

Caltrain

Attn: Guadalupe River Bridge Comments

1250 San Carlos Ave.

San Carlos, CA 94070-1306

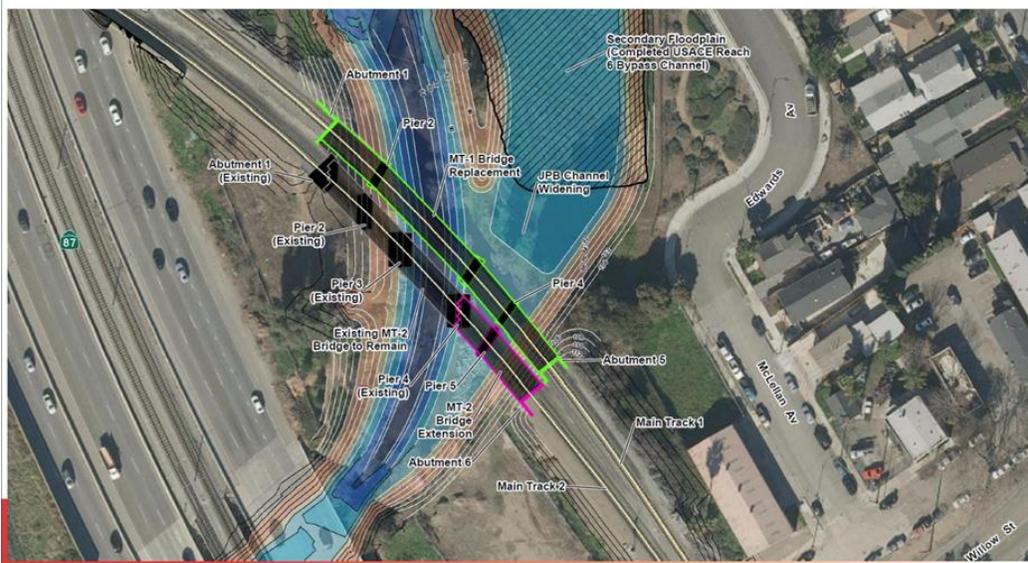
via email: guadalupe@caltrain.com, sent Dec. 21, 2020

Dear Sir/Madam,

I am writing on my own behalf as an interested individual. I am a retired aerospace engineer; I have been involved with the area's creeks and trails for decades; I have been following the plans and discussions regarding Caltrain electrification, High Speed Rail (HSR), and the Diridon Integrated Station Concept (DISC); and I was involved with the 2017 replacement of Caltrain's Los Gatos Creek bridge.

I participated in the Dec. 10, 2020, tele-conference presentation and discussion of Caltrain's plans for replacing and extending the Guadalupe River bridges. I asked some questions then, and am writing now to go into further detail and to formally submit my comments and questions.

I accept the need to replace the MT-1 bridge and extend the MT-2 bridge: this needs to be done in order



to accommodate planned flood-control measures. I am saddened by the loss of yet another old wooden trestle bridge in the region, but here the need is compelling.

Are "your" plans (Caltrain's Guadalupe River Bridge Project plans under discussion here) compatible with the plans of other agencies that might impact this stretch?

- Plans for the Diridon Station include raising the train tracks by the station: I understand that that is far enough away that the tracks will have returned to original grade by this point, but I'd like that to be confirmed for the record.
- Caltrain is electrifying service in this stretch: will any modifications be required to accommodate the supports for the overhead power lines?

- High Speed Rail (HSR) is planning on using this alignment for their planned service: will the bridges and tracks be suitable for this anticipated use? Are the tracks' curves and slopes appropriate?

My main concern relates to minimizing environmental impacts to the Guadalupe River. From all the discussions around Caltrain electrification and the resulting anticipated increased service in this area, plus HSR coming to Diridon and the reconfiguring of Diridon Station: all these plans call for at least three tracks in this reach: one for freight, one for northbound passengers, and a third track for southbound passengers. Your plans call for dewatering the river one season to replace the older bridge (MT-1), and then dewatering the river a second season to extend the other bridge (MT-2), leaving it to you or some other agency to have to dewater the river a third season to construct the needed third bridge (#3). So my question: is there a way to minimize these impacts to the Guadalupe River?

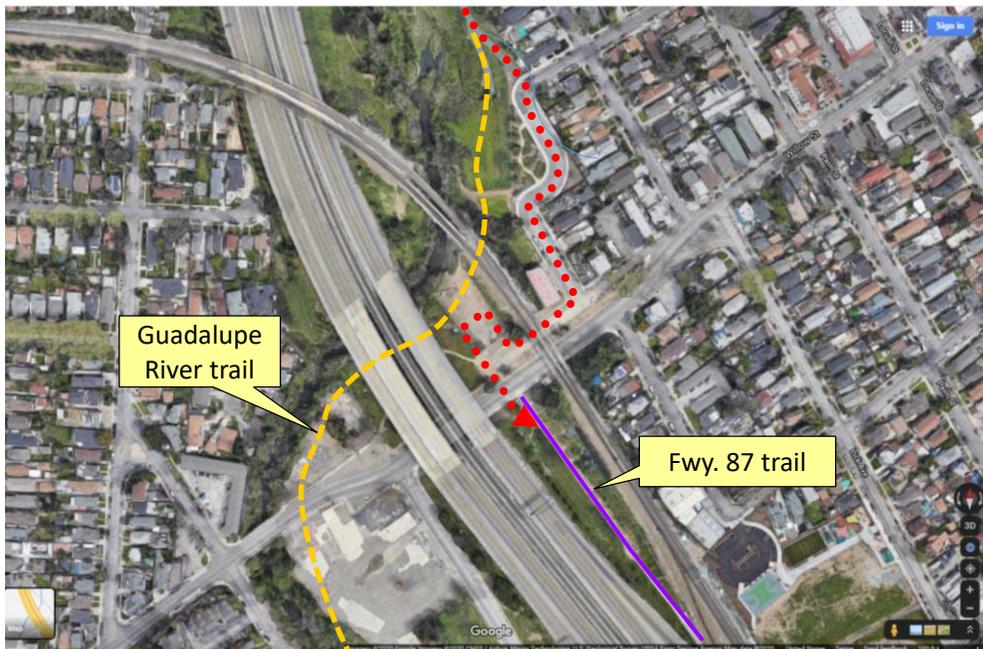
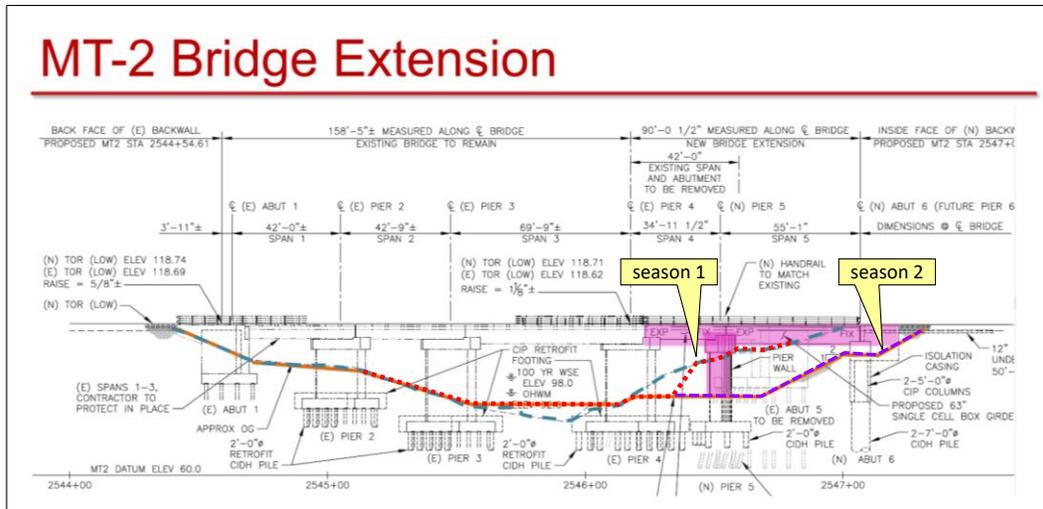
One alternative: why not replace MT-1 with a double track bridge? I appreciate that the plan here is to extend MT-2 rather than replace it, and thus it is not practical to add a second track to that bridge, but MT-1 is a completely new bridge which readily could be made wider. Double the tracks on MT-1 now when there's the opportunity, and then the river will not need to be dewatered for a third season in order to construct the needed third bridge, and thus environmental damage can be reduced.



I appreciate that there might be issues related to the ownership and operation of a double-wide bridge, with one track on a double-wide MT-1 run by Union Pacific while the other track is run by Caltrain. However, this issue has arisen before and been solved, as illustrated by the new bridges over the Los Gatos Creek, just a mile down-track. There too the bridges were replaced, first one and then the other, but the old single-track eastern bridge was replaced with the double-track bridge now in service, with freight on one track and passenger service on the other.

Another possibility: build the third bridge at the same time you are working on one or the other of the other two bridges. The third bridge could even be built over two seasons if that made it easier: construct the foundation for #3 while replacing MT-1, and then complete #3 while extending MT-2.

And is it even necessary to dewater the river for two seasons? Could the in-channel grading for MT-2 be done while the river is dewatered for the construction of MT-1, without disrupting train service on MT-2, as shown by the dotted red line below? Then, during the second season when MT-2 is being extended, all of the remaining grading (purple dashed line) would be outside of the river channel and thus wouldn't require a second river dewatering.

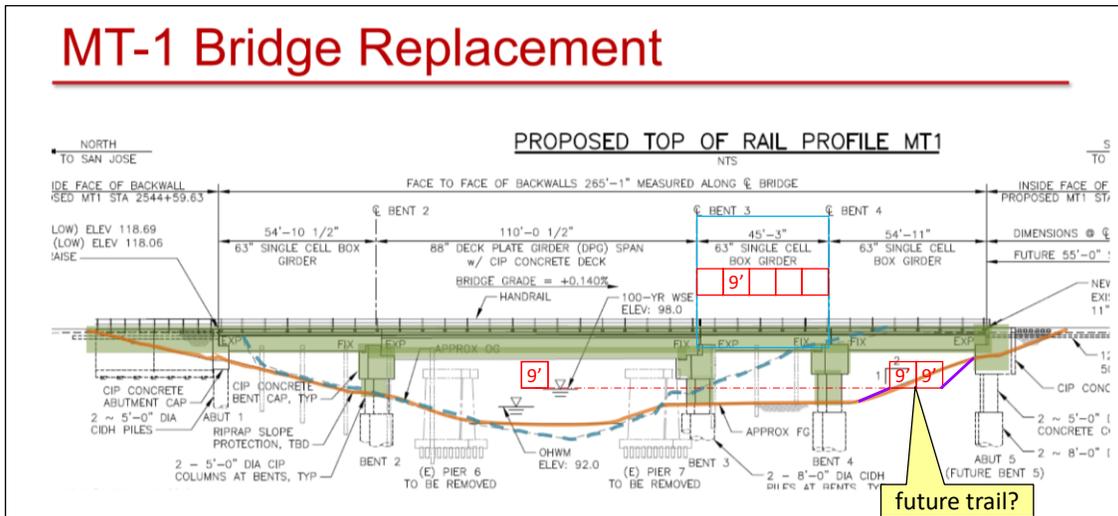


The other point I raised at the public discussion related to creek-side trails. The Guadalupe River Trail is one of the region's most important trails, running from Alviso, through downtown San José, and out to Almaden Valley. Ten miles of continuous trail already runs from Alviso to Virginia

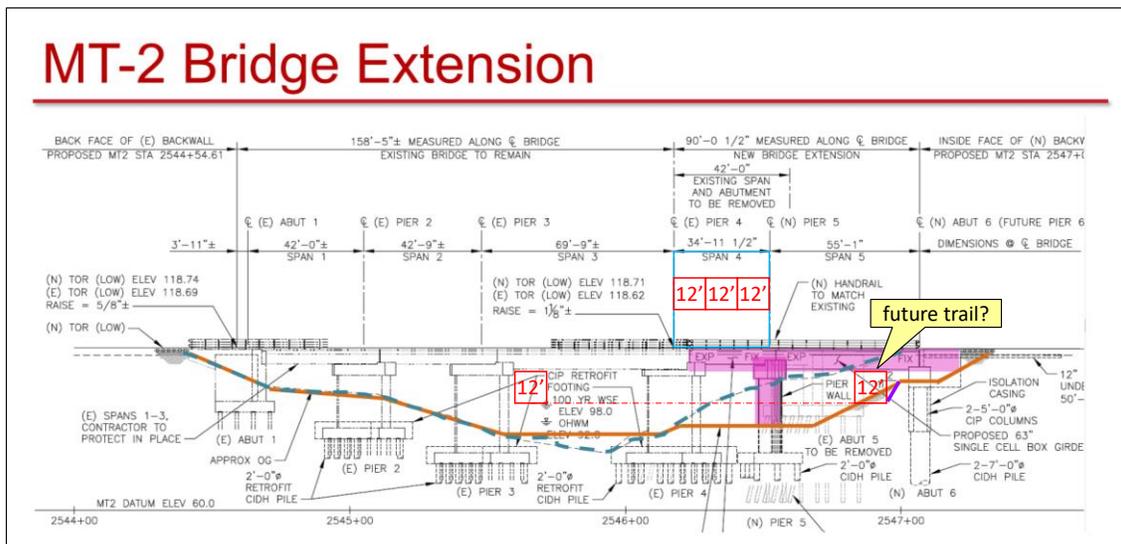
Street, less than a quarter mile from this location, and another 5 miles of existing trail runs southward from Chynoweth Avenue. It was pointed out to me that the City's current plans do not call for the trail to cross beneath these bridges, and, as shown by the dotted red line, I can see that it is possible to connect to the existing Fwy. 87 trail without crossing here by utilizing local streets and the old Willow St. undercrossing. Indeed, this alignment may have been proposed *because* at the time there was no practical way of crossing under the current bridges. However, now you are going to replace and modify those bridges, and that opens up the possibility of extending the Guadalupe River Trail (dashed yellow line) when Valley Water undertakes their channel-widening project in this reach. Note: I'm not asking Caltrain to construct this trail; all I'm asking is that you not needlessly impede it.

Utilizing an analytical technique from my aerospace past, it appears to me that it would be quite feasible to grade a "bench" between Bents 4 and 5 on MT-1 that is outside even the channel of a 100-year flow and still have in excess of 9' vertical clearance. (Analysis method: the blue box in the diagram matches

the feature that is dimensioned as 45'3"; scale it by 20% to get a 9' box, and copy that box onto the 100-Yr WSE ("water surface elevation") mark to check vertical clearance. Of course, a more thorough analysis is needed to verify and refine these PowerPoint studies.)



For the extension of MT-2, it looks like it would be possible to have nearly 12' of vertical clearance outside the 100-year flood zone, passing between Pier 5 and Abutment 6.



It would appear to require a trivial amount of grading to go from the "approx. FG" ("future grade", in the orange-brown line) to what I'm proposing (the purple line by the red box). If this possible future trail alignment is not precluded by the Caltrain construction, then trail advocates in the community can discuss further details with Valley Water as they design their next projects in this reach.

I wish that I had more time to go into greater depth. I was informed about the public meeting by email (thanks!), but I was given only one day's notice and had little time to alert other community creek and trail advocates. And the closing of public comment on Dec. 21st, during the height of the holiday season rush, limits the amount of time I (and I assume others) could give in studying the linked information.

In summary:

- I appreciate the need to replace MT-1 and extend MT-2 to accommodate Valley Water's flood-control plans.
- I certainly hope that Caltrain is cooperating with the various other agencies that may have plans affecting this location, and that the plans here are compatible with those of High Speed Rail, the Diridon Station, and the electrification project.
- I urge you at Caltrain to minimize environmental impacts by constructing the needed third crossing as part of this project rather than needing to dewater the Guadalupe River for a third (or maybe even a second) time to construct the third bridge.
- I hope, as the channel is regraded, that a future trail undercrossing can be accommodated.
- And I hope you improve your public outreach. There are many in the community interested in trains, creeks, and/or trails whom I imagine wish had known about this opportunity to give public comment.

Thank you.

~Larry Ames

Lawrence Ames, area resident and a longtime creek and trail advocate.

cc: Dev Davis, San José Councilmember, D6
Jessica Zenk, City of San José Dept. of Transportation
Liz Sewell, City of San José Trails Planner
Nicolle Burnham, SJ Parks, Rec. and Neighborhood Services
Daphna Wolfe, SJ Parks and Rec. Commission
Barbara Keegan, Director, Valley Water
Mike Potter, Don Rocha, and Jana Sokale, Valley Water
Boris Lipkin, High Speed Rail
Lori Severino, Diridon Station Area Advisory Group
Ryan Mccauley, SamTrans
Shiloh Ballard, Silicon Valley Bicycle Coalition
Jean Dresden, San José Parks Advocates
Bill Rankin, Save Our Trails
Harvey Darnell, North Willow Glen Neighborhood Assoc.