

Mark A McLaughlin,
Director of Environmental Services
ATTN: San Francisco to San Jose
California High Speed Rail Authority
100 Paseo De San Antonio, Suite 206
San Jose CA 95113

via email, sent June 8, 2016

re: San Francisco - San José Project Section EIR Scoping Questions

Dear Mr. McLaughlin,

I am glad that High Speed Rail (HSR) is coming to the Bay Area, and I appreciate the cost- and time-saving concept of a “blended system” that is shared with, and helps expedite, the electrification of the San Francisco to San José (SF-SJ) CalTrain system.

I have a couple questions about the SF-SJ portion of the HSR, and a number more concerning the interface with the SJ-Merced segment at and near the San José Diridon Station.

Given the impacts of the SF-SJ segment on the Diridon Station and on the tracks just south of the station (and also the impact of the station and the southern tracks on the SF-SJ segment), I respectfully request that either the EIR Scoping of the SJ-Merced segment be reopened, or the portion between Diridon and the Capitol Station be shifted so as to be included in the SF-SJ Study. (Beyond the Capitol Station, the tracks follow Monterey Road for miles without any of the complications I discuss below.) I also request that the planned replacement of the CalTrain bridge over the Los Gatos Creek (just south of Diridon) be postponed so that its configuration and design can be coordinated with the chosen HSR alternative.

The coming of HSR will have profound impacts, both positive and negative, on San José and the various neighborhoods it will pass through. Hopefully, the designs can be optimized to minimize the negatives, but I don’t want us to seek a solution to problems in one area if they shift problems to other areas: I want “win/win” solutions, not an “us vs. them”.

(While I have been following the developments of the HSR over the years and have attended a number of the public meetings, I admit that I have not read all the supporting documentation. Thus, please accept my apologies in advance if I ask questions that have already been addressed somewhere, and please direct me to the answers. Thanks.)

Q1: What happened to the Palo Alto Station? All the previous charts I’ve seen for the SF-SJ segment showed two intermediate stations: one at Millbrae (which makes perfect sense, given the existing major connection there between CalTrain, BART, and the San Francisco Airport (SFO)); and also a second station further south along the peninsula. Is the thought process that now that CalTrain is going to be electrified, it will operate so efficiently that travelers to Palo Alto can simply change trains in San José and get to Palo Alto just as quickly as if they’d stayed on the HSR? Palo Alto to me does seem to be a major destination in its own right, given its urbanized downtown, plus nearby Stanford University, and also the nearby industrial campuses already served by a local shuttle bus connection to the train station.

Q2: Will HSR interfere with the scheduling of CalTrain? Presently, CalTrain has a rather efficient system of Local, Express, and Baby Bullet trains that serve the various stations along the corridor at frequent intervals. I recall recently seeing some timing diagrams that seemed to imply that, with the introduction of HSR to the system, the remaining CalTrain runs would all become Locals (stopping at all stations) and there would be schedule “gaps” where the tracks would be cleared to make way for HSR to pass. So, my question is: will there be adequate “passing lanes” on the tracks so that HSR can speed on by while still allowing CalTrain to operate with regular and frequent service?

Q3: I don’t see it labeled on the maps, but I’ve heard that the HSR is to be elevated from Santa Clara into the Diridon Station – is that true? Is that choice already made, or is it an upcoming decision? What would drive the decision: do the HSR tracks need to be elevated because of the design of the Diridon Station, or because of the need to find a suitable “landing area” for the HSR to blend in with CalTrain, or are there ground-level features that would be severely impacted by an at-grade HSR? (I’ve heard that the town of Santa Clara has its prison cells below-grade near the tracks on the west side, and that there is a dense node of internet cables to the east.)

Q4: If the need to elevate the HSR tracks is driven by the design of the Diridon Station, could they descend so as to be at-grade by the time they reach the Newhall neighborhood if the tracks in Diridon Station were lowered to, say, 30' or 45' above grade rather than the currently planned 60'? (I appreciate that this is an engineering challenge, given the need to avoid the freight line on the eastern side of the ROW and also the need for real-estate for a “landing zone” where the tracks can “blend”. If HSR were lower, could it touch down at the CalTrain maintenance yard at Stockton near Taylor?)

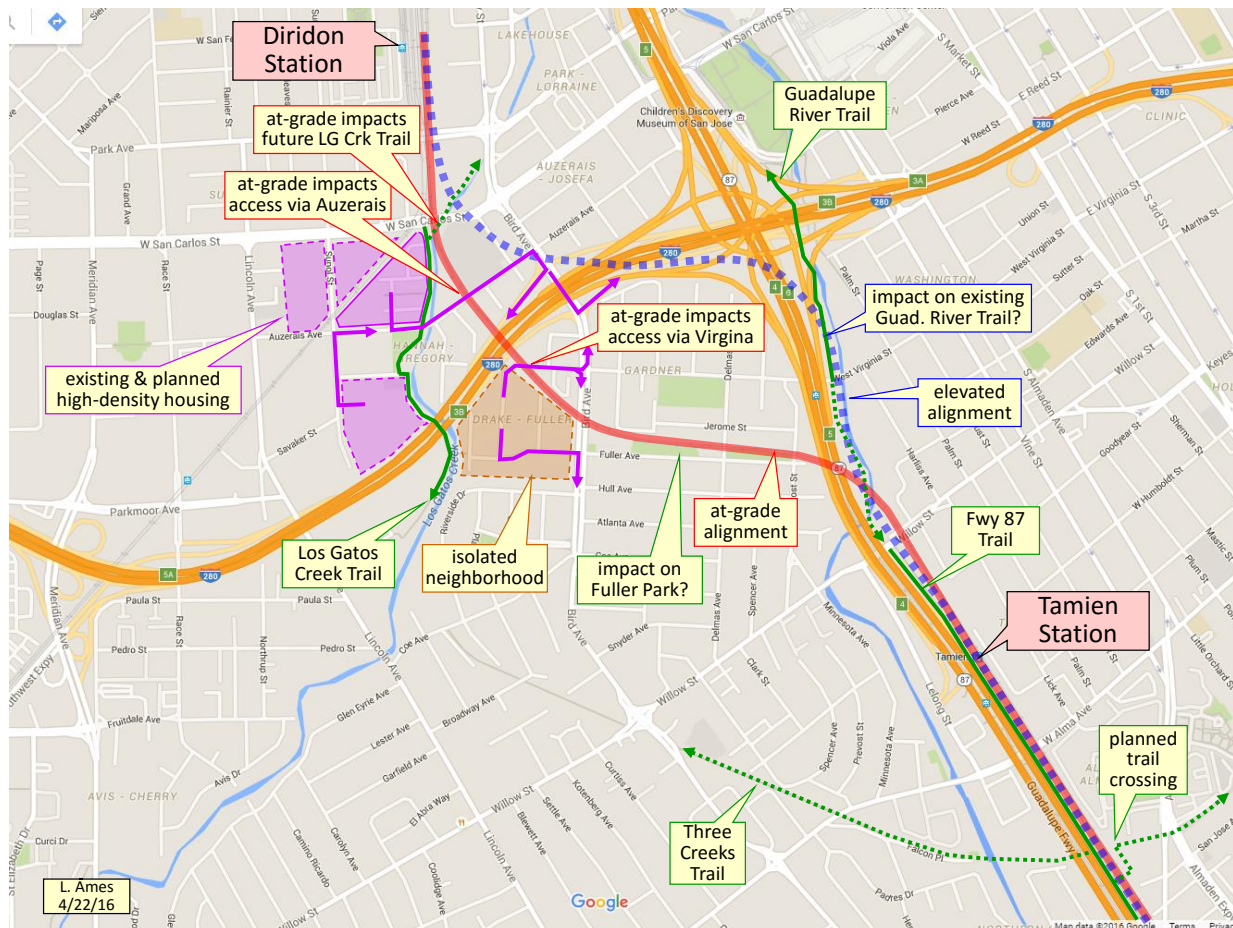
Q5: The choice of at-grade vs. elevated has major impacts on several neighborhoods just south of the Diridon Station: Midtown, northern Willow Glen, and the Greater Gardner District. These areas are not exactly home to “the top 1%”, and they have been impacted for years by freight trains, freeways, and aircraft overflights en route to San José International (SJC). [As shown in red in the graphic below, the at-grade alignment between Diridon and Tamien Stations follows the existing CalTrain alignment while the elevated alignment (dashed blue) is primarily within the right-of-way of Freeways 87 and I-280. The third possible alternative, “underground”, would not have the issues I list here but has a number of other problems.]

My concerns:

- The at-grade alignment into Diridon would impede or sever Virginia Street, the main access route to and from an isolated neighborhood shown in tan on the map. The only other access to this community is limited to right-turn-in / right-turn-out.
- A number of existing and planned mid- to high-density housing complexes (shown in purple) use Auzerais as a principal access to the freeway. The at-grade HSR alignment would impede or sever this access route, inconveniencing the residents and affecting traffic patterns throughout the region.
- Using the existing rail alignment would require additional tracks, given that one of the current two tracks is dedicated for freight. The added tracks would likely infringe upon Fuller Park
- The at-grade route will require a new crossing of the Los Gatos Creek. This bridge is already planned for replacement (see below), and coordination work needs to be done to assure its design is compatible with the planned extension of the Los Gatos Creek Trail into Downtown.

The aerial alignment would generally be within the right-of-way of the freeways and would have much less impact on the neighborhoods. It would also give arriving passengers a great view of the City. Care

would be needed, however, to avoid impacting the Guadalupe River Trail into Downtown (shown in green in the graphic).



Q6: If the HSR tracks are elevated at Diridon Station, how high do they have to be? The current design calls for the HSR tracks to be 60' above grade. This is a convenient design solution, as everything fits together: the tracks easily clear the 87/280 ramps and the San Carlos Street Bridge, and at the Diridon Station it gives room for a Mezzanine Level to serve as an entranceway concourse between HSR and CalTrain. However, the nearest "landing zone" to blend HSR in with CalTrain is miles to the north at Scott Blvd., resulting in elevated tracks that will affect the quality-of-life for residents in the Newhall area and in Santa Clara.

My question: is it possible to come up with lower elevated configuration? If the HSR tracks were shifted a little further south towards the edge of the 87/280 intersection, could they be lower to ground? There might not be room for a mezzanine at the Diridon Station, but perhaps the north- and southbound tracks could be separated to allow room for an entrance concourse at the same level and in between the tracks, or else the concourse could be on a level above them. Perhaps this could permit a smaller (and less expensive, less imposing, less obtrusive) station, and perhaps the tracks exiting to the north could blend into the CalTrain tracks at a closer landing area (near Stockton and Taylor?), thereby avoiding the impacts of elevated HSR tracks past Newhall and Santa Clara.

Q7: The Blended HSR is being coordinated with the electrification of the CalTrain tracks. CalTrain runs from SF, through Diridon, and on south to the next station at Tamien: all those tracks will need to be electrified. At the SJ-Merced HSR meetings, we have been assured that the electrification of the Diridon-Tamien segment does not mean that HSR is required to select the at-grade configuration: HSR can still have its own electrified tracks that go past Tamien, elevated through the 87/280 interchange and on into Diridon. Is this the understanding of the SF-SJ segment design team as well?

Q8: There are currently two tracks between Diridon and Tamien, but one is used for freight, and so CalTrain is effectively single-track through this stretch. When the tracks are electrified for CalTrain, can the Diridon-Tamien stretch remain single-track, or will a third set of tracks need to be constructed through here to accommodate both freight and a double-tracked CalTrain? (Note: from Diridon going southwest, there is a similar situation: a single-track light-rail and a freight line: it works there given the light schedule and usage of that light rail line.)

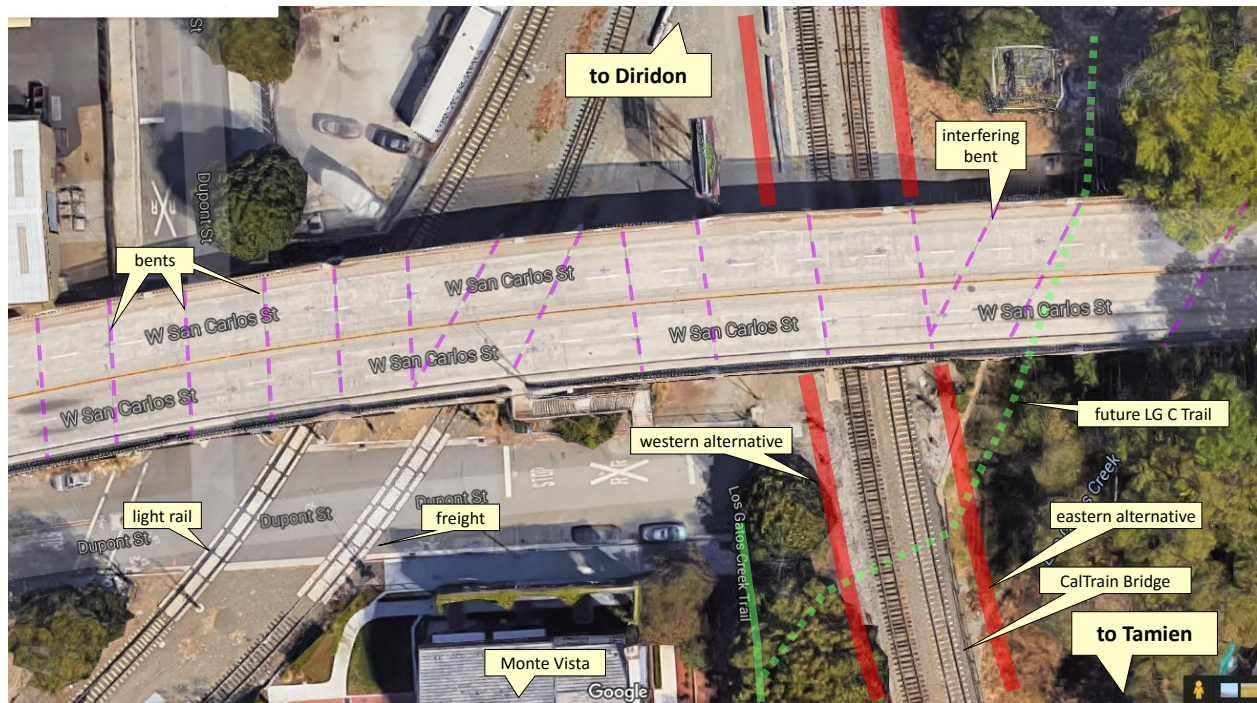
Q9: CalTrain is planning on replacing the old (c. 1936) bridge over Los Gatos Creek near San Carlos Street. This has many ramifications, including to HSR should the at-grade alternative be selected, as then HSR will be using this bridge as well. (And, the choice of elevated vs at-grade for the SF-SJ segment entering Diridon is also tied to this.)

Is the replacement of the Los Gatos Creek train bridge being coordinated with HSR?

I have many questions and concerns related to this Los Gatos bridge. Thus, I ask that this subject be reopened for Scoping questions:

- Will the new bridge be constructed in such a manner that it will facilitate the future planned extension of the Los Gatos Creek Trail, or will it preclude such an extension? Are the agencies coordinating with the City of San José and its trails and parks planners? From what I've heard, the contracts for the replacement bridge are right now going out for bid, and the current construction plans, as revealed to the City of San José, call for a design where the trail will likely be under water for 40 days per year and unusable for perhaps as long as 4 months a year.
- We've been told that the two existing track bridge will be replaced with a three track bridge: freight and CalTrain apparently can't (or won't) share a single track during construction and so a new bridge for the third set of tracks needs to be constructed as a temporary "shoo-fly" track before either of the existing tracks on the bridge is removed and replaced.
- We've been told that the Diridon Station management plans count on using this third track after construction is completed for use as a "tail track" to help simplify operations at the Diridon Station. In discussions with CalTrain two years ago, we negotiated that, once construction was completed, this third track would be "terminated" with a stop and barricade prior to reaching the Auzerais crossing so that local traffic would not be impeded by the lowering of crossing arms every time a train was shunted on to this tail track.
- But now, with the electrification of CalTrain as part of the Blended HSR, would this third track still be a "tail track" (which wouldn't impact traffic on Auzerais), or would it now become half of the double-track to Tamien (in which case it would impact Auzerais, and also would lose its usefulness as a tail-track for Diridon). Would its use for passenger service negate its usefulness for Diridon Station operations?

And my main concern: on which side of the current bridge is this third bridge track to be constructed? If it is to the east of the current tracks, the impact on the riparian habitat of the Los Gatos Creek is minimized, as are impacts to the residents in the Monte Vista housing complex just west of the tracks. Also, as the new bridge is constructed, if the new track is to the east, it would be straightforward to leave room for planned extension of the popular Los Gatos Creek Trail (which presently ends at the underside of the San Carlos Street Bridge) to cross under the Los Gatos CalTrain bridge. However, the existing, old, and planned-to-be-replaced San Carlos Street Bridge has a set of pilings (a “bent”) that blocks an eastern alignment, and so this third set of tracks is now being planned to be constructed on the western side of the existing line, thereby causing severe negative impacts to the creek habitat, the future trail extension, and the residents of Monte Vista.



One solution would be to replace the San Carlos Street Bridge before replacing the train bridge, and have the SJ Dept. of Transportation design it in coordination with CalTrain and HSR. However, CalTrain wants to replace their bridge now, while San José is still in the early stages of considering the replacement.

As a retired aerospace engineer, I would like to offer an alternative solution that I recently (finally!) found: just make a minor retrofit to the existing San Carlos Street Bridge and then build the third track on the eastern side where the impacts are less severe. The following graphic illustrates the issues:

- The San Carlos Street Bridge is supported by numerous “bents” (lines of pilings or supporting walls): their positions and orientations can be seen in the graphic by the expansion-gaps in the bridge (highlighted in purple). Note that some of the bents are perpendicular to the bridge alignment, while others are angled to align with the Los Gatos Creek or with the freight tracks heading to the southwest.
- If the train bridge is expanded to the west (left red line), the tracks can easily pass under the San Carlos St. Bridge between a parallel set of bents. However, for the eastern alignment, the way is blocked by a bent that is parallel the Los Gatos and that angles across the potential track alignment.



The photo above to the left shows the offending angled bent, and the photo to the right shows the solution: the bent can be reconstructed, with a new piling on either side of the track and a new “cap” across the top. It appears that the San Carlos Street Bridge has already been retrofitted once, when the light rail tracks were installed a decade or two ago. (This bent alignment is readily visible in aerial view, crossing the light rail tracks.) The bent labeled “interfering bent” could be similarly retrofitted to enable the better eastern alignment.

Q10: In addition to the planned extension of the Los Gatos Creek Trail, the HSR in the vicinity of the Diridon Station also impacts the Guadalupe River Trail (especially in the vicinity of the 87/280 elevated alignment) and the planned extension of the Three Creeks Trail (just south of Tamien). These trails would allow future HSR customers to arrive at the station without impacting traffic or parking, and their use should be encouraged.

Q11: As has been pointed out at numerous public meetings, the Diridon Station area is destined to become an impressive transportation hub, with CalTrain to San Francisco, Amtrak, regional trains (the Capitol Corridor to Sacramento and the ACE Train to Stockton), light rail, and the future BART, all in addition to HSR, and HSR is participating in the reconfiguration of the Diridon Station area. I’d like to alert you to one of the possible plans for the area: the “daylighting” of the Los Gatos Creek at Park and Montgomery (at the southern end



of the study area). The creek was buried in culverts some 50 years ago to facilitate streamlining of some minor arterial streets, back in the day when the car was king and nature was to be subjugated. The idea is that, now as the area is redeveloped, a creek channel could be reconstructed to allow for a more natural creek environment and also for the continuation of the Los Gatos Creek Trail. (The existing culverts could even be left in place to serve as a flood bypass channel.) The Los Gatos Creek Trail could then help ease congestion in the area by separating cyclists and pedestrians from at-grade street crossings, and also by providing alternative means of reaching the train station. (Note that the State has a policy (AB32) to reduce greenhouse gases (GHG) – it's one of the reasons why HSR is important. San José also has a General Plan (Envision-2040) that calls for a 40% reduction in Vehicle Miles Travelled (VMT). Improving trail access to the Diridon Station would help reduce both GHG and VMT.)

Q12: While Diridon will provide an amazing array of public transportation alternatives for arriving HSR passengers, nonetheless not everyone will (or can) give up on driving a car. Rather than consume valuable nearby real estate with parking lots for rental cars, can there be some means of quick connection to the nearby San José International Airport (SJC), which already has a well-established rental car facility? Additionally, a convenient Diridon-SJC connection would encourage residents in the Central Valley to come fly out from San José, rather than continuing on to SFO or going south to LAX. The City (and all us taxpayers and local airline passengers!) have invested billions in the expansion and maintenance of our airport, and I would hate to see it wither because of an inadequate connection. The connection could be by means of a “people-mover”, autonomous cars (perhaps on a dedicated roadway?), or by frequent shuttle buses. Whatever the method, there needs to be provisions in the station area design to accommodate this connection.

As I stated at the beginning, I am glad that High Speed Rail is coming to San José, and I'm glad that it will blend with an electrified CalTrain system. It all will have a profound impact on the region, both positively and negatively, and everything seems to be happening in the Diridon Station area. I once again urge either that the EIR for the San José to Merced segment of HSR and the CalTrain bridge over the Los Gatos both be reopened for scoping questions, or that that portion of the SJ-Merced section between the Diridon and Capitol Stations and the CalTrain bridge both be incorporated in with the evaluation for SF-SJ segment.

I would be pleased to answer any question or provide more background information.

Thank you,

~Larry Ames

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retired aerospace engineer and longtime environmental-, community-, and trail advocate.

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