Bicycle and Active Transportation Advisory Committee

Correspondence as of

January 14, 2022

From:	Caltrain, Bac (@caltrain.com)
To:	Mesterhazy, Rose; cliff.bargar@gmail.com; Provence, Dan
Cc:	Adina Levin; Star-Lack, Sylvia; Luong, Christine; Caltrain, Bac (@caltrain.com); Tim Oey; Shiloh Ballard; Lauren.Ledbetter@vta.org; andrewhsu@yahoo.com
Subject:	RE: Caltrain/Mid-tail Bikes
Date:	Friday, January 14, 2022 10:28:29 AM
Attachments:	image001.png image003.png image004.png image006.png image013.png image014.png

Hi Rose,

Caltrain believes bikes are an excellent first and last mile solution, and riders who use their bikes to access Caltrain reduce pollution, relieve congestion, and help promote healthy, active transportation. Caltrain has one of the most extensive onboard bicycle programs among passenger railroads in the nation, and we are working hard to increase the amount of safe and secure on-demand bicycle parking at stations. We now have over 300 bicycle eLockers available at 19 stations along the corridor, with more installations on the way. To encourage eLocker use, we're offering riders 100+ hours of free credit for Caltrain-owned eLockers by signing up for an account at www.bikelink.org. (Regular rates are five cents/hour and nights and weekends are two cents/hour.) Thank you for bringing your concerns to our attention. We're looking into the matter and will get back to you as soon as possible.

Best,
Lori

From: Mesterhazy, Rose <rose.mesterhazy@cityofpaloalto.org>
Sent: Wednesday, December 8, 2021 12:44 PM
To: Cliff Bargar <cliff.bargar@gmail.com>
Cc: Adina Levin <adina.levin@friendsofcaltrain.com>; Star-Lack, Sylvia <Sylvia.Star-Lack@CityofPaloAlto.org>; Luong, Christine <Christine.Luong@CityofPaloAlto.org>; Caltrain, Bac (@caltrain.com) <baccaltrain@samtrans.com>; Tim Oey <tim@bikesiliconvalley.org>; Shiloh Ballard <shiloh@bikesiliconvalley.org>; Lauren.Ledbetter@vta.org; andrewhsu@yahoo.com
Subject: RE: Caltrain/Mid-tail Bikes

Hi Cliff,

Thanks for your comments. I have added a few other organizations and Caltrain at your recommendation to make them aware that increasingly popular mid-tail bikes that conform to the Caltrain bike length requirement are being banned by Caltrain because they are not considered

"single rider bicycles".

This is extremely frustrating. My family is now to concerned about getting kicked off Caltrain, so we won't bring our bike, which then impacts our trip-making decisions. Our family does not own a car and invested in this bike (a Tern HSD) with the intent of being able to take it on Caltrain since it is well within the 80" length and width requirements. Many other mid tail cargo bikes of this dimension fall into this category as well.

I can imagine how others feel if they think there will be any problem taking these bikes on board. No one wants to explain to their excited 6 year old that they can't get on the train or have to get off, despite their bike meeting the stated length and width requirements. I also now feel compelled to warn parents that they should not consider using Caltrain as a commuting option if they purchase this bike.

This is not about a few random tandems from recreational cyclists, this is about a broad swath of families that bought these bikes with the intent to use them for their single and non-single rider Caltrain commutes. This policy deso not align with Caltrans new stated equity policy to:

"commit to combating the climate crisis and its disproportionate impact on frontline and vulnerable communities — such as Black and Indigenous peoples, communities of color, the people experiencing homelessness, people with disabilities, ***and youth. We will change how we plan, design, build, and maintain our transportation investments to create a more resilient system that more equitably distributes the benefits and burdens to the current and future generations of Californians."***

Arbitrary judgement calls by the conductor around mid-tail bikes will have a chilling effect on families and commuters using Caltrain when ridership is at an all time low and commuters and families should be welcomed aboard.

Can you please share some potential next steps or recommendations for how to address changing this policy and support this increasing popular bike option among families and commuters?
https://www.caltrain.com/riderinfo/Bicycles/Bikes_on_the_Train/Rules_and_Guidelines.html

I would like to recommend the following:

Recommendation 1: Remove the ban on non-single rider bicycles OR explain why this policy exists, what it is trying to prevent and what constitutes a "single rider bicycle"

Remover the ban on arbitrary calls of conductors not permitting "bulky" backpacks on board OR specify what constitutes a "bulky" backpack.

These policies are in need of updates to reflect updated technology and changing norms on bringing mid-tail bikes on Caltrain and on supporting families to use Caltrain for multi-modal trips.

Thanks for your guidance,

Rose

Rose Mesterhazy, MPH, LCI #5255
Safe Routes to School Coordinator
Office of Transportation
(650) 329-2157 | rose.mesterhazy@cityofpaloalto.org
www.cityofpaloalto.org/saferoutes

> On Fri, Nov 19, 2021 at 10:12 AM Mesterhazy, Rose <rose.mesterhazy@cityofpaloalto.org> wrote:
>
> > Hi Adina,
> >
> > A friend was not permitted on Caltrain today because the conductor said her bike was not a "Single Rider" bicycle, even though it conformed well within the 80" length maximum requirements. (Tern HSD).
> >
> > Since there is no definition for single rider bikes, arbitrary judgement calls by the conductor can effectively ban all mid-tail bikes from Caltrain, many of which were purchased for the express purpose of being able to support multimodal green trips, since they conform with the length requirement and are advertised as such by the manufacturers.
> >
> > Have there have been any efforts to define what constitutes a "single rider bike" on Caltrain? Is a standard bicycle with a rack allowed? Is a bicycle with a child seat on that rack allowed? Is a bicycle with a rack and detachable child seat allowed?
> >
> > Is a bike with no specific child seat but length in the back allowed? If so, why should whatever the length in the back supports, whether it be a person or a backpack matter?
> >
> > The Caltrain customer service associate whom I filed the complaint with today was unable to define single rider bicycles other than to say "it's a bicycle for only one rider" but that is unclear, especially since any bike can accommodate more than one rider.

Perhaps only a bike with two seat posts, like a tandem, would clearly violate this policy, and that bike would likely exceed 80” anyway.

This policy does not align well with the changing technology of increasingly popular mid-tail cargo bikes and multimodal ridership and I’m unclear as to what kind of problem it seeks to address. By denying service to family commuters, car light, or car-free individuals in need of a bicycle that can support utility and family related trips via Caltrain, Caltrain stands to lose customers at a time when it should be welcoming them.

As staff responsible for encouraging, safe, green and active commutes whenever possible, your insights are appreciated.

Best,

Rose

Rose Mesterhazy, MPH, LCI #5255

Safe Routes to School Coordinator

Office of Transportation

(650) 329-2157 | rose.mesterhazy@cityofpaloalto.org

www.cityofpaloalto.org/saferoutes

From: David Boyce
To: Caltrain, Bac (@caltrain.com)
Subject: One man's experience with the taking his bike on the train
Date: Tuesday, January 11, 2022 5:31:11 PM

To the Bicycle Advisory Committee:

I am a cyclist and an infrequent Caltrain passenger. On Monday, Jan. 10, I took my bike on board for a round trip between Menlo Park and Lawrence Expressway stop. It wouldn't fit to call it a station; it's a bare platform with a few benches. No shelters other than the expressway above.

On my return trip, the 113 train stopped at Lawrence. When it came to a stop, I was standing with my bike at the middle of the train. It was not at all obvious where the train would stop, or I would have placed myself at the that terminal point. As I was walking rapidly toward the bike car, I heard the automated voice announcing that the doors were "about to close."

I'm 72 and can no longer run safely, but I picked up my pace and yelled for the conductor, who had stepped out to let off a cyclist and gotten back on and was out of sight. He apparently heard me and responded by telling me that I should have been standing closer to the bike car.

So it's my fault if I miss the train when I'm standing right there and have to wait an hour for the next train? Is that any way to run a railroad … a railroad we voted to throw a tax-revenue lifeline some years back?

Why is the platform lacking signs regarding bike loading?!? How is that not a convenience that is readily solved at minimal expense?

The conductor and I had an exchange later and when I noted the point about taxpayer support, he shot back that everyone on the train also pays taxes. So having the trains run on time — the 113 was running about a minute late — is the highest priority? Whose priority is that and why? And where have we heard about such a priority before?

I'd be surprised if the trains in Italy run on time. Mussolini — if he actually made that promise — would have been positively un-Italian. Here's what is true about Italian trains and their conductors, and Alitalia pilots and crews, for that matter, in my experience. They make the trip enjoyable. Now how about that!

The Lawrence platform is visited just once an hour on weekday mornings. If a conductor needed a reason to take a look at the platform as the train pulls in, that

once-an-hour stop a good one. I was standing there with my white beard and my bright neon yellow cycling jacket and a bike with bright orange rims. Had he even looked at the platform upon arriving?

When I informed the conductor that I planned to write to management, he told me to go ahead, and that “it won’t go anywhere.” Where did that come from? So giving customers slight regard is endemic to the Caltrain conductor community? It’s business as usual? Maybe so. We used to be able to buy tickets on the train, from the conductor. That was probably a meaningful part of their job, but not anymore.

Doubtless there are malcontents that sour a conductor on the riding public, but figuring out how to properly deal with those few malcontents apart from the well-meaning general public, and being courteous to a fault with that general public, is part of the long history of being a conductor on a train, IS IT NOT???

A dissatisfied customer!

Dave Boyce
Menlo Park

From: Howard
To: Board (@caltrain.com); cacsecretary [@caltrain.com]; Caltrain, Bac (@caltrain.com)
Subject: HAPPY TRANSIT 2022
Date: Monday, January 10, 2022 1:38:01 AM
Attachments: ~SAVEMUNI-TRANSIT APPRECIATION 2022 #########.docx.pdf
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Hello Everyone: With transit challenges ahead, **ATTACHED** is a fun look at possibilities. Best, Howard Wong, AIA **EXCERPT BELOW. [Sorry for duplicate emails]**

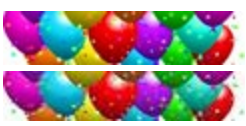
ATTACHED: TRANSIT FUN, PHOTOGRAPHY, INNOVATIONS




Midttrafik: The Bus https://www.youtube.com/watch?v=snKbU5r0pBo

Epic Bus: The Sequel https://www.youtube.com/watch?v=yn2HM0f2uDM

De Lijn ad campaign (Belgium) https://www.youtube.com/watch?v=sB28k6urZPg






Beatles: Ticket to Ride https://www.youtube.com/watch?v=SyNt5zm3U_M

Monkees: Last Train to Clarksville https://www.youtube.com/watch?v=U1w048AwTkI

Shang-Chi Movie Clip - Bus Fight https://www.youtube.com/watch?v=v8aujerLNs8

The Rock---Cable Car Crash https://www.youtube.com/watch?v=tZj_S_JtoGk

Inside Zoox: The robot vehicle totally changing transportation | Hard Reset by Freethink https://www.youtube.com/watch?v=tGgGdqr2alc

5 Amazing Passenger Drones You Need To See 2020
HTTPS://WWW.YOUTUBE.COM/WATCH?V=RBD4FDTZ-YE

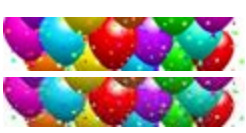
AWS+: SAVEMUNI RECOVERY PLAN (October 2021) is full 100% restoration of all Muni routes/ alignments by implementing "Augmented Weekend Service Plus" (AWS+). Pre-pandemic, weekend service was 65% of weekday service. Augmenting 65% with 20% of added services would reach Muni's stated 85% funding capacity. However, a Controller's audit reveals that Muni actually has zero deficits for the next three fiscal years---making 100% service recovery possible. Moreover, the City & County of SF has budget surpluses for the next two years. The State of California has a $31 billion surplus. And the new Federal Infrastructure Bill includes $4.5 billion transit dollars for the Bay Area. Also, the Transit Workers Union states that sufficient staffing exists for 100% service. Though long-term structural deficits may exist, cities and agencies should reprioritize existing budgets to restore services---prior to any new bond measures and transportation taxes.







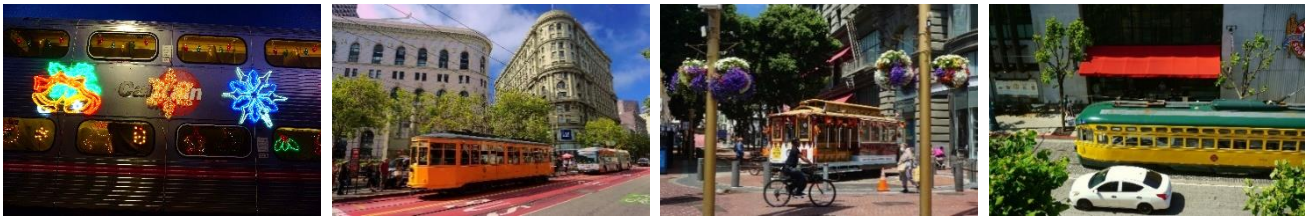

AND MORE: Transit music, movie scenes, trip planners, transit technology, innovations, neighborhood-oriented transit, fresh ideas, photography.....



Howard Wong, AIA

SaveMuni = FRISC **F**ast, **F**requent, **R**eliable, **I**nexpensive, **S**afe, **C**lean and "**C**ool".

SAVEMUNI: TRANSIT APPRECIATION 2022



RIDE PUBLIC TRANSIT 2022---LOCALLY AND REGIONALLY: Bay Area transit needs everyone's support---to assure a world-class system for all and mobility equity for the disabled, disadvantaged, seniors and youth. To create a post-pandemic/ sustainable/ integrated system, everyone needs to ride transit---frequently, at every opportunity, to every destination. Transit operators and workers have taken risks for us during the epidemic. Let's reciprocate by taking transit today, building back better and transforming transit tomorrow.

Midttrafik: The Bus https://www.youtube.com/watch?v=snKbU5r0pBo
Epic Bus: The Sequel https://www.youtube.com/watch?v=yn2HM0f2uDM
The Bus. From GO. The GO Bus. https://www.youtube.com/watch?v=NuWS4XGb-G4
De Lijn ad campaign (Belgium) https://www.youtube.com/watch?v=sB28k6urZPg
We Move You (Toronto) https://www.youtube.com/watch?v=so6CjBsMUIc
ETS COOL Bus https://www.youtube.com/watch?v=VUfgmQsgJvw
Yes, the future of transportation in Sweden is ... a bus. https://www.upworthy.com/a-hilarious-commercial-in-sweden-is-getting-people-hyped-about-public-transport
These Ads Will Make You Want to Ride Public Transit: https://citi.io/2015/04/18/these-ads-will-make-you-want-to-ride-the-public-transit/
Christmas Train of Lights' Casts Magical Glow Along English Seaside
https://malaysia.news.yahoo.com/christmas-train-lights-casts-magical-175656971.html

Beatles: Ticket to Ride https://www.youtube.com/watch?v=SyNt5zm3U_M
Monkees: Last Train to Clarksville https://www.youtube.com/watch?v=U1w048AwTkI
Gladys Knight & The Pips: Midnight Train to Georgia
https://www.youtube.com/watch?v=HwbmufPphP0
The Who: Magic Bus https://www.youtube.com/watch?v=TmfQQC1bsf4
Tony Bennett: I Left My Heart In San Francisco
https://www.youtube.com/watch?v=ryF9p-nqsWw

Shang-Chi Movie Clip - Bus Fight https://www.youtube.com/watch?v=v8aujerLNs8
The Rock---Cable Car Crash https://www.youtube.com/watch?v=tZj_S_JtoGk
Star Trek IV: The Voyage Home - Bus Scene
https://www.youtube.com/watch?v=prH9RyFX4SM
Mrs. Doubtfire – On Muni Bus https://www.youtube.com/watch?v=RYjL_BJRfqM

TRANSIT TRIP PLANNING TOOLS: To find transit options from any starting point to any destination, the websites of Bay Area transit agencies have trip planers (Muni, BART CalTrain, Golden Gate Ferry, Golden Gate Transit, AC Transit, SamTrans and more). **See** https://511.org/about/changes for links to 31 transit agencies. Other regional trip planning tools include Google Maps, Moovit, Citymapper, Bing Maps, Apple Maps and TransitApp. For the tech-savvy, mobile apps provide real-time departure schedules. A host of free shuttle buses also exist, like PresidioGo, Mission Bay Shuttle, Kaiser Shuttle, UCSF Shuttle and more. ALL ABOARD BAY AREA has links to 22 transit agency websites and Clipper Card discount programs https://www.allaboardbayarea.com/.

What 8am Commutes Looks Like Around the World
https://www.youtube.com/watch?v=zszLu6F7pEE
CGTN: China-Laos railway in 90 seconds https://news.cgtn.com/news/2021-12-03/China-Laos-high-speed-railway-in-90-seconds-15H9G4190fm/index.html
Inside Zoox: The robot vehicle totally changing transportation | Hard Reset by Freethink https://www.youtube.com/watch?v=tGgGdqr2aIc
Autonomous Airport Wheelchair https://www.youtube.com/watch?v=9wbvCRPT9r0
5 Amazing Passenger Drones You Need To See 2020
HTTPS://WWW.YOUTUBE.COM/WATCH?V=RBD4FDTZ-YE
This Electric Autonomous Ferry Is the Future of Emission-Free Public Water Transportation https://www.yankodesign.com/2021/04/08/this-electric-autonomous-ferry-is-the-future-of-emission-free-public-water-transportation/

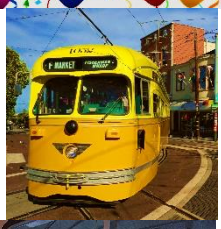
INCENTIVES TO TAKE PUBLIC TRANSIT: The average annual savings is $10,160 for a commuter who switches from driving to taking public transportation, according to the American Public Transportation Association. Relaxing on public transit (it's possible) can make you more relaxed, happier and healthier. With recent wildfires, tornadoes and hurricanes, greenhouse gas reduction is paramount---and public transit takes cars off the road. Cost-saving benefits exist, like commuter checks, subsidized carpools, Muni free passes for youth/ homeless/ low-income disabled and seniors, Senior Clipper cards with reduced fares, including 62.5% discounts on BART (50% discounts for youth).

MTC: Blue Ribbon Task Force Approves Actions To Guide Post-Pandemic Future of Bay Area Transit Network https://mtc.ca.gov/news/blue-ribbon-task-force-approves-actions-guide-post-pandemic-future-bay-area-transit-network Approving 27 near-term actions to be taken by MTC, transit agencies, county transportation agencies and others in

the coming months to make the Bay Area's public transportation network more connected, more efficient, and more customer-focused.

AWS+: SAVEMUNI RECOVERY PLAN (October 2021) is full 100% restoration of all Muni routes/ alignments by implementing "Augmented Weekend Service Plus" (AWS+). Pre-pandemic, weekend service was 65% of weekday service. Augmenting 65% with 20% of added services would reach Muni's stated 85% funding capacity. However, a Controller's audit reveals that Muni actually has zero deficits for the next three fiscal years---making 100% service recovery possible. Moreover, the City & County of SF has budget surpluses for the next two years. The State of California has a $31 billion surplus. And the new Federal Infrastructure Bill includes $4.5 billion transit dollars for the Bay Area. Also, the Transit Workers Union states that sufficient staffing exists for 100% service. Though long-term structural deficits may exist, cities and agencies should reprioritize existing budgets to restore services---prior to any new bond measures and transportation taxes.



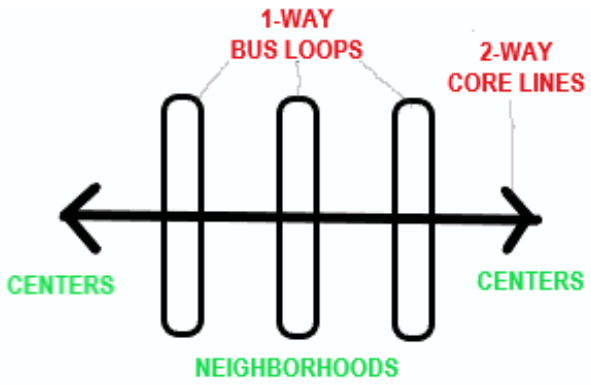



INCREASING TRANSIT SERVICES AND ADDRESSING STRUCTURAL DEFICITS: Even prior to the pandemic, transit ridership was declining. Instead of forging systems holistically, billions of dollars have been diverted to large infrastructure projects with small new ridership gains and marginal systemwide benefits. SaveMuni has advocated for effective/ efficient projects---that benefit the most people, in the shortest timeframes, at the lowest costs. Expensive long-range projects should be avoided, delayed and not opened, until post-pandemic needs are clearly established. Instead, invest in restoring service, improving existing systems and doing the low-cost, near-term projects that have quick benefits. Big improvements can have little cost, such as creating a culture of cleanliness, courtesy, customer service, design quality and reliability---gaged by significant ridership growth.




SAVEMUNI: TRANSIT REIMAGINATION 2022

POST-PANEMIC:NEIGHBORHOOD-ORIENTED TRANSIT: Via a robust public process, structural deficits can also be sliced by more usefu l/ used routes. The pandemic highlights the need to revitalize neighborhoods, commensurate with changing mobility patterns, e.g. stay-at-home, work-at-home, localized entertainment/ recreation/ restaurants/ schools/ services/ shopping/ streetscapes…. Outdoor dining, parklets and shared spaces symbolize a new normal, which transit can reinforce by connecting neighborhood nodes.



K.N.O.T. SYSTEM

KEYED NEIGHBORHOOD-ORIENTED TRANSIT

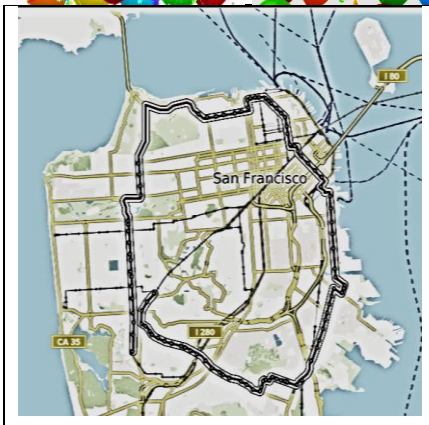
KEYED NEIGHBORHOOD-ORIENTED TRANSIT: One-way/ frequent bus loops to connect key neighborhood points, such as commrcial corridors, groceries, shops, restaurants, schools, libraries, parks, playgrounds, cultural institutions, services…. Bus loops also connect to key transfer points of high-speed, core lines that cross the city. Route alignments can be flexible, allowing changes for community events and new needs. Routes run clockwise, making only right turns for better safety. Bus loops can be coordinated with taxis, free shuttles, ride-share---creating a reliable 24/7 service.

TRANSPORT POLITIC: "Cities Develop Alternative Bus Networks to Combat Perceived Disadvantages of Mainline Routes."
http://www.thetransportpolitic.com/2010/01/15/cities-develop-alternative-bus-networks-to-combat-perceived-disadvantages-of-mainline-routes/ Baltimore's new transit network, which supplements the city's metro rail, light rail, commuter rail, and bus routes, is the most recent example of a trend that has taken American cities by storm: The creation of auxiliary routes for the inner-city that are designed for frequent, high-quality service with the goal of attracting onto buses people who aren't used to public transportation.

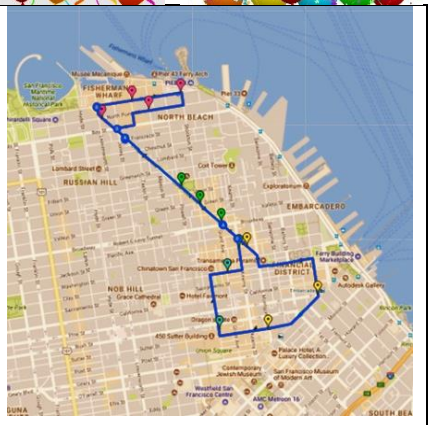
GEEKWIRE: Seattle-area counties' experiment with on-demand, door-to-door public bus service is showing promise https://www.geekwire.com/2021/seattle-area-

[counties-experiment-with-on-demand-door-to-door-public-bus-service-is-showing-promise/](#)



FREE BUS LOOPS can draw new ridership. Some ideas:
Left: Existing 91 Owl Bus---3rd Street/19th Avenue (12 midnight - 5am nightly) could be an all-day free loop.
https://www.sfmta.com/routes/91-3rd-street19th-avenue-owl
Right: Proposed Northeast Loop could connect Market Street, Chinatown, North Beach & Fisherman's Wharf.



SMARTER TRANSIT CHOICES: Good transportation planing isn't about how much money is spent on big, long-drawn-out projects with marginal benefits---but rather, how quickly new riders are enticed into public transit. Public and private free bus loops are common in the Bay Area and worldwide---a surefire way to attract new transit ridership. When business suffered after the 1989 Loma Prieta Earthquake, the City could have started a free Northeast Bus Loop---to connect Downtown, Moscone Center, Chinatown and Fisherman's Wharf. Instead, special interests moved $1.6 billion to a short 1.7-mile subway ($1 billion/ mile), which decreased overall Muni service and fueled rising land values/ displacement/ gentrification.

DENVER FREE 16TH STREET MALLRIDE demonstrates great cost/ benefits of free bus loops, energizing business/ economic vitality. Wildly successful, Denver expanded the system with the Free MetroRide. Running frequently, riders can see the next bus a block or two away---day and night. Transit network companies (TNC) can't compete with free transit.
RTD Free MallRide: https://www.youtube.com/watch?v=z-IPXyjr98A
16TH Street Free MallRide: https://www.rtd-denver.com/services/free-mallride
KEY WEST: Free Duval Loop Bus: https://www.carfreekeywest.com/free-duval-loop-bus

NOT ROCKET SCIENCE, JUST TRANSIT SCIENCE: San Francisco has one of the smallest geographic transit footprints in the world---only 49 square miles. Meanwhile, cities covering hundreds of square miles have designed world-class transit systems. Despite billions and billions of dollars spent, transit ridership, per capital ridership, transit modal share and on-time performance have declined. Traffic congestion, commute times and pollution have increased. Let's learn from global best practices---to shape a world-class system.

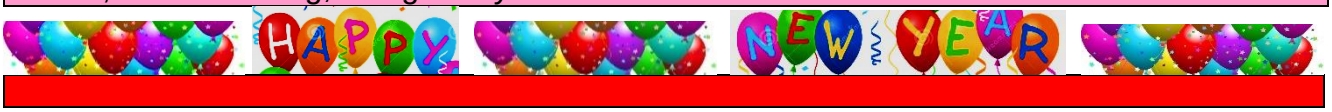
LUXEMBOURG: The Country Where All Public Transit Is Free
https://www.youtube.com/watch?v=feCQPD9DSOA

DEZEEN: "Paris is green with envy" at London's sustainable policies says Sadiq Khan
https://www.dezeen.com/2021/09/23/sadiq-khan-london-mayor-interview/ Last year, Hidalgo announced plans to plant 170,000 trees in Paris while by December 2020, London had 300 electric buses and Paris had 259. Both lagged behind Moscow, with 500 electric buses. In terms of tree planting, Milan eclipses both cities with its Forestami initiative to plant three million trees. Hidalgo introduced a Low Emission Zone in 2015…..

ARCHDAILY: Paris to Turn Champs-Élysées into Expansive Urban Garden
https://www.archdaily.com/955080/paris-to-turn-champs-elysees-into-expansive-urban-garden?utm_medium=email&utm_source=ArchDaily%20List&kth=3,660,081 Paris Mayor Anne Hidalgo has approved a comprehensive plan to transform Champs-Élysées, the city's most famous avenue. The proposal aims to turn a 1.2 mile stretch of central Paris into an expansive garden. The proposal includes reducing space for vehicles, turning roads into pedestrian green areas, and creating tunnels of trees to improve air quality.

WORLD ECONOMIC FORUM: Paris halves street parking and asks residents what they want to do with the space **https://www.weforum.org/agenda/2020/12/paris-parking-spaces-greenery-cities/** "We can no longer use 50% of the capital for cars when they represent only 13% of people's journeys," said deputy mayor David Belliard.

JOIN AND DONATE: Keep SaveMuni as San Francisco's only independent transit advocacy group---free of corporate, government and financial underwriters. Annual dues are $20. Mail your dues and donations **TO:** SaveMuni, P.O. Box 330282, SF CA 94133, ATTN; Howard Wong, along with your contact information and email address.



Howard Wong, AIA **© Transit photographs: Howard Wong, AIA**
SaveMuni = FRISC **F**ast, **F**requent, **R**eliable, **I**nexpensive, **S**afe, **C**lean and "**C**ool".

From: Roland Lebrun
To: Board (@caltrain.com)
Cc: MTC Commission; SFCTA Board Secretary; Baltao, Elaine [board.secretary@vta.org]; SFCTA CAC; Caltrain, Bac (@caltrain.com); Caltrain, Bac (@caltrain.com)
Subject: Resending extracts of Tuesday, January 3, 2017 5:19 AM letter (attached)...
Date: Monday, December 6, 2021 10:46:38 AM
Attachments: January 5th 2017 Item #3 Commit to Fund Up to $50 Million for Caltrain.pdf

2) System is not ready for electrification

a. New CBOSS signaling system is not "electrification ready"

"*It seems, from the scope of work for the electrification contractor that it will be responsible for testing these links after its work on track circuits is finished. This is a high risk safety area. In our experience, any work requiring safety related technical interfaces with signaling already installed on an existing system is high risk in terms of interface management, approvals for designs by the operator and regulators and in the installation by the electrification contractor for intrusive access to a new and complex system like* ***CBOSS is bound to cause some delay to the project completion date, particularly if the alteration (e.g. track circuit replacement) involves interfaces with other operators like the UPRR.***"
http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg_121316_item3_ATTACHMENT_Ind_Consult_Report_SF_SJ_Peninsula_Corridor_Funding_Plan.pdf (Section 4.5 on page 35)

d. Caltrain electrification design does not follow best practices and could result in (potentially spectacular) catenary failures at high speeds.

"*NB noted that back-to-back cantilevers were not to be used on the high speed line but were likely to be used by Caltrain.* ***Such cantilevers did not provide for mechanical independence necessary for reliable performance****."*
http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg_121316_item3_ATTACHMENT_Ind_Consult_Report_SF_SJ_Peninsula_Corridor_Funding_Plan.pdf (PDF page 54).

f. UK's Network Rail recently cancelled an electrification contract with Caltrain's contractor

"It was concluded that the proposed alliance was unlikely to meet its stated objectives of delivering the scope of the work on time and to budget"
http://www.railtechnologymagazine.com/Rail-News/balfour-beatty-dropped-from-north-west-electrification

3) Caltrain Management issues

a. "A May 2016 APTA Peer Review Panel of the CBOSS project raised serious questions about Caltrain's project management capabilities and JPB oversight that have similar implications to PCEP. These include:

"The panel notes that the PTC CBOSS project is just one of several complex infrastructure projects that will ***require Caltrain to take a serious look at in-house technical management resources.****"*

"Caltrain needs to directly hire a project manager with requisite technical experience and provide that person with the authority to manage the interests of Caltrain."

"…this has consequently led to unresolved technical and contractual issues. ***Despite the recent partnering session, there continues to be a lack of commitment to resolving contractual issues such as scheduling and cost.****"*

*"****The agency's Executive Director and the Mod Squad will need sufficient time and understanding of project technical and management issues in order to provide the necessary oversight and authority for effective program delivery****"*
http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg_121316_item3_ATTACHMENT_Ind_Consult_Report_SF_SJ_Peninsula_Corridor_Funding_Plan.pdf (page 24)

Sincerely,

Roland Lebrun

CC

MTC Commissioners
SFCTA Commissioners
VTA Board
VTA PAC
SFCTA CAC
Caltrain CAC
Caltrain BPAC
VTA CAC

From: Roland Lebrun <ccss@msn.com>
Sent: Tuesday, January 3, 2017 5:19 AM

To: Supervisor Aaron Peskin <aaron.peskin@sfgov.org>
Cc: SFCTA Board Secretary <steve.stamos@sfcta.org>; VTA Board Secretary <board.secretary@vta.org>; MTC Commission <info@mtc.ca.gov>; CHSRA Board <boardmembers@hsr.ca.gov>; Caltrain Board <board@caltrain.com>; Caltrain CAC Secretary <cacsecretary@caltrain.com>; Caltrain BAC <bac@caltrain.com>; Nila Gonzales <ngonzales@transbaycenter.org>
Subject: SFCTA 1/5 Board Meeting Item #3 Commit Up to $50 Million in additional funding to Caltrain

Dear Supervisor Peskin and members of the SFCTA Board of Directors,

Please find attached issues and recommendations re this item for your consideration.

Sincerely,

Roland Lebrun

Cc
SFCTA Board of Directors
VTA Board of Directors
MTC Board of Directors
TJPA Board of Directors
High Speed Rail Authority Board of Directors
Caltrain Board
Caltrain CAC
Caltrain BAC
VTA CAC
SFCTA CAC
TJPA CAC
FTA regional director

Roland Lebrun
ccss@msn.com
January 2nd 2017

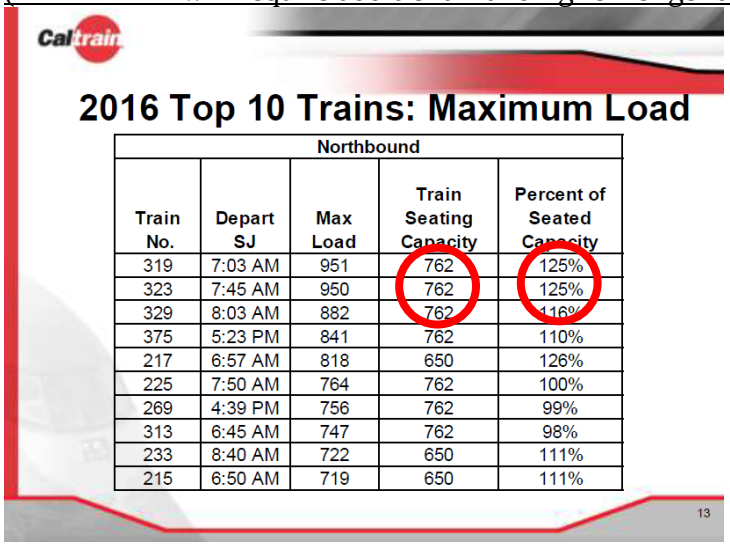
SFCTA Board of Directors
January 5th Board Meeting
Item #3 Commit Up to $50 Million in additional funding to Caltrain

Dear Chair Peskin and members of the SFCTA Board of Directors,

Please consider the following issues and recommendations prior to approving any additional funding for the Caltrain electrification project:

Issues

1) $2.5B investment will result in a <u>10% loss of capacity AFTER adding a 6th train</u>
<u>("Calmod II" will require additional funding for longer trains & platform at a later date)</u>



2016 Top 10 Trains: Maximum Load

Northbound				
Train No.	Depart SJ	Max Load	Train Seating Capacity	Percent of Seated Capacity
319	7:03 AM	951	762	125%
323	7:45 AM	950	762	125%
329	8:03 AM	882	762	116%
375	5:23 PM	841	762	110%
217	6:57 AM	818	650	126%
225	7:50 AM	764	762	100%
269	4:39 PM	756	762	99%
313	6:45 AM	747	762	98%
233	8:40 AM	722	650	111%
215	6:50 AM	719	650	111%

13

Caltrain's proposed EMU replacement trains

Parameter	Car 1	Car 2	Car 3	Car 4	Car 5	Car 6	Total
Car type	Cab	Middle	Middle	Middle	Middle	Cab	-
Number of powered axles	2	4	0	4	0	2	12
Seats, lower level	38	23	6	38	6	38	149
Seats, upper level	52	52	60	52	60	52	328
Seats, intermediate level	10+2	10	10+16	10	10+16	10+2	96
Seats, total	102	85	92	100	92	102	**573**
Bike spaces	-	-	40	-	40	-	**80**
Bathroom	-	1	-	-	-	-	**1**

5 trains x 762 seats (3,810 seats) - 6 trains x 573 seats (3,438 seats) = <u>372 seats lost</u>

2) **System is not ready for electrification**

a. **New CBOSS signalling system is not "electrification ready"**
"It seems, from the scope of work for the electrification contractor that it will be responsible for testing these links after its work on track circuits is finished. ***This is a high risk safety area. In our experience, any work requiring safety related technical interfaces with signaling already installed on an existing system is high risk in terms of interface management, approvals for designs by the operator and regulators and in the installation by the electrification contractor for intrusive access to a new and complex system like CBOSS is bound to cause some delay to the project completion date, particularly if the alteration (e.g. track circuit replacement) involves interfaces with other operators like the UPRR."***
http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg_121316_item3_ATTACHMENT_Ind_Consult_Report_SF_SJ_Peninsula_Corridor_Funding_Plan.pdf (Section 4.5 on page 35)

b. **Unknown impacts of High Speed Rail modifications to the corridor**
"PFAL did not review future improvements to the Corridor which may be required to operate at speeds above the current imposed speed in the Peninsula Corridor because they are not included in the Funding Plan."
http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg_121316_item3_ATTACHMENT_Ind_Consult_Report_SF_SJ_Peninsula_Corridor_Funding_Plan.pdf (Page 3)

c. **Many stations and grade crossings require reconstruction/relocation**
"*Though the track improvements compatibility risk described here mainly poses a risk to the PCEP schedule for the purposes of this review, a secondary issue is the* ***potential for throw away costs due to the possibility of replacing electrification infrastructure.***"
http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg_121316_item3_ATTACHMENT_Ind_Consult_Report_SF_SJ_Peninsula_Corridor_Funding_Plan.pdf (page 27)

d. **Caltrain electrification design does not follow best practices and could result in (potentially spectacular) catenary failures at high speeds**.
"NB noted that back to back cantilevers were not to be used on the high speed line but were likely to be used by Caltrain. ***Such cantilevers did not provide for mechanical independence necessary for reliable performance****."*
http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg_121316_item3_ATTACHMENT_Ind_Consult_Report_SF_SJ_Peninsula_Corridor_Funding_Plan.pdf (PDF page 54).

e. Caltrain ridership has been dropping off for the last 6 months and the revised schedule is likely to result in further decreases in ridership.

f. **UK's Network Rail recently cancelled an electrification contract with Caltrain's contractor**
"It was concluded that the proposed alliance was unlikely to meet its stated objectives of delivering the scope of the work on time and to budget"
http://www.railtechnologymagazine.com/Rail-News/balfour-beatty-dropped-from-north-west-electrification

3) Caltrain Management issues

a. *"A May 2016 APTA Peer Review Panel of the CBOSS project raised serious questions about Caltrain's project management capabilities and JPB oversight that have similar implications to PCEP. These include:*

- ***"The panel notes that the PTC CBOSS project is just one of several complex infrastructure projects that will require Caltrain to take a serious look at in-house technical management resources."***

- ***"Caltrain needs to directly hire a project manager with requisite technical experience and provide that person with the authority to manage the interests of Caltrain."***

- ***"…this has consequently led to unresolved technical and contractual issues. Despite the recent partnering session, there continues to be a lack of commitment to resolving contractual issues such as scheduling and cost."***

"The agency's Executive Director and the Mod Squad will need sufficient time and understanding of project technical and management issues in order to provide the necessary oversight and authority for effective program delivery"
http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg_121316_item3_ATTACHMENT_Ind_Consult_Report_SF_SJ_Peninsula_Corridor_Funding_Plan.pdf (page 24)

b. Current Caltrain job openings:
   i. Chief Financial Officer (the last CFO quit after 10 months)
   ii. Director, Engineering & Maintenance
   iii. Deputy Director, Railroad Systems Engineering
   iv. Director, Contracts and Procurement
   v. Director, Safety and Security

http://www.smctd.com/jobs.html

4) **Funding issues**

a. **Misappropriation of $125M FTA Formula Funds dedicated to EMU procurement**

"WHEREAS, $125 million in FTA funds identified in the 2012 Early Investment Strategy funding plan included in the 2012 Nine-Party MOU is needed by the PCJPB to advance critical state of good repair improvements necessary to maintain existing Caltrain operations, and the PCJPB has requested to remove these funds from the early investment funding strategy, ***which would create a $125 million funding gap****"*
http://www.caltrain.com/Assets/Caltrain+Modernization+Program/Documents/7-Party+MOU.pdf (SEVEN PARTY SUPPLEMENT TO 2012 MEMORANDUM OF UNDERSTANDING (MOU) Page 2)

b. **Misappropriation of $28M FTA Formula Funds dedicated to EMU procurement by the San Mateo County Transit District WITHOUT JPB APPROVAL.**

"In its role as the metropolitan planning organization for the San Francisco Bay Area, the Metropolitan Transportation Commission (MTC) programmed $27,854,836 of Federal Transit Administration (FTA) Section 5337 State of Good Repair grant funds for the PCEP.

Recently, the Peninsula Corridor Joint Powers Board (JPB) and MTC were informed by the FTA that the PCEP is not eligible to receive the programmed Section 5337 funds*, which would create a corresponding funding gap in the PCEP budget.*

JPB staff has coordinated with the FTA and MTC, and MTC has concluded that it will redirect the Section 5337 funds to the SSF Caltrain Station Improvement Project. Therefore, these funds will replace the TA funds proposed for re-programming."
http://www.smcta.com/Assets/__Agendas+and+Minutes/TA/Board+of+Directors/Agendas/2016/2016-12-01+TA+BOD+Agenda+Packet.pdf (AGENDA ITEM # 9 (a))

c. **$600M Prop1A funding issue (PCEP does not go to Transbay)**

""Section 2704.04, subdivision (b)(2) provides that "Phase 1 of the high-speed train project is the corridor of the high-speed train system between San Francisco Transbay Terminal and Los Angeles Union Station and Anaheim." Subdivision (b)(3) identifies specific high-speed train corridors, and lists, "(B) San Francisco Transbay Terminal to San Jose to Fresno." Subdivision (a) identifies that the purpose behind the Bond Act is "construction of a high-speed train system that connects the San Francisco Transbay Terminal to Los Angeles Union Station and Anaheim…"
Consequently, it appears that the intent of the Bond Act was for the system to extend, in San Francisco, to the Transbay Terminal, not stop 1.3 miles short at a 4th and King Caltrain Station*.*

This specific language and indication of intent does not conflict with a general referral to "San Francisco" in section 2704.09 subdivision (b)(1) and (3). It is reasonable to interpret this reference to "San Francisco" as indicating the Transbay Terminal identified as the intended San Francisco location in section 2704.04.

***It appears, at this time, that the Authority does not have sufficient evidence to prove the blended system can currently comply with all of the Bond Act requirements, as they have not provided analysis of trip time to the San Francisco Transbay Terminal**, and cannot yet achieve five-minute headways (even allowing for the definition of "train" to include non-HSR trains).*

However, as Plaintiffs acknowledged during oral argument, the Authority may be able to accomplish these objectives at some point in the future. This project is an ongoing, dynamic, changing project. As the Court of Appeal noted, "because there is no formal funding plan and the design of the system remains in flux.. .we simply cannot determine whether the project will comply with the specific requirements of the Bond Act…" (California High-Speed Rail Authority, 228 Cal.App.4th at 703.)

There is no evidence currently before the Court that the blended system will not comply with the Bond Act system requirements. ***Although Plaintiffs have raised compelling questions about potential future compliance, the Authority has not yet submitted a funding plan pursuant to section 2704.08, subdivisions (c) and (d), seeking to expend Bond Act funds**. Thus, the issue of the project's compliance with the Bond Act is not ripe for review. Currently, all that is before the Court is conjecture as to what system the Authority will present in its request for Bond Act funds. This is insufficient for the requested relief."*
http://www.thehamiltonreport.com/downloads/TOS-RULING-KENNY-3-4-2016.PDF(pp15-16).

Recommendations

1) Commit to fund up to $50 Million in Additional State Regional Improvement Program Funds to the Peninsula Corridor Electrification Project subject to JPB Board approval to terminate SamTrans' contract and initiate search for new agency responsible for Caltrain administration (VTA, MUNI, ACE or BART).

2) Consider requesting an Independent Financial Advisor Report to the 7-party MOU partners regarding the Caltrain EMU procurement and CBOSS projects.

Respectfully presented for your consideration.

Sincerely,

Roland Lebrun.

Cc
SFCTA Board of Directors
VTA Board of Directors
MTC Board of Directors
High Speed Rail Authority Board of Directors
Caltrain CAC
Caltrain BAC
VTA CAC
SFCTA CAC
RAB CAC
FTA regional director

From:	Roland Lebrun
To:	Board (@caltrain.com)
Cc:	MTC Info; SFCTA Board Secretary; Baltao, Elaine [board.secretary@vta.org]; SFCTA CAC; cacsecretary [@caltrain.com]; Caltrain, Bac (@caltrain.com)
Subject:	Fw: Emerging Caltrain Modernization issues
Date:	Monday, December 6, 2021 9:22:05 AM
Attachments:	Emerging Caltrain modernization issues.pdf

Resending Monday, December 1, **2014** 3:39 AM letter...

Sincerely,

Roland Lebrun

CC

MTC Commissioners
SFCTA Commissioners
VTA Board
VTA PAC
Caltrain CAC
SFCTA CAC
VTA CAC

From: Roland Lebrun <ccss@msn.com>
Sent: Monday, December 1, 2014 3:39 AM
To: Caltrain Board <board@caltrain.com>
Cc: CHSRA Board <boardmembers@hsr.ca.gov>; sheminger@mtc.ca.gov <sheminger@mtc.ca.gov>; Erika Cheng <erika.cheng@sfcta.org>; VTA Board Secretary <board.secretary@vta.org>; mayoremail@sanjoseca.gov <mayoremail@sanjoseca.gov>; Nila Gonzales <ngonzales@transbaycenter.org>
Subject: Emerging Caltrain Modernization issues

Dear Chair Nolan and Honorable members of the Caltrain Board of Directors,

The intent of the attached letter is to substantiate and elaborate on the comment I made at the November Board meeting that the time has come to revisit the entire approach to the Caltrain modernization program.

Sincerely,

Roland Lebrun

Roland Lebrun
ccss@msn.com
30 November 2014

Dear Chair Nolan and Honorable members of the Caltrain Board of Directors,

The intent of this letter is to substantiate and elaborate on the comment I made at the November Board meeting that the time has come to revisit the entire approach to the Caltrain modernization program.

Background:

In April 2012, the 9 funding partners co-signed the High Speed Rail Early Investment Strategy MOU that should have resulted in Caltrain electrification at a cost of $785M and new rolling stock (EMUs) for $440M (total cost $1.225B) by 2019.
http://www.caltrain.com/Assets/Caltrain+Modernization+Program/Documents/Executed+9+Party+MOU.pdf

In April 2014, the Caltrain Board approved a $122.4M set of consultant contracts:
- Project Delivery Director: $4.3M
- Systems Safety Specialist: $4.0M
- Project Management: $23.5M
- EMU Vehicle Consultant: $42.4M
- Electrification consultant: $48.2M

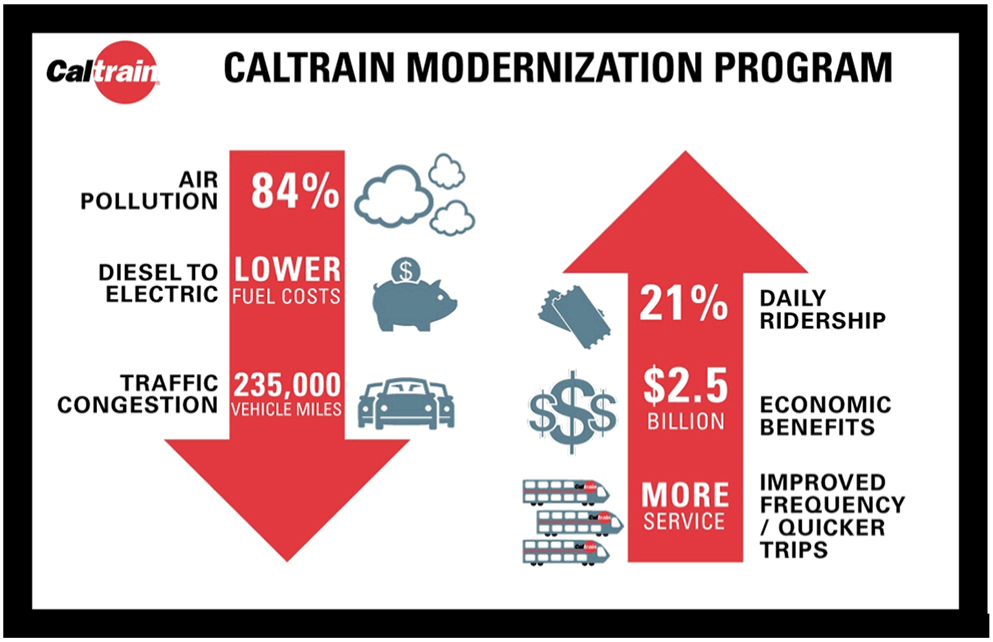
http://www.caltrain.com/Assets/Caltrain+Modernization+Program/Documents/CalMod+Procure.Fact+Sheet+3.11.14.pdf.

On November 6th 2014, SamTrans staff and consultants presented the Caltrain Board with the following update:
- New cost estimate of $958M for 150 track miles (**$6.4M/mile vs. $1.6M in the UK**)
- 90-minute off-peak headway during construction (vs. 30-minute headway requirement)
- **6 years of construction (1 year longer than 2,000 miles of electrification in the UK)**
- No revenue service until 2021 (new rolling stock was due in 2015-2018 timeframe)
- No increase in capacity until after electrification (projected 21% increase in ridership will occur 5 years before electrification)
- No improvement in San Jose to San Francisco travel times (**exposure to litigation**)
- No electrification of Main Track 1 (MT-1) between Santa Clara and Tamien, making it impossible to run service to Tamien during peak or emergencies (signal/switch failures)
- Additional "Management Reserve": $28M
- "Vehicle Management Oversight": $65M (**50+% over April consultant contract**)
- "Defer purchase of one 6-car EMU train set offset by need to purchase 3 used electric locomotives": $20M
- "~75% diesel vehicle conversion to EMUs", making it impossible to operate a high-capacity electrified blended system

http://www.caltrain.com/Assets/__Agendas+and+Minutes/JPB/Board+of+Directors/Presentations/2014/11-6-14+JPB+BOD+CalMod+Cost+and+Schedule+Update.pdf

Analysis:

In October 2008, a similar set of issues were raised during a UK Railway Engineers forum entitled "Making Electrification Happen"
Forum proceedings are appended to this letter. Here are sample extracts in *italic*:
- "*Just declaring the electrified railway as a good thing to have is not in itself sufficient.*"

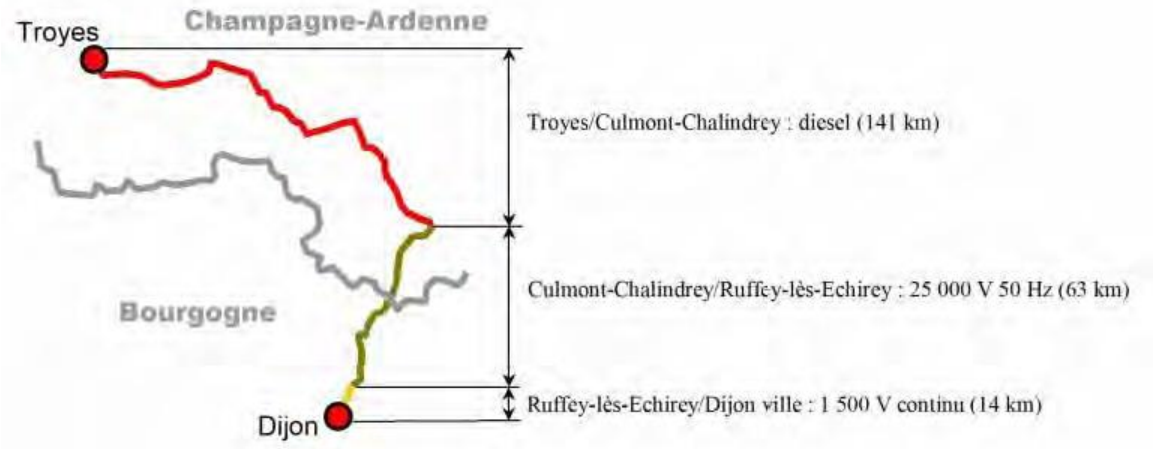


- "*The reduction in carbon emissions is useful but not a deciding factor.*"
- "*Electricity and diesel fuel prices are not that much different.*"
- "*The business case is heavily dependent on traffic density.*"
- "*The rollout of electrification can be done more quickly and at reduced cost.*"
- "*The current RSSB figure for electrification of $1.4-1.6M per track mile needs to reduce to $1.1-1.25M"*
- "***A 1-mile section needs to be achievable in an 8 hour week night possession.***"
- "*Ways of reducing costs, particularly for possession management, must be found.*"
- "*Project management must be sized to scope."*
- "***Track must be in its final design position so as to avoid later adjustment***."
- *"To be successful, a set of competence standards must be built up*."
- "***The Bi-mode IEP*** (Hybrid InterCity Express) ***may be a key factor in maintaining through services.***"

Discussion:

- Caltrain is experiencing a significant capacity crunch that needs to be addressed urgently through an improved signaling system and enhanced infrastructure (one or more passing stations at Palo Alto, Redwood City and/or Hillsdale).
- 75% of the existing rolling stock is due for replacement in the next couple of years.
- The current approach to Caltrain modernization will not be able to cope with the expected increase in ridership.

- France (AGC BiBi hybrid trains), the UK (InterCity Express bi-modes) and Spain (Alvia S-730) all faced similar challenges which were addressed through the introduction of hybrid trains capable of operating on the existing infrastructure regardless of the type of electrification (if any). Example: Troyes to Dijon:



Recommendations:

- Immediate moratorium on electrification and vehicle consultant activities ($110M saving)
- Postponement of electrification RFP until cost and schedule issues have been resolved
- Engage ACE and Capitol Corridor on joint EMU procurement (economies of scale)
- Issue RFP for bi-level bi-mode (hybrid) EMUs with a maximum speed of 125 MPH
- Issue RFP for an entity with demonstrable railway modernization expertise, specifically:
    - Substantial network capacity improvements (minimum 100% over 20 years)
    - Increased operating speeds (minimum100 MPH)
    - Experience installing 1 mile of electrification in an 8-hour weekday night possession
    - Successful implementation of high-speed blended systems including freight

I hope that you will find this information useful.

Sincerely,

Roland Lebrun

Cc:

California High Speed Rail Authority
Metropolitan Transportation Commission
San Francisco County Transportation Authority
Santa Clara Valley Transportation Authority
City of San Jose
City and County of San Francisco
Transbay Joint Powers Authority

Making Electrification Happen

Electrification has become fashionable, so said one of the speakers at the recent Railway Engineers Forum seminar on Making Electrification Happen. With virtually no electrification schemes being undertaken in the UK over recent years (CTRL excepted), the change in attitude has come about because of concerns on climate change and the realisation that oil prices will continue to increase as supplies dwindle. Even the DfT has done a U turn in the past 12 months. **The proponents of electrification all point to the benefits but much needs to be done before electric trains begin running over new routes**. The seminar looked at what needs to happen in terms of finance, engineering and resources. The downsides of electrification must not be overlooked and ways of minimising the impact of these are important.

The Mobile Factory

An inspired key note speech by Steve Yianni, the Network Rail Director of M&E Engineering set the scene and demonstrated that much thought has gone into how **the roll out of electrification can be done more quickly and at reduced cost**. Two factors have to be in place before work can start:

- **The Business Case**, which will be developed as a partnership between funders, customers and suppliers, and which becomes part of the NR Route Utilisation Strategy (RUS).
- **The Operational Plan, to achieve a roll out with sufficient capacity to deliver at the right cost and timescale**.

Key to both of these will be the Mobile Factory – **a means of installing electrification infrastructure within existing possession patterns and without significant disruption to train services**. In effect, **a 1.5km tension length section** based on masts at 50-60 metre spacing, **needs to be achievable in an 8 hour week night possession**, inclusive of take up and give back time. To do this the 'factory' will consist of:

- 3 x Piling and Mast Trains
- 1 x Feeder and Return Wire Train
- 1 x Cantilever and Registration Assembly Train
- 1 x Catenary and Contact Wire Train
- 1 x Inspection and Measurement Train including Earthing assurance

Normally **the 'factory' will operate on a single track with other tracks kept open for traffic**. The use of bi-directional signalling will be key to this. The 'factory' will be capable of reaching both lines of a 2 track railway if a complete possession is obtained. Designed primarily for plain line sections, adaptation for junctions, bridges, tunnels, etc needs to happen when work will be done during weekend possessions.

Later speakers confirmed the concept of a mobile factory as workable. Keith Warburton, the Head of Electrification Design in Balfour Beatty Rail gave an insight on the costs for both a blockade and possession type approach

	Blockade	**Blockade**	**Possession**	**Possession**
Description	Proportion	Typical Cost per Single Track km	Proportion	Typical Cost per Single Track km
Survey & Design	3%	£11k	3%	£14k
Materials	44%	£157k	38%	£189k
Construction	45%	£158k	40%	£200k
Project Mgmt	**8%**	**£29k**	**19%**	**£94k**
Total	**100%**	**£355k**	**100%**	**£497k**

Unsurprisingly, the blockade approach is cheaper as the engineer has unrestricted access to the railway. However, **criticism of blockades is increasingly vehement because of the disruptive impact. Ways of reducing costs, particularly for possession management, must be found**. Planning, design and engineering principles are too often forgotten.

- Do a survey well ahead of design, in a single pass and collect data electronically including 3D modelling linked to material supply and signal siting
- Design work to promote a single installation activity with minimal or no stage work

- Use standard spans and tension lengths, and employ new technology / methodology but only when proven
- Maximise use of like parts by a 'one size fits all' design with a standardised geometry and easy calculation of balance weights and droppers
- **Ensure track is in its final design position so as to avoid later adjustment**
- Construction activities to have no unknowns as to access availability, plant utilisation and resource deployment
- **Project management to be sized to scope**

Mark Simmons from Plasser demonstrated by video sequence a 'mobile factory' in use on Austrian Railways (OBB). Particularly impressive was the installation of masts by a rotating 'central gripper' mounted on a wagon and inserted into the ground by piling. Machine and trains have a jolt free control to enable catenary and wire to be installed at final tension and stagger. **All this is achieved in 5 hour work blocks in 2 possessions**. A reminder was given that mechanised piling and erection had been trialled on the ECML in the 1980s, when 6 piles per hour had been achieved.

Likely Routes for the Passenger Railway and the Business Case

Studies on various routes have looked at fuel/energy costs, train reliability and passenger capacity in analysing whether electrification would be beneficial. Jim Morgan, the Director of Passenger Development in First Group, suggested the criteria necessary for electrification to show advantages over diesel were:

- Capital costs – rolling stock provision linked in with energy costs and carbon emission, also bridge and clearance works
- Variable track access costs – these must allow for OLE maintenance including performance and reliability expectations
- Staff costs – any train crew implications
- Revenue impact – is the 'sparks' effect on passenger growth still valid

There will be pluses and minuses here. Electric trains should be cheaper and lighter, thus causing less track wear. **The current RSSB figure for electrification of £550-650k per track km needs to reduce to £450-500k**. On board energy costs need to be accurately metered and regenerative braking must help. System losses have to be addressed with better driving techniques and lower train idle time costs. The availability of rolling stock and where to cascade displaced stock to, will be a major factor. Taking all these considerations into account, the likely routes for electrification are:

- GWML from Airport Junction to Bristol, Cardiff and Oxford
- MML from Bedford to Sheffield via Derby plus Nottingham
- Cross Country to link up existing and proposed electrified routes
- North Trans Pennine from Liverpool and Manchester to York

There will be an impact on through services that exist today and it is acknowledged that this is a difficult problem. **The hybrid version of the new IEP may be one answer but diesel haulage off the wires and slick cross connections may have to suffice**.

Richard Davies, the Head of Strategic Planning in ATOC added that **the business case was heavily dependent on traffic density**, where rail has typically doubled its usage in 20 years. **Electricity and diesel fuel prices are not that much different** but the delta may be the deciding factor. **The reduction in carbon emissions is useful by not a deciding factor**. In addition to the main line routes, there was a good case for suburban routes around Manchester, Liverpool, Leeds and Cardiff. **Inclusion of diversionary routes is unlikely as the business case is weak**.

The Freight Situation and the case for In-Fill

A totally different view comes across from the Freight Sector. Graham Smith, the EWS Planning Director, whilst supporting electrification, stated that gauge enhancement was the top priority. At present, the gaps

between electrified lines were too numerous and **having to do frequent locomotive changes made operation expensive and time consuming**. Hence, the freight companies have invested heavily in diesel traction, with electric locomotives being only a small percentage of the fleet. Increasing electric freight usage would need the gaps to be filled and 31 schemes were tabled, many of them being very short distances. Doing some of these in the CP4 period would be advantageous as it would allow the engineering and implementation skills to be built up in non sensitive areas. It would also be necessary to acquire a fleet of electric locomotives, which need to be less complicated (and expensive) than the Cl 92, with all the different voltage and signalling systems that these embrace. **The 'last mile' problem on how to access sidings and loading facilities without having a resident diesel shunter on site is another challenge.**

Maintenance and Reliability

If electrification is to be expanded, then some of the present maintenance problems have to be overcome, so says Kevin Lydford, NR's Head of Electrification. **Electrified infrastructure should have a 90 year life, with contact wire renewal between 40-50 years and piece part renewal every 30 and 60 years**. New designs should minimise routine maintenance and not need regular adjustment. Booster transformers should be eliminated in favour of 50kV auto transformer systems, and Sub Stations and Track Sectioning Cabins must be made simpler and cheaper. **Inspection trains to check height and stagger, dynamic force measurement and wire wear are vital** with MENTOR and the NMT fulfilling this role currently. Combating theft and vandalism is another challenge, with designs needing to be more capable of withstanding the interests of less desirable elements within society. Pantographs have to be compatible with the electrification infrastructure and be regularly and reliably maintained

Establishing whole life costs is important and buying cheap equipment initially will lead to significant problems. The balance between Capex and Opex must be right for equipment with such a long life. **Too many entanglements and de-wirements happen and the ensuing poor reliability undermines the business case**. If the wires are down, the chances are you will not get home that night!

Resources, Expertise and Contracts

Jeremy Candfield, the Director General of RIA, set out the resource challenge to make all this happen. With no electrification having been undertaken in England and Wales in recent years, the skill base has dispersed and a recruitment and training initiative is essential. Competent people will be in great demand and NR will have to compete for engineers having heavy current expertise needed for the LUL renewal programme, the National Grid refurbishment and overseas rail projects. **To be successful, a set of competence standards must be built up and supplier confidence must be gained by having continuity of work in a programme visible for all to see**. In addition to the electrical engineering aspects which the RIA ELECTIG group are studying, **expertise will be needed in**:

- **Possessions and uninterrupted working**
- **Single line working**
- **Depot provision and management**
- Planning paths to site
- Materials and engineering train management
- Testing

The proposal for a Rail Skills Academy is being driven forward by RIA members but ultimately the companies involved must be the dominant driver in getting trained people in place.

Getting the right contract conditions in place can make a difference according to Ross Hayes an engineer working in the legal sector, and obeying EU rules is another complication. Two options exist:

- **Framework contracts**, whereby contractors enter into an agreement based on work requirements and price. **Broad order quantities are defined and work packages can be awarded under the framework**. These are normally time limited to 4 years but utilities (including railways) can get this waived providing competition rules are not misused
- **Term contracts, where work is committed in relatively simple repetitive work packages**

Contractors generally prefer the latter as these are less open ended. Choosing the right terms and conditions is equally important – ICE, IMechE, NEC, etc – and using a standard that is recognised by industry is always the best bet.

The CTRL and Scottish Experience

Recent electrification projects have only been the CTRL and the Airdrie – Bathgate link. Both have yielded or are yielding valuable lessons. Dominic Kelsey and Mark Howard from Bechtel emphasised the importance of getting power supply points right. These cost around £200k for every km of route energised and are thus an expensive item. The CTRL has three – Barking, Sellindge and Singlewell – and all 3 have compensation devices to eliminate variations to the catenary voltage under different current conditions. Much design and planning effort went into these but cost-saving opportunities are there to be had. The CTRL had also to contend with the interface between 50kV and 3rd rail 750v and this continues to be a maintenance challenge. Difficulties with Notified Body acceptance were an unwanted inconvenience and the required paperwork was massive, out of all proportion to the desired end result.

Bill Reeve, the Director Rail Delivery in Transport Scotland, gave a positive message in that an additional 350 single track kms of electrification has been approved by the Scottish Parliament beyond Airdrie – Bathgate. This will include the main E&G line plus extending to Dunblane. However, **present costs are in the order of £1M per single track km, <u>about double the desired amount</u>**. Some of this is due to having to rebuild the resource and manufacturing capability but interestingly, construction and wiring is less than all the other activities. **There is an urgent need to revise standards** and this must be done in partnership with Network Rail before any further schemes are authorised.

The DfT View and the Day in Retrospect

David Clarke, the DfT's Deputy Director of Rail Services endorsed most of what had gone before but showed a simplified matrix on how electrification might proceed.

Rolling Stock Cost and Utilisation	Low	High
High	Suburban Route Extensions plus short In Fills √	Main Line Electrification √ ?
	Single Line Branches √ ?	Long Secondary & Diversionary Routes X

Cost of Construction

Clearly the big question mark is on the future viability of main line projects but single line feeder routes like those existing at St Albans Abbey, Braintree, Southminster, North Berwick are not ruled out. **The optimum timing is to electrify when rolling stock replacement is due and <u>getting rid of diesel traction from under the wires is also important</u>**. New ideas for energy storage to cover gaps in the wires will be welcome. **<u>The Bi-mode IEP may be a key factor in maintaining through services</u>**. The implementation of ERTMS and associated signal siting issues needs to be better understood. **The ultimate challenge is to reduce the cost of running the railway**.

Altogether a fascinating day and those in attendance should be better informed on the challenges that an ongoing electrification programme will present. **Just declaring the electrified railway as a good thing to have is not in itself sufficient.** The promoters must understand the downsides and come up with solutions to overcome these.

From:	Bartholomew, Tasha
To:	Bartholomew, Tasha
Subject:	NEWS: Holiday Train Returns to Help Kick-off the Season of Giving
Date:	Thursday, November 18, 2021 1:32:10 PM

NEWS

November 18, 2021

Media Contact: Tasha Bartholomew, 650.339.5257

Holiday Train Returns to Help Kick-off the Season of Giving

On Saturday, December 4, and Sunday, December 5, the Holiday Train returns to bring good tidings and cheer to families from San Francisco to the South Bay as part of its annual toy drive.

This cherished tradition offers an opportunity to donate new toys or books to local children whose families are struggling to make ends meet. Caltrain is proud to once again partner with the U.S. Marine Corps Reserve Toys for Tots program and The Salvation Army to help make the season brighter for everyone.

The Holiday Train, which had taken a brief hiatus in 2020 due to the pandemic, is decorated with more than 75,000 glittering lights. This special train will visit nine Caltrain stations in San Francisco, San Mateo and Santa Clara counties over the weekend. At each of the train's 20-minute station stops, people can join in singing with onboard carolers and the Salvation Army Christmas Brass Ensemble. Santa, Mrs. Claus and their extended family – including Frosty the Snowman and Rudolph the Red-nosed Reindeer – will get off the train to greet kids and pose for pictures. To ensure its commitment to public safety, people planning to attend this event should be mindful that Caltrain requires face coverings at all of its stations.

Prior to the arrival of the train, families can enjoy free entertainment at each of the Holiday Train station stops as well as local community events like the Hometown Holidays Parade in Redwood City and the inaugural Winter Ice Rink in Downtown Sunnyvale. Holiday Train ambassadors will be onsite to help direct people to the donation bins and will have special giveaways for those in attendance.

"We are grateful to the generous Bay Area residents who have donated more than 50,000 toys since the start of this local tradition in 2001," said Acting Caltrain Executive Director Michelle Bouchard. "This event would not be possible without the support from our in-kind sponsors and our staff for helping us provide this magical experience to the communities we serve."

Holiday Train Schedule

Saturday, December 4

Station	Arrive
San Francisco	4:00 p.m.
Redwood City	6:10 p.m.
Mountain View	6:50 p.m.
Sunnyvale	7:30 p.m.
Santa Clara	8:00 p.m.

Sunday, December 5

Station	Arrive
San Francisco	4:00 p.m.
Millbrae	5:40 p.m.
Burlingame	6:10 p.m.
San Mateo	6:40 p.m.
Menlo Park	7:25 p.m.

Community Support

Santa's helpers can get into the holiday spirit by taking pictures of the Holiday Train during the event weekend and sharing them on social media by tagging @Caltrain on Instagram, Twitter or Facebook using the hashtag **#HolidayTrain2021** to help spread the word.

Sponsors

The Holiday Train would not be possible without the generous support of sponsors for everything from decorations and wiring to costumes. This year, in-kind sponsors include Herzog, Jim's Handyman Services, Peterson Technical Services, the San Mateo County Daily Journal, and the Subway store located in the San Francisco Caltrain Station.

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About Caltrain: *Owned and operated by the Peninsula Corridor Joint Powers Board, Caltrain provides commuter rail service from San Francisco to San Jose, with commute service to Gilroy. While the Joint Powers Board assumed operating responsibilities for the service in 1992, the railroad celebrated 150 years of continuous passenger service in 2014. Planning for the next 150 years of Peninsula rail service, Caltrain is on pace to electrify the corridor, reduce diesel emissions by 97 percent by 2040 and add more service to more stations.*

Follow Caltrain on Facebook and Twitter.

From: Lieberman, Dan
Subject: NEWS: Bay Area Transit Agencies Cheer Infrastructure Bill Passage
Date: Monday, November 15, 2021 1:29:01 PM
Attachments: image001.png
image002.png
image005.png
image007.png

NEWS

November 15, 2021

Media Contacts:
Dan Lieberman, Caltrain and SamTrans 650.622.2492
Alicia Trost, BART, 510.414.4725
Stacey Hendler Ross, VTA 408.464.7810
Robert Lyles, AC Transit 510.919.9754
Erica Kato, SFMTA 415.271.7177
Karen Bakar, Capitol Corridor 510.368.6871

Bay Area Transit Agencies Cheer Infrastructure Bill Passage

Transportation agencies from around the Bay Area celebrated the signing of the Infrastructure Investment and Jobs Act today, thanking President Biden and Transportation Secretary Pete Buttigieg, as well as California's federal delegation for their leadership and support. The bill will provide nearly $1 trillion in infrastructure funding that could potentially go to support dozens of projects and programs that help to keep our region moving.

"Electrification will transform Caltrain, replacing 75% of the aging diesel fleet with high-performance state of the art electric train, but this funding will allow us to take the next step and finish the project by 2024," said Caltrain's Acting Executive Director Michelle Bouchard. "Additional federal support will help get us to a fully zero emission service and will allow the agency to realize its 2040 Service Vision goal of running 8 trains per hour in each direction, which would carry the equivalent of 5.5 lanes of freeway traffic. It also presents a new opportunity to support local communities pursuing grade separations throughout the corridor, a vital safety measure that will prevent traffic bottlenecks, as well as creating world class transit stations in San Francisco and

San Jose that are better integrated into the communities they serve."

"This is a great day for public transportation," said SamTrans General Manager/CEO Carter Mau. "Bus agencies throughout California have committed to adopting fully zero emission fleets by 2040, and this bill offers a means of funding that ambitious goal. We are all one step closer to cleaner, greener bus service that is vital in the fight against climate change."
"The infrastructure bill is a once-in-a-generation investment in things that matter to our riders: reliability, frequency and accessibility," said BART General Manager Bob Powers. "It also benefits Bay Area residents who don't necessarily ride BART by creating the opportunity for jobs with good pay. Our Congressional delegation and the Biden-Harris administration are to be applauded for their unwavering commitment to public transportation." FTA formula funds within IIJA are expected to support BART's Train Control Modernization Program to increase frequency through the Transbay Tube, to enhance BART's efforts to rebuild tracks, electrical cabling and other critical infrastructure and to improve accessibility for those with disabilities, including modernizing elevators.

"VTA will use this critical funding to help create jobs to build projects like the Silicon Valley BART Extension, to help meet the State of California mandates for clean energy fleets by 2040, and provide electric charging infrastructure at our three bus yards," said VTA General Manager/CEO Carolyn Gonot. "We have a responsibility to build a greener transportation network in Santa Clara County and this funding will help us do that."

"We have worked for two decades to ensure zero-emission is more than a test of innovation but achievable delivery of service aboard our expanding fleet of both hydrogen fuel cell and battery electric buses," says General Manager Michael Hursh. "It is now our hope that this historic bill will accelerate AC Transit's mission to eliminate tailpipe emissions from every bus by 2040, by funding infrastructure improvements like large-scale depot bus charging, faster and more efficient hydrogen fueling pumps, battery storage and microgrid systems for resilient operations, and renewed maintenance facilities to accommodate these new zero-emission bus technologies."
"With this monumental help from our state and federal leaders, we now have the much needed funds to better our critical assets, transportation system and agency infrastructure," said Jeffrey Tumlin, SFMTA Director of Transportation. "These dollars will directly fund the programs and projects our community values most-- including State of Good Repair, Complete Streets Investments, Fleet Replacement, Safe Streets for All Program, Overhead Lines, Historic Fleet Rehabilitation and Repair and Vision Zero."

"Overall, it is hard to overstate the significance of this legislation to the Capitol Corridor and the nation's passenger rail industry," said Rob Padgette, Managing Director for the Capitol Corridor Joint Powers Authority. "Historically, we have relied almost entirely on funds from the State of California to invest in passenger rail improvements. With IIJA, we can now partner with the Federal government to dramatically enhance our service. For our riders, this legislation will mean stronger rail connections throughout the Northern California megaregion; improved safety and reliability; and an overall better customer experience."

California will receive approximately $9.5 billion for public transportation and $47.2 billion for roads, bridges and ports from the bill. An additional $600 million will be available to prepare transportation system for extreme weather, including drought and wildfires.

The bill also includes an approximately $475 billion reauthorization of the core federal transportation program for the next five years, a 56% increase over the current Fixing America's Surface Transportation (FAST) Act. The new five-year federal program should provide approximately $4.5 billion to the Bay Area through established formulas, which among other things will help to fund the purchase of new electric buses.

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