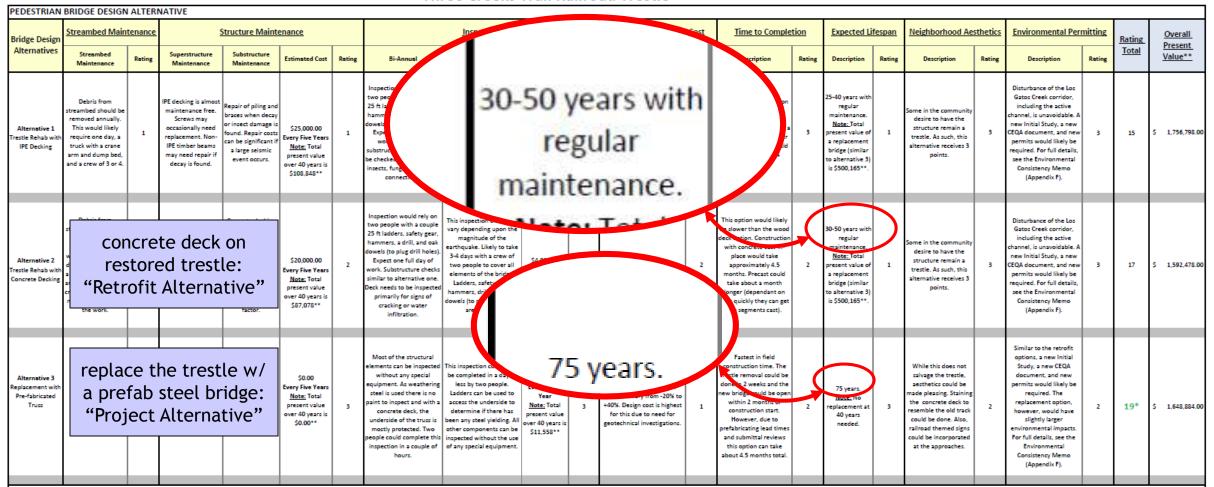
"Studies in both terrestrial (e.g., railroad ties) and aquatic (e.g., pier pilings) environments have shown significant decreases in creosote and PAH releases from treated wooden structures within 5 years or less of placement. The pilings comprising the Three Creeks Bridge are, for the most part, not new (the bridge itself was built in 1921) and are likely well past the point where meaningful quantities of creosote constituents (particularly the more soluble and toxic LPAHs) are leaching into the environment - either to the creek or to its terrestrial, riparian margins. ... Our current knowledge of the behavior of creosote and its constituents in older creosote-treated wooden structures suggests that leaving the pilings of the Three Creeks Bridge in place will not pose a risk to terrestrial or aquatic receptors. Conversely, if removal is contemplated, this same knowledge clearly indicates that pile removal projects must deploy best management practices (BMPs) to avoid or mitigate the possibility of temporarily increasing PAH levels in soils or sediment as a consequence of the physical disturbance of pilings."

Translation: Leave the old pilings alone: they're not hurting anything, but disturbing them might.

Expected Lifetime

Table 16: Alternative Comparison Matrix

Three Creeks Trail Railroad Trestle



Note: Ratings used above are based on a scale of 1 to 3, with 1 being the worst overall value and 3 being the best overall value. The total rating is the sum of the individual scores and the highest score is selected as the alternative of choice.

*Recommended Option: Based on analysis of the table above, we recommend Alternative 3 (Replacement with pre-fabricated truss). While there appears to be some community sentiment to keep the existing trestle, it is the most difficult to maintain and inspect. The trestle would require more maintenance of the structure as well as the stream bed than the prefabricated replacement would. In addition, the trestle would have an inspection process that would require more effort and therefore an increased bi-annual cost. The pre-fabricated truss bridge would be the best option for the city based off of overall return on investment (if some sort of streambed maintenence costs were to be included). If it is decided that the trestle should remain then it is our recommendation that the second alternative (trestle rehab with concrete decking) be selected as this option helps to protect the substructure from accelerated water damage.

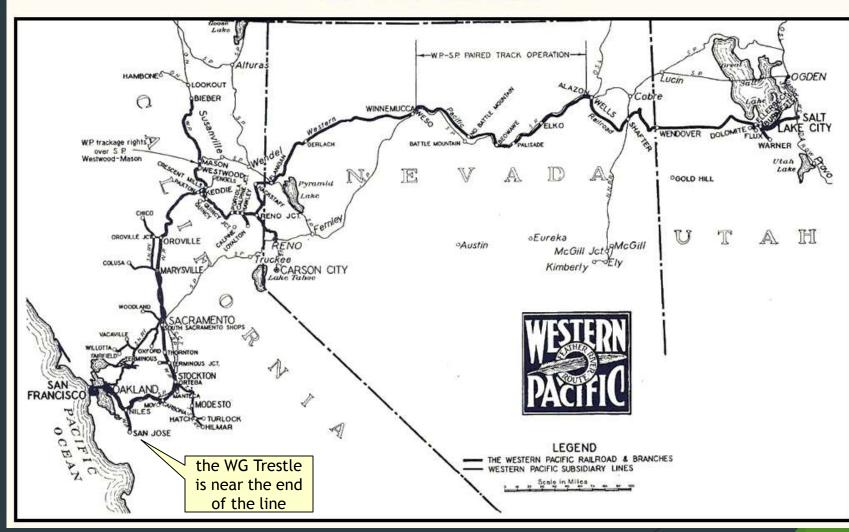
**These estimates were calculated assuming a 3% rate of return on investment over 40 years (the approximate retrofit useful life). Inflation was not taken into account and the values reported are in terms of 2012 US Dollar value. These estimates are intended to be used as guidance when comparing the overall cost for each alternative that could be expected if the City were to pay all costs everything for the next 40 years by investing a sum of money today.

Construction Time

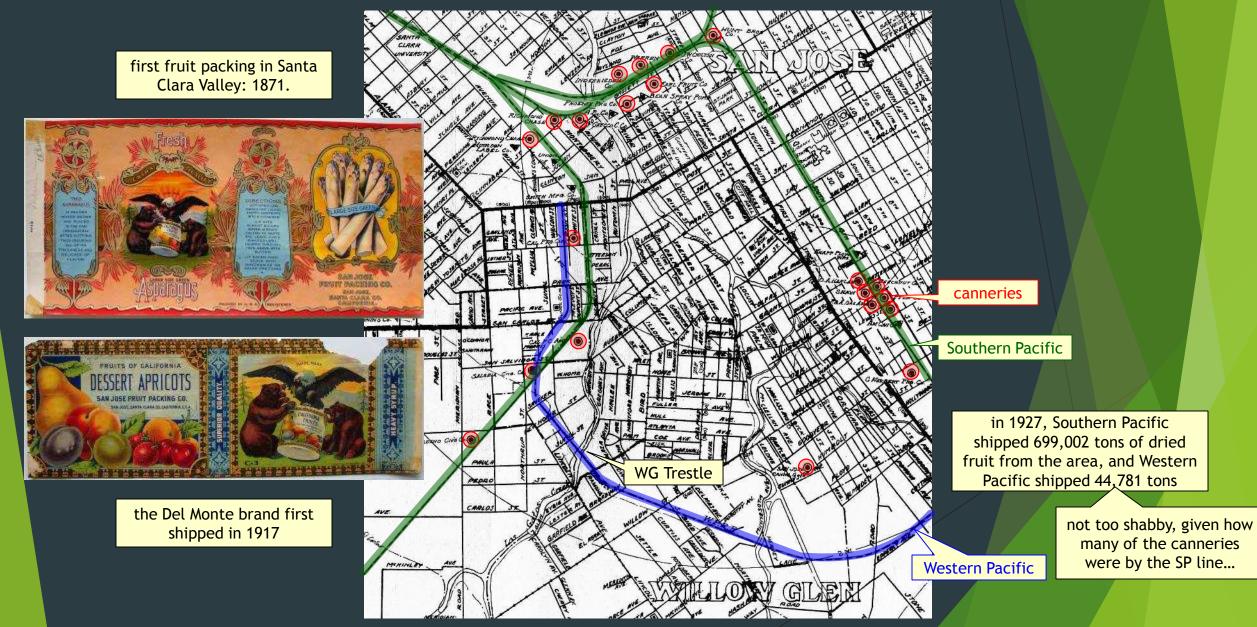
- Restored Trestle: "Completion of the retrofit project is expected to require 5 months of construction, approximately the same as the proposed project." (DEIR, p. 6-3)
- Prefab Replacement Bridge: "Construction is expected to begin in summer 2015, and last for approximately 7 months." (DEIR, p. 2-2)

Historic Significance: The Western Pacific Railroad

WP SYSTEM MAP



San José and Willow Glen in 1928



Town of WG was founded in conflict w/ railroads



Historic Significance





The History Report in the DEIR says that train trestles are <u>common</u> and nothing special, that they're everywhere, and not worth saving

The DEIR says that <u>this</u> is a <u>trestle!</u> "The Goat Canyon Trestle in San Diego County -- the largest wooden railroad trestle in the world! Made out of redwood beams, over 600 feet long & over 180 feet high! However, getting there involves traveling over rough terrain: off-roading to a remote trailhead, committing a whole day to hiking in and hiking out, and possibly breaking the law." *



* quote from LastAdvernturer.com

* image from DEIR

Maybe it <u>is</u> worth saving our local trestle: it might not impressive in a National sense, but it is easily accessible, and it is meaningful to us who live here in San José. The SJ Historic Landmark Commission was never able to agendize the WG Trestle for recognition.

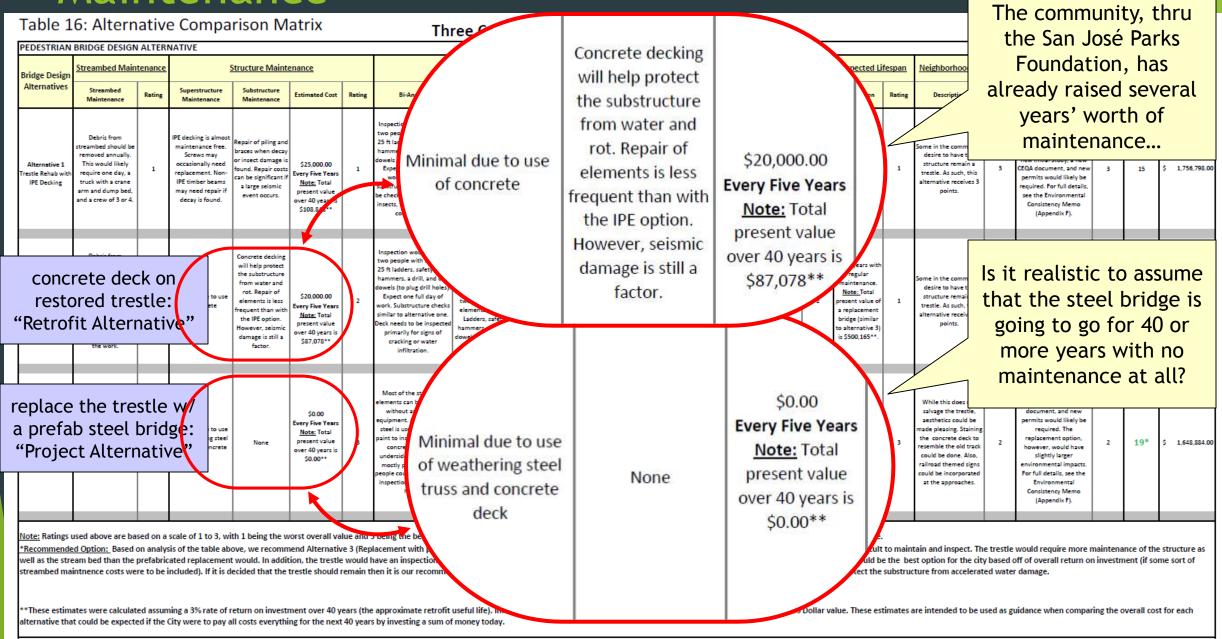
The DEIR does not include the "tally sheet" customarily used in evaluating structures that may be of local significance

Inspection

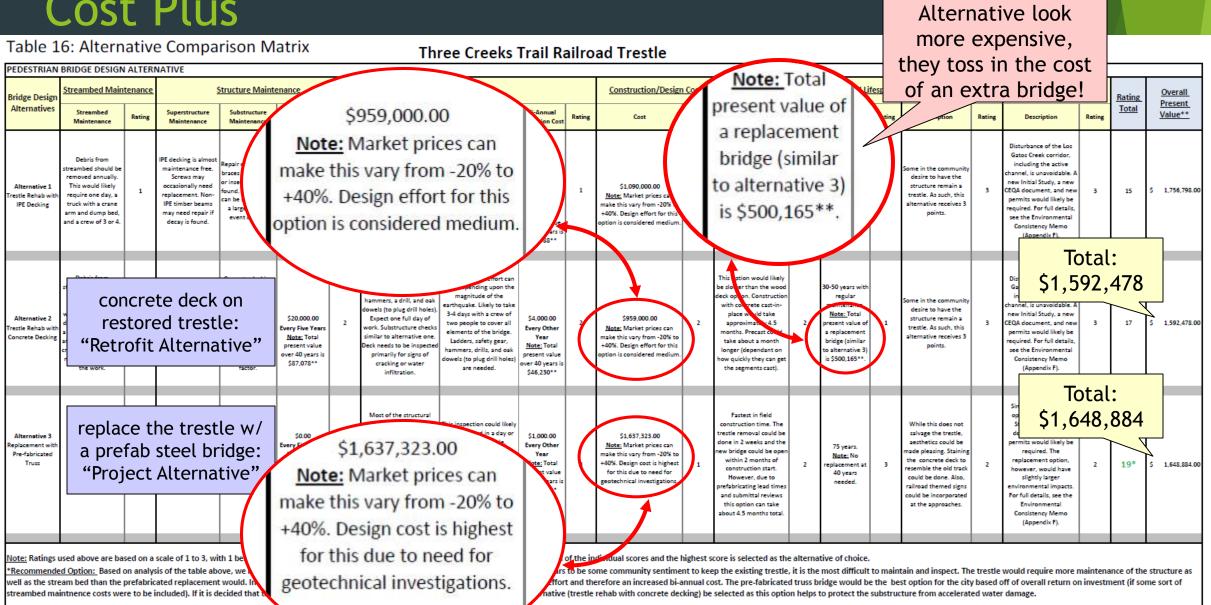
Inspection would rely on This inspection effort can Table 16: Alternative Comparison Matrix Three Creeks Trail Railroad Tres two people with a couple vary depending upon the PEDESTRIAN BRIDGE DESIGN ALTERNATIVE 25 ft ladders, safety gear, magnitude of the Streambed Maintenance Structure Maintenance Inspection Constructi Bridge Design hammers, a drill, and oak earthquake. Likely to take Alternatives Streambed Substructure Post-Seismi **Bi-Annual** Superstructure Ratin Estimated Cost Rating **Bi-Annual** Rating Cost dowels (to plug drill holes). Maintenance Maintenance Maintenanc (Magnitude ≥ 5.0) spection Cos 3-4 days with a crew of Expect one full day of \$4,000.00 nspection would rely o two people with a couple his inspection effort car two people to cover all Debris from PE decking is almost epair of piling and 25 ft ladders, safety gear vary depending upon the work. Substructure checks **Every Other** treambed should be maintenance free. aces when decay hammers, a drill, and oak magnitude of the removed annually Screws may elements of the bridge. nsect damage i wels (to plug drill holes). arthouake. Likely to take Alternative 1 This would likely occasionally need \$25,000.00 \$5,000.00 \$1,090,00 similar to alternative one. nd. Repair cost Expect one full day of 3-4 days with a crew of Year replacement. Non estle Rehab wi require one day, a very Five Year Every Other n be significant work. Decking and two people to cover all hake this vary fr Ladders, safety gear, IPE Decking truck with a crane IPE timber beams Note: Total Year elements of the bridge. a large seismic ubstructure need to bot arm and dump bed +40%. Design ef may need repair present value Note: Total Deck needs to be inspected Note: Total e checked for signs of rot, Ladders and safety gear event occurs and a crew of 3 or 4 decay is found. ver 40 years i present value ption is consider hammers, drills, and oak nsects, fungus, and failed are needed. \$108.848** ver 40 years i connections primarily for signs of \$57,788** present value dowels (to plug drill holes) cracking or water over 40 years is spection would rely on are needed. his inspection effort can o people with a couple infiltration. \$46,230** ry depending upon the 25 ft ladders, safety gear concrete deck on magnitude of the hammers, a drill, and oak rthquake. Likely to take owels (to plug drill holes) 3-4 days with a crew of \$20,000.00 \$959,000.00 Alternative 2 restored trestle: Expect one full day of \$4,000.00 alu 4.5 2 assess value of 1 structure remain a 2 CEOA document and new 3 17 ¢ 1.502.478.00 . wo people to cover all estle Rehab with Every Five Year vork. Substructure check Every Other Note: Market prices car elements of the bridge Concrete Decking Note: Total imilar to alternative one make this vary from -20 Vear "Retrofit Alternative" Ladders, safety gear, present value ck needs to be inspecte Note: Total +40%. Design effort mmers, drills, and oak over 40 years i primarily for signs of present value ation is considered wels (to plug drill holes) Most of the structural \$87,078** cracking or water over 40 years i are needed. infiltration. \$46,230** elements can be inspected This inspection could likely without any special be completed in a day or Most of the structura \$1,000.00 replace the trestle w/ ments can be inspecte equipment. As weathering less by two people. \$0.00 without any special be completed in a day or \$1,637,32 Alternative \$1,000.00 **Every Other** uipment. As weathering Replacement v ery Five Year less by two people Every Other Note: Market a prefab steel bridge: ladders can be used to steel is used there is no steel is used there is no Ladders can be used to Pre-fabricated Note: Total Year make this vary fr int to inspect and with access the underside to Year Truss present value Note: Total +40%. Design co "Project Alternative" concrete deck, the determine if there has over 40 years i for this due to present value paint to inspect and with a access the underside to underside of the truss is been any steel vielding. Al \$0.00** geotechnical inv over 40 vears i Note: Total mostly protected. Two other components can be \$11.558* cople could complete this inspected without the use concrete deck, the determine if there has spection in a couple of of any special equipment present value underside of the truss is been any steel yielding. All over 40 years is mostly protected. Two other components can be \$11,558** Note: Ratings used above are based on a scale of 1 to 3, with 1 being the worst overall value and 3 being the best overall value. The total rating is the sum of the individual scores *Recommended Option: Based on analysis of the table above, we recommend Alternative 3 (Replacement with pre-fabricated truss). While there appears to become communit people could complete this inspected without the use well as the stream bed than the prefabricated replacement would. In addition, the trestle would have an inspection process that would require more effort and therefore an use streambed maintnence costs were to be included). If it is decided that the trestle should remain then it is our recommendation that the second alternative (trestle rehab with co inspection in a couple of of any special equipment. hours.

**These estimates were calculated assuming a 3% rate of return on investment over 40 years (the approximate retrofit useful life). Inflation was not taken into account and the values alternative that could be expected if the City were to pay all costs everything for the next 40 years by investing a sum of money today.

Maintenance



Cost Plus



ney today.

**These estimates were calculated assuming a 3% rate of return on investment over alternative that could be expected if the City were to pay all costs everything for the next 40 yea ation was not taken into account and the values reported are in terms of 2012 US Dollar value. These estimates are intended to be used as guidance when comparing the overall cost for each

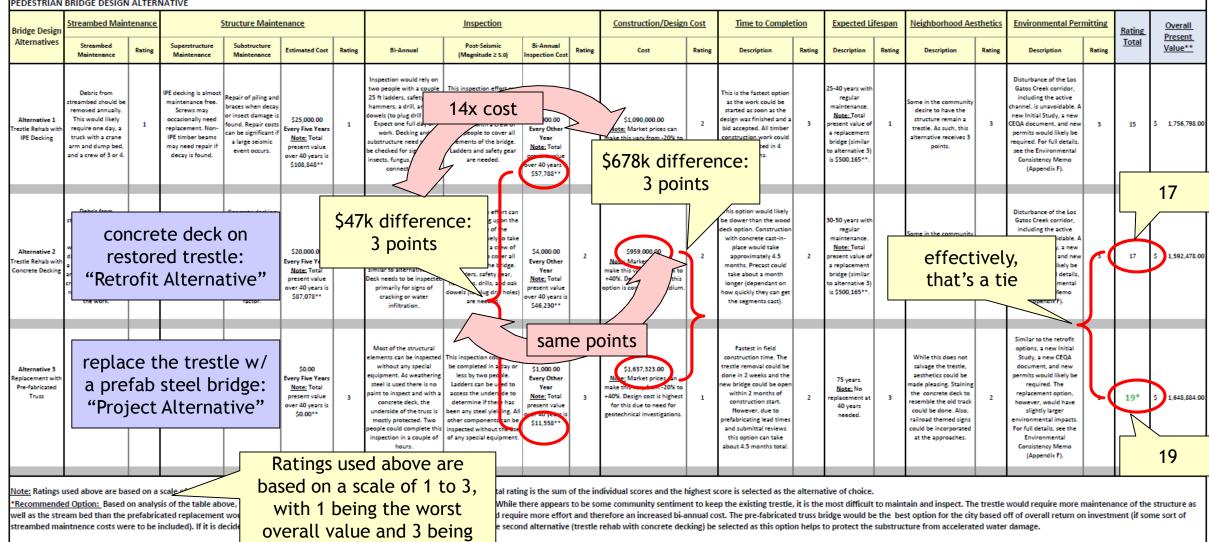
to make the Retrofit

Unweighted Trade Matrix

Table 16: Alternative Comparison Matrix

Three Creeks Trail Railroad Trestle





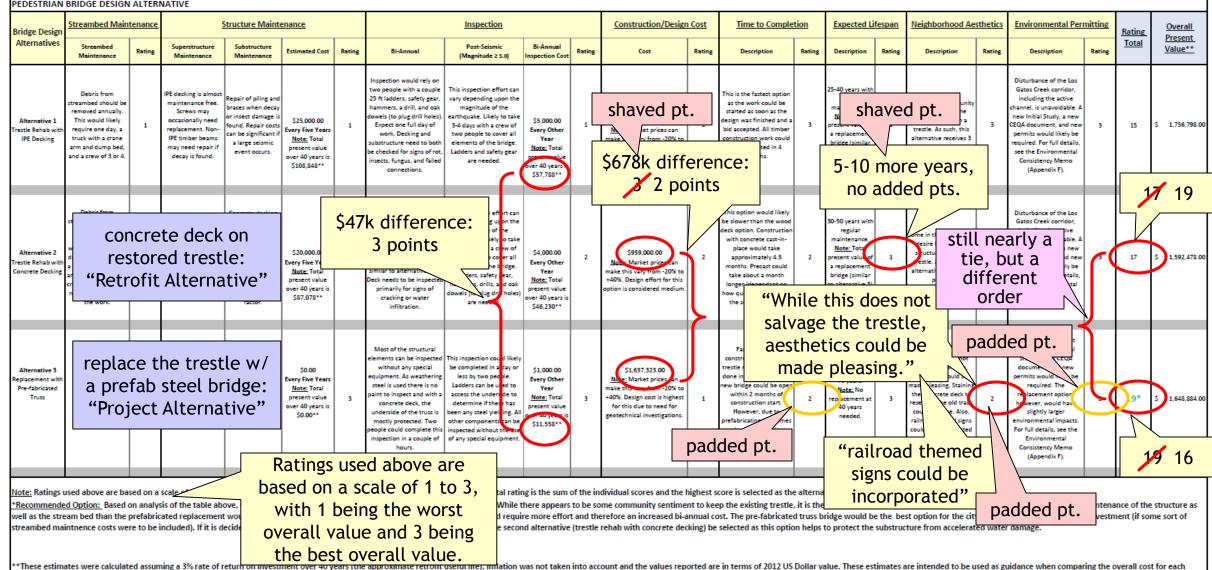
the best overall value. **These estimates were calculated assuming a 3% rate of return on investme mation was not taken into account and the values reported are in terms of 2012 US Dollar value. These estimates are intended to be used as guidance when comparing the overall cost for each alternative that could be expected if the City were to pay all costs everything for the next 40 years by investing a sum of money today.

Unweighted Trade Matrix

Table 16: Alternative Comparison Matrix

Three Creeks Trail Railroad Trestle





alternative that could be expected if the City were to pay all costs everything for the next 40 years by investing a sum of money today

Trade Matrix Significance

- The Executive Summary in the "Initial Study" used the trade matrix as justification for its recommendation:
 - In order to compare all the pros and cons of each option, a comparison matrix was developed and a scoring system applied. It was found that the replacement option had a slightly higher upfront cost, but was the best value for the City over a 40 year time frame. CH2MHILL recommends that the bridge be replaced with a new prefabricated bridge to minimize the long term cost to the City."

The Draft EIR Executive Summary justifies its recommendation based on Section 1.1, which has primarily this note:

"The engineering study evaluated the different approaches using the following criteria: streambed maintenance, structure maintenance, inspection, construction and design cost, time to completion, expected lifespan, neighborhood aesthetics, and environmental permitting. The replacement alternative had the highest rating and an overall present value of \$1,648,884. The retrofit alternatives had lower ratings and present values of \$1,592.478 and \$1,756,798 for the concrete deck and timber deck options, respectively. See Chapter 6, Alternatives, for additional discussion of the retrofit approach and Appendix G for additional details (see Table 16, Alternatives Comparison Matrix, in Appendix G)."

the score is the main justification

the DEIR's misrepresentative Executive Summary

TABLE ES-2

Summary Comparison of Alternatives

Category	Proposed Project	Retrofit Alternative	No Project	
Biological Resources	Construction would disrupt instream and riparian habitat. Extensive controls would be used to minimize disruption. Long-term benefits would occur, as creek would no longer be obstructed by piles.	Disruption during construction, and minimization measures, would be the same. Long-term habitat loss would occur from 25-foot maintenance buffers, and benefits of clear-span bridge would not occur. Disruption would occur during periodic maintenance.	Disruption would occur during periodic maintenance.	steel bridge should have fire-buffer as well; creek is not "obstructed" by the trestle; best to leave pilings undisturbed.
Cultural Resources	The existing trestle does not meet the criteria for designation as a historical resource; therefore, there would be no impact.	Impacts would be the same as for the proposed project.	Impacts would be the same as for the proposed project.	DEIR failed to consider local historic significance
Hydrology and Water Quality	Long-term benefits would occur, as creek would no longer be obstructed by piles.	Benefits of clear-span bridge would not occur.	No change would occur from existing conditions.	as in point 1: creek is not "obstructed" by the trestle; best to leave pilings undisturbed.
Land Use	The project would be consistent with all relevant plans and policies.	The project would be consistent with plans and policies regarding bicycle and pedestrian trails, but not with plans and policies for fiscally sustainable infrastructure and urban/wildland fire hazards and would require short-term closures.	The project would <u>not</u> be consistent with plans and policies.	the creek channel should be periodically cleared of debris that snags in the vicinity
Transportation and Traffic	The project would be consistent with all relevant plans and policies.	The project would be consistent with plans and policies regarding bicycle and pedestrian trails, but would require short-term closures.	The project would <u>not</u> be consistent with plans and policies.	the traffic impacts from repairs once every five years, or after arson fires?

Comparison of Alternatives

	Trestle "Retrofit"	Prefab Bridge - "Project"	
Construction cost	\$959,000	\$1,637,000	
Est. Maintenance	\$4,000 / year	not budgeted	
Est. Inspection	\$2,000 / year	\$500 / year	
Construction time	5 months	7 months	
Estimated Life	30 - 50 years	75 years (w/o maintenance?)	
Flooding	not a problem	not a problem	
Creosote	not a problem if left alone	a concern if disturbed	
Fire	not a problem: redwood, sprinklers, alarms and maintenance	no precautions are provided, and steel loses strength at brushfire temperatures	
History	significant to the community of Willow Glen; was not evaluated for City Landmark status	"While this does not salvage the trestle, aesthetics could be made pleasing. Staining the concrete deck to resemble the old track could be done. Also, railroad themed signs could be incorporated at the approaches."	

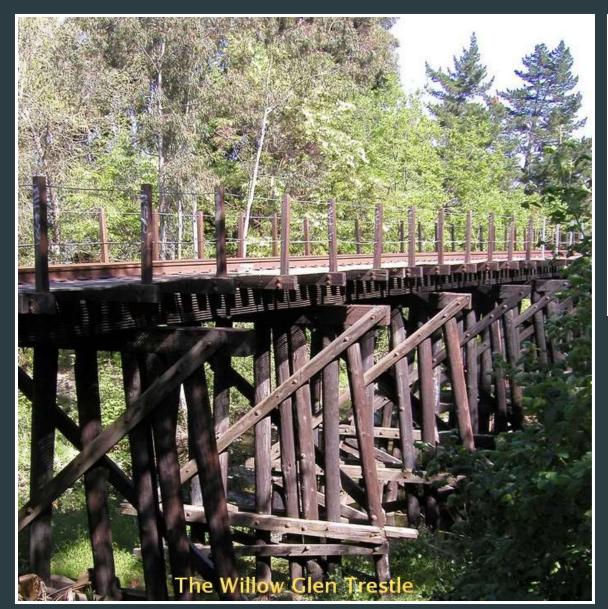
Summary

The DEIR shows that the "Retrofit Alternative" (restored trestle) is quite viable

- less expensive
- shorter construction time
- less impact of toxics on the stream
- comparable (or better?) at fire safety
- negligible impact on flood levels
- For the "Project Alternative" prefab steel bridge:
 - the DEIR did NOT evaluate the impact of heat from brush fire on the yield-strength of the steel and the integrity of the truss
 - ▶ the DEIR did NOT include an analysis of the local historic significance
- The Executive Summary in the DEIR is inconsistent with the findings in the body of the report

the "Retrofit Alternative" appears to be environmentally superior.

The Trestle is a piece of our history!





Why waste over a half-million dollars, just to destroy a piece of our history?

Write the Mayor and Council, asking that they select the EIR's "Retrofit" Alternative