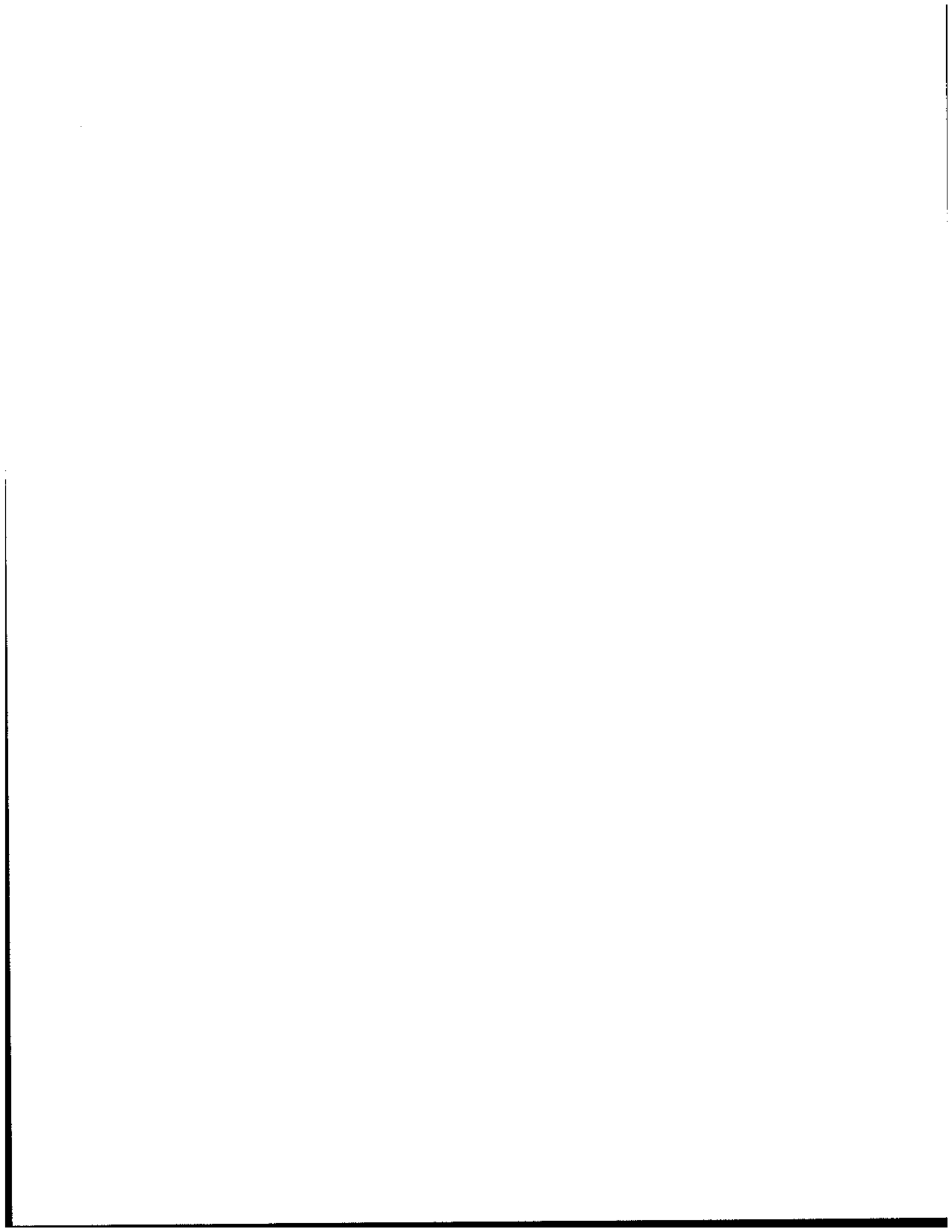


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**Bicycle Advisory Committee**

**Correspondence  
as of**

**September 17, 2018**



**Low, Lori**

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**From:** Caltrain, Bac (@caltrain.com)  
**Sent:** Monday, September 17, 2018 1:10 PM  
**To:** 'Scott Yarbrough'; Caltrain, Bac (@caltrain.com)  
**Cc:** Bikes on Board; Janice Li  
**Subject:** RE: BAC agenda September 20

---

Dear Scott,

Thank you for your comments. The current design with bikes in front of emergency windows is compliant with FRA regulations (as discussed during the Subcommittee on EMU Design (question 10) item at the March BAC Meeting). We understand the bike community's interest in this topic, and should there be additional design changes we will let you know.

Caltrain is also working to improve boarding/deboarding of the bike car through its Bikes Board First Pilot Program. The latest update on this effort can be seen here: <http://www.caltrain.com/Assets/BAC/pdf/Bikes+Board+First+Pilot+Update+7.19.18.pdf>

Thank you again for your continued feedback.

Best,  
Lori

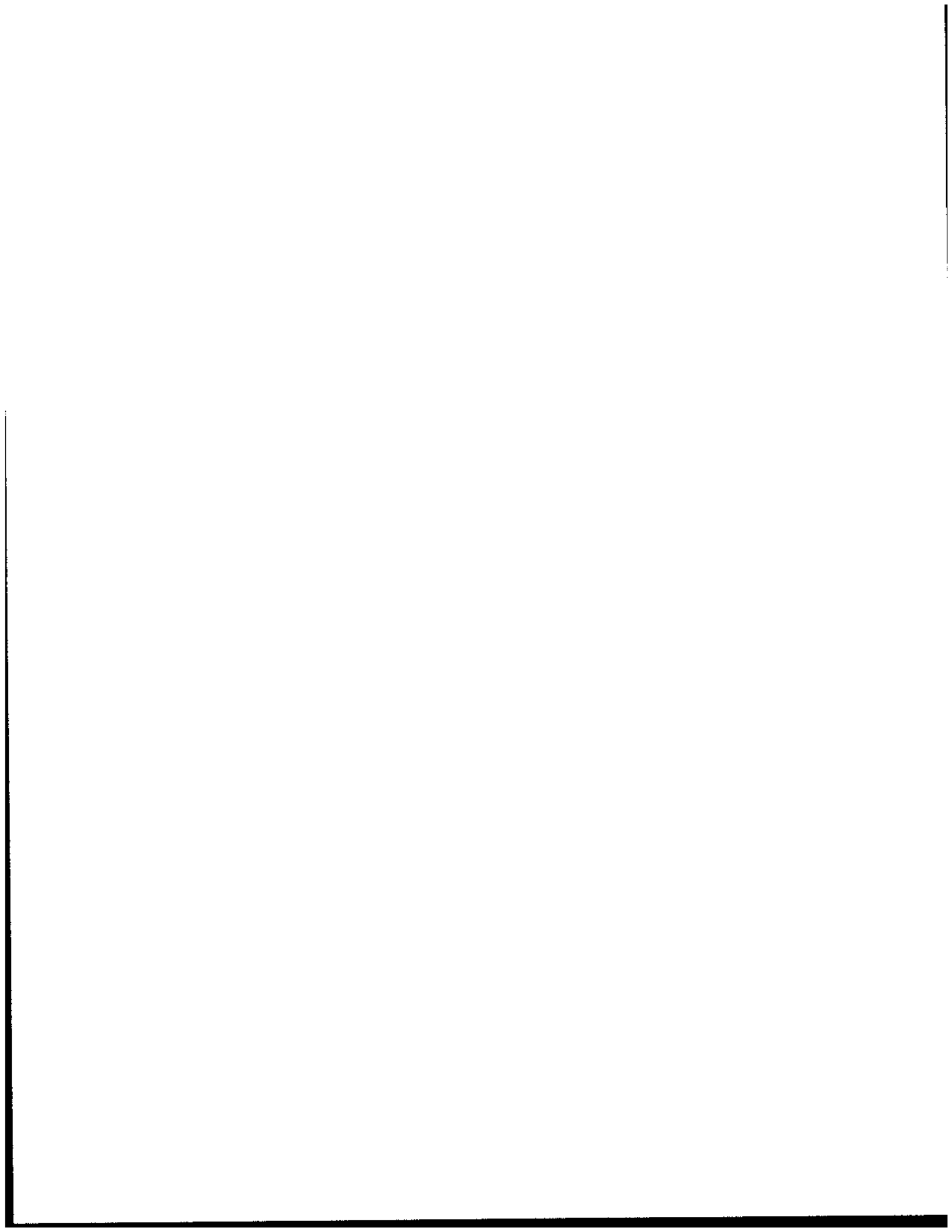
**From:** Scott Yarbrough [<mailto:yarbrough.scott@gmail.com>]  
**Sent:** Wednesday, September 12, 2018 8:19 PM  
**To:** Caltrain, Bac (@caltrain.com)  
**Cc:** Bikes on Board; Janice Li  
**Subject:** BAC agenda September 20

Hello,

I request an update regarding the car layout design for the new electric trains and that the agenda in next week's meeting include communication about the present status to the public. There are many cyclists on trains expressing concerns about safety issues (e.g., bikes blocking emergency exit windows) and frequent delays boarding and exiting bike cars due to the number of cyclists who anticipate standing next to their bikes in anticipation of theft concerns. An update on the current status of the design discussion would be appreciated by many in your cycling customer base.

Thank you,

Scott Yarbrough  
Zone 1 to Zone 3 daily commuter



**Low, Lori**

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**From:** Dan Lieberman <liebermand@samtrans.com>  
**Sent:** Tuesday, September 11, 2018 1:08 PM  
**To:** Caltrain, Bac (@caltrain.com)  
**Subject:** NEWS: Caltrain Ridership Back on the Rise

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September 11, 2018

Media Contact: Dan Lieberman, 650.508.6385

### **Caltrain Ridership Back on the Rise**

After a slight decrease in ridership last year, Caltrain's annual ridership count shows that Caltrain ridership grew by 1.5 percent. Initial findings from the annual onboard ridership count show that average mid-weekday ridership (AMWR) for 2018 is at 65,095 passengers.

Due to increasing costs and budget constraints, the weekday count methodology was changed from counting weekday trains on all five weekdays (Monday to Friday) to counting weekday trains on two mid-weekdays (Tuesday, Wednesday or Thursday). In order to provide an "apples to apples" comparison to last year's count, Monday and Friday ridership data was extracted from 2017 data. AMWR also captures the true maximum load because ridership is lower on Mondays (by approximately 1 percent) and Fridays (by approximately 9 percent). For weekends, riders were counted for one weekend on each train once on a Saturday and a Sunday.

The results of the annual ridership count, given to the Board of Directors at its monthly meeting last Thursday, provides a snapshot of Caltrain ridership that is used to identify trends, allocate resources to address capacity issues and validate revenue-based ridership estimates.

Most riders continue to travel during peak commute hours. There was a 2.5 percent increase in traditional peak riders (defined as northbound in the morning and southbound in the afternoon) from 33,548 riders in 2017 to 34,373 in 2018. There was a 9.2 percent decrease in midday riders, 5.1 percent increase in reverse peak riders (southbound in the morning and northbound in the afternoon) and 5.8 percent decrease in evening riders.

Average mid-weekday ridership is up at 18 stations, and down at 11 stations. Hayward Park, College Park, Belmont, Gilroy, Capitol, Blossom Hill, 22<sup>nd</sup> Street, and Morgan Hill all had more than 10 percent growth. The 10 most popular train stations are San Francisco, Palo Alto, San Jose Diridon, Mountain View, Redwood City, Sunnyvale, Millbrae, Hillsdale, San Mateo and 22<sup>nd</sup> Street.

When comparing average mid-weekday ridership by county, Santa Clara County still has the highest average weekday ridership with 27,687, a 0.8 percent drop from last year; San Mateo County has the second-most at 19,757, 4.1 percent higher than 2017 and San Francisco County has 17,651, a 0.2 percent decrease. Average mid-weekday ridership has increased by 15.4

percent on the Gilroy extension, which includes the Capitol, Blossom Hill, Morgan Hill, San Martin and Gilroy stations, from last year.

Results indicate that riders are traveling shorter distances on Caltrain, with the average weekday trip length for 2018 being 22.9 miles, compared to 23.4 in 2017.

During peak period travel, Local service had the highest growth, with a 17.5 percent increase in ridership. Limited service clocked in at 5.1 percent and Baby Bullet service had a 1.1 percent increase.

Average mid-week bike ridership (AMWBR) increased by 6 percent this year, with 5,919 riders bringing bikes on Caltrain on an average weekday. For the seventh year, the number of bike riders that were not able to board the train due to overcrowding was counted. There was a substantial decrease in bikes bumped due to capacity, with only 1.6 riders bumped per 1,000 bike boardings versus 3.2 in 2017.

The count, a physical head count of riders, is typically conducted in January and February when there are fewer holidays and special events that could skew ridership numbers. The count data is used as Caltrain's ridership baseline.

This data will also be incorporated into the Caltrain Business Plan in order to strategize for future scheduling and passenger capacity. Caltrain also looks forward to the ability to monitor ridership more frequently using Automatic Passengers Counters (APCs) that will be installed on the new electric fleet in 2022. Later this month, the entirety of the 2018 Annual Count Key Findings Report will be uploaded to <http://www.caltrain.com/about/statsandreports/Ridership.html>.

###

*About Caltrain: Owned and operated by the Peninsula Corridor Joint Powers Board, Caltrain provides commuter rail service from San Francisco to San Jose, with limited commute service to Gilroy. Caltrain enjoyed more than five years of consecutive monthly ridership increases, surpassing more than 65,000 average weekday riders. 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 system, reduce diesel emissions by 97 percent by 2040 and add more service to more stations.*

Like us on Facebook at: [www.facebook.com/caltrain](http://www.facebook.com/caltrain) and follow us on Twitter [@Caltrain](https://twitter.com/Caltrain)

Free translation assistance is available. Para traducción llama al 1.800.660.4287; 如需翻譯,請電 1.800.660.4287.

This email was sent to [bac@caltrain.com](mailto:bac@caltrain.com)  
San Mateo County Transit District, 1250 San Carlos Ave., San Carlos, California 94070, USA  
[Unsubscribe](#)

**Low, Lori**

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**From:** Caltrain, Bac (@caltrain.com)  
**Sent:** Monday, September 10, 2018 3:12 PM  
**To:** 'Bikes on Board'; Board (@caltrain.com)  
**Cc:** Caltrain, Bac (@caltrain.com); cacsecretary [@caltrain.com]; CalMod@caltrain.com  
**Subject:** RE: Please keep electrificaton on schedule

Dear Bikes Onboard Team,

Thank you for your comments. The current design with bikes in front of emergency windows is compliant with FRA regulations. We understand the bike community's interest in this topic, and should there be additional design changes we will let you know. Thank you again for your feedback.

Best,  
Lori

---

**From:** Bikes on Board [mailto:bikesonboard@sonic.net]  
**Sent:** Saturday, September 01, 2018 6:54 PM  
**To:** Board (@caltrain.com)  
**Cc:** Caltrain, Bac (@caltrain.com); cacsecretary [@caltrain.com]; CalMod@caltrain.com  
**Subject:** Please keep electrificaton on schedule

Dear Chair Bruins and Members of the Joint Power Board,

We see that staff has flagged a risk to the electrification project that the FRA may not allow emergency exit windows to be blocked by stacked bikes. Why take the risk of delaying electrification, when a simple re-design of the bike car layout would make this risk go away completely? Please ensure seats (not bikes) are next to emergency exit windows, as specifically permitted by FRA regulations.

In addition, you have heard from many passengers that seats within view of bikes is critical to help prevent bike theft. In fact, 637 people have signed a petition for more capacity and better bike-car layout for electrified Caltrain (please see comments below). If passengers cannot sit within view of their bicycles, they will be forced to stand in the bike car causing congestion and delaying the train.

Electrification is a high-profile and very important advancement for Caltrain. Please ensure its timely implementation by putting seats within view of bikes for the sake of passenger safety (to keep emergency exit windows clear) and security of personal property (to allow passengers to watch their bikes to guard against theft). Thank you.

Respectfully,  
The BIKES ONboard Team

=====  
**Petition for More capacity and better bike-car layout for electrified Caltrain**

I support more capacity on electrified Caltrain and seats within view of bikes to deter bicycle theft. Caltrain plans to electrify its line and run six-car electric trains, which have fewer seats and less bike capacity than today's diesel trains and no dedicated seats within view of bikes. I urge Caltrain to run eight-car (instead of six-car) electric trains with seats within view of bikes. Eight-car trains with 96 bike spaces per train satisfy the board-mandated 8:1 ratio of seats-to-bike-spaces and provide more capacity for all Caltrain passengers.

#	Name	Date	City	Comments
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1	Shirley Johnson	6/9/2018 0:56	San Francisco
2	Jym Dyer	6/9/2018 6:07	
3	Benjamin Chandler	6/9/2018 6:29	San Jose
4	Michael Louie	6/10/2018 3:11	San Francisco
5	Neeraj Chandra	6/10/2018 18:40	San Francisco
6	Benjamin Allen	6/11/2018 0:15	San Francisco
7	Eric Steinhauer	6/11/2018 5:02	Berkeley
8	Sacha ielmorini	6/11/2018 11:27	San Francisco
9	Demetrius Marcoulides	6/11/2018 13:48	SF
10	Fabian Falconett	6/11/2018 23:15	SF
11	Greg Matthews	6/11/2018 23:16	San Francisco
12	Mark Morey	6/11/2018 23:16	San Francisco
13	Barry Marchessault	6/11/2018 23:17	San Bruno
14	Peter Colijn	6/11/2018 23:17	San Francisco
15	Jennifer Shiu	6/11/2018 23:18	Redwood City
16	Robert Panero	6/11/2018 23:20	San Carlos
17	Max	6/11/2018 23:20	San Jose, CA
18	Christine Ricks	6/11/2018 23:20	Menlo Park
19	John OSullivan	6/11/2018 23:21	Redwood City
20	Suzie Scales	6/11/2018 23:21	San Mateo
21	Andrea Corredor	6/11/2018 23:24	SAN JOSE
22	Ted Lechterman	6/11/2018 23:25	San Francisco
23	Michael Pence	6/11/2018 23:25	Menlo Park
24	Judd Curran	6/11/2018 23:27	San Diego
25	Lawrence Garwin	6/11/2018 23:27	Palo Alto
26	Andrew Ness	6/11/2018 23:27	Oakland
27	Brandon Paski	6/11/2018 23:27	REDWOOD CITY
28	Nickie Irvine	6/11/2018 23:28	San Mateo
29	Scott Jung	6/11/2018 23:29	San Francisco
30	Robin	6/11/2018 23:29	Sunnyvale
31	Jonathan Seder	6/11/2018 23:29	Palo Alto
32	Mike Kahn	6/11/2018 23:29	San Bruno
33	Daniel Shore	6/11/2018 23:29	Redwood City

More bikes mean less cars. Let's prioritize road.

Caltrain: please be more bike friendly!

And thank you for the bikes-board-first ini Hillsdale at least. It might also make sense cars back to back so that the non-cyclists le where best to wait on the platform.

More capacity for bikes is absolutely neces transportation option for commuters.

supporting people who commute on bikes

I've witnessed many bike theft attempts on been able to sit close by, those cyclists wou for bicyclists to sit within sight of their bik retain their bikes.

We need to make biking a viable alternativ don't make us choose between losing our b I support more bikes and ability to view th

I currently stand in the bike car on average bicycle, rather than seeking a seat where it

**MORE BIKE SPACES!!**



34	David Haley	6/11/2018 23:30	Oakland	It's vital to make bicycle commuting viable. With the amazing progress electrifying cars, we should have more bicycle transportation.
35	Peter Delahunt	6/11/2018 23:31	San Mateo	Have used my bike on Caltrain for 13 years.
36	Kurt Martin	6/11/2018 23:32	San Francisco	
37	Howard Meyerson	6/11/2018 23:32	El Cerrito	Having lived in the South Bay a long time, I know the bicycle capacity. And bike riders will want to prevent theft.
38	LeAnn Baum	6/11/2018 23:33		
39	Ellen Koivisto	6/11/2018 23:33	San Francisco	Come on, you all! How often do we need to hire people who ride bikes and who ride the train about here. So does your staff. So why are you entirely, making it worse in every way possible. Hate your staff and resent their recommendations.
40	Shahin Saneinejad	6/11/2018 23:34	San Francisco	
41	Charlotte Campbell	6/11/2018 23:34	Sunnyvale	Looking at the proposed layouts made me realize 1) the promise for video cameras to upstairs TV monitors 2) they'd break easily 3) it would be stolen, rather than stop it. Please re-think the layout can work with and not have our bikes stolen. Currently it has a huge personal cost attached.
42	Brad Taft	6/11/2018 23:36	San Francisco	
43	Ed Ruder	6/11/2018 23:37	San Jose	
44	Brian Richerson	6/11/2018 23:40	San Mateo	All the prototypes I saw didn't consider bicycle racks.
45	Michelle Sieling	6/11/2018 23:42	San Francisco	
46	Reed Kennedy	6/11/2018 23:43	San Francisco	
47	Jason Hogeboom	6/11/2018 23:44	SAN FRANCISCO	
48	Segue Fischlin	6/11/2018 23:47	Oakland	
49	Alex Jacobs	6/11/2018 23:53	Berkeley	I agree with the provided statement.
50	Aaron Verstraete	6/11/2018 23:53	San Francisco	More bicycle transport support with less reliance on cars.
51	Gregory P Smith	6/11/2018 23:54	Menlo Park	
52	David Giberton	6/11/2018 23:54	Belmont	
53	Ryan Klafuric	6/11/2018 23:58	San Francisco	Need more cars or more scheduled runs in the morning. Please do this. I don't want to have my bike stolen.
54	Scott Johnston	6/11/2018 23:58	San Francisco	The ability to bring a bike to the work end is important to many of us, yet there is often a chance to miss this opportunity to make things better.
55	Judith A Butts	6/12/2018 0:02	MOUNTAIN VIEW	
56	Kevin Wang	6/12/2018 0:02	Santa Clara	
57	John Luk	6/12/2018 0:03	San Mateo	
58	Paul Bigbee	6/12/2018 0:04	Palo Alto	
59	Tim O'Brien	6/12/2018 0:05	Belmont	When on the train, it is difficult to relax and use my bike. It is vulnerable to damage and theft.
60	Miguel Lopez Saenz	6/12/2018 0:09	San Francisco	
61	Alex Herzick	6/12/2018 0:10	Menlo Park	
62	Frank Paysen	6/12/2018 0:10	San Jose	

63	David Fisher	6/12/2018 0:13	San Mateo	
64	Donna Weber	6/12/2018 0:15	Palo Alto	
65	Steven B Rosen	6/12/2018 0:18	San Francisco	
66	Philip Spiegel	6/12/2018 0:19	Redwood City	
67	Bill Michel	6/12/2018 0:23	Redwood City	
68	Patricia Elson	6/12/2018 0:24	Santa Clara	Bike riders need to watch their bikes durin
69	Chris Merrill	6/12/2018 0:25	San Francisco, CA	
70	Tom Corboline	6/12/2018 0:26	San bruno	We need more bike capacity on trains and by their owners
71	Mike Youngberg	6/12/2018 0:26	San Bruno	
72	Donald Tran	6/12/2018 0:26	Santa Clara	
73	Ted Raab	6/12/2018 0:27	Redwood City	
74	Akbar	6/12/2018 0:28	Mt. View	I support the idea for more seating capacity to add a strip of rubber to the steps to avoid and out of the train car Hanging straps fr train comes to a stop will be a great suppor
75	Marcia Weisbrot	6/12/2018 0:29	San Francisco	
76	Jeffrey Oldham	6/12/2018 0:32	San Jose	
77	Maria Ladle Ristow	6/12/2018 0:33	Los Gatos	
78	David Goldsmith	6/12/2018 0:34	San Francisco	
79	Ian Emmons	6/12/2018 0:36	SAN JOSE	
80	Patrick Killelea	6/12/2018 0:37	Menlo Park	
81	Darby morris	6/12/2018 0:40	Redwood City	
82	Elika Etemad	6/12/2018 0:43	Oakland	
83	Bill Bushnell	6/12/2018 0:44	Sunnyvale	
84	Robert Krossa	6/12/2018 0:45	SAN FRANCISCO	
85	Bart Selby	6/12/2018 0:49	San Carlos	
86	Georgia Andrews	6/12/2018 0:50	San Francisco	Designing the bike cars in a theft-friendly i seems like a sneaky way to deter bicycle ri demand/availability. Being able to watch y I depend on the train and bike.
87	Brian Oldham	6/12/2018 0:50	San Carlos, Ca.	
88	Eric H Rhode	6/12/2018 0:52	San Francisco	
89	Terria Brewer	6/12/2018 0:56	San Mateo	We need more room for bikes and adequat the commute times not less. Please consider seating arrangements that v bikes. Commuting is stressful enough with the whole time. Thanks!
90	Lydia Lee	6/12/2018 0:57	Menlo Park	
91	Cameron Erskine	6/12/2018 1:11	Redwood City	
92	Scott Barton	6/12/2018 1:12	Belmont	Taking my bike to and from Caltrain keeps doesn't foul the air. More people should co
93	Travis Schuh	6/12/2018 1:12		
94	Eric Takayama	6/12/2018 1:22	San Carlos	
95	Robert Morgan	6/12/2018 1:23	San Jose	

96	david tu	6/12/2018 1:25	Redwood city
97	Noam Zomerfeld	6/12/2018 1:28	San Francisco
98	Brian	6/12/2018 1:29	East Palo Alto
99	Gary Wu	6/12/2018 1:34	Redwood city
100	Christine	6/12/2018 1:36	
101	Caroline Horn	6/12/2018 1:45	Los altos
102	RenÃ© Sterental	6/12/2018 1:47	Palo Alto
103	Marilyn Beck	6/12/2018 2:30	
104	Jon Spangler	6/12/2018 2:34	Alameda
105	Dale Low	6/12/2018 2:35	SF
106	Michael Mansour	6/12/2018 2:38	San Mateo
107	Michael Gregory	6/12/2018 2:54	San Francisco
108	David Kardatzke	6/12/2018 3:04	San Francisco
109	Julie Watt	6/12/2018 3:06	Mountain View
110	Mark Rauscher	6/12/2018 3:12	Morgan Hill
111	Michael Schumann	6/12/2018 3:37	Brisbane
112	Marc Aronson	6/12/2018 3:47	Cupertino
113	Jenn Gross	6/12/2018 3:48	San Francisco
114	Mike Cohn	6/12/2018 3:49	San Francisco
115	Robert Cronin	6/12/2018 3:54	Menlo Park
116	Kara Baker	6/12/2018 3:58	Stanford
117	David Groves	6/12/2018 4:17	San Mateo, California
118	Yoichi Shiga	6/12/2018 4:18	San Francisco

I would not be able to use Caltrain if I could simply drive. I applaud Caltrain for expansion. When I started, only 4 bikes were allowed per train. I hope Caltrain keeps improving its service off the roads!

1. Caltrain needs to use common-sense, bike deterrent- not video cameras, which have been used. Caltrain needs to follow its own adopted board policies, provide passenger seats and provide 96 bike spaces per train.

Bikes make Caltrain work for many people. Electrifying will create more demand. Bikes are an incredible problem in the Bay Area, but Caltrain has a solution with poor design. Bike owners who can see the need for theft.

More capacity and seats near bikes is essential. Using Caltrain is the "last mile" problem: Can you get to your train stop. Bikes solve this in a friendly and economical way.

Caltrain's charter should be changed to require more bike board would be welcomed not sabotaged by the current rules.

I am a long-time Caltrain bike commuter and having a bike in eyesight of your bike is really important. A bike parked elsewhere. Bike/Caltrain commuting is a great way to maintain capacity for this to continue in the Bay Area population!

I am a disabled veteran, who uses a bicycle for Aquatic Therapy on Saturdays, (when the train, 89, does not run on weekends). Please do not be "One Less Car", than drive, since I pay to use Caltrain to get to my therapy at the V.

119	David Millard	6/12/2018 4:18	San Francisco
120	Bruce S Garretson	6/12/2018 4:45	SAN FRANCISCO
121	Jim Sullivan	6/12/2018 5:15	Palo Alto
122	Mark Forbes	6/12/2018 5:24	San Carlos
123	Cor van de Water	6/12/2018 5:34	Sunnyvale
124	Steph Campbell	6/12/2018 5:40	San Francisco
125	William Smith	6/12/2018 5:50	Alameda
126	jed michnowicz	6/12/2018 5:55	San CARlos
127	Zak Jarvis	6/12/2018 6:03	Pacifica
128	Paul William	6/12/2018 6:21	Los Altos
129	Pete Slosberg	6/12/2018 6:24	san francisco
130	Michael Khaw	6/12/2018 6:57	Sunnyvale
131	Virginia	6/12/2018 7:48	
132	Martin MacKerel	6/12/2018 8:20	San Francisco
133	Ann Togasaki	6/12/2018 9:58	Mountain View
134	Teresa Pratt	6/12/2018 10:02	San Francisco
135	AJ Schrauth	6/12/2018 12:49	San Francisco, CA
136	Drew Skau	6/12/2018 13:22	Vallejo
137	Zoe Hoster	6/12/2018 13:38	San Francisco
138	Carrie Sandahl	6/12/2018 13:51	San Francisco
139	Christopher Holland	6/12/2018 14:09	San Jose
140	Diana Pray	6/12/2018 14:53	San Francisco
141	Carsten Bruckner	6/12/2018 15:00	San Mateo
142	Thomas Zimlich	6/12/2018 15:04	
143	Richard Blaine	6/12/2018 15:08	Cupertino
144	Bruce Lundquist	6/12/2018 15:30	San Francisco
145	Ron Wolf	6/12/2018 15:37	Mountain View
146	Fabio Mincone	6/12/2018 15:41	Foster City
147	Alan Williams	6/12/2018 15:44	San Jose

I've used Caltrain for over a decade to go e Jose. My bike is a critical part of every Ca couldn't get my bike on board, or couldn't

Please be more bicycle friendly

Security is important. And more bikes on we trying to stop using fossil fuels?!?

Without being able to use my bike at both able to use Caltrain. Protecting my bike w bicycles have been stolen. Please retain se Caltrain has been a leader in bike commute safety for all commuters. Please don't regr

CalTrain has been a leader in bikes on pub has a great opportunity to create an even b attract more customers.

please provide additional capacity for bike amount of cars on our roads :)

You MUST have seats within view of the l that. Cameras will only show a grainy pict stealing a bike. It will do NOTHING to st bike, I will most likely use a lock to keep r others. With the increasing use of electric their car and using bikes from further dista (happening today). Caltrain needs to provi may also look at different seating configur

148	Sergey Stavisky	6/12/2018 16:33	San Francisco
149	Garrett Smith	6/12/2018 16:51	San Francisco
150	Jon Gaul	6/12/2018 17:35	San Francisco
151	Jeffrey Munos	6/12/2018 17:50	San Francisco
152	Alyson Jacks	6/12/2018 18:04	San Francisco
153	scott yarbrough	6/12/2018 18:10	San Francisco
154	Isabel Echeverria	6/12/2018 18:55	Cupertino
155	David Lai	6/12/2018 18:59	San Francisco
156	Saran Raksincharoensak	6/12/2018 19:15	San Francisco
157	Marc Tapia	6/12/2018 19:27	S.F.
158	Elliot Schwartz	6/12/2018 20:26	San Francisco
159	Ever Rodriguez	6/12/2018 20:50	Redwood City
160	Robert Page	6/12/2018 20:51	Redwood City
161	Winnifred Homer-Smith	6/12/2018 22:37	Los Altos Hills
162	Jason Thwaites	6/12/2018 23:38	
163	Joanna Tong	6/12/2018 23:46	San Francisco
164	Alexander Magee	6/13/2018 0:03	San Francisco
165	Shane Burkle	6/13/2018 0:31	South San Francisco
166	Kyle Barlow	6/13/2018 0:43	San Francisco
167	John Aikin	6/13/2018 0:59	San Mateo, CA 94401
168	Amanda Fanniff	6/13/2018 1:25	San Francisco
169	Noah Coccaro	6/13/2018 1:39	Mountain View
170	James Edwards	6/13/2018 1:52	Berkeley
171	Miguel Guerrero	6/13/2018 3:43	Emeryville
172	Sue Young	6/13/2018 3:53	Los Altos
173	John Phillips	6/13/2018 4:12	Santa Clara

dedicated bullets, less seats for locals when  
More bike capacity and seats for cyclists to  
just common sense. If you want to cut down  
the CalTrain), then making biking + Caltra  
go.

Bringing bikes on CalTrain is how my son  
Altos since our family is car free.

Please increase projected bike capacity on  
is behind demand, and the board agreed in  
trains in a way that staff continue to attempt  
space to electric trains with seating available  
theft. Thank you!

This is a huge opportunity to perpetuate an  
Caltrain has allowed people to revolutionize  
momentum by limiting capacity and adding

Current bike capacity is already lacking so  
reduce it! Enforce bike car seating for cyclists  
The reason why theft isn't a big problem is  
count on someone not watching their own  
some seats, and maintain bike capacity per  
further population growth.

I live right next to a CalTrain station, so I  
sure that there would be space on it for my  
was unsure if my bike would be stolen.

If you had to keep your unlocked car in a parking  
would want to keep it in sight. I would want  
Having a realistic way for cyclists to bring  
importance in the new plan.

174	sean reardon	6/13/2018 4:25	san francisco	
175	Nathaniel Kane	6/13/2018 4:35	San Francisco	
176	Ziyan	6/13/2018 5:44	San Francisco	I have been a biker on Caltrain for 7 years space for bikes!
177	Brian Prazinko	6/13/2018 9:18	San Francisco	One of the main reasons I don't ride Caltra bike space. Please don't take one step forw
178	Wesley Bexton	6/13/2018 10:31	Alameda	
179	Daniel Golden	6/13/2018 12:34	Palo Alto	
180	Mike Wood	6/13/2018 13:46	Corte Madera	
181	Annie Armstrong	6/13/2018 15:27	San Francisco	
182	Micah Springut	6/13/2018 15:39	San Francisco	
183	John Burke	6/13/2018 16:28	San Francisco	
184	giuliano carlini	6/13/2018 16:33	belmont	
185	Asher Cohen	6/13/2018 16:33	San Jose	
186	Mark	6/13/2018 16:45	San Mateo	I frequently commute with a work stuff in keep an eye on my bike.
187	Ted Thomas	6/13/2018 16:47	San Francisco	
188	Matt	6/13/2018 16:52	San Diego	
189	Marc Brandt	6/13/2018 16:52	San Francisco	Bikes on board are better than cars in the p apples to apples replacement for the bike o in the long run.
190	Antony Trezos	6/13/2018 17:08	SF	Yes! This is a no brainer
191	John Swanda	6/13/2018 17:14	San Francisco	
192	Nik Kaestner	6/13/2018 17:26		
193	Nik Kaestner	6/13/2018 17:29	San Francisco	Bikers are a large share of Caltrain ridershi mile problem. We need to make Caltrain a:
194	Emily H	6/13/2018 17:36	Los Angeles, CA	
195	K R	6/13/2018 17:52	SF	
196	John Holtzclaw	6/13/2018 18:00	San Francisco	
197	Michelle Isaacs	6/13/2018 18:07	San Jose	
198	Terry Rolleri	6/13/2018 18:13	San Francisco	
199	Martin Bourqui	6/13/2018 18:54	San Francisco	
200	Vadim Graboys	6/13/2018 18:55	San Francisco	
201	Emma Fujii	6/13/2018 18:57	Oakland	
202	Larry Chinn	6/13/2018 19:10	Palo Alto	
203	Jerry Cahill	6/13/2018 19:16	Mill Valley. CA	Bikes are critical for the last mile, but they CalTrain electrification project.
204	Donald F Robertson	6/13/2018 19:18	San Francisco	
205	Tim Shea	6/13/2018 19:51	San Francisco	
206	Nicole Aptekar	6/13/2018 20:04	san francisco	There's not enough bike space as is. More, I'm not leaving it without a lock, which wil Caltrain needs more room for bikes, not le:
207	Danny Snyder	6/13/2018 20:15	Oakland	
208	Gene Cutler	6/13/2018 20:24	San Francisco	I've been riding Caltrain for years, and biki

209	David Edwards	6/13/2018 20:32	Campbell	We need more future bike spaces, not fewer. Bike space on southbound rush hour trains definitely don't need less capacity, and we need more sight of owners.
210	Brittany Kathleen Candell	6/13/2018 21:04	San Francisco	
211	Michael Escobar	6/13/2018 21:22	San Francisco, CA	I commute from SF to Mountain View or San Jose and from my origin and destination station. I stopped commuting to Palo Alto and chose Caltrain because of enough space for my bike.
212	Brian	6/13/2018 21:41	San Francisco	I bring my bike on CalTrain from Bayshore every day.
213	Lee Trampleasure	6/13/2018 21:52	San Francisco	Strongly support this effort, as bike theft is a problem. Caltrain should do everything it can to promote bike use and keep polluting, congestion-causing cars off the train.
214	Matt Sieving	6/13/2018 22:25	San Francisco	
215	Dorian Lemarchand	6/13/2018 22:59	Campbell	
216	Carolyn Scott	6/13/2018 23:02	San Francisco	I bike to Caltrain and would appreciate more bike spaces.
217	Andrew Davis	6/13/2018 23:19	Berkeley	I ride Caltrain Daily! Please add space for bikes.
218	Steven Gowin	6/14/2018 0:25	San Francisco	As time goes on, there will only be MORE bike spaces. Please work now to make that happen.
219	Lois Kellerman	6/14/2018 4:28	Mountain View	
220	Ruth Radetsky	6/14/2018 4:34	San Francisco	
221	Tom Pressburger	6/14/2018 4:47	Redwood City	We need more bike spaces not fewer.
222	Reuben Smith	6/14/2018 5:40	San Francisco	Yes!
223	Cindy erskine	6/14/2018 13:04	Redwood city	
224	Justin Bigelow	6/14/2018 16:21	Sf	94110
225	Richard Girling	6/14/2018 19:52	San Francisco	
226	Karen Allen	6/14/2018 21:31	San Francisco	
227	Manu Zeta	6/15/2018 0:24	San Francisco	
228	Sean McFeely	6/15/2018 3:49	San Jose	
229	Jun Lin	6/15/2018 3:51		
230	Adele Madelo	6/15/2018 4:02	Piedmont	
231	Jed Charlesworth	6/15/2018 11:35	Danville, Ca	
232	Peter Gulezian	6/15/2018 14:17	San Francisco	
233	Christina Ignarra	6/15/2018 14:28	San Francisco	
234	Sean Fay	6/15/2018 14:31	San Francisco	
235	K Lee	6/15/2018 15:14	Palo Alto	
236	Patrick Ryan	6/15/2018 15:36	San Francisco	
237	Catherine Kircos	6/15/2018 16:34	San Bruno	
238	Daniel Yang	6/15/2018 17:03	Millbrae	Bikes are critical for last mile commute on Caltrain. Bike capacity on Caltrain with more bike spaces to prevent theft needs to be part of Caltrain's needs of commuters and relieve congestion.
239	Julie Nager	6/15/2018 17:04	San Francisco	

240	Nathan Dushman	6/15/2018 17:13	San Francisco	
241	Larry Aronovitz	6/15/2018 17:16	Los Altos	
242	Mert Dikmen	6/15/2018 17:31	San Francisco	
243	Medum Choe	6/15/2018 18:28	San Francisco	Greatly needed.
244	Maurizio Franzini	6/15/2018 19:13	San Francisco	
245	Christian Veer	6/15/2018 19:53	San Francisco	More capacity for bikes is urgently needed
246	David Steele	6/15/2018 22:12	SAN FRANCISCO	I support more capacity on electrified Caltrain to deter bicycle theft.
247	Christine Ryan	6/15/2018 22:27	San Francisco	
248	Patrick Kitto	6/15/2018 22:49	San Francisco	
249	Scott Perry	6/16/2018 3:53	San Francisco	
250	Chris H Takimoto MD	6/16/2018 9:13	Menlo Park	
251	Casey Passmore	6/16/2018 15:25	Pacifica	
252	Joseph Swisher	6/16/2018 15:35	Berkeley	
253	Bruce Halperin	6/16/2018 23:33	San Francisco	
254	Steve Sergeant	6/16/2018 23:36	San Jose	I support any policy that allows cyclists to use Caltrain, and discourages non-cyclists from being monitored.
255	Thomson Yeh	6/17/2018 16:31	Palo Alto	
256	Laurie Bierman	6/17/2018 19:37	Santa Clara	
257	Michael Bierman	6/17/2018 19:38	Santa Clara	We need to encourage biking. Given error have a bike to get around once we make it
258	Antoine Rose	6/17/2018 19:38	San Francisco	Am from France, and am really enjoying b
259	Noriko Nakano	6/17/2018 20:37	San Mateo	Even the current level of bike capacity is n And since you can't lock your bike in the t keep someone from just walking off with y be doing all we can to encourage people to cars.
260	Dave	6/18/2018 1:43	SF	Bikes are sustainable transportation. Please issues with bookends of commute and bike
261	Leif Wennerberg	6/18/2018 5:21		
262	Scott Toh	6/18/2018 15:13	San Mateo	Been denied boarding on a couple occasion northbound to SF
263	Chuck Kamzelski	6/18/2018 18:52	San Francisco	
264	Alex Simrell	6/18/2018 20:12	Belmont	
265	Mardhen Bravo	6/19/2018 1:42	San Mateo	
266	Carrie Doyle	6/19/2018 15:56	San Carlos	I expect Caltrain and the state of California Caltrain. The first and last miles (2.5 miles and are the most expensive to solve for (do you build an infinite number of parking sp Maintain the ratio of 8:1 should be a good
267	Mark Sherwood	6/19/2018 19:02	San Francisco	
268	Pierce Salamack	6/20/2018 0:21	San Francisco	
269	CHARLES SCHNAKE	6/20/2018 0:53	SAN FRANCISCO	
270	Jessy Diamond Exum	6/20/2018 2:38	San Francisco	



271	Devon Warner	6/20/2018 5:19	San Francisco	Of course we need bike space on the trains and more as it is getting safer and more eco to support the trend. It's good public policy for your riders' health.
272	Russell Berman	6/20/2018 12:53	San Francisco	
273	Rob Kahn	6/20/2018 13:34	Mountain View	
274	Parker Pruet	6/20/2018 13:48	San Francisco	
275	Tony Cox	6/20/2018 13:53	Menlo Park	Please more room for bikes. There are time off the train because of too many bikes and
276	Derek Gurney	6/20/2018 15:25	Palo Alto	
277	Hilary Douglas	6/20/2018 15:39	Foster City	
278	Elaine Haight	6/20/2018 16:08	Los Altos	History has shown that supporting bikes on CalTrain, traffic reduction, lower carbon footprint won't bring our bikes if we can't secure the
279	Art Pope	6/20/2018 16:14	Menlo Park	
280	Peter Lenhardt	6/20/2018 16:17	Menlo Park	I currently actively avoid taking my bike on setup.
281	Lew Laurent	6/20/2018 16:19		
282	Kara Baker	6/20/2018 16:20	Stanford	I love bike/Caltrain commuting! Please consider Sitting far away from your bike is very uncomfortable have some seating in view of bikes. Thank
283	Katharine Keller	6/20/2018 16:26	Mountain View, CA	
284	Guy Shuman	6/20/2018 16:27	MOUNTAIN VIEW	
285	Jeffrey Armin McKnight	6/20/2018 16:46	Oakland	
286	Meghan Arnold	6/20/2018 16:58	San Francisco	
287	Lenore Cymes	6/20/2018 17:18	Palo Alto	no one should worry about their bike while
288	Marc Rarden	6/20/2018 17:23	San Mateo	If you take a morning train from the peninsula number of cyclists on board... and the difficulty high participation in mass transit.
289	Robin Jeffries	6/20/2018 17:40	Palo Alto	I would be very worried about leaving my bike. I'm sure you already know that there aren't many of the trains.
290	George Halet	6/20/2018 17:41	SAN MATEO	I can fortunately avoid crowded trains, but unpleasant this is, much worse than it is for reasonable measures to make mass transit more bicycle capacity.
291	Chris Weeks	6/20/2018 17:50	San Ramon	Watch it or lock it - that's the rule. Unless where I can't see my bike is not a viable option.
292	Vincent de Martel	6/20/2018 18:02	Palo Alto	Let's communicate with our fellow bike commuters aware of the misguided Caltrain plans for the Bay Area affecting both bikers and non-bikers.
293	Judy Colwell	6/20/2018 18:20	Menlo Park	
294	John Toor	6/20/2018 18:52	Portola Valley	
295	Gary Virshup	6/20/2018 19:06	Cupertino	
296	Tom Brown	6/20/2018 19:09	San Francisco	Please don't reduced bike capacity on Caltrain

297 Helena Birecki 6/20/2018 19:12 San Francisco  
 298 Amy Harcourt 6/20/2018 19:42 San Francisco  
 299 barry burr 6/20/2018 19:47 Santa Clara, CA  
 300 Curt Relick 6/20/2018 20:30 Redwood City  
 301 Jake Kaplove 6/20/2018 21:22 San Francisco  
 302 Thmas R Prager 6/20/2018 21:23 Burlingame  
 303 Derek Myers 6/21/2018 1:03 San Francisco  
 304 Jared Jelsing 6/21/2018 1:05 San Francisco  
 305 Robert M 6/21/2018 1:05 San Francisco  
 306 Nava Kommalapati 6/21/2018 1:05 Redwood City  
 307 Benjamin Lai 6/21/2018 1:08 Mountain View  
 308 Jim Kozelka 6/21/2018 13:41 Palo Alto  
 309 John Langbein 6/21/2018 14:38 Redwood City  
 310 Colin Raffel 6/21/2018 15:33 San Francisco, CA

bikes allow me to leave my bike unlocked unboarding.

Being able to take one's own bike on board essential to many people, including me, w/ their bikes during the day outside of "down bike capacity with seats in view of bikes!

IF your bike isn't with you, its not your's. it, its anyone's who want to take it away.

Please assure additional bicycle capacity o: near bikes

311 Joanna percher 6/21/2018 15:37 San francisco

I depend on taking my bike on Caltrain to ; due to lack of space and the bike cars as is difficult to navigate. More trains and more mean more (people with) bikes. Looking fo and fleet and hoping that Caltrain will cont encourages and facilitates bike riding.

312 Alexandre Tachard Passos 6/21/2018 15:47 San Francisco

We need to keep enough bike space on the at home and commute by bike + train inste (most trains in Europe and France don't ha when you see how crowded it can be in the

313 Valentin Geffrier 6/21/2018 15:56 San Francisco

314 James Rozzelle 6/21/2018 17:32 San Francisco

315 Catherine Young 6/21/2018 20:47 Melbourne (visits SF)

316 Maria Stevens 6/21/2018 22:27 Mountain View

Bike theft has been a problem and we need "I want to ride my bicycle I want to ride it

317 Ingrid Heller 6/22/2018 0:41 Sunnyvale

318 Vardhman Jain 6/22/2018 1:32 San Francisco

319 Jonathan Hills 6/22/2018 1:34 San Francisco

320 Jo Vesco 6/22/2018 4:59 SAN LEANDRO

Eight car electric trains good idea.

321 Timothy Oey 6/22/2018 5:36 Sunnyvale

Bikes greatly expand the reach of who Cal for bikes and riders on Caltrain. And bicyc bikes to prevent theft. 8 car electric trains v best. Thanks!

322 Sharleen Garcia 6/22/2018 14:42 San Mateo

323	Dana Wilson	6/22/2018 15:54	Sunnyvale	Please don't make it harder for bicycle com
324	David Ahn	6/22/2018 16:27	San Francisco	
325	Martin Strauss	6/22/2018 17:07	San Francisco	
326	Thomas Hazelton	6/22/2018 19:22	San Francisco	
327	Ammon Skidmore	6/22/2018 20:16	San Bruno	
328	Joseph Mercurio	6/23/2018 17:48	Gilroy	

329	Bob Mack	6/23/2018 18:08	San Jose	
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Over the last 10 years the Caltrain Board has reduced board bike capacity. Caltrain needs to live with board bike capacity with electric trains. They need to encourage cyclists to sit near their bikes. If they are not, you are setting up a system that will encourage more people who can safely take their bike to leave their cars at home and use Caltrain.

330	Gordon Hamachi	6/23/2018 20:52	Mountain View
331	Stanley	6/24/2018 13:46	San Francisco
332	Matt Elsey	6/24/2018 20:48	San Francisco
333	Tyler Ackerson	6/25/2018 2:04	San Francisco
334	Jonathan Dirrenberger	6/25/2018 5:01	San Francisco
335	Nicholas Lucey	6/25/2018 7:26	San Francisco, CA

I always sit above / near my bike to make sure my bike commute to get to the caltrain and it is not damaged / stolen. Just as important is that my bike. Getting bumped from a train makes me miserable.

336	Robert Manchester	6/25/2018 12:35	San Francisco
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We need more bike cars, as well as seats to

337	Kit Colbert	6/25/2018 13:54	San Francisco
338	Cindy Asrir	6/25/2018 21:49	Redwood City
339	Charles Deffarges	6/26/2018 1:44	San Francisco
340	Brad Williford	6/26/2018 1:45	San Francisco
341	Keith Stevens	6/26/2018 1:45	San Francisco
342	Colleen McCarthy	6/26/2018 14:46	San Francisco
343	Michael Marlin	6/26/2018 14:46	San Francisco
344	Deland Chan	6/26/2018 14:46	San Francisco, CA
345	Mike Osorio	6/26/2018 14:52	San Francisco
346	ALISTAIR male BARR	6/26/2018 14:57	San Carlos

thank you!!

347	Ibrahim Halloum	6/26/2018 15:02	San Francisco
348	Mike Marley	6/26/2018 15:03	San Francisco, CA
349	Mike Marley	6/26/2018 15:03	San Francisco, CA
350	Khanh Truong	6/26/2018 15:03	Mountain View
351	Joseph Injae Chang	6/26/2018 15:19	San Francisco
352	Aaron Wippold	6/26/2018 15:24	Redwood City

At least it should be better enforced that bikes are stored properly.  
At least it should be better enforced that bikes are stored properly.

353	Caleb Stewart	6/26/2018 15:28	San Mateo
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More seats within view of bike storage!  
I have contacted Caltrain a couple times in the past to see a unified petition!

354	Tavio J	6/26/2018 15:29	San Jose, CA
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We need more seats!

355	Brannon Klopfer	6/26/2018 15:30	San Francisco
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356	Gaetano D'Amato	6/26/2018 15:35	San Francisco
357	Jennifer Finley	6/26/2018 15:36	San Francisco
358	scott haefner	6/26/2018 15:38	san francisco
359	Lucas Oliver Oswald	6/26/2018 15:46	San Francisco
360	Jerry Reiva	6/26/2018 15:53	San Francisco
361	Michael C Leung	6/26/2018 15:56	San Francisco
362	Thibaut Loysel	6/26/2018 15:56	San Francisco
363	Steve Della-Valentina	6/26/2018 15:57	SF
364	Devendra Modium	6/26/2018 16:01	San Fransisco
365	Danny	6/26/2018 16:19	San Francisco
366	Senthil	6/26/2018 16:21	San Francisco
367	Jonathan Ward	6/26/2018 16:30	Palo Alto
368	Satish Uppuluri	6/26/2018 16:50	Sunnyvale
369	Jeff Mahe	6/26/2018 16:52	San Jose
370	Mtichell Miglis	6/26/2018 17:51	San Francisco
371	Richard Goldman	6/26/2018 18:08	San Francisco
372	Bailey Wall	6/26/2018 18:57	San Francisco
373	Daniel Lenaghan	6/26/2018 19:23	East Palo Alto
374	Ming Yan	6/26/2018 19:44	Mountain View
375	Ryan Dougherty	6/26/2018 20:44	Palo Alto
376	Ben E Machado	6/26/2018 20:52	San Francisco
377	Natalie Love	6/26/2018 20:55	San Francisco
378	Jason Cauthen	6/26/2018 21:11	Santa Clara
379	james chu	6/26/2018 21:20	san francisco
380	Romain Roux	6/26/2018 22:05	San Francisco
381	Edward Ruder	6/26/2018 22:21	San Jose

Reducing bike space is not the answer. If C and reliability then we could potentially do without that you are not solving anything.

As the Bay Area grows we need to increase inadequate in this as well as the lack of dec eye on our bikes. For some of us it's not ju: I depend on the train to commute everyday enough room for bikes, sometimes racks b maintain the 8 car trains and increase servi

Never had my bike stolen yet, largely due t

need seats in the bike area

What is Caltrain doing to prevent bike theft their bikes? Not all owners can sit next to will make a difference. Also post in the ca fined on the spot.

I have been taking the bicycle train to work who has had his bicycle stolen from the tra It is very important to have seats within vic

Increase capacity, and ensure a layout that bikes, both for increased speed boarding at prevention!

The Bay Area economy makes it very diffi workplace. Commuting by car is not feasib transit option that runs the full length of th the same roads that make car commuting i highly ramified system, like a subway, it is "mile" solutions for both ends of the commu need seats in view of our bicycles.

Bicycle theft happens today, when riders c aren't close, as with the current design, thi

382	Toma	6/27/2018 0:05	San Francisco
383	Eric Jones	6/27/2018 0:48	Palo Alto
384	Rebecca Jones	6/27/2018 0:49	Palo Alto
385	Mike Urbach	6/27/2018 1:13	San Francisco
386	Sasanka Panguluri	6/27/2018 1:35	sunnyvale
387	Rafael Casanova	6/27/2018 1:45	San Francisco
388	Igor shadko	6/27/2018 3:17	San Francisco
389	Marie Eide	6/27/2018 13:45	Palo Alto
390	Kristian Eide	6/27/2018 14:07	Palo Alto
391	Yehuda Gotlieb	6/27/2018 14:25	Sunnyvale
392	Tim Tsuruda	6/27/2018 15:20	Sunnyvale
393	Rob	6/27/2018 15:22	San Francisco
394	Kathleen Keough	6/27/2018 15:25	Menlo Park
395	Eitan Yaffe	6/27/2018 15:52	San Francisco
396	Zoe Ya	6/27/2018 17:31	San Francisco
397	Tamas Nagy	6/27/2018 17:31	San Francisco
398	Neil Yazma	6/27/2018 18:05	San Francisco
399	chris	6/27/2018 20:46	Palo Alto
400	Patrick Weiler	6/27/2018 20:47	San Francisco
401	Ryan Schaub	6/28/2018 2:25	San Francisco
402	Ryan	6/28/2018 14:53	
403	Isabelle Heye	6/28/2018 15:16	San Francisco
404	Michael Roberts	6/28/2018 15:37	SAN FRANCISCO
405	Kevin OLeary	6/28/2018 16:19	San Francisco
406	Dave Evans	6/28/2018 16:35	San Francisco

design is a predictable disaster in the making  
Pls improve bike safety and usage on Caltrain

I have commented on every previous petition  
say it again: the more bike capacity the better  
Please don't make this dumb move of eliminating  
In this city is impossible to have a car which  
we need more capacity in Caltrain to commute

We must have seats with a view of the bike  
the bike, which when many people do will  
being hugely inconvenient. Caltrain is advancing  
commuter option in the country, let's keep it

In an already crowded and at-capacity bike  
bike spaces is a major cause of concern.

I had someone try to take my bike once and  
bike they would have succeeded, and I don't  
graduate student, bike + Caltrain makes it  
graduate student stipend.

I appreciate current Caltrain bicycle access  
high use times and requires more, not less  
proceeds and demand increases. Theft is an  
inevitably show an increase in bike theft if  
storage area. Theft seems like a future liability  
probability that the number of thefts will increase  
We need 8 car trains!

Electrified Caltrain is going to be an improvement  
That being said, we should not forget the need for  
Caltrain's support of bikes is already great,  
further! Please add capacity for more bikes

Biking to the train is a critical part of my commute  
bike, I'll have to drive 25 min to the train for the  
purpose of using public transit.

407	Frank Tessier	6/28/2018 17:28	San Francisco
408	Fabien Blanc-Paques	6/28/2018 23:03	San Francisco
409	Erwan Blanc	6/28/2018 23:04	San Francisco
410	Elaine	6/28/2018 23:13	San Francisco
411	Zach	6/29/2018 1:58	San Francisco
412	Richard Baker	6/29/2018 2:11	San Mateo, CA
413	AmÃ©lie B	6/29/2018 14:52	Sans Mateo
414	Keith Hall	6/29/2018 15:09	San Francisco
415	Karen Stevenson	6/29/2018 15:20	Sunnyvale
416	Cara Dodge	6/29/2018 15:40	San Jose
417	Matthew Stephens	6/29/2018 16:34	San Francisco
418	Brett McKenzie	6/29/2018 17:04	San Francisco
419	Bram Lambrecht	6/29/2018 17:05	Redwood City
420	Madeline Sides	6/29/2018 17:19	San Francisco
421	Myles A Iribarne	6/29/2018 17:20	San Francisco
422	Boris Foelsch	6/29/2018 17:28	Palo Alto
423	Eric Schmidt	6/29/2018 18:08	San Francisco
424	Chris Gerrety	6/29/2018 20:27	San Francisco/ San Carlos
425	Diana Reddy	6/29/2018 21:47	REDWOOD CITY
426	Rachel Ha	6/29/2018 23:22	San Francisco
427	Tyler	6/29/2018 23:24	San Francisco
428	Brandon Tran	6/29/2018 23:48	San Francisco
429	Robert Fink	6/29/2018 23:50	SAN FRANCISCO
430	Kai	6/30/2018 0:46	
431	Joe	6/30/2018 0:52	San Mateo
432	Andrew Nelson	6/30/2018 2:22	San Francisco
433	Erico Gomes	6/30/2018 3:47	San Francisco
434	Joshua Brause	6/30/2018 4:24	Palo Alto
435	John stamos	6/30/2018 4:24	San Francisco
436	Wyatt Scott	6/30/2018 4:25	Longview
437	JOSEPH ZARATE	6/30/2018 4:45	REDWOOD CITY
438	Michael Leung	6/30/2018 16:49	San Francisco
439	jean nguyen	6/30/2018 17:15	san francisco

I use the train to commute daily, and often today (on the 6:59am NB train and SB train) would mean I wouldn't be able to use my public transit if I couldn't use my bike. Frustrating concern for me; if I can't get a seat nearby, see others do the same. That's not efficient

Please honor the 8:1 seat:bicycle ratio that we need to watch our bikes!  
I look forward to electrifying the train, but well!

Bike thefts are real. The conductors warn you not to bike and disembark with a bike.  
Bikes and trains make a wonderful couple.

Caltrain is useless without bike capacity. It needs to be increased.

We need to increase bike capacity in order to have a complete solution to our congestion and snail pace.

Doing the right thing for the future!

I don't need my bike stolen. Caltrain should have an eye on their property instead of making excuses.

I commute with my bike everyday and always.

440	Jason Traugher	6/30/2018 17:46	San Bruno	few months ago I witnessed a transient at a nice road bike with a carbon frame) - the owner was within view of his bike because there were a few other cyclists, were able to prevent the bike from being stolen and got the bike back safely to its owner.
441	Michael Brady	6/30/2018 22:06	San Francisco	I support increasing the number of cars to reduce theft and encourage commuting.
442	Carl Grossman	7/1/2018 0:12	Redwood City	We definitely need more bike capacity!
443	Sean finn	7/1/2018 3:34	Redwood city	
444	Radu Kopetz	7/1/2018 19:13	Sunnyvale	
445	Nicolas Czellecz	7/1/2018 20:02	San Bruno	I would like to be able to see my bike while riding with it when I can not see it.
446	Liam Kelly	7/2/2018 1:33	Mountain View	
447	Meredith Tooker Hanlin	7/2/2018 2:20	San Francisco	
448	Joe Ryan	7/2/2018 15:03	SAN FRANCISCO	
449	Youenn	7/2/2018 16:38	San Francisco	Seeing the bike is a must when on the train
450	Nina Sun	7/2/2018 16:46	San Francisco	
451	Cameron M	7/2/2018 17:01	Oakland	
452	Stuart Westerman	7/2/2018 17:25	San Francisco	
453	Sarah McCurdy	7/2/2018 17:41	San Francisco	
454	Gary s	7/2/2018 19:06	Redwood City	We need space on trains
455	Phelan Bybee	7/2/2018 20:41	San Francisco	I bike to work 3 times a week on CalTrain. I would like more bike space implemented but I want more bike space at all times.
456	Guillermo Cornejo	7/3/2018 3:40	Redwood City	
457	Marcia Feitel	7/3/2018 5:01	Sunnyvale	Anything that meets the ratio is fine with me
458	Ciara Gallagher	7/3/2018 14:08	Redwood City	
459	Maria Telleria	7/3/2018 14:30	Menlo Park	
460	Sarah Worthington	7/4/2018 0:55	San Francisco	
461	Jennifer Smith	7/4/2018 1:34	Palo Alto	
462	pat giorni	7/4/2018 18:41	burlingame	
463	Blaine Nelson	7/4/2018 19:00	San Francisco	
464	Sarah Kolarik	7/4/2018 22:49	El Cerrito	
465	Turner Kirk	7/5/2018 15:38		
466	Guy langford-lee	7/5/2018 15:38		
467	Jesse Morris	7/6/2018 3:38	San Francisco	
468	Eartis E Beck III	7/6/2018 14:37	Pittsburgh	
469	David Chambers	7/6/2018 23:35	San Francisco	More space would be great- and I applaud some basic education for bikers: how to stay on that electric bike that's basically a car. There are plenty of other cars for you.
470	Gabriel N	7/8/2018 16:12	Redwood City	
471	Michael Mizrahi	7/8/2018 16:18	San Francisco	

472	Daniel Kufer	7/8/2018 17:56	Saratoga	
473	Alex Gonzalez	7/9/2018 0:48	Palo Alto, CA	
474	Stefan Geiger	7/9/2018 14:55	San Francisco	
475	William Kemper	7/9/2018 17:39	Redwood City	More bikes, less theft!
476	Kyle Liske	7/9/2018 18:12	San Francisco	
477	Kelsie Eichel	7/9/2018 18:15	San Francisco	
478	David Hirsch	7/9/2018 19:14	Palo Alto	
479	Peter Hand	7/9/2018 22:07	Redwood City	Having to lock bikes onboard to prevent th and become unworkable.
480	Heung-Gyu Lim	7/9/2018 22:40	Foster City	
481	Mark Sheinbaum	7/10/2018 0:46	Redwood City	
482	Tanya Maslach	7/10/2018 13:12	san mateo	
483	Robert Bihler	7/10/2018 14:13	San Jose	
484	Robert Maslach	7/10/2018 15:13	San Mateo	Please stand in support of configuring trair storage of bicycles within train cars and re theft.
485	Byron	7/12/2018 0:24	San Jose	
486	Sanjay	7/12/2018 0:29		
487	Asav Patel	7/12/2018 0:48	San Jose	
488	Jill C	7/12/2018 1:09	Sunnyvale	
489	William Bertrand	7/12/2018 1:18	San Francisco	
490	Laura Begay	7/12/2018 1:38	Sunnyvale	
491	Andee Tao	7/12/2018 1:58	San Bruno	
492	Belinda Liu	7/12/2018 2:03	Sunnyvale	
493	peter herzlinger	7/12/2018 2:45	Saratoga	
494	Giuseppe puglisi	7/12/2018 15:54	Sunnyvale	
495	Herman	7/12/2018 17:02	Sunnyvale	More bike spaces, please!
496	Jeffrey Mishler	7/12/2018 20:09	San Francisco	
497	Chris Potter	7/12/2018 21:25	San Jose	
498	Omar Riaz	7/13/2018 2:44	San Jose	
499	Madhan	7/15/2018 19:29		
500	Tibor Gal	7/15/2018 19:33	Cupertino	
501	Daniel T	7/15/2018 19:33	Redwood City	More bike cars. More seating! More condu specific cars.
502	Milind	7/15/2018 19:35	Palo alto	Keep cars off the road by keeping more bil
503	Johnny root	7/15/2018 19:38	Redwood city	
504	Tony Fossati	7/15/2018 20:05	MISSION VIEJO	
505	Catherine Elizabeth Carter	7/15/2018 22:01	San Francisco	
506	Bradley Freitag	7/16/2018 14:49	San Mateo	Everyone wins.
507	Aron Mason	7/16/2018 14:52		
508	Jonathan Brand	7/16/2018 23:44	Mountain View, CA	I will sigh, but am curious doesn't electrific you will be able to support more bikes per



509	Justin Ney	7/17/2018 13:56	Sunnyvale, CA
510	Venkata Sajja	7/17/2018 14:15	Sunnyvale
511	Humayun Irshad	7/17/2018 14:21	Sunnyvale
512	Richard Au	7/17/2018 15:15	Cupertino
513	Suman Nag	7/17/2018 15:16	Sunnyvale
514	Tanmay	7/17/2018 15:20	Sunnyvale
515	Anthony	7/17/2018 15:26	Sunnyvale
516	Sarang Hemant Borude	7/17/2018 15:42	Santa Clara
517	Motasim	7/17/2018 16:24	Sunnyvale
518	Ben Allen	7/17/2018 16:38	Sunnyvale
519	Shengpu Liu	7/17/2018 17:36	Sunnyvale
520	Jane Grayce Casamajor	7/17/2018 18:59	SANTA CLARA
521	Darren Quintero	7/17/2018 19:06	Sunnyvale
522	Michael D Bennett	7/17/2018 23:37	Sunnyvale
523	Albert Chang	7/18/2018 0:01	San Jose
524	Sandra	7/18/2018 1:24	Sunnyvale
525	Leeann Bond	7/18/2018 1:48	Mountain View
526	John Demme	7/18/2018 3:00	San Jose
527	Karina Camacho	7/18/2018 14:29	San Mateo
528	Rob Jordan	7/18/2018 17:06	Menlo Park
529	C Miller	7/18/2018 20:08	Sunnyvale
530	Linda Wan	7/19/2018 0:17	San Mateo
531	Irving Arguello	7/19/2018 0:25	San Francisco
532	Alli Rico	7/19/2018 1:07	San Jose
533	Cyrus Manuel	7/20/2018 7:31	Sunnyvale
534	Cristina Munoz	7/20/2018 14:53	San Jose
535	Stanley	7/20/2018 22:07	San Jose
536	Alison Hamblin	7/23/2018 17:19	Los Altos
537	Jeff Fisher	7/23/2018 20:42	Mountain View

and this petition are unclear.

Vote for electric train and more train route

I support this initiative!

it has been too crowded in the current caltr fewer sets and less bike capacity.

more bike capacity is critical. rush hour tr

If there is a reduction and less view to ensu more per year for service? If anything this and place more cars on the local roads.

Bike availability is critical to building a gr encourage people to use more efficient mo the infrastructure to support it!

I've seen theft and people trying to leave w need to be near their bikes.

As a commuter and transit user I support th the new electric carts to feature only six ca inconvenience for passangers and bike ride

Let's be progressive in our thinking here. a real need for Silicon Valley. More bike c

I don't want my bike stolen

People should be able to sit near their bike; folks that don't use destination tags. Not ha absolute chaos boarding at stations with hi; delays caused by slow boarding.

Caltrain support of cyclists is critical to cre greener and clogs roads less than car/train during the change to electric trains is going

538	Divya	7/24/2018 0:46	Sunnyvale
539	Sam Falter	7/24/2018 3:57	San Bruno
540	Susannah Barsom	7/24/2018 15:21	San Jose
541	Ann Marie	7/24/2018 15:32	San mateo
542	Soren Harner	7/24/2018 22:27	Palo Alto
543	Gaurav Sawant	7/25/2018 1:25	Sunnyvale
544	Rafael Ramos	7/25/2018 1:26	
545	Tom D'Arezzo	7/25/2018 19:50	San Mateo
546	Jessica Knapstein	7/25/2018 20:59	Redwood City
547	Eric Cretarolo	7/25/2018 21:23	Redwood City
548	Ray Thompson	7/25/2018 21:40	Palo Alto
549	Edward Saum	7/25/2018 21:56	San Jose
550	E Wang	7/25/2018 22:06	San Jose
551	Jean Higham-Sergeant	7/25/2018 22:15	San Jose, CA
552	Matt Giambruno	7/25/2018 22:17	San Francisco
553	Margaret Soucheray	7/25/2018 22:23	Sunnyvale
554	Jacqueline Sanchez	7/26/2018 1:08	Redwood City
555	Nat Collins	7/26/2018 1:48	Santa Clara
556	Brian Badenoch	7/26/2018 4:25	San Jose
557	Lloyd Cha	7/26/2018 4:52	Saratoga

transportation to and from Caltrain, like dr lead to people doing things like locking bil in order to protect their property, which wi some of the gains of the trains going electr cycling accommodations will make stops : keeping cyclists from losing their bikes.

I strongly support seats next to the bikes fc I've already had one bike stolen... I'd like to being able to see it on the train.

The proposed configuration seems to invite to see their bicycles throughout the commu at each station will take a great deal of time

I support more capacity

Very sad to say this, but I would not trust I Caltrain ride. And "less bike capacity"?? provide more bike capacity for environmer passengers.

Caltrain's plans for new bike cars without s unreasonable invitation to bike thieves. Th vandalism and bike theft on the current bik community helps thwart those problems by cyclists' bikes. Forcing cyclists to temporar the lower level and out of view from the m community threatens cyclists' valuable pro transportation. Cycling and using mass tra driving clogged roadways, and will only be reduce global warming and pollution. Plea spaces/train and seating within view of bik have fewer seats and less bike capacity tha

I support this petition.

We cyclists absolutely need to be able to se someone messes with it. Please correct this electrified cars. Thanks.

Bicycles are essential to solving the 'last m users. Space for bicycles is already scarce

558	Bill Carter	7/26/2018 5:15	San Jose
559	Caleb Fowler	7/26/2018 6:06	San Jose
560	Scott Reimert	7/26/2018 13:26	San Jose
561	Brian Funk	7/26/2018 13:55	Saratoga
562	Martina Sbicca	7/26/2018 13:56	Santa Clara
563	Patrick Barone	7/26/2018 14:03	Santa Clara
564	Hesham	7/26/2018 14:06	Santa Clara
565	Pankaj Dugar	7/26/2018 14:29	MTV station
566	Anthony Moor	7/26/2018 15:01	Mountain View
567	karan gathani	7/26/2018 15:04	Mountain View
568	Sasha Ovsiankin	7/26/2018 15:08	Sunnyvale, CA
569	Kavit	7/26/2018 15:10	Mountain View
570	Viet Nguyen	7/26/2018 15:16	Mountain View
571	Chris Parry	7/26/2018 15:28	Mountain View
572	TK Tsai	7/26/2018 15:34	Sunnyvale
573	Stav Ashuri Zohar	7/26/2018 15:43	Mountain View
574	Moya Damberger	7/26/2018 19:31	San Jose
575	Cyrus Vafadari	7/26/2018 19:39	Sunnyvale
576	Randy Leberknight	7/26/2018 21:01	San Jose
577	Stan Wong	7/26/2018 22:36	san jose
578	J Lawrence	7/26/2018 23:04	Mountain View, CA
579	Ashley Hanson	7/27/2018 3:02	San Jose
580	Claire	7/27/2018 14:32	
581	Christopher weber	7/27/2018 14:49	San Francisco

frequent trains is very encouraging, but the more bicycle capacity on every peak hour

Please! Good design facilitates increased riding. Unless CalTrain is replacing stolen bikes, bike thieves.

As a daily commuter who brings his bike on the train, I see firsthand the stress that bike cars provide inadequate space for bikes and don't underuse the space each stop if people had to shuffle between cars.

Bike cars are a great feature of Caltrain that is being lost. Without convenient view of my bike I would not use bike options and possibly ride Caltrain less.

Non bikers occupying seats in the cabinet cars are a problem since I started using Caltrain in 2015. It's frustrating that the busy train announce that allow bikers to use bike cars. Ideas to solve the problem: - Having more bike cars. - That this is the car for people who has bikes. - Caltrain stations showing where the bike cars are.

The bike cars are often crammed today. We need more bike cars. Please find balance on the seat & bike capacity. We need to travel with bike able to stay with their investment.

Watching the bikes is important. Even if it takes time that would go a long way.

Encourage bikes instead of making it harder. If you want more commuters on the train, please invest in bike cars in the long term for a continuously GROWING population. I commute via Caltrain with my bike and the bike cars have improved on in so many ways I can't believe it's not even worse.

I'm not so bothered by the lesser capacity of bike cars if they'll run more frequently. I am however concerned if I can't sit near my bike. If I can't sit near it I'm causing greater disruption to everyone's commute.

582	Adam Pinch	7/27/2018 16:31	San Francisco	More space for bikes is needed. Not less!!
583	Brian Kammerer	7/27/2018 23:20	San Francisco	
584	Kunal Sangani	7/27/2018 23:36	San Francisco	I like to be able to sit with my bike
585	Matthias Bendull	7/28/2018 0:56		
586	Brad Davis	7/28/2018 15:04	Mountain View	Paying more for less! I've about had it with are overcrowded, and unsafe!
587	Eric Muller	7/28/2018 18:18	Los Altos	
588	Sarah Ellison	7/28/2018 19:52	Redwood City	
589	Jackson Reed	7/29/2018 19:27	San Jose	
590	Joke van Bommel	7/29/2018 20:07	Palo Alto	
591	Frank San Miguel	7/29/2018 22:36	San Jose	
592	Brian	7/30/2018 14:29	San Jose	
593	Kenneth Ledbetter	7/30/2018 20:34	San Jose	
594	Randy Spickler	7/30/2018 20:59	Mountain View	Please do not force bicyclists to chose betw potentially having their bike stolen due to t ride.
595	David Gustafson	7/30/2018 21:20	San Mateo	Please provide for bikers the opportunity to the volume of bikers riding Caltrain by pro
596	Mark Kashima	7/30/2018 21:23	San Mateo	
597	Lauren Renaud	7/30/2018 22:10	San Jose	
598	Peter Levonian	7/30/2018 23:56	Mountain View	
599	Genevieve Norman	7/31/2018 0:26	Redwood City	
600	Carlos Marin	7/31/2018 13:43	San Jose	daily commuter have very ex pensive bike
601	Javier Trueba	7/31/2018 13:45	San Jose	daily commuter have very ex pensive bike
602	Fernanda Marchant	7/31/2018 20:07	Redwood City	bikes on board is great! keep them safe is i
603	Jacob Crabill	8/1/2018 4:14	Palo Alto	There's barely enough capacity as it is; I al bike car during commute hours. We need
604	Rocio Segura	8/1/2018 5:04	Mountain View	In addition to the theft issue, think of all th their bike to watch over it and how difficu on a design of this type. Please reconsider within view of bikes.
605	Alfonso Ramirez	8/1/2018 15:42	Sunnyvale	
606	Annie Xu	8/1/2018 16:04	Saratoga	As a young person using CalTrain for the f impressed and entertained by the number o wonderfully low-tech bikes, in combinatio: There have been many weekdays where th sometimes leaving people standing in the a ride. It would be disappointing for a renova: problem instead of allieve it. I hope that, as dictates powerfully how citizens contribute emissions, CalTrain will consider this revis
607	Cameron Moberg	8/1/2018 23:28	Mountain view	
608	Sophie	8/2/2018 0:06	Palo Alto	
609	Sarah Hanes	8/2/2018 0:06	San Jose	Security cameras won't stop bike thefts. Ne people trying to keep an eye on their bikes.

610	Aurina Malaki	8/2/2018 0:56	
611	Thibaut de Bretagne	8/2/2018 1:05	Palo Alto
612	Joe Powers	8/2/2018 1:08	San Rafael
613	Richard Nieset	8/2/2018 1:09	San Jose
614	Karl Sorensen	8/2/2018 2:57	San Francisco
615	Jonathan Hoyt	8/2/2018 3:49	San Francisco
616	Randy	8/2/2018 4:30	Foster city
617	Jennica Storti	8/2/2018 14:10	San Jose
618	Sean Murphy	8/2/2018 17:32	San Francisco
619	Riana Pfefferkorn	8/2/2018 18:24	San Francisco
620	Reid Erickson	8/3/2018 2:21	Redwood City
621	Frank Dowling	8/3/2018 19:00	San Francisco
622	Nicholas Johnson	8/4/2018 18:57	San Jose
623	Jeffrey Kastenbaum	8/6/2018 1:59	San Francisco
624	Carlos A Tarango	8/6/2018 17:06	San Jose
625	Shannon Clark	8/7/2018 23:39	Redwood City
626	Meaghan Brosnan	8/8/2018 21:53	Mountain View
627	Jacquette Ward	8/9/2018 22:55	Santa Clara
628	Kawai Washburn	8/11/2018 12:58	San Carlos, CA
629	Julie Ma	8/12/2018 18:21	
630	Alex Stowbunenko	8/12/2018 20:47	San Jose
631	Corentin Fabry	8/14/2018 16:27	
632	Alex Semfel	8/14/2018 21:29	San Francisco
633	Katie Dlesk	8/19/2018 1:11	San Francisco
634	Ximin Luo	8/23/2018 4:01	San Francisco
635	Rose Rustowicz	8/24/2018 15:15	Mountain view
636	Mark tiedens	8/24/2018 17:11	Menlo Park
637	Walter Huf	8/27/2018 17:45	Santa Clara, CA

within view of bikes, people need to be able to stack. Seems like the worst option at the moment.

Daily commuter Palo Alto to SF & back us

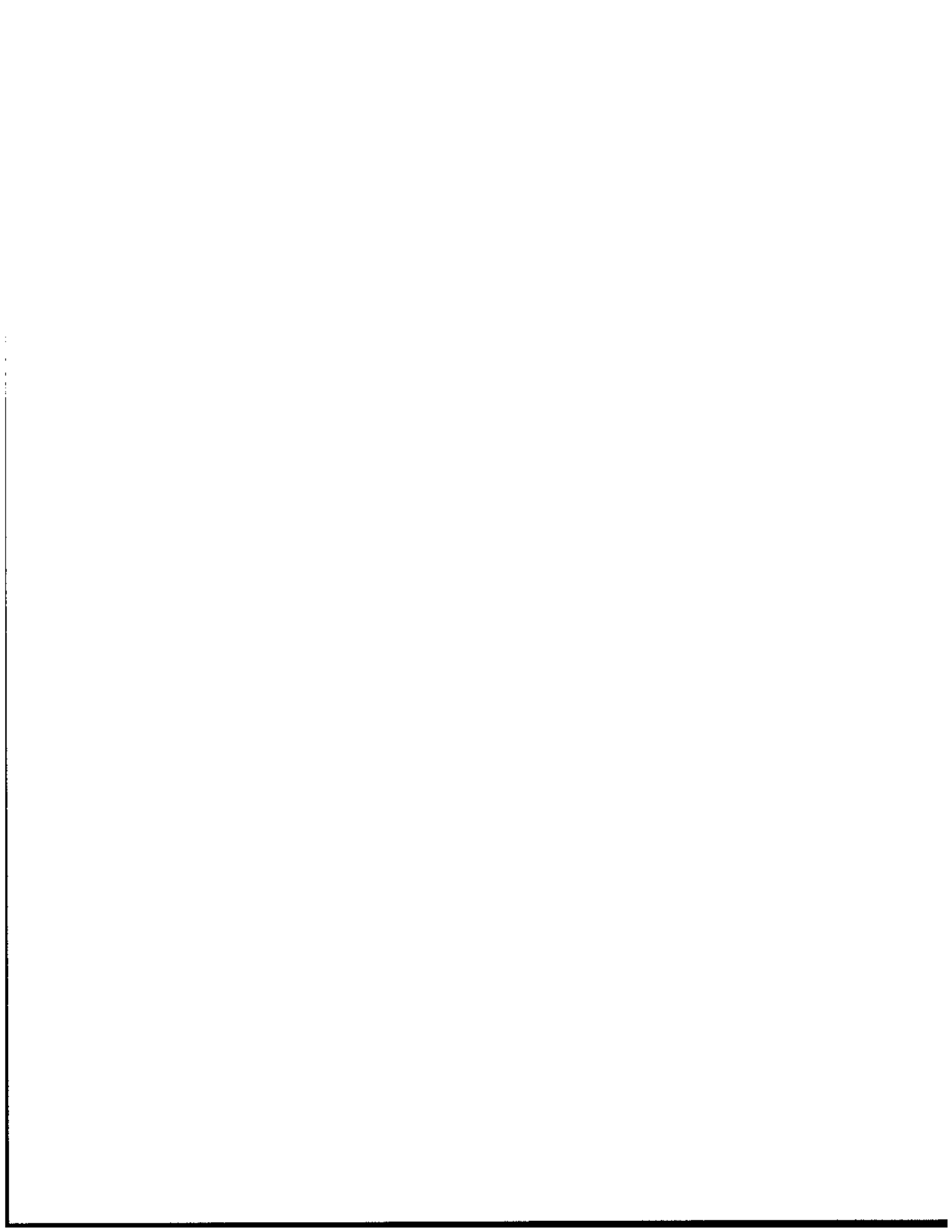
Remember why there is mass transit. Let's improve efficiency in transportation infrastructure a powered transport. More bikes on trains help. We have design objectives for a reason. So important for the economy and environment. In the name of expediency we have he or don't do it at all.

I've witnessed too many bike thefts even in view of riders is an invitation for theft

Caltrain you're electrifying the line to cut emissions also cut our emissions by making it less time to walk to the station and 10 minutes stolen I might have to drive instead!

We need more space for bikes! Thank you!

Bike cars are already too crowded, we need better transportation with us



**Low, Lori**

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**From:** Caltrain, Bac (@caltrain.com)  
**Sent:** Monday, September 10, 2018 2:55 PM  
**To:** 'Alvaro Jimenez'; Caltrain, Bac (@caltrain.com)  
**Subject:** RE: Comment from BAC Webpage

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Dear Alvaro,

Thank you for your comments below. While customers are allowed to sit in any car, Caltrain encourages non-cyclists to sit in non-bike cars as a courtesy. I have brought your feedback to the attention of the rail operations team as Caltrain constantly works to improve its service and make the boarding/deboarding process as seamless as possible. Thanks again for the information.

Best,  
Lori

-----Original Message-----

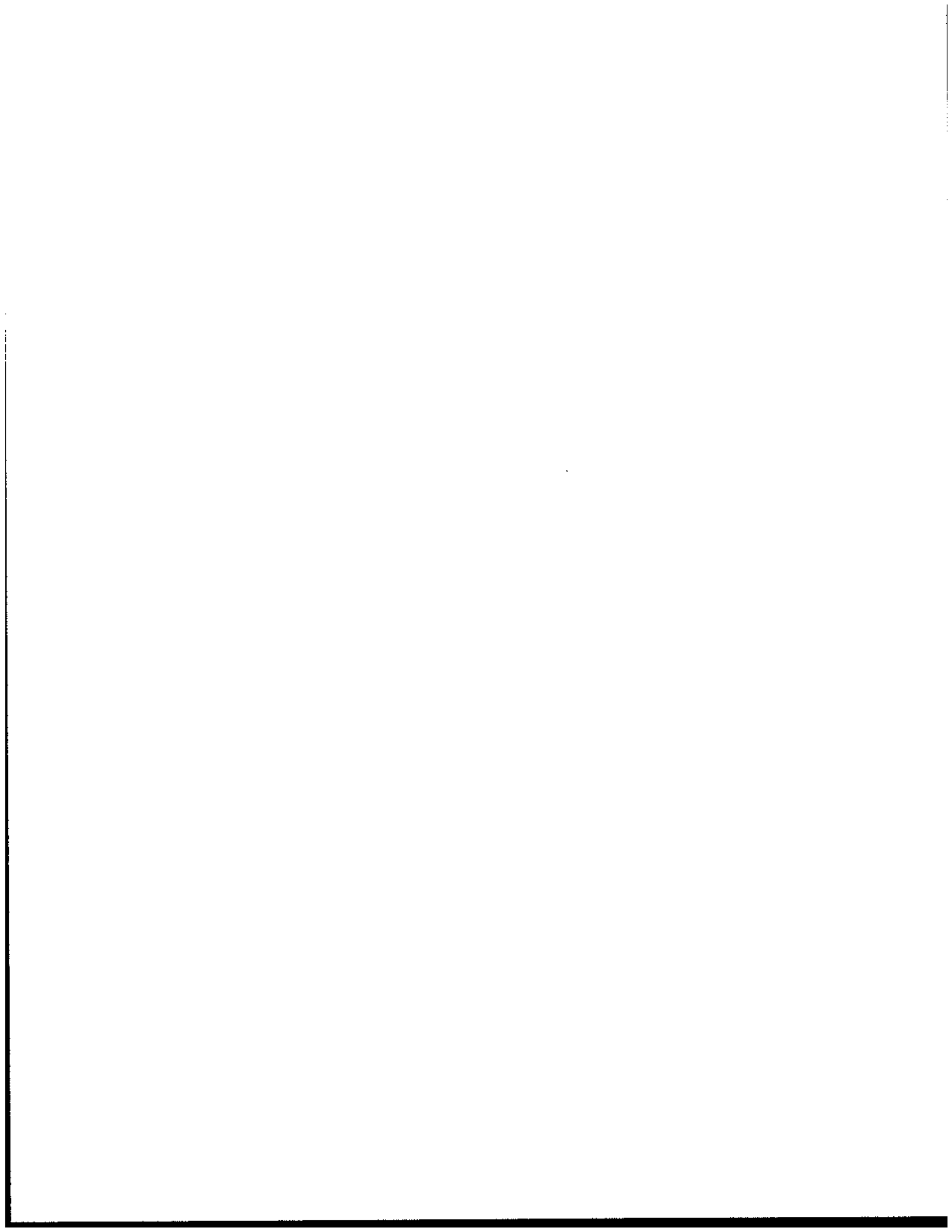
**From:** Alvaro Jimenez [mailto:alvaro.jimenez@caltrain.com]  
**Sent:** Tuesday, August 28, 2018 7:17 AM  
**To:** Caltrain, Bac (@caltrain.com)  
**Subject:** Comment from BAC Webpage

As a daily train rider, a monthly pass subscriber, a bicycle rider, and a respectful citizen, I would like to make an observation regarding train passengers that ride on the Bicycle designated cars. It is unfortunate to note that people without bicycles take over the limited sitting available in such cars making more difficult for riders like myself to get to our bicycles in case it is needed, and whenever bicyclists need to get off or vacate the train. Is it possible to have conductors actively asking people without bikes not to be in these cars? Conductors are often seen just having long and pleasant conversations with passengers, but it will also be very appreciated if they can actively help the growing community of bike riders on Caltrain.

Best regards,

-Alvaro Jimenez

Sent from my iPhone





**Low, Lori**

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**From:** Caltrain, Bac (@caltrain.com)  
**Sent:** Monday, September 10, 2018 9:39 AM  
**To:** 'Dana Jordan'; Nabong, Sarah  
**Cc:** bikesonboard@sfbike.org; Board (@caltrain.com); Bartholomew, Tasha; cac@caltrain.com; Caltrain, Bac (@caltrain.com)  
**Subject:** RE: Capacity of Bikes on Caltrain Comment

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Hi Dana,

Thank you for your comments below regarding conductors and open bike spaces onboard trains. I have brought this to the attention of the director of rail operations who is looking into the matter. As you know, Caltrain has one of the most extensive bicycle access programs among passenger railroads in the nation as bikes are an excellent first and last mile solution that help reduce pollution and relieve congestion. Thanks again for the information.

Best,  
Lori

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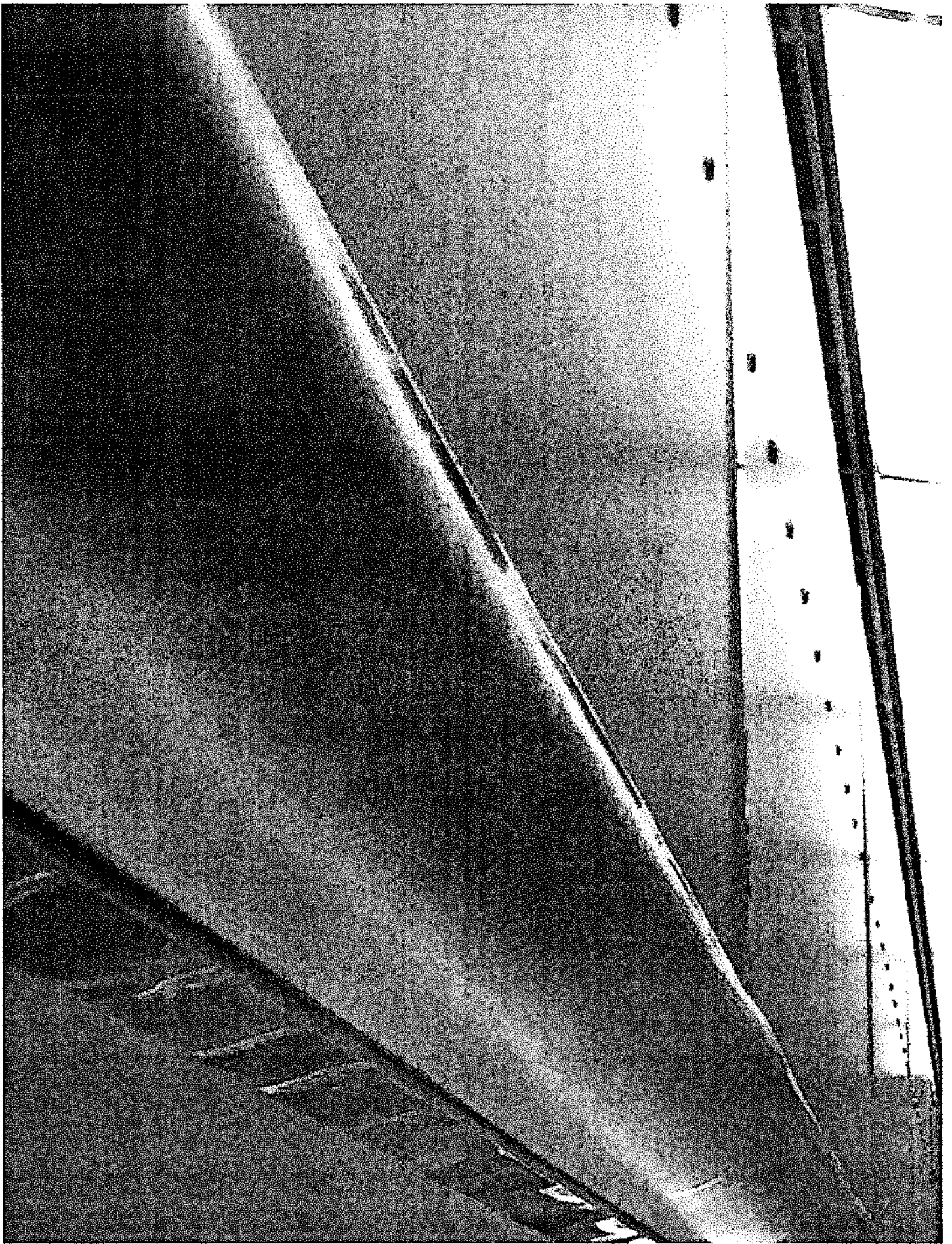
**From:** Dana Jordan [mailto:[dana.jordan@caltrain.com](mailto:dana.jordan@caltrain.com)]  
**Sent:** Thursday, August 23, 2018 8:28 AM  
**To:** Nabong, Sarah  
**Cc:** [bikesonboard@sfbike.org](mailto:bikesonboard@sfbike.org); Board (@caltrain.com); Bartholomew, Tasha; [cac@caltrain.com](mailto:cac@caltrain.com); Caltrain, Bac (@caltrain.com)  
**Subject:** Capacity of Bikes on Caltrain Comment

Hi there! I am currently on the # 222 train (boarded at San Mateo-getting off in Menlo) and in San Mateo I was waiting with three other bikers to board the train. The conductor was very nice about it but had to bump the three others (thankfully I get to the station early to avoid being bumped myself).

When I got in the train I noticed a few racks with only 3bikes and quite a bit of space but the conductor abides by the 40 TOTAL bikes -thus bumped the others . Just wanted to let someone know -and show a pic- to indicate the plethora of space , even with the max amount of bikes. I definitely understand the safety issue but thought, in a situation like this, it warrants a conversation to help out those bikers who are bumped but could possibly have been accommodated.

Thanks for listening-  
Dana

(FYI- I did ask everyone in the bike car for permission to take this photo)



**Low, Lori**

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**From:** Roland Lebrun [REDACTED]  
**Sent:** Monday, September 10, 2018 8:01 AM  
**To:** Supervisor Aaron Peskin  
**Cc:** Steve Stamos, Clerk of the Board; Board (@caltrain.com); Nila Gonzales; CHSRA Board; SFCTA CAC; CAC@TJPA.org; cacsecretary [@caltrain.com]; Caltrain, Bac (@caltrain.com)  
**Subject:** Item #7 Pennsylvania Avenue Alignment  
**Attachments:** SFCTA September 11th 2018 full Board Item #7 Pennsylvania Avenue alignment.pdf; Northbound DTX refined alignment.pdf

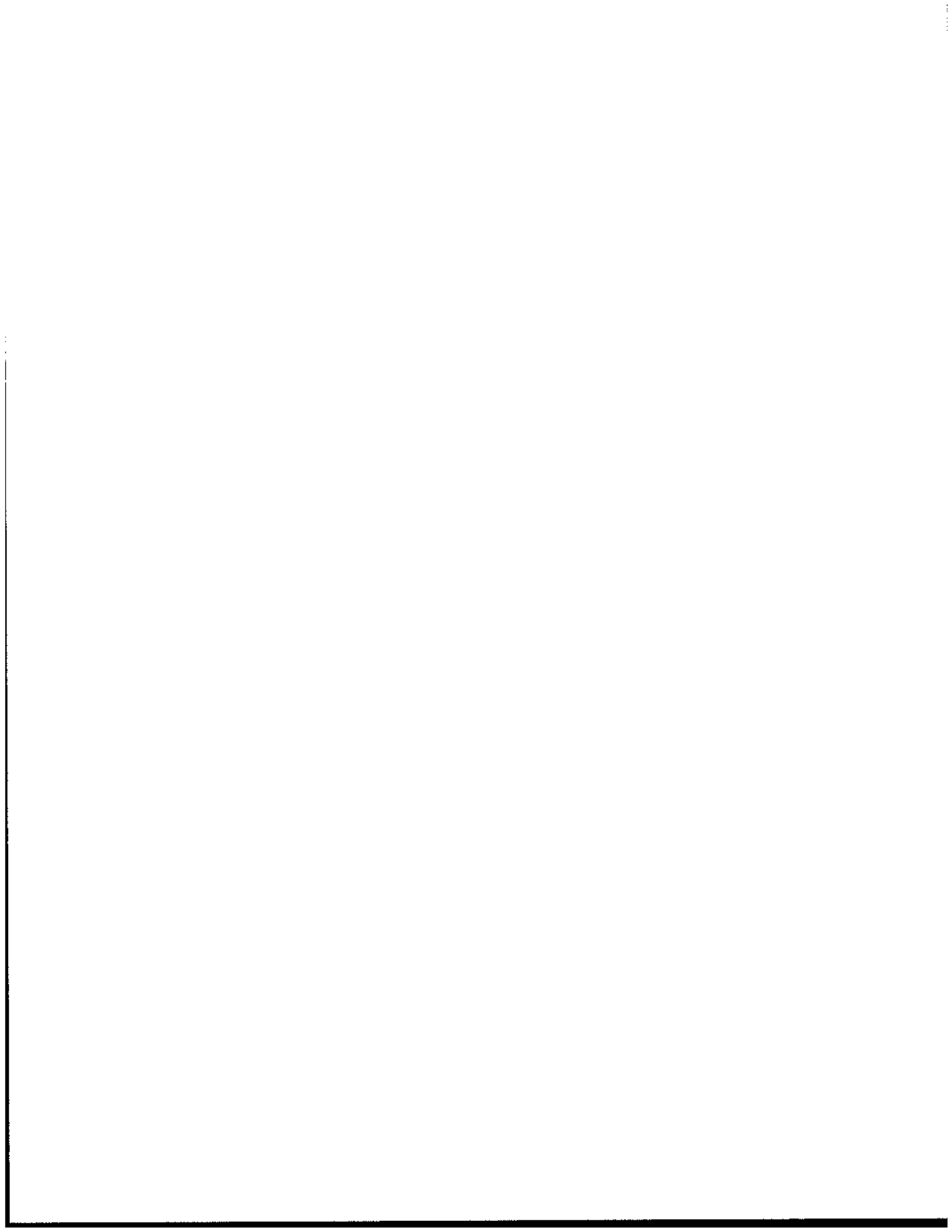
Dear Supervisor Peskin and members of the SFCTA Board of Directors,

Please find attached my response to Ms. Gygi's August 14 2018 letter.

Sincerely,

Roland Lebrun

cc  
Caltrain Board  
TJPA Board  
CHSRA Board  
SFCTA CAC  
TJPA CAC  
Caltrain CAC  
Caltrain BAC



Roland Lebrun  
[ccss@msn.com](mailto:ccss@msn.com)  
September 10, 2018

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SFCTA September 11<sup>th</sup> 2018 Full Board meeting  
Item #7 Pennsylvania Avenue Alignment

Dear Chair Peskin and members of the SFCTA Board of Directors

Further to my July 8<sup>th</sup> letter to the SFCTA Board and Ms. Gygi's August 14<sup>th</sup> 2018 response, I appreciate the opportunity to respond to some of the points raised by Ms. Gygi.

First, I apologize for any confusion the presentation may have caused. As stated in the last paragraph on page 2 of my July 8 letter (*The solution outlined in the attached "Rethinking DTX" (2012) presentation*), this presentation was prepared in 2012, approximately two years before the so-called "RAB study"

Most of the presentation stands today with the exception of the following items:

**\$1.3B cost estimates.** The 2012 estimates were based on two contracts awarded during the 2008 Great Recession:

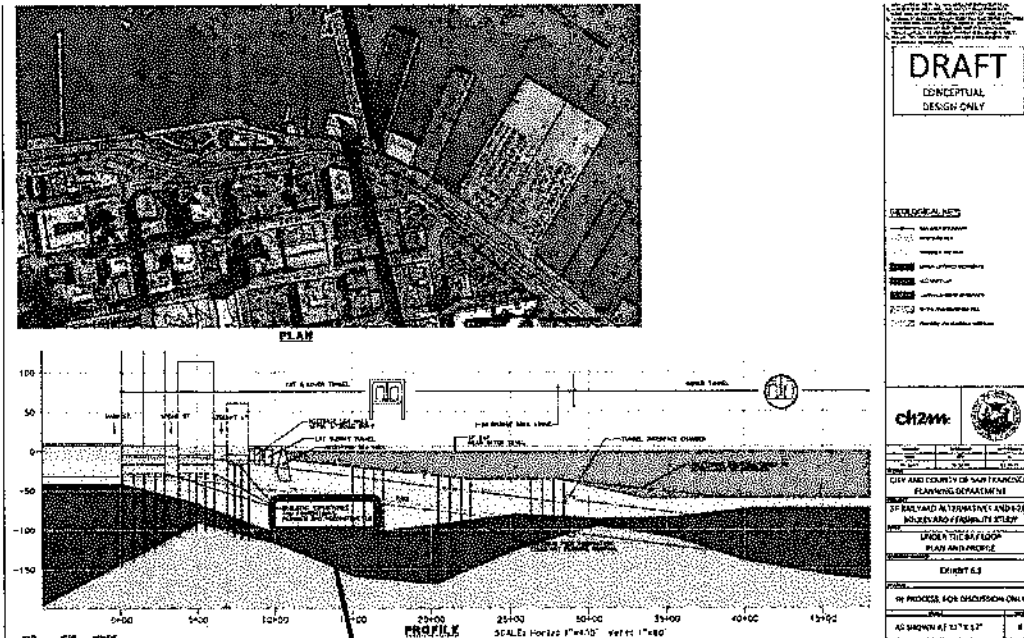
- **Crossrail: 13 miles of twin-bore tunnels and two ¼ mile-long stations under existing buildings** awarded in 2009 for **under \$2B**.  
<http://www.crossrail.co.uk/news/articles/crossrail-awards-major-tunnelling-contracts-worth-125bn>

- **Central Subway:** *"The Tunnels contract was awarded in June 2011, to the Joint Venture of Barnard/Impregilo/Healy. The \$233.9 million contract consisted of 1.5 miles of twin-bore tunnels"*  
[https://www.sfcta.org/sites/default/files/content/CapitalProjects/images/Central Subway/CentralSubway factsheet\\_042017.pdf](https://www.sfcta.org/sites/default/files/content/CapitalProjects/images/Central%20Subway/CentralSubway_factsheet_042017.pdf)

The 2012 estimate for the tunnels and the 7<sup>th</sup> & King station was revised to \$2B on page 9 of the July 8 2018 letter and is followed by a table showing an **average of \$350M/mile** for recently awarded tunnel contracts.

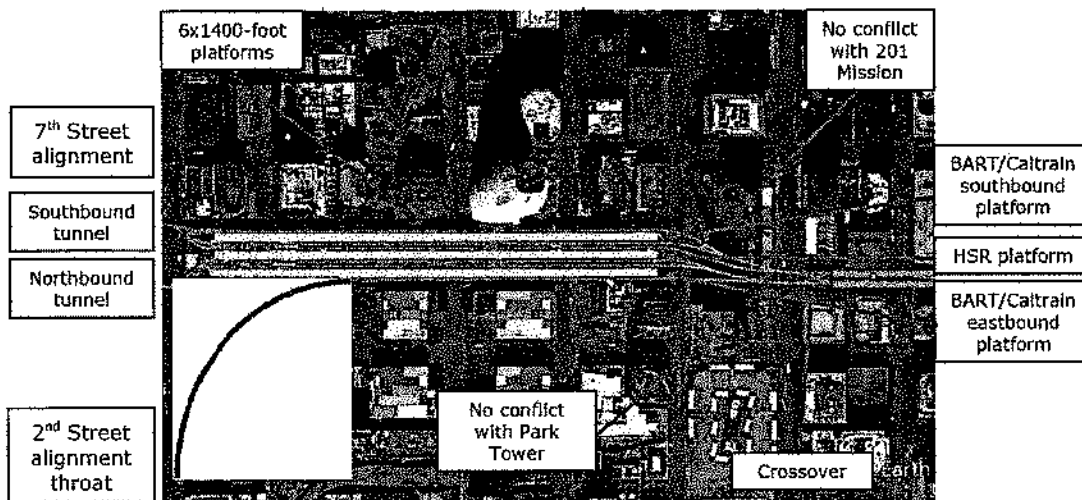
**Adverse impact to other buildings**

As can be seen in the video and the 2012 presentation, the twin bores did not impact any buildings because **the 7<sup>th</sup> street alignment was the only alignment that made it possible to connect the Transit Center to the East Bay without requiring massive building condemnations.**



With regards to comments about the 2012 alignment impacting the foundations of the Park Tower building, it should be noted that Ms. Gygi informed Mayor Ed Lee's office in December 2014 that it was "OK to sell Transbay Block 5" because she had a "Spear Street solution" consisting of "Removing and reconstructing building structures and foundations" including the entire Rincon Center  
[http://default.sfplanning.org/Citywide/railyard\\_bldv/RAB\\_TechReport\\_052118\\_DRAFT-AppendixB.pdf](http://default.sfplanning.org/Citywide/railyard_bldv/RAB_TechReport_052118_DRAFT-AppendixB.pdf) (page 4)

Here is a revised draft Transbay tunnel alignment which requires the condemnation of a single building on Main Street.



### **Relocation of 4<sup>th</sup> & King Railyard**

As can be seen from the above snapshot, the 7<sup>th</sup> Street alignment makes it possible to fit 1,400-foot platforms (vs. 800 for the 2<sup>nd</sup> street alignment) within the existing train box, so (assuming double-stacking), the Transit Center could accommodate the same number of trains (12) as the 4<sup>th</sup> & King railyard and **there would be no need for train storage at any other location.**

### **Location of crossover**

The 2013 refined alignment introduced two crossovers between the Minna (southbound) and Natoma (northbound) tunnels (11/17 2013 letter to Luis Zurinaga).



The location of the Yerba Buena Garden crossover is deliberate because it has the potential to use the Hall E&F slabs to support the face during excavation without additional support from a layer of grout.

The crossovers are discussed at length in the November 17<sup>th</sup> 2013 letter (attached) and closely follow Crossrail crossover designs (see engineering diagrams on page 7 and the Whitechapel Station crossover in particular).

### **Curves would not meet CHSRA standards**

This comment is incomprehensible. The curve radii as the tunnels transition from 7<sup>th</sup> Street to Minna and Natoma are approximately 1,800 feet versus 600 feet for each of the three sharp curves in the current DTX alignment.

Assuming 100-foot piles, there should be no building impacts because the elevation of the tunnels through the curve drops to 130 feet below the surface rising to -110 feet before going under the Central Subway.

With regards to building impacts on Second Street between Minna and Natoma, I reached out to an engineering firm specializing in Sequential Excavation Mining (SEM) and they advised that the properties could be preserved if necessary. Here is their reference project:

*"The tunnel passes diagonally under the 100 year old Russia Wharf complex, which comprises three seven-story buildings with steel frames and brick facades listed in the National Register of Historic Places"*

<http://projects.dr-sauer.com/projects/mbta-russia-wharf-segment-section-cc03a>

### **Operational Constraints and Safety risks**

The comment that *"The two single-track tunnels proposed by Mr. LeBrun would constrain operations, create severe safety risks, and pose maintenance challenges"* does not have any basis in fact, specifically that these tunnels follow best practices developed on the Channel Tunnel Rail Link, Crossrail, High Speed Two (HS2) and the Central Subway.

Please encourage Ms. Gygi to familiarize herself with basic twin bore tunnel ventilation principles:

<http://webarchive.nationalarchives.gov.uk/20110131084552/http://www.dft.gov.uk/pgr/rail/pi/highspeedrail/hs2ltd/routeengineering/pdf/appendixatok.pdf> (page 12: twin bore tunnels)

With regards to *"Constructing the passages would disrupt businesses and circulation on Second Street and would be difficult to locate, given the large number of existing buildings with deep foundations and below-grade parking.."*

Once again, this comment is incomprehensible. First, the 7<sup>th</sup> Street alignment does not need cross-passages on Second Street and second most of the cross-passages are located under existing streets between Minna and Natoma (no building impacts). Last but not least, Ms. Gygi does not appear to be familiar with recent developments in cross-passage construction:



<https://www.tunneltalk.com/New-Products-Oct2015-Cross-passage-excavation-made-easy.php>

## Design Requirements

---

Ms. Gygi states that "The proposed alignment would eliminate the connection with the Central Subway."

Once again, this statement does not have any basis in fact. The Central Subway is one of the "Guiding principles" in the 2012 presentation which shows a MUNI station serving both the N and the T-Third via an extension of the 16<sup>th</sup> Street turnback loop integrated with the 7<sup>th</sup> Street underground Caltrain/HSR station (similar to Montgomery and Embarcadero stations). Furthermore, the 7<sup>th</sup> Street location provides an opportunity to integrate an additional level ready to provide a BART connection to Alameda.

*"Additionally, relocating the 4th/Townsend Station would not eliminate the cut-and-cover construction techniques and the resultant impacts, as Mr. LeBrun contends. 7th/Townsend ground conditions still require cut-and-cover construction. The relocation would also lose the advantage of the adjacent 4th/King railyard as a potential staging area for construction materials of the DTX."* Once again this statement does not have a basis in fact because the 2012 Guiding Principles clearly state "**No surface impacts north of Townsend.**" The 7<sup>th</sup> Street location additionally eliminates all impacts on Townsend Street and has the advantage of using both the unused portion of the Caltrain railyard at the corner of 7<sup>th</sup> & Townsend as well as the Recology site for staging. Last but not least, unlike 4<sup>th</sup> & Townsend, the 7<sup>th</sup> Street location serves Mission Bay, including UCSF and the Arena as well as SOMA because it straddles China Creek.

### Structural Compromise to the SFTC

Once again, had Ms. Gygi paid closer attention to the proposed alignment, she would have realized that there is no need to "demolish the west end of the brand new building" let alone "take the new bridge out of service" or "require the relocation of the already built columns".

### 3) Travel times

Ms. Gygi is questioning a travel time saving of 3 minutes between San Jose and San Francisco. This saving was achieved through a series of refinements in 2013 designed to sustain a minimum speed of 80 MPH until approaching Moscone Center.

As an example, a close examination of the video and slide 10 of the 2012 presentation will reveal **that the alignment is not under Pennsylvania Avenue per se** because this would result in a sharp bend at the junction of Pennsylvania and 7<sup>th</sup> (this sharp bend is most likely the reason behind the 2017 SMA study showing a speed of 40 MPH as far south as 22<sup>nd</sup> Street).

# DTX South to Mission Bay station

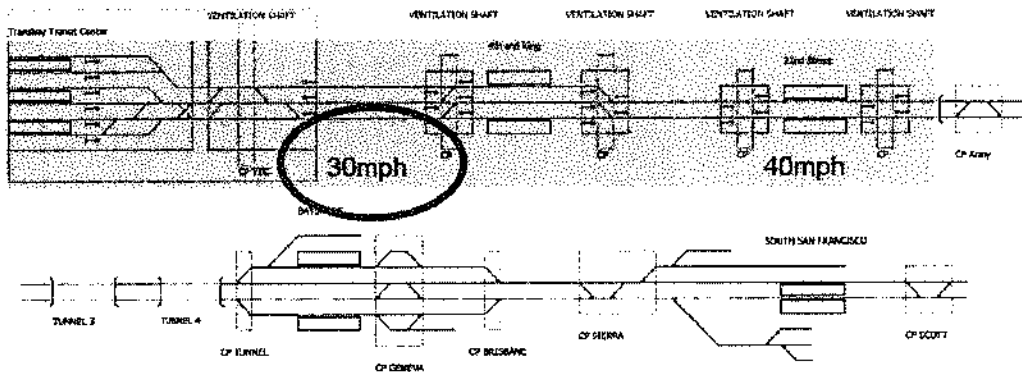


Ms. Gigy's assertion that "The curve speeds on the DTX alignment are 35 mph between 7th/Townsend and 2nd/Townsend." appears to contradict the 2015 SMA report

## OPERATIONS

Current track layout was accepted as the starting point for initial analysis.

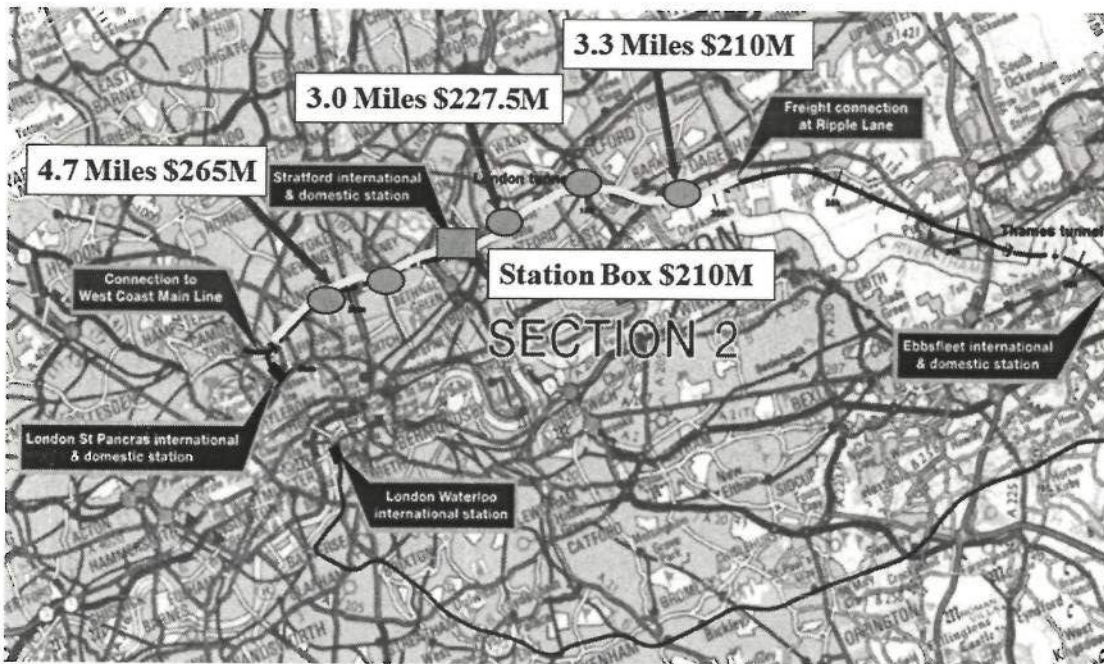
ALTERNATIVE 2A



## Conclusions

- The 3-track requirement is a direct aftereffect of the poorly designed 2<sup>nd</sup> Street throat structure
- The 3-track design results in a poorly ventilated tunnel design requiring multiple vent structures while London's twin bore high speed tunnels require a vent structure every 2 miles (see below)

## 2001 London tunnel contracts



- There has been no attempt to comply with Streets & Highways Codes section 2704.09(b)

*"Maximum nonstop service travel times for each corridor that shall not exceed the following:*

*(3) San Francisco-San Jose: 30 minutes."*

<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=shc&group=02001-03000&file=2704.04-2704.095>

- There has been no attempt to connect the Transit Center to the East Bay
- There has been no attempt to fit 1,400-foot platforms within the existing 1,543-foot train box

Sincerely,

Roland Lebrun

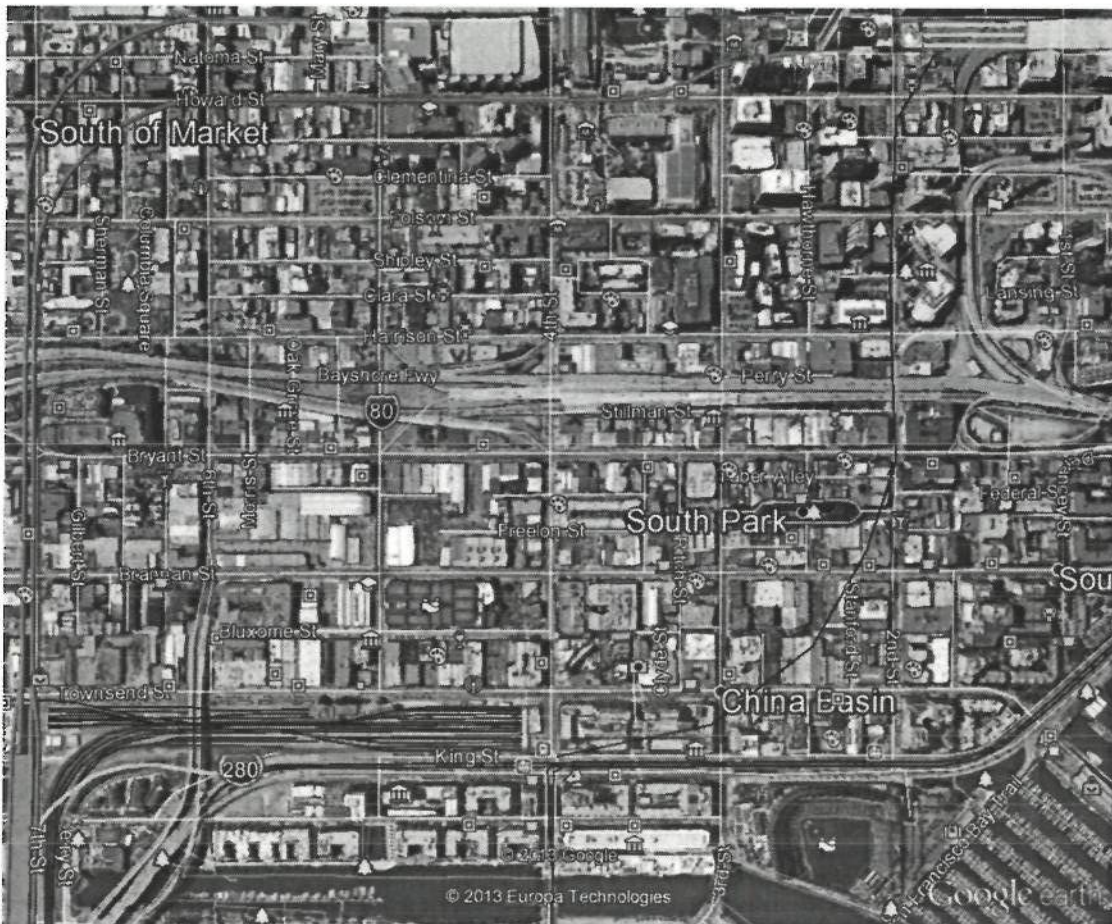


The purpose of this short paper is to outline a refined northbound DTX tunnel alignment capable of delivering substantially higher TTC capacity if the crossover under Main Street is not available.

The refined alignment enables the implementation of Crossrail crossover designs and construction techniques to deliver a track layout with the same capacity as the connection between the HS1 tunnels and St Pancras platforms 11, 12 & 13.

**Background:**

The current northbound DTX tunnel proposal avoids existing building foundations by veering east off 7<sup>th</sup> Street under Howard before lining up with Natoma east of 3<sup>rd</sup> Street.



The refined northbound tunnel alignment lines up with Natoma east of 7<sup>th</sup> Street and runs deep enough to avoid any current or future building foundations between 7<sup>th</sup> and 3<sup>rd</sup> Street, including Moscone Center which is understood to have foundations supported by micropiles extending 100 feet below the surface.



Moving the northbound DTX tunnel alignment to Natoma makes it feasible to connect the two tunnels with additional crossovers as follows:

- 1) Crossover from Northbound to Southbound tunnel between 3<sup>rd</sup> and 4<sup>th</sup> Street. This crossover's purpose is to route northbound trains to TTC platforms 1, 2 & 3 (northern-most platforms closest to Mission Street) which should be reserved for high-volume traffic (12 trains/hour).



2) Crossover from Northbound to Southbound tunnel between 6<sup>th</sup> & 7<sup>th</sup> Street.  
This crossover is for southbound traffic originating from TTC platforms 4, 5 & 6 which should be reserved for low-volume traffic (maximum 4 trains/hour) because southbound trains originating from these platforms can potentially interfere with northbound traffic between 7<sup>th</sup> street and the TTC.

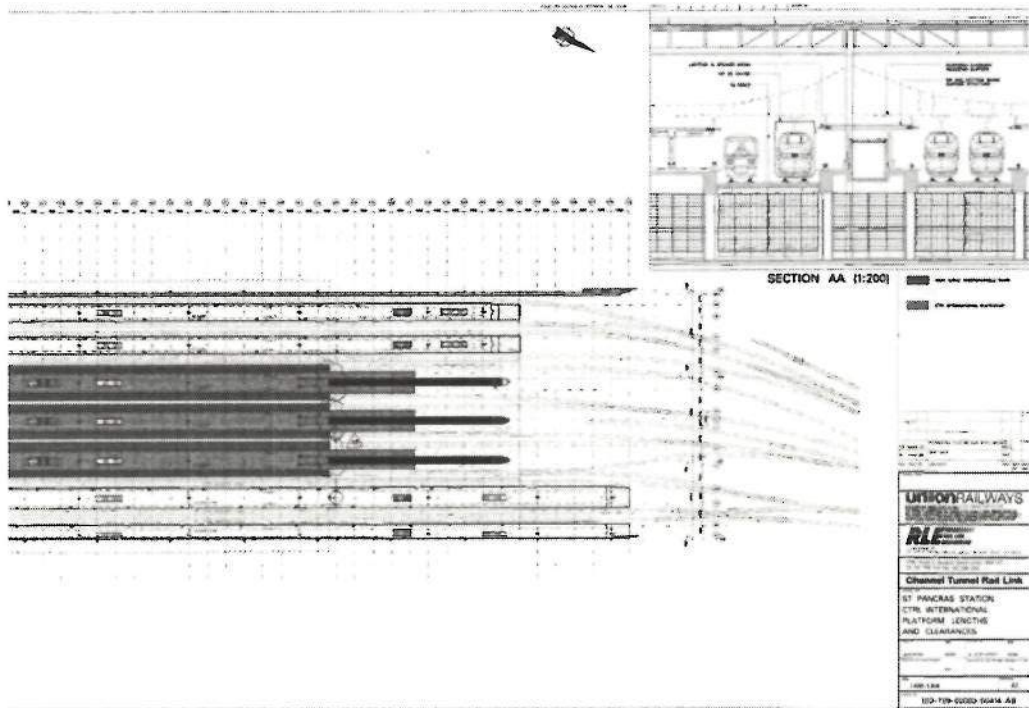
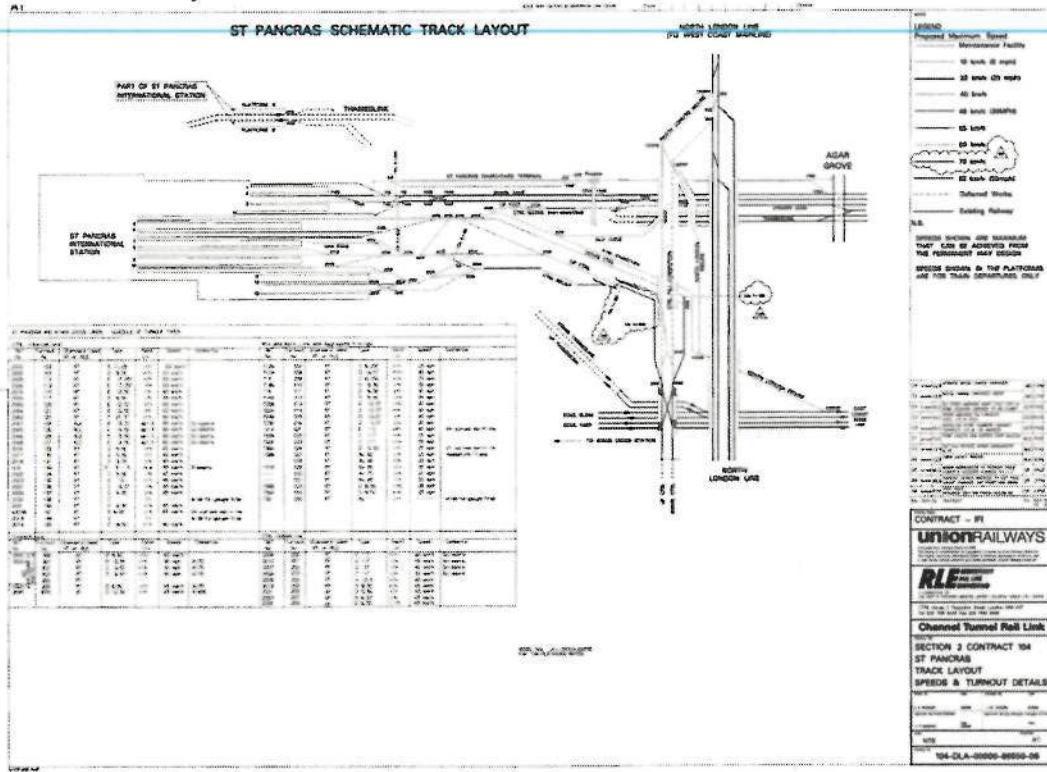


Last but not least, the refined alignment is expected to deliver costs savings through shorter cross-passages between the northbound and southbound tunnels and these savings are expected to cover the construction costs of the two crossovers.



Reference material:

St Pancras track layout



# 2012 Summer Olympics timetable (12 trains/hour)

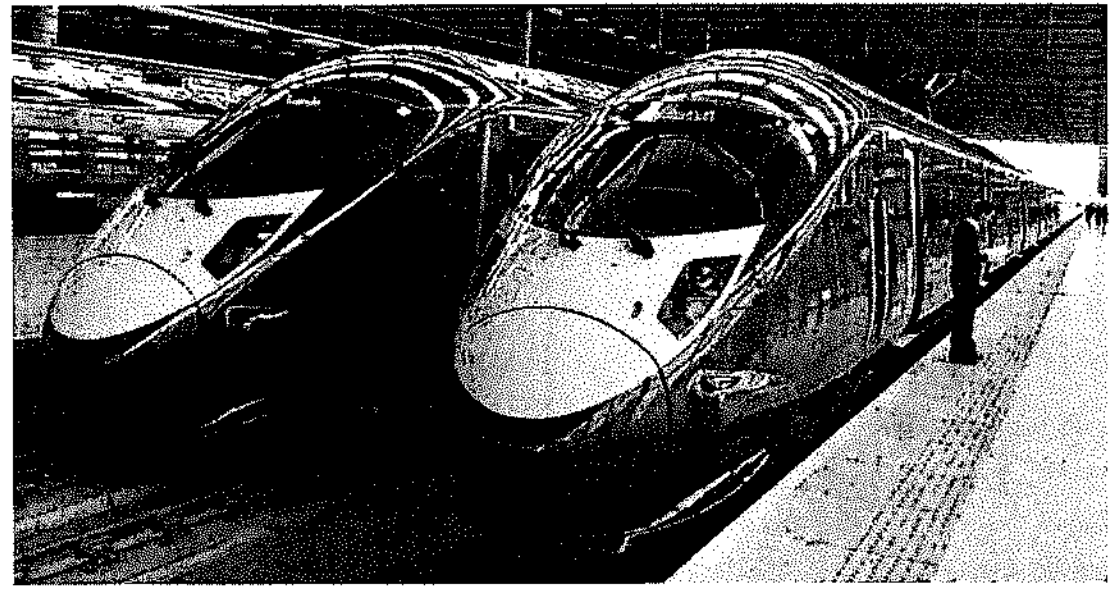
Service	Platform	06:00	06:15	06:30	06:45	07:00	07:15	07:30	07:45	08:00	08:15	08:30	08:45	09:00	09:15	09:30	09:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00	19:15	19:30	19:45	20:00	20:15	20:30	20:45	21:00	21:15	21:30	21:45	22:00	22:15	22:30	22:45	23:00	23:15	23:30	23:45	24:00
St Pancras International	11	06:00	06:15	06:30	06:45	07:00	07:15	07:30	07:45	08:00	08:15	08:30	08:45	09:00	09:15	09:30	09:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00	19:15	19:30	19:45	20:00	20:15	20:30	20:45	21:00	21:15	21:30	21:45	22:00	22:15	22:30	22:45	23:00	23:15	23:30	23:45	24:00
St Pancras International	12	06:00	06:15	06:30	06:45	07:00	07:15	07:30	07:45	08:00	08:15	08:30	08:45	09:00	09:15	09:30	09:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00	19:15	19:30	19:45	20:00	20:15	20:30	20:45	21:00	21:15	21:30	21:45	22:00	22:15	22:30	22:45	23:00	23:15	23:30	23:45	24:00
St Pancras International	13	06:00	06:15	06:30	06:45	07:00	07:15	07:30	07:45	08:00	08:15	08:30	08:45	09:00	09:15	09:30	09:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00	19:15	19:30	19:45	20:00	20:15	20:30	20:45	21:00	21:15	21:30	21:45	22:00	22:15	22:30	22:45	23:00	23:15	23:30	23:45	24:00

For guide timetables & symbols see page 7

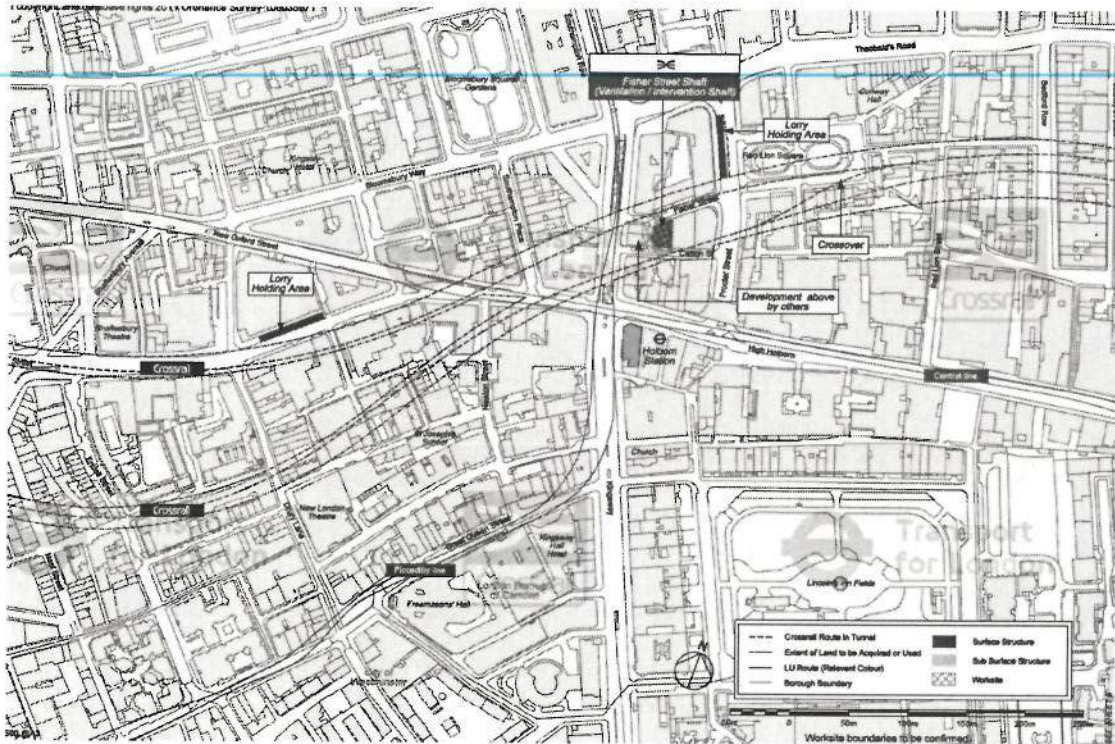
Trains not run in the early hours of Friday 8 July but will run in the early hours of Monday 12 August

27 July to 10 August 2012  
 Mondays to Fridays  
 Highspeed 1 - London to Stratford International, Eboliham International, Greenwich, the Abbey, Faversham, Sittingbourne, Swastham and Ashford International

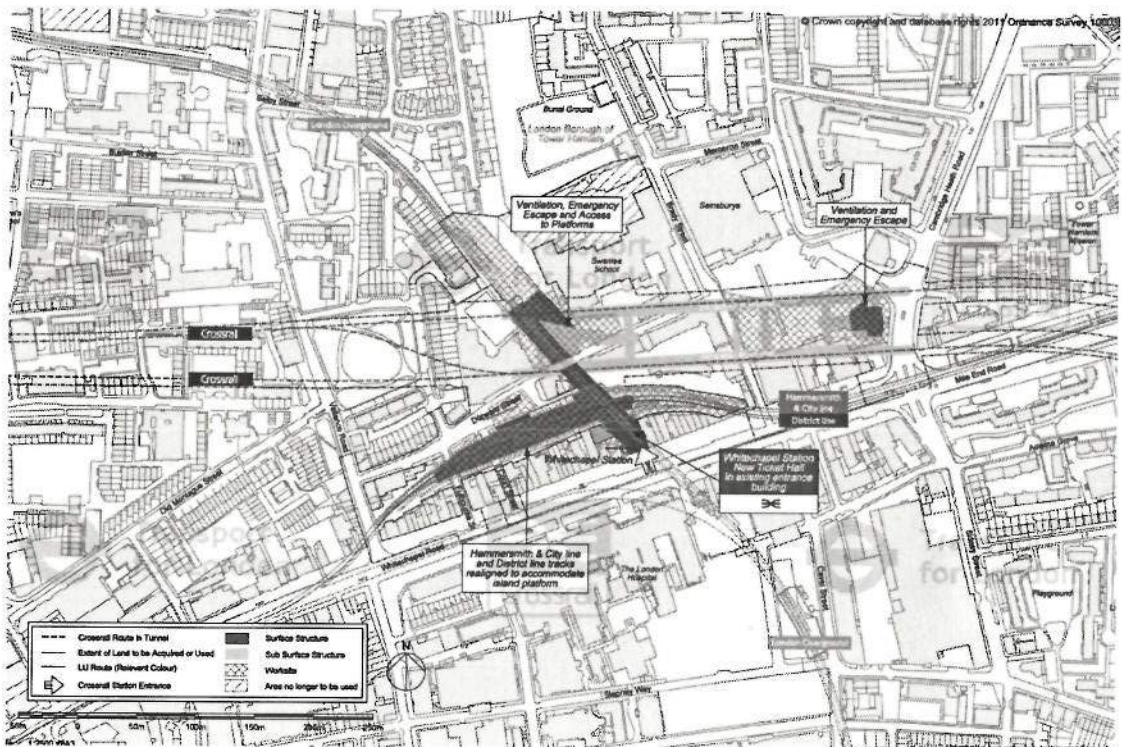
## St Pancras domestic platforms 11, 12 & 13

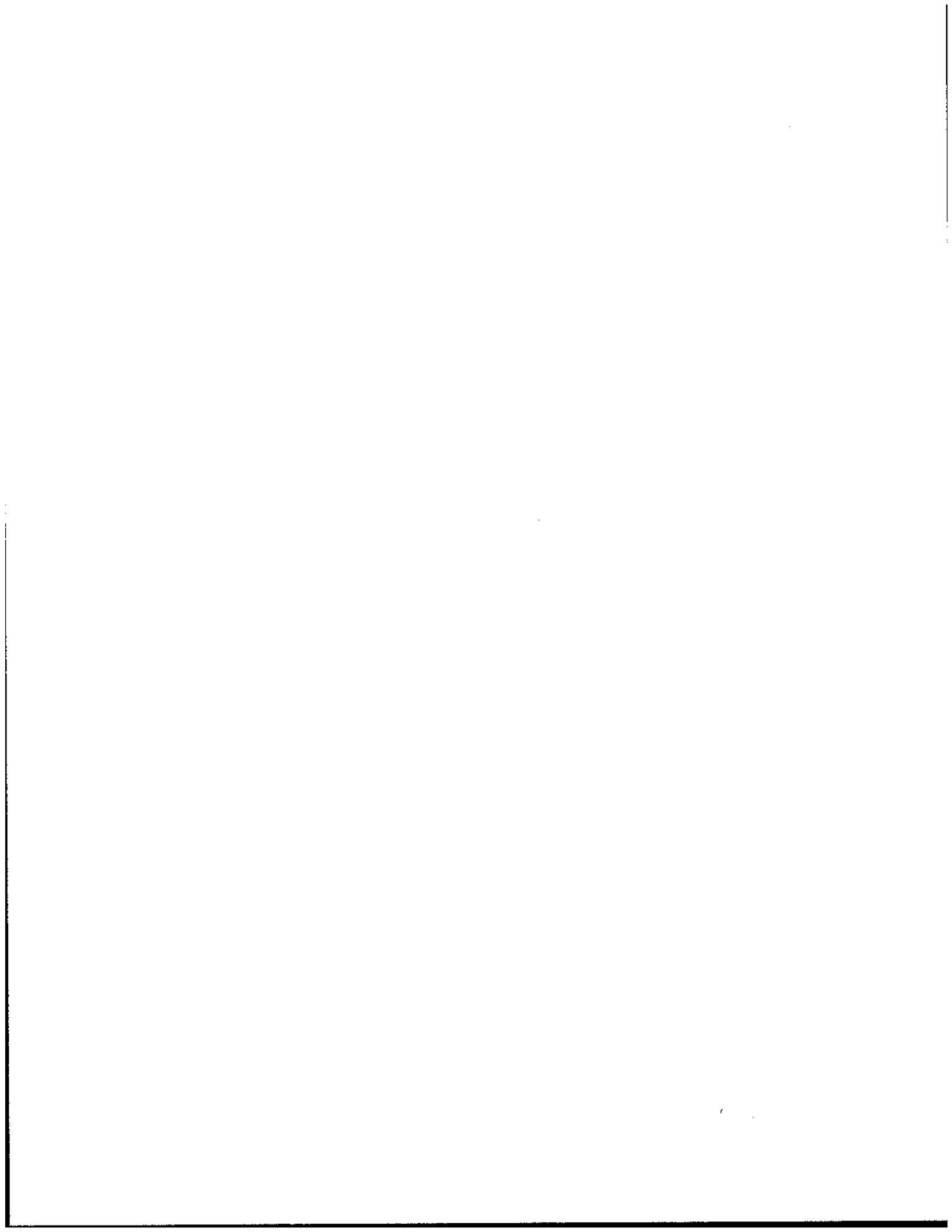


## Red Lion Square (London WC1) Crossrail crossover



## Whitechapel Crossrail station (London E14) crossover





**Low, Lori**

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**From:** Kevin Burke [REDACTED] >  
**Sent:** Friday, September 07, 2018 11:59 AM  
**To:** Tietjen, Brent  
**Cc:** Caltrain, Bac (@caltrain.com); Low, Lori  
**Subject:** Re: Problems with proposed east side exit design at South San Francisco Caltrain station

Thank you very much for looking into this issue! I appreciate it.

I've also sent a message to the Caltrans District 4 Bicycle and Pedestrian Advisory Committee members, as Caltrans may want to have a say if there's an incursion into their offramp space, but I haven't heard back from them yet.

On 9/7/18, Tietjen, Brent [REDACTED] > wrote:

> Hi Kevin,  
>  
> Thanks for your comments below regarding the Caltrain South San  
> Francisco Station Improvement Project. I have brought this to the  
> attention of the Project Manager, our Station Access Manager, and  
> South San Francisco Planning. We are researching possible alternatives  
> to the current configuration and will provide an update once we are  
> able to investigate further.  
>  
> Please let me know if you have additional questions at this time.  
>  
> Thanks,  
>  
> Brent Tietjen, Government and Community Relations Officer SamTrans |  
> Caltrain | TA  
> 1250 San Carlos Ave.  
> San Carlos, CA 94070-1306  
> 650-508-6495

> [REDACTED] >  
>  
>  
>  
> -----  
>  
> From: Kevin Burke [REDACTED]  
> Sent: Tuesday, September 04, 2018 11:21 AM  
> To: Caltrain, Bac (@caltrain.com); [REDACTED];  
> [REDACTED]  
> Subject: Problems with proposed east side exit design at South San  
> Francisco Caltrain station  
>  
> Hi,  
> Reading through this month's Caltrain board presentation, there's a  
> rendering on page 13 of the east side station offramp that I haven't  
> seen in either the SSF Downtown Area Plan or the Bike/Ped Plan and I'm  
> wondering how finalized that is.

shown in  
next email  
w/images

> [http://www.caltrain.com/Assets/ Agendas+and+Minutes/JPB/2018/2018-09-](http://www.caltrain.com/Assets/Agendas+and+Minutes/JPB/2018/2018-09-)

> 06+SSF+presentation.pdf

>

> [caltrain-board-meetnig.png]

>

> It's not ideal to have pedestrians and cyclists on the north side of  
> East Grand for two reasons: ped/bike crossings will hold up shuttles  
> merging onto East Grand, and peds/bikes have to go out of the way up  
> to the East Grand/Grand intersection and then cross two signals - one  
> with a 30 second wait time and the other with a 42 second wait time.  
> If one of the sidewalks in that photo is supposed to be a bike path,  
> it's currently in poor shape and it's not clear there are plans to repair the surface.

>

> [cid:image002.jpg@01D4469B.924249C0]

>

> It's pretty easy to imagine instead that cyclists will try to get  
> across 2-3 lanes of traffic here, instead of waiting for two WALK signs at East Grand:

>

> [bike-ramp-exit-how.png]

>

> In an ideal world bikes/peds could just cut straight across to the  
> Gateway/East Grand intersection like this. I believe SSF owns the  
> right of way where the bottom red line is located.

>

> [proposed-route-vs-good-route.png]

>

> If we are stalling the undercrossing construction by a few months, I  
> hope that we could come up with a better plan here!

>

> Thanks,

> Kevin

>

> --

> Kevin Burke

> 925.271.7005 | [kev.inburke.com](http://kev.inburke.com)<<http://kev.inburke.com>>

>

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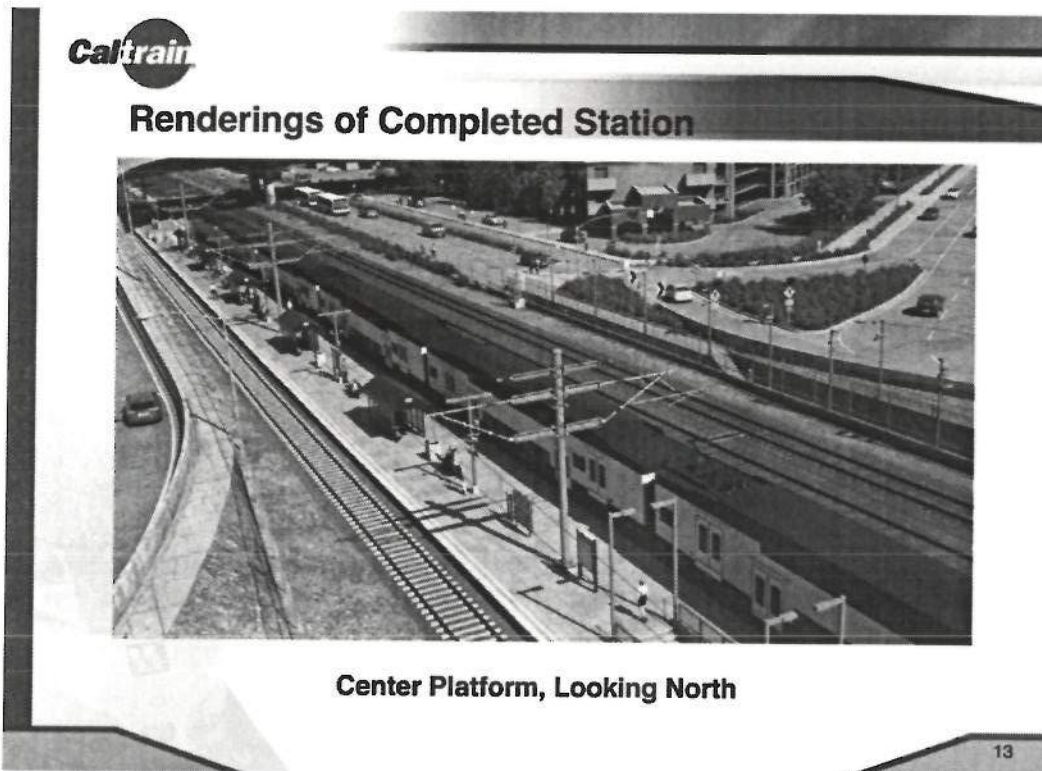
Kevin Burke

phone: 925.271.7005 | [kev.inburke.com](http://kev.inburke.com)

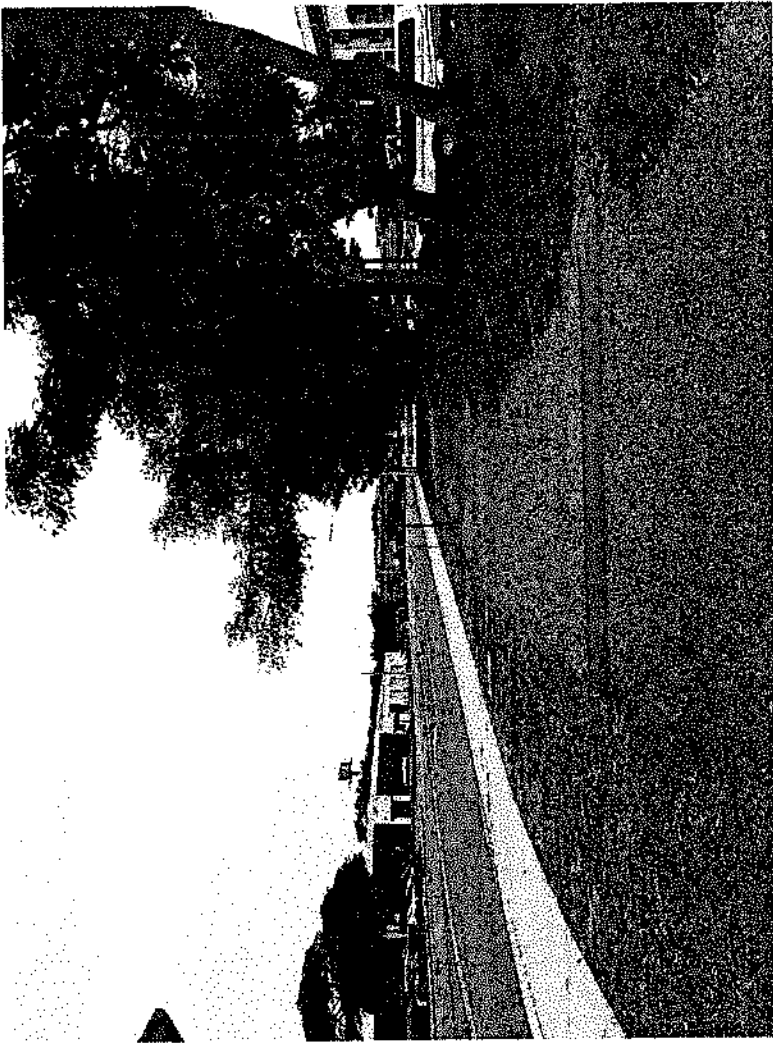
Low, Lori

**From:** Kevin Burke <[REDACTED]>  
**Sent:** Tuesday, September 04, 2018 11:21 AM  
**To:** Caltrain, Bac (@caltrain.com), [REDACTED]  
**Subject:** Problems with proposed east side exit design at South San Francisco Caltrain station

Hi,  
Reading through this month's Caltrain board presentation, there's a rendering on page 13 of the east side station offramp that I haven't seen in either the SSF Downtown Area Plan or the Bike/Ped Plan and I'm wondering how finalized that is. [http://www.caltrain.com/Assets/\\_Agendas+and+Minutes/JPB/2018/2018-09-06+SSF+presentation.pdf](http://www.caltrain.com/Assets/_Agendas+and+Minutes/JPB/2018/2018-09-06+SSF+presentation.pdf)



**It's not ideal to have pedestrians and cyclists on the north side of East Grand for two reasons: ped/bike crossings will hold up shuttles merging onto East Grand, and peds/bikes have to go out of the way up to the East Grand/Grand intersection and then cross two signals - one with a 30 second wait time and the other with a 42 second wait time. If one of the sidewalks in that photo is supposed to be a bike path, it's currently in poor shape and it's not clear there are plans to repair the surface.**



It's pretty easy to imagine instead that cyclists will try to get across 2-3 lanes of traffic here, instead of waiting for two WALK signs at East Grand:





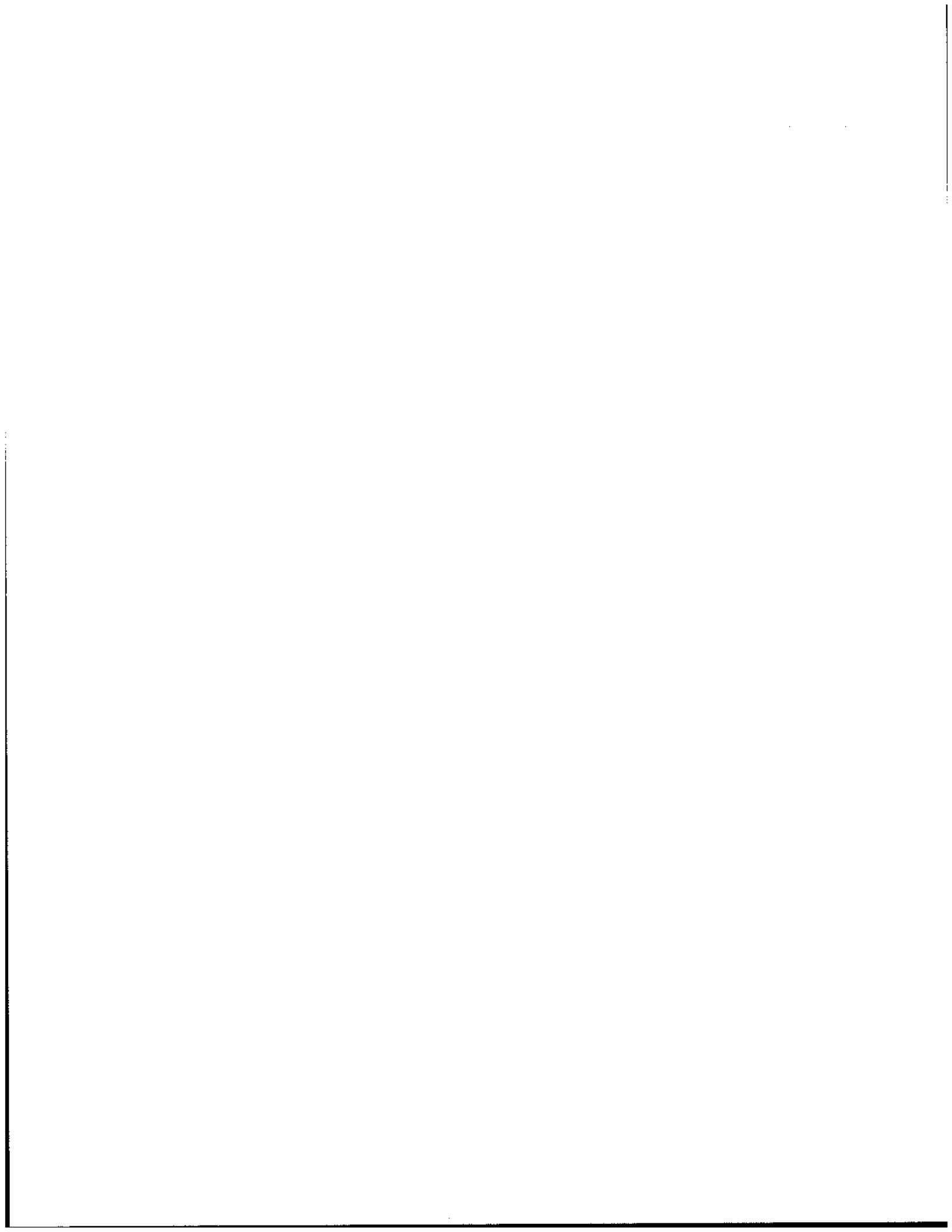
In an ideal world bikes/peds could just cut straight across to the Gateway/East Grand intersection like this. I believe SSF owns the right of way where the bottom red line is located.



If we are stalling the undercrossing construction by a few months, I hope that we could come up with a better plan here!

Thanks,  
Kevin

--  
Kevin Burke  
925.271.7005 | [kev.inburke.com](http://kev.inburke.com)



**Low, Lori**

---

**From:** Roland Lebrun <[REDACTED]>  
**Sent:** Wednesday, September 05, 2018 9:24 AM  
**To:** SFCTA CAC  
**Cc:** Steve Stamos, Clerk of the Board; Board (@caltrain.com); cacsecretary [@caltrain.com]; Nila Gonzales; info@bayareametro.gov; CHSRA Board; Caltrain, Bac (@caltrain.com); TJPA CAC  
**Subject:** SFCTA CAC item 7. Support for Pennsylvania Avenue alignment  
**Attachments:** SFCTA CAC item #7 support for Pennsylvania Avenue alignment.pdf; Item #2 Citizens Advisory Committee Report.pdf; Item 7 - DTX Penn alignment.pdf

Dear Chair Larson and members of the SFCTA CAC,

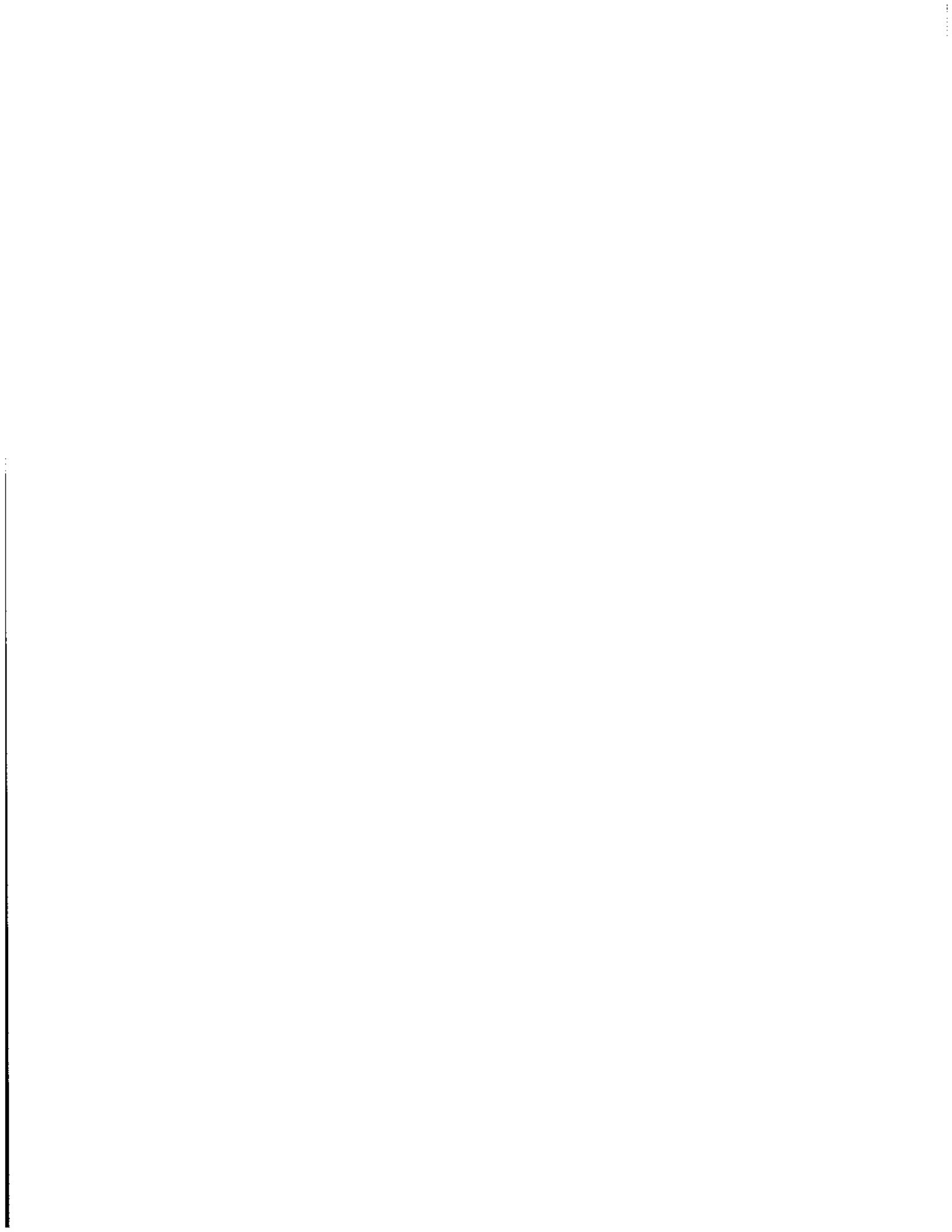
Please find my attached response to Ms. Susan Gygi's August 14th letter.

I look forward to hearing the CAC's comments.

Sincerely,

Roland Lebrun

cc  
SFCTA Board  
Caltrain Board  
TJPA Board  
CHSRA Board  
MTC Commissioners  
Caltrain CAC  
Caltrain BAC  
TJPA CAC



Roland Lebrun  
[ccss@msn.com](mailto:ccss@msn.com)  
September 5, 2018

SFCTA CAC September 5 Special Meeting

Dear Chair Larson and members of the SFCTA CAC

Further to my July 8<sup>th</sup> letter to the SFCTA Board and Ms. Gygi's August 14<sup>th</sup> 2018 response (both attached), I appreciate the opportunity to respond to some of the points raised by Ms. Gygi.

First, I apologize for any confusion the presentation may have caused. As stated in the last paragraph on page 2 of my July 8 letter (*The solution outlined in the attached "Rethinking DTX" (2012) presentation*), this presentation was prepared in 2012, approximately two years before the so-called "RAB study". Most of the presentation stands today with the exception of the following items:

**1) \$1.3B cost estimates.** These estimates were based on two contracts awarded during the 2008 Great Recession:

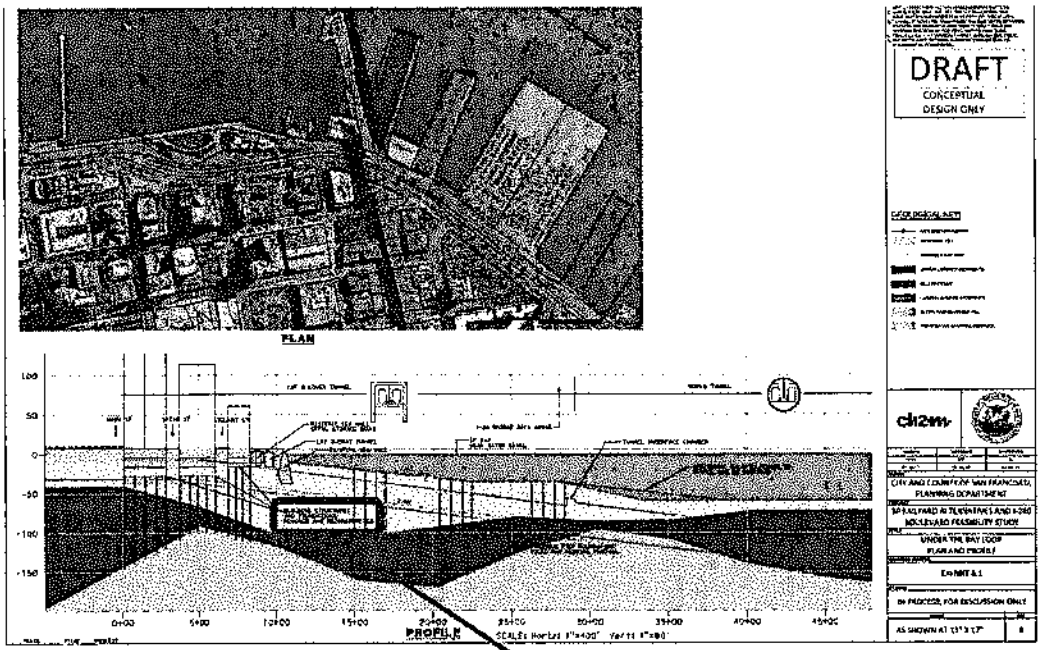
- **Crossrail:** 13 miles of twin-bore tunnels and civils for two ¼ mile-long stations under existing buildings awarded in 2009 for **under \$2B**.  
<http://www.crossrail.co.uk/news/articles/crossrail-awards-major-tunnelling-contracts-worth-125bn>

- **Central Subway:** "The Tunnels contract was awarded in June 2011, to the Joint Venture of Barnard/Impregilo/Healy. The **\$233.9 million contract** consisted of 1.5 miles of twin-bore tunnels"  
[https://www.sfcta.org/sites/default/files/content/CapitalProjects/images/Central Subway/CentralSubway factsheet 042017.pdf](https://www.sfcta.org/sites/default/files/content/CapitalProjects/images/Central%20Subway/CentralSubway%20factsheet%20042017.pdf)

The 2012 estimate for the tunnels and the 7<sup>th</sup> & King station was revised to \$2B on page 9 of the July 8 2018 letter and is followed by a table showing an **average of \$350M/mile** for recently awarded tunnel contracts.

**2) Adverse impact to other buildings**

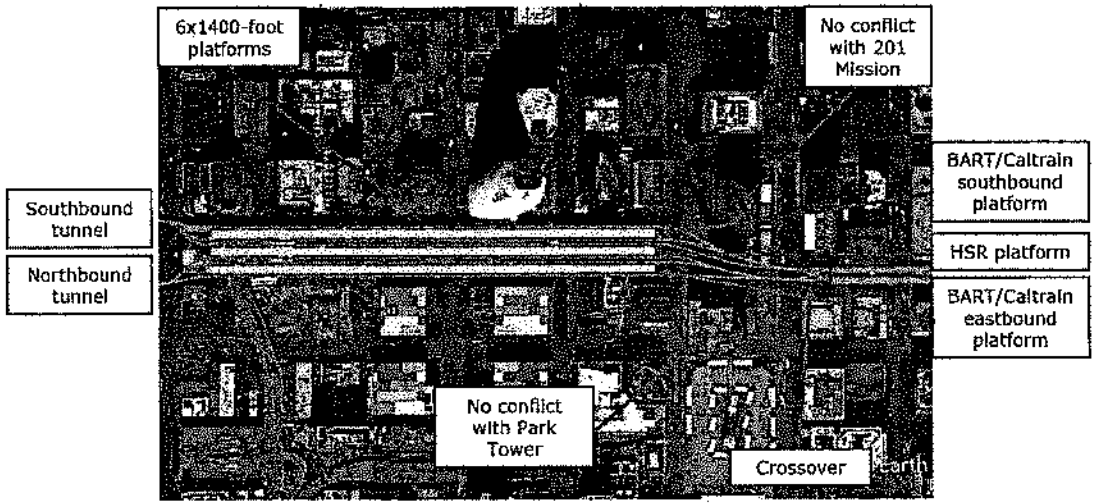
As can be seen in the video and the 2012 presentation, the twin bores did not impact any buildings because **the 7<sup>th</sup> street alignment was the only alignment that made it possible to connect the Transit Center to the east bay without requiring massive building condemnations including the entire Rincon Center**



With regards to comments about the 2012 alignment impacting the foundations of the Park Tower building, it should be noted that Ms. Gygi informed Mayor Ed Lee's office in December 2014 that it was OK to sell Transbay Block 5 because she had a "Spear Street solution"

[http://default.sfplanning.org/Citywide/railyard\\_bldv/RAB\\_TechReport\\_052118\\_DRAFT-AppendixB.pdf](http://default.sfplanning.org/Citywide/railyard_bldv/RAB_TechReport_052118_DRAFT-AppendixB.pdf) (page 4)

Here is a revised Transbay tunnel alignment which requires the condemnation of a single building on Main Street.



### 3) Travel times

Ms. Gygi is questioning a travel time saving of 3 minutes between San Jose and San Francisco. This saving was achieved through a series of refinements over 6 months in 2013 designed to sustain a minimum speed of 80 MPH until approaching the Moscone Center.

As an example, a close examination of the video and slide 10 of the 2012 presentation will reveal **that the alignment is not under Pennsylvania Avenue per se** because this would result in a sharp bend at the junction of Pennsylvania and 7<sup>th</sup> (this sharp bend is most likely the reason behind the 2017 SMA study showing a speed of 40 MPH as far south as 22<sup>nd</sup> Street).

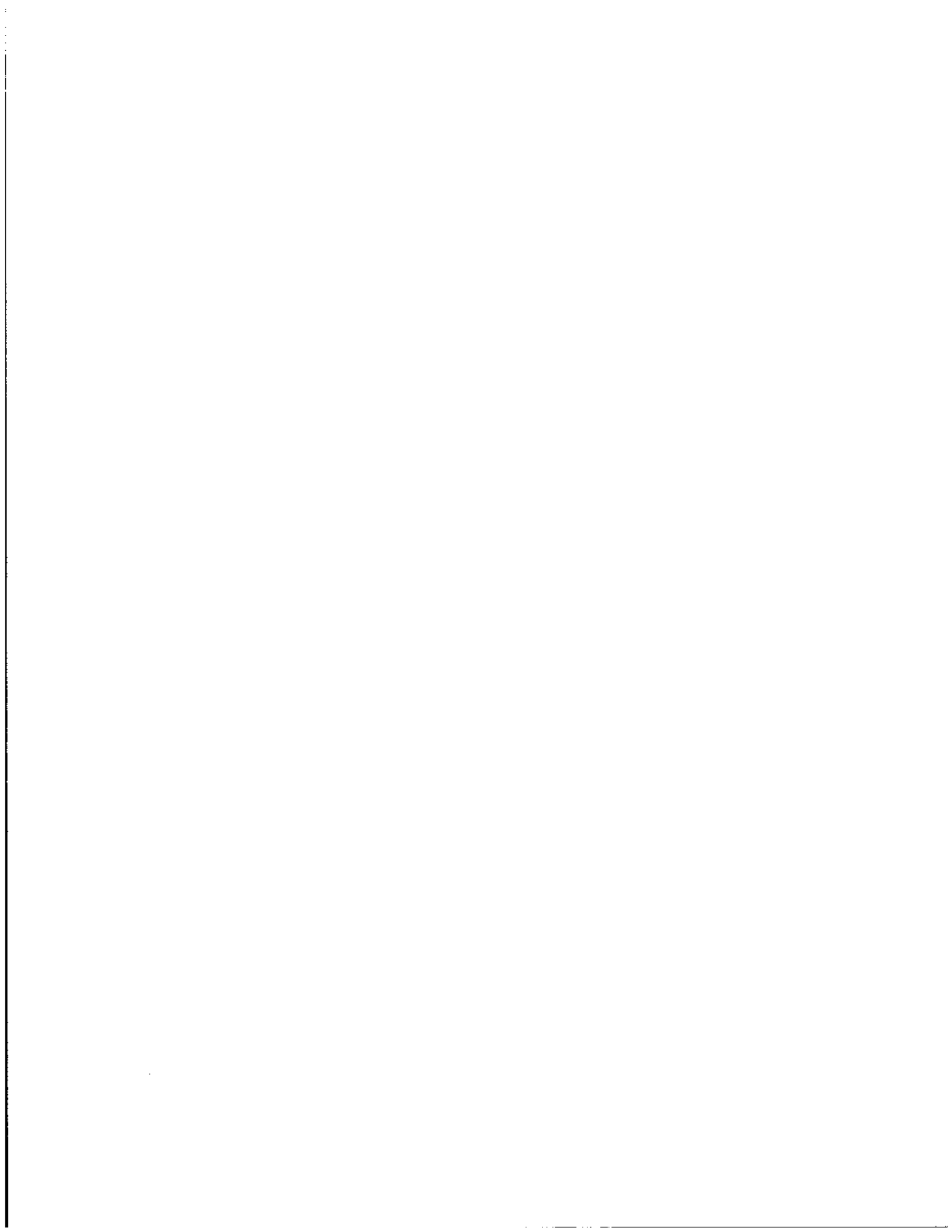
### DTX South to Mission Bay station



I will be addressing Ms. Gygi's other concerns when the item comes to the full SFCTA and the Board of Supervisors for their consideration.

Sincerely,

Roland Lebrun





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

The intent of this letter is to elaborate on my response to the following comments made at the June 27 CAC meeting:

*“Mr. Zurinaga said that the 7th Street alignment had been looked at multiple times and been rejected because of the complexity to build around and under city buildings. He said the alignment of the project had been carefully looked at for the last 14 years by industry experts.”*

The only slide referring to the 7<sup>th</sup> Street alignment is found on page 40 of the May 2018 DTX Peer Review Panel report (the 7<sup>th</sup> Street alignment was not reviewed by the Panel)

## DTX Project Background: 40 Other Alignments (2010)

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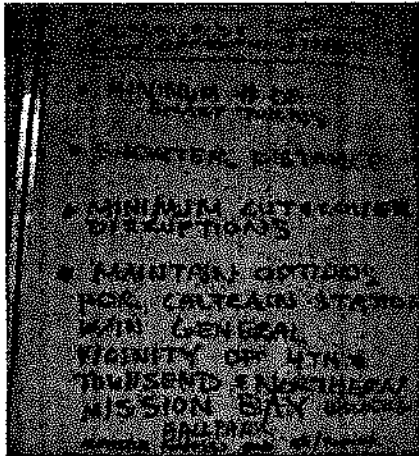
- Seventh St. reviewed in 2010
- Determined that conflicts with Central Subway and buildings along Minna/Natoma required alignment to be up to 130 ft deep.
- New required Throat Structure would require demolition of buildings between the Transit Center and Third St. including SF MOMA.



7

This slide appears to refer to the “San Francisco Technical Working Group DTX Engineering Charette and Alternative Alignment Analysis” held at the SFCTA offices on October 11-12, 2011 which identified the following issues and opportunities:

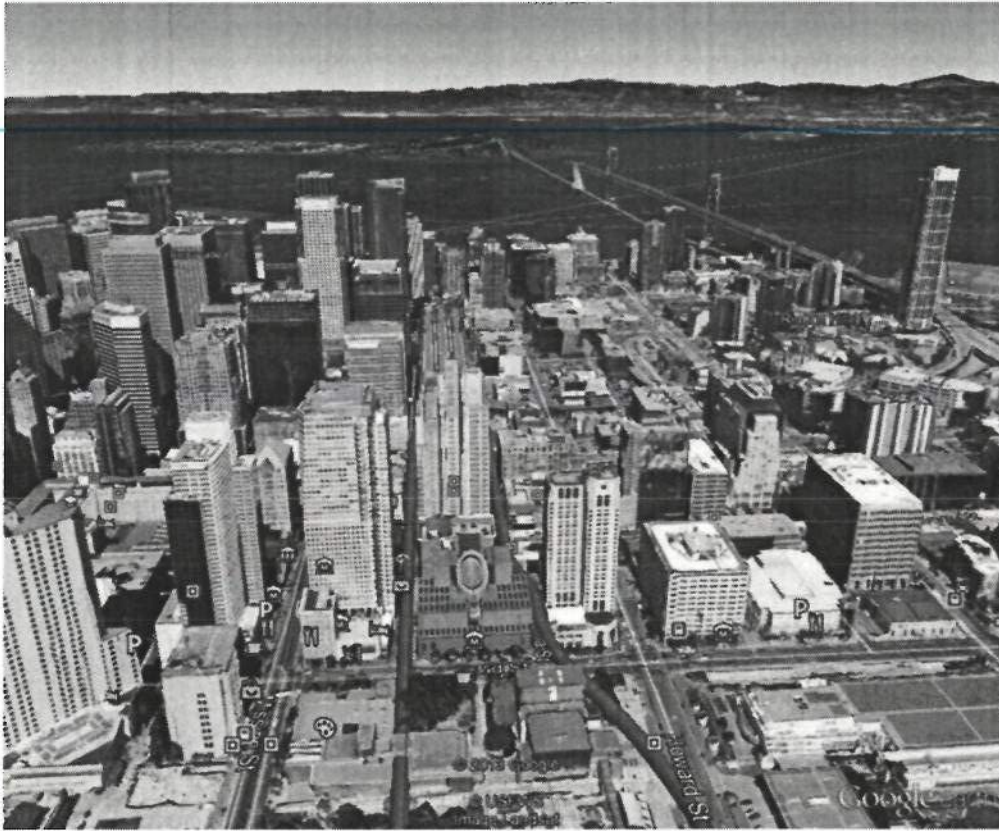
- Minimum # of sharp turns
- Shorter distance
- Minimum cut & cover disruption



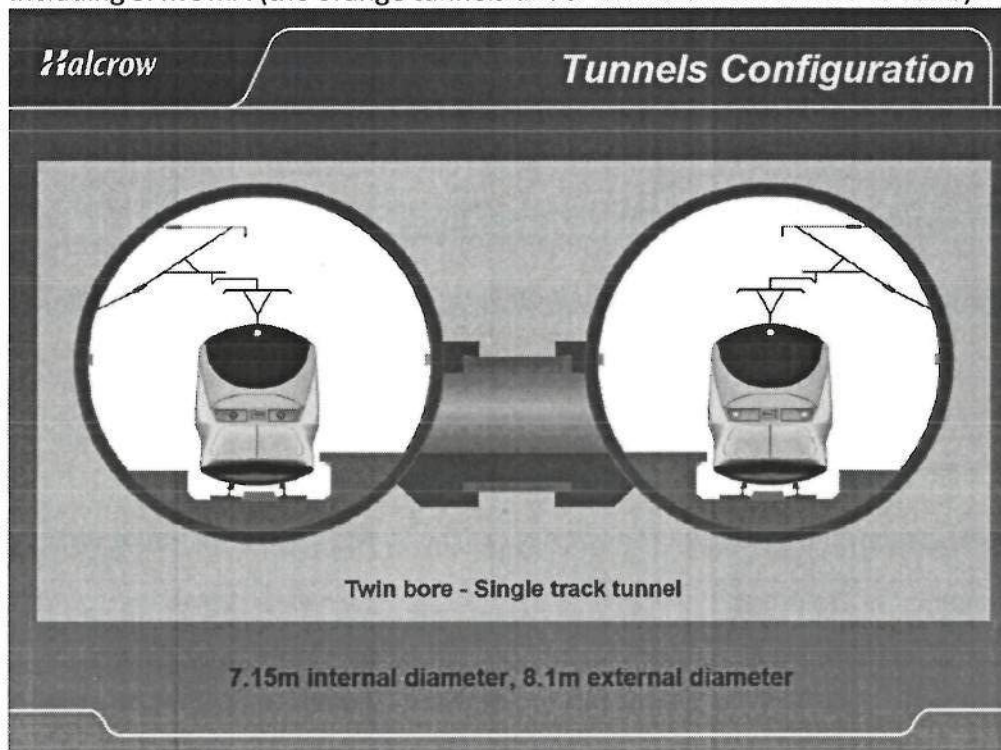
The Orange alignment above is the "7<sup>th</sup> Street alignment" with a fatal flaw (a single 44-foot diameter two-track tunnel).

*"Alternative 1B mimics Alternative 1A, but the alignment is routed under Natoma Street. Similar to Minna Street, the ROW available on Natoma Street is approximately 30 feet. Given that about 60 feet ROW will be needed to accommodate the 44 feet tunnel bore, the buildings abutting on either side of Natoma Street will be impacted. "*

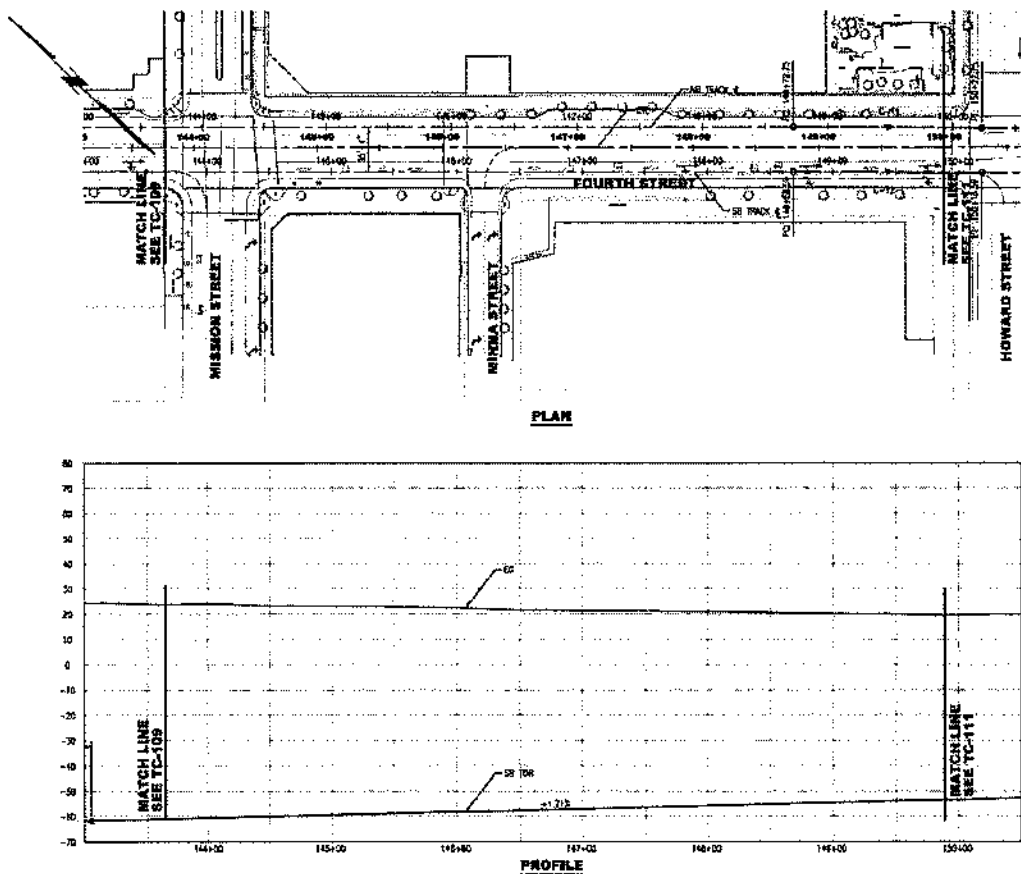
The solution outlined in the attached "Rethinking DTX" (2012) presentation is to locate the northbound and southbound tracks in separate 27-foot tunnel bores (one each under Minna and Natoma Street) similar to the high-speed tunnels linking London to the Channel Tunnel.



As seen above, there is no need to demolish any buildings between Second & Third, including SFMOMA (the orange tunnels under Minna & Natoma are to scale).



The smaller tunnel diameters provide an opportunity to cross the Central Subway.



### Additional issues resolved by the 7<sup>th</sup> Street alignment

- Elimination of six-track station throat under 2<sup>nd</sup> Street

*"The structural column configuration in the built Salesforce Transit Center limits the flexibility for changing the track geometry within the train box and at the throat leading into the terminal, but options that entail adjustments to track design criteria at the throat to minimize right-of-way impacts should be explored with CHSRA, TJPA, Caltrain and SENER."*

This problem is resolved through the replacement of the 90 degree curved throat under Second Street with two mini-throats each serving 3 sets of platform faces. These mini-throats are modeled after the approach to St Pancras domestic platforms 11, 12 and 13 (please refer to "Elimination of the requirement for a third track" on page 7 below).

Station mini-throats under Second Street

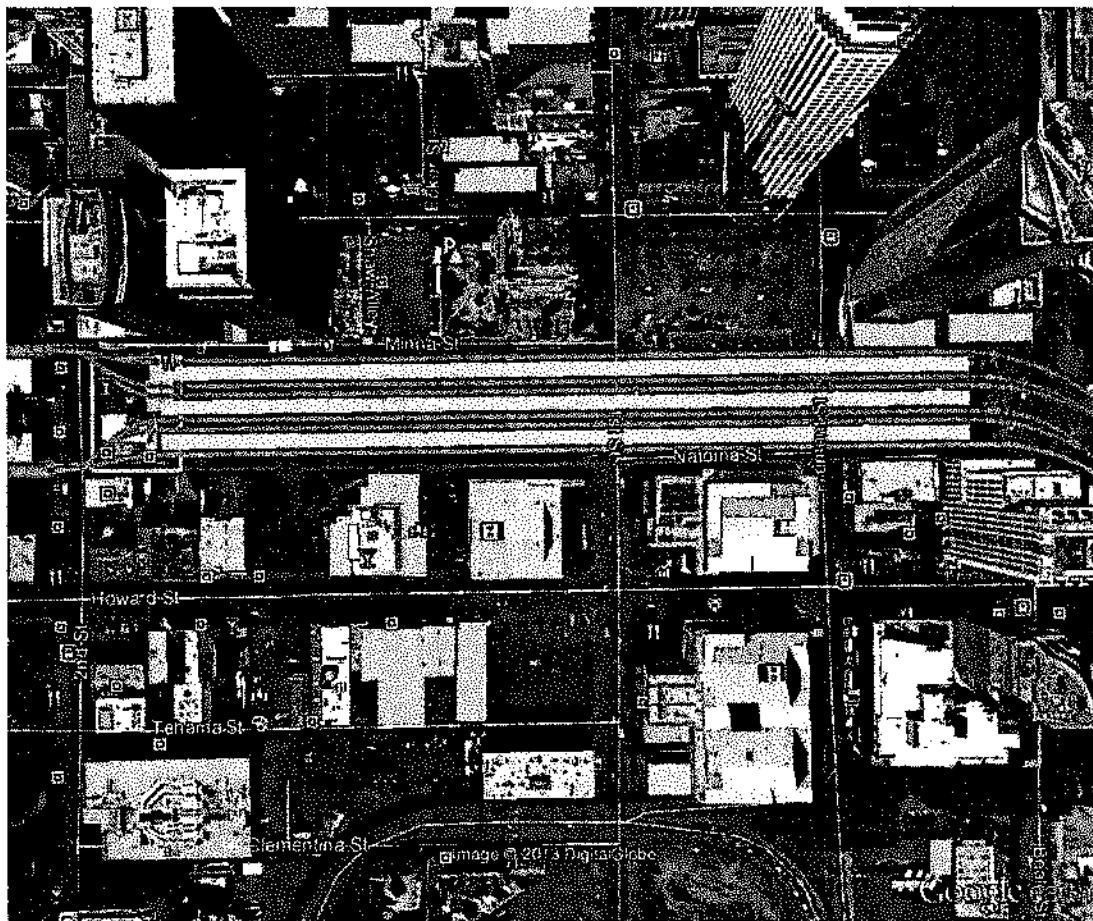


Entering the STC train box (no conflicts). Minna is on the left and Natoma is on the right



### - Platform lengths

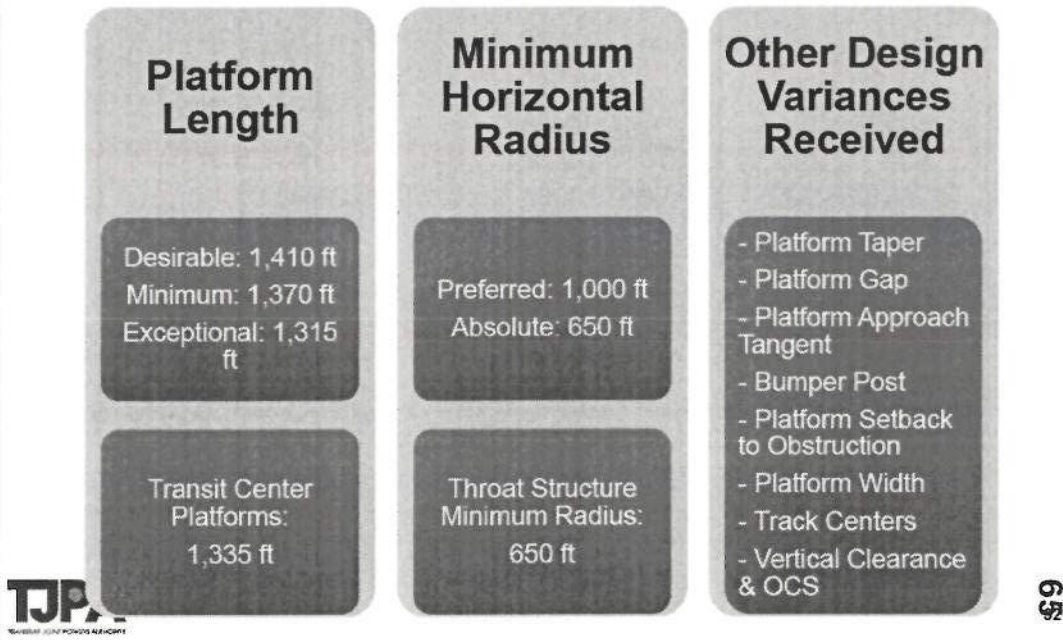
One of the conditions of the \$400M 2008 ARRA grant was 400-meter (1,312 feet) straight platforms. The 7<sup>th</sup> Street alignment makes it possible to have six (not five) full-length platforms without impacts on the 201 Mission foundations by sliding the southern tip of the platforms to the location previously occupied by the six-track angled station throat located between Second & First.



### - Vacation of 4<sup>th</sup> & King Railyard

Doubling the length of the six STC platforms makes it possible to store two 650-foot trains per platform resulting in the same capacity as the existing twelve 650-foot platforms at the 4<sup>th</sup> & King railyard.

## CHSRA Design Guidance



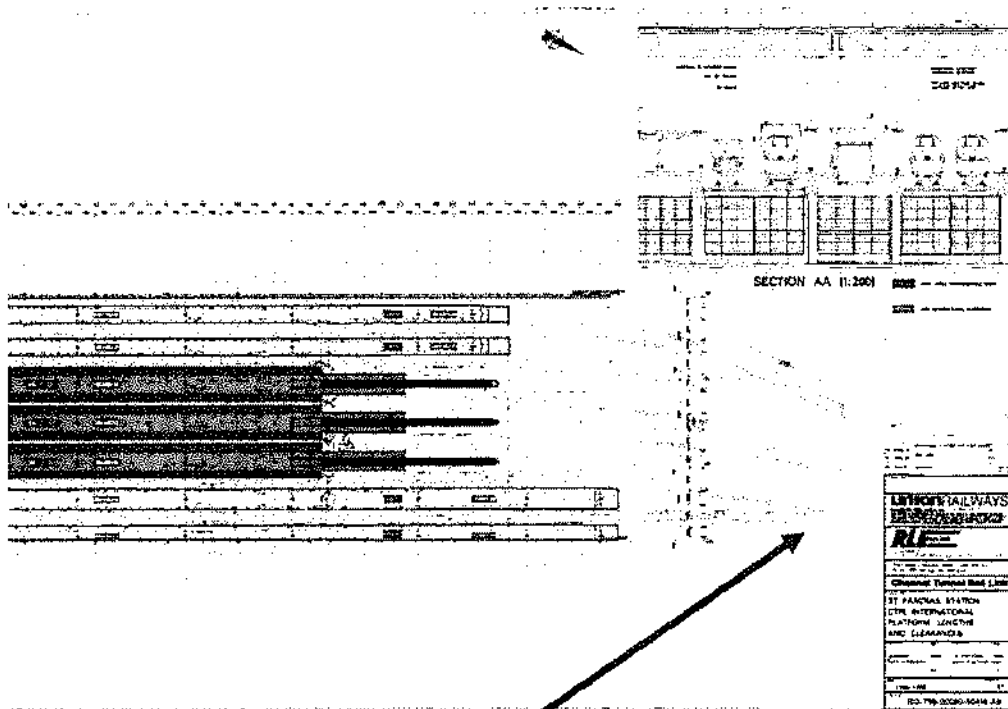
### - Elimination of the requirement for a third track

*“Only one of the studies, completed by Parsons and Carl Wood for TIPA, performed a detailed service perturbation analysis. It shows that if there is a delay or track blockage in the tracks leading to the “throat” of the terminal, then three tracks are required to support reliable train service and to facilitate recovery from operational delays.”*

This problem is resolved by a combination of

- Two 3-track mini throats
- Two mined crossovers (at Howard & Seven and under Yerba Buena Gardens)
- Four tracks between 16<sup>th</sup> and Townsend (new 7<sup>th</sup> & King station)

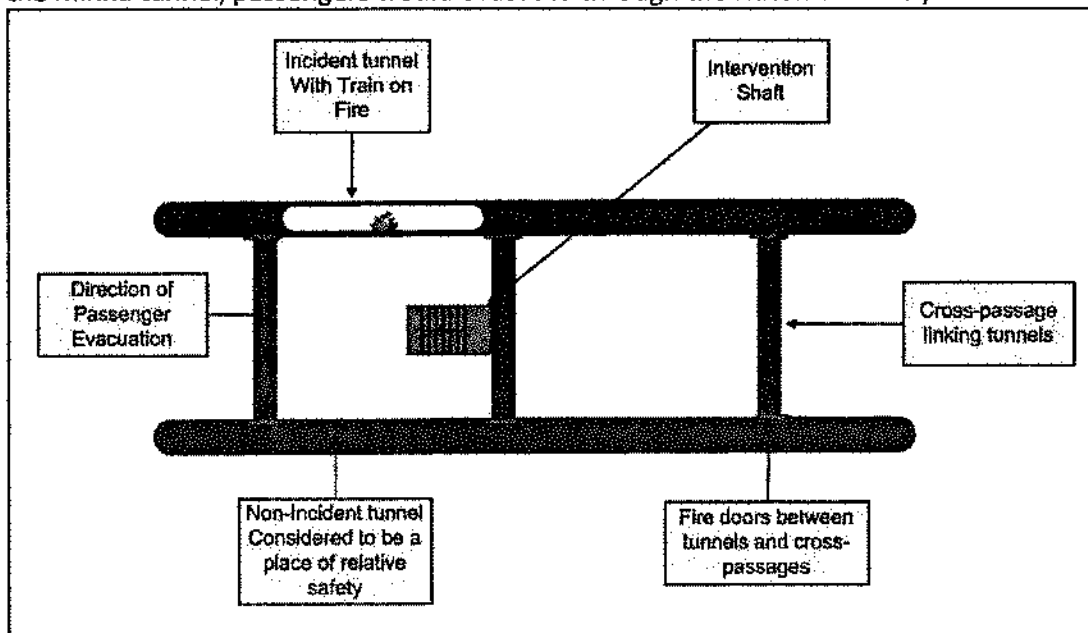
Please refer to the attached “Northbound refined DTX alignment” letter dated November 17<sup>th</sup> 2013 which explained how London was able to support 12 trains/hour with 3 (not six) platforms faces and **two tracks** (not three) during the 2012 Olympics.



**TWO Tracks**

- Elimination of multiple vent/evacuation structures

The elimination of the third track enables the implementation of a twin-bore ventilation/evacuation system similar to BART's Transbay tube (in the event of a fire in the Minna tunnel, passengers would evacuate through the Natoma tunnel).





**-\$4B (2/3) cost reduction**

This slide lists recent tunnel project with an average cost of **\$350M/mile**.

Tunnel	Year completed	Diameter (ft)	Bores	Alignment length (miles)	Total length of tunnels (miles)	Reported cost (\$ million)	Cost per mile of tunnel (million \$/mile)
Port of Miami Tunnel	proposed	36	twin	0.7	1.5	1,000	\$677
Lefortovo	2005	47	single	1.4	1.4	600	\$439
Airport Link Brisbane	2012	41	twin	3.3	6.5	2,206	\$338
Groene Hart Tunnel	2006	48	single	1.4	1.4	450	\$332
4th Tube of the Elbe	2002	47	single	2.6	2.6	775	\$303
I-710 (A3)	proposed	50 <sup>1</sup>	triple	4.1	12.4	3,585	\$290
I-710 (C3)	proposed	42 <sup>1</sup>	triple	4.0	12.0	3,195	\$266
A86W	2010	37.9 <sup>1</sup>	single	10.9	10.9	2,641	\$242
Wesertunnel	2001	38	twin	1.0	2.0	358	\$180
Beacon Hill Tunnel	2009	21	twin	0.8	1.6	280	\$172
M-30	2008	50	twin	2.2	4.3	570	\$131
Dublin Port Tunnel	2006	38	twin	2.8	5.6	530	\$94
Pannerdenschkanaal	2003	32	twin	1.0	2.0	173	\$86
SMART	2007	43	single	6.0	6.0	515	\$85
Wuhan	2008	37	twin	1.7	3.4	288	\$85
Nanjing	2013	49	twin	1.9	3.7	245	\$66
Westerschelde	2002	37	twin	4.1	8.2	490	\$60
Shanghai River Crossing	2008	51	twin	4.6	9.3	245	\$27

<sup>1</sup> This scheme contains multiple tunnel diameters. This number presented is the average tunnel diameter.

This is in sharp contrast with the **\$2B/mile** costs presented to the CAC on June 27

**PRELIMINARY ESTIMATES OF PROBABLE COSTS AND SCHEDULES**

ALIGNMENT	COST <sup>1</sup>	EXPECTED COMPLETION DATE <sup>2</sup>
<b>FUTURE WITH SURFACE RAIL:</b>		
DTX + TRENCHED STREETS	\$5.1 Billion	2026
<b>PENNSYLVANIA AVENUE:</b>		
DTX + EXTENDED TUNNEL	\$6.0 Billion	2027
<b>MISSION BAY:</b>		
MODIFIED DTX + 3 <sup>RD</sup> STREET TUNNEL	\$9.3 Billion	2031

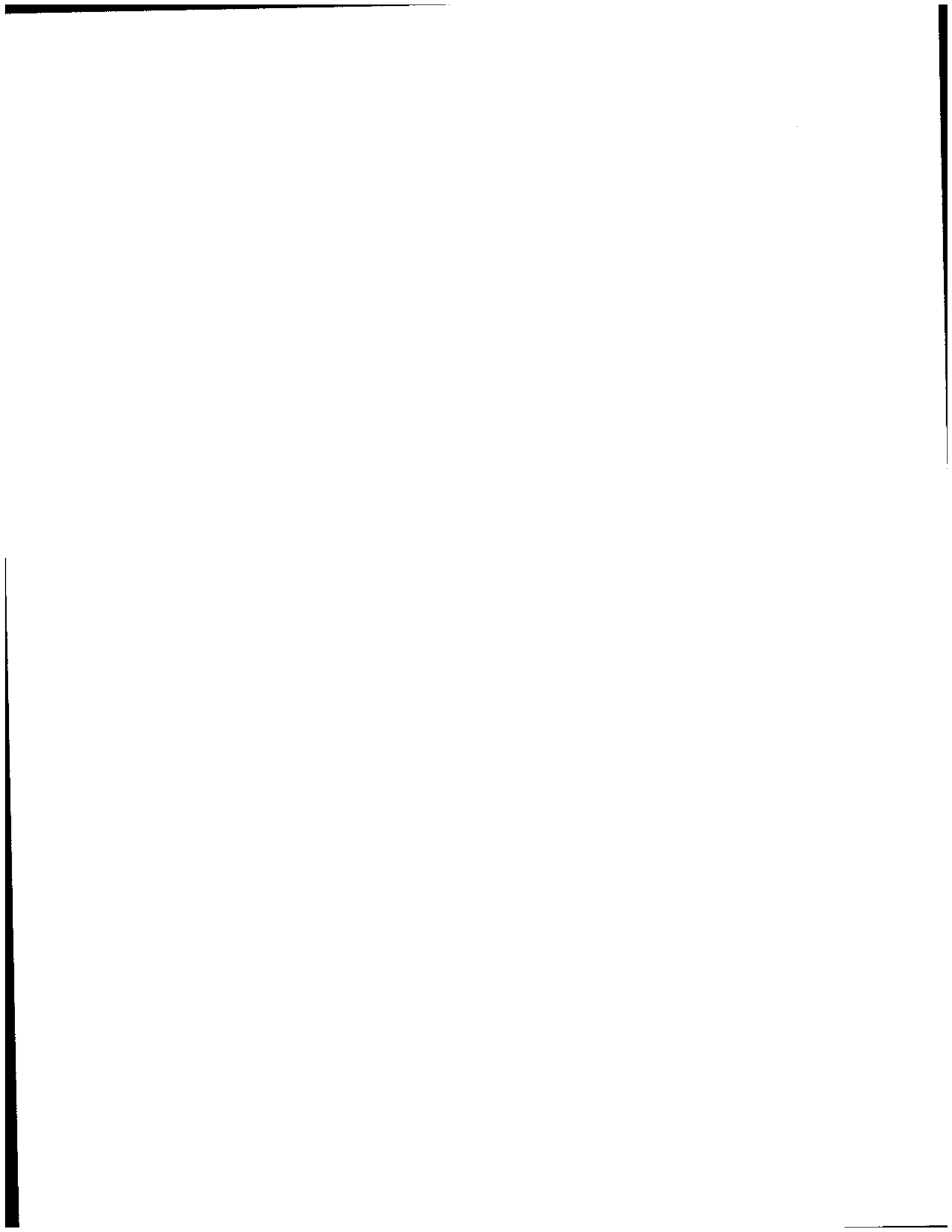
1. Includes construction costs, value capture, and impact costs
2. Completion date estimate if all money were available on January 1, 2017

Conceptual Level  
Comparative Cost  
Estimates

Respectfully presented for your consideration.

Sincerely,

Roland Lebrun





# SAN FRANCISCO PLANNING DEPARTMENT

MEMO

**DATE:** August 14, 2018  
**TO:** SFCTA CAC members  
**FROM:** Susan Gygi, PE  
**RE:** Rail Alignment and Benefits (RAB) Study – responses to SFCTA CAC outstanding issues

1650 Mission St.  
Suite 400  
San Francisco,  
CA 94103-2479

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415.558.6378

Fax:  
415.558.6409

Planning  
Information:  
415.558.6377

## Introduction

The RAB Study Project Management Team (Susan Gygi and Jeremy Shaw) provided an informational presentation related to the Rail Alignment and Benefits (RAB) Study at the June 27, 2018 meeting of the SFCTA CAC. In that meeting there was also an agenda item to adopt a motion of support for the Pennsylvania Avenue Alignment as the Preliminary Preferred Alternative for grade separations at 16<sup>th</sup> Street and Mission Bay Drive on the approach to the Downtown Rail Extension (DTX).

It was the desire of the CAC to continue the motion of support adoption for two reasons:

1. Two CAC members expressed concerns about not knowing the specific location of a potential southern railyard, and asked for clarification on the continued use of the 4<sup>th</sup>/King railyard.
2. During public comment, Mr. Roland LeBrun requested that a 7<sup>th</sup> Street alignment be fully reviewed prior to approval of any singular alignment moving forward

This memorandum responds to those two items.

## Response to Continued use of surface 4<sup>th</sup>/King Railyard

The continued use of the surface 4<sup>th</sup>/King railyard was not fully studied under the RAB. The RAB studied only scenarios which included full relocation of the 4<sup>th</sup>/King railyard to a southern location (biggest impact). The study also determined that it may be possible to distribute train storage among various locations (more on this below). At this time, no decision can be made about modifying or relocating the yard and/or its functions until a full analysis of the needs of Caltrain and CHSRA are completed. This work is being done through the Caltrain Business Plan and the Blended Service Operations Plan. Both efforts are underway and anticipated to be completed in mid-2019. In the future, any proposed yard relocation would be required to have its own environmental process where all alternatives will be analyzed, and public input sought.

As noted above, the RAB study found that it may be possible to distribute train storage among various locations. For example, expanding the 4<sup>th</sup>/Townsend underground station further south (under the 4<sup>th</sup>/King surface railyard), is one option that would allow for additional dead-end tracks for staging or storage, allowing for a transit-oriented development to be built above. In addition, there is the possibility to allow for overnight storage at the Salesforce Transit Center (SFTC) on all six tracks including double-berthing the trains on five of them. Some combination of the above could also be deployed with or without a southern railyard. Until the Caltrain Business Plan and the Blended Service Operations Plan efforts are completed, and we have a better understanding of the needs to operate future service, we must have potential alternative railyard sites. Of note, the Pennsylvania Avenue alignment and a potential yard relocation can be seen as independent projects. Even after the Pennsylvania Avenue alignment is built, Caltrain could continue using the current surface railyard (or a smaller footprint) for some to-be-determined amount of time. Since most trains would be going to the SFTC, train volumes on the surface would be significantly lower than present.

## Response to Request for Locations under Consideration for a Southern Railyard

The RAB study team identified two likely railyard locations (one inside the City limits, and one outside of the City limits) that could meet Caltrain's storage and operational needs in the near term.

Two CAC members requested the physical location of a potential southern railyard before they would consider supporting the preliminary preferred Pennsylvania Avenue alignment.

Based on the City Attorney's Office legal opinion and common practice, City agencies should not disclose potential locations for properties that may have to be acquired until sufficient work is completed to determine what parcels may be needed. Currently, both of the potential locations appear to work for operations. However, without further study, a determination cannot be made as to what, if anything, is necessary.

The RAB study was based on the most conservative planning assumptions for each of the three alignment alternatives. Specific to the Pennsylvania Avenue alignment, that included assuming a total replacement of the 4<sup>th</sup>/King railyard to a southern location. However, the ultimate solution may be much less (as stated above). Caltrain and California High Speed Rail Authority (CHSRA) do not currently know what their railyard needs are along the entire Caltrain alignment. Caltrain is currently undertaking the Caltrain Business Plan and CHSRA/Caltrain are undertaking a Blended Service Plan, aka the Peninsula Corridor Service Vision. These two documents, expected in 2019, will provide a better understanding of each agency's railyard needs along the Caltrain alignment.

### **Response to Mr. LeBrun's proposed 7<sup>th</sup> Street alignment**

The RAB study preliminarily reviewed over 30 conceptual alignments for getting heavy rail (Caltrain and High Speed Rail) to the Salesforce Transit Center (SFTC). Four alignments were deemed to have merit and were studied further as part of the RAB Study. Mr. LeBrun's proposal is similar to the 7<sup>th</sup> St alignment that the RAB Study considered, deemed infeasible, and therefore, did not study further. This response to the request to look at Mr. LeBrun's alignment proposal was developed in cooperation by the RAB Study Team, the TJPA DTX Team, and SFCTA.

To reach the SFTC, Mr. LeBrun proposes two parallel one-track tunnels starting at the north west edge of the current railyard, traveling north under 7<sup>th</sup> Street, turning east under Minna/Natoma Streets, and ultimately entering the underground train box through the already-constructed western wall near Second Street. The Planning Department, TJPA, SFCTA, consultants, and other agencies evaluated a similar alignment as part of the 3-year RAB study, drawing upon original analysis from the TJPA DTX work. Agency staff and consultants determined that the 7<sup>th</sup> Street alignment did not warrant further study as it would: i) adversely impact other existing buildings, ii) constrain operations and create safety risks, iii) doesn't meet design requirements, iv) compromise the structural layout of the SFTC, and v) not conform to design requirements. Each finding is detailed out below.

#### **Adverse Impacts to Other Existing Buildings**

The proposed alignment goes under multiple buildings, and will have greater ROW impacts than the current DTX alignment, located predominantly in the public ROW. The tracks and a mined crossover on the proposed alignment would be located under Moscone Center, which is in itself an underground facility with deep piles. Park Tower, currently under construction, sits on deep foundations and two levels of parking below grade, which would be in the path of the tunnel proposed by Mr. LeBrun. The tunnels for Mr. LeBrun's alignment would also pass under Moscone Center, Yerba Buena Gardens, and the SFMoMA. Since much of the Moscone facility as well as SFMoMA subsurface structures are located in the way of the proposed alignment its construction would be unacceptably disruptive and costly.

The two curves that would be necessary from 7<sup>th</sup> Street would not meet CHSRA standards. Mr. LeBrun's drawings do not seem to be to scale as preliminary layouts determined impacts to all three facilities. In addition, the curves impact many more buildings in the transition from 7<sup>th</sup> Street to Minna and Natoma, respectively. In addition, even by Mr. LeBrun's assumption, the grade coming up to the train box after passing under Moscone Center would be 3.5% or more. CHSRA has a maximum grade of 2.7% so this alignment would not meet CHSRA criteria for continued operation. Finally, the wider footprint of the throat structure in Mr. LeBrun's concept would affect two additional properties that are clear of the planned alignment. Impacting these two properties would require re-opening the environmental document again, delaying the project further with no possibility of improvement over the current proposed alignment.

## **Operational Constraints and Safety Risks**

The two single-track tunnels proposed by Mr. LeBrun would constrain operations, create severe safety risks, and pose maintenance challenges. The February 2018 SFCTA's peer review panel made up of five construction, operations, and maintenance experts, identified a need for three tracks into/out of the station to allow for anticipated operational inconsistencies without affecting train travel up and down the Peninsula main line. This determination of three tracks was not specific to the alignment itself but to address issues going in and out of the SFTC and the need to absolutely ensure that operations can be maintained even when there are incidents. This additional track allows for train service to continue if a train were disabled where the tracks enter the station. Mr. LeBrun's concept does not account for this. Twin-bore single-track tunnels, as recommended by Mr. LeBrun, fail to achieve the required operational flexibility provided by a third track, which is required by Caltrain and CHSRA. In addition, to meet safety standards for sufficient egress/access, Mr. LeBrun's option would require longer, numerous, and more expensive cross-passages between tunnels. Constructing the passages would disrupt businesses and circulation on Second Street and would be difficult to locate, given the large number of existing buildings with deep foundations and below-grade parking.

## **Design Requirements**

Relocating a planned 4<sup>th</sup>/Townsend station to 7<sup>th</sup> Street, as suggested by Mr. LeBrun, would undermine the planning and land use-transportation coordination at the core of the Central SoMa Plan and the Central Subway alignment. As currently, an escalator at Fourth Street will provide convenient access to the Central Subway from the underground 4<sup>th</sup>/Townsend Station currently planned for DTX. The proposed alignment would eliminate the connection with the Central Subway, which received \$65 million towards construction due to HSR connectivity funds.

In addition, the Central SoMa plan upzoned the area based on a train station at 4<sup>th</sup>/Townsend. Moving the station would require longer walking distances for these higher density neighborhoods and for those making the connection between Muni Metro and Caltrain. Additionally, relocating the 4<sup>th</sup>/Townsend Station would not eliminate the cut-and-cover construction techniques and the resultant impacts, as Mr. LeBrun contends. 7<sup>th</sup>/Townsend ground conditions still require cut-and-cover construction. The relocation would also lose the advantage of the adjacent 4<sup>th</sup>/King railyard as a potential staging area for construction materials of the DTX.

## **Structural Compromise to the SFTC**

The SFTC construction is now complete. In order to accommodate Mr. LeBrun's proposal, the west end of the brand-new building would have to be demolished and rebuilt to accommodate the different approach of the proposed alignment and move the load bearing elements to another location. This would mean that the new bridge from the Bay Bridge, which connects to the terminal at the west end, would most likely have to be taken out of service (if not partly demolished), eliminating bus service on the bus deck for the duration of demolition and construction of the modifications. This very expensive proposition would require major structural changes to the SFTC. Having the tracks approach the train box from a different direction will require the relocation of the already-built columns at the west end of the station. Since the west end carries a significant portion of the structural load of the station, any change to the western wall would require modifying the rest of the SFTC. The SFTC opened for bus operations on August 12, 2018. Modifications to the structural elements within the building would impact bus operations on the bus level.

## **Travel Times**

Mr. LeBrun's claims the 7<sup>th</sup> St alignment will save three minutes travel time. Unfortunately, this claim is unrealistic, since the current travel time from 4<sup>th</sup>/Townsend into the SFTC is anticipated to be three minutes, so, under Mr. LeBrun's claim this time would shrink to zero. Mr. LeBrun states that the current DTX alignment has a longer travel time, due to three sharp curves with a maximum speed of 25 mph. This statement is incorrect. The curve speeds on the DTX alignment are 35 mph between 7<sup>th</sup>/Townsend and 2<sup>nd</sup>/Townsend. And while the final curve speed entering the SFTC is 22 mph, trains are required to slow down regardless of

curve radius because the SFTC is a terminal station. In 2007, TJPA engaged Deutsche Bahn International (DBI) GmbH, the engineering division of the German high-speed rail operator, to peer review the Transit Center and DTX alignment, configurations, and design criteria in relation to current practice in Europe and elsewhere. The peer review report prepared by DBI, and available for review online, concluded that "operating speeds on the DTX approach to the Transit Center are comparable to several major terminals in Europe and do not adversely affect the operation of the Transit Center." Finally, for over two years during the RAB Study, the TJPA, Caltrain and CHSRA simulated rail operations between 4th/Townsend and the SFTC that met the needs of both train operators.

#### **Peer Review**

Mr. LeBrun states that the 7<sup>th</sup> Street alignment was not reviewed by the SFCTA-convened DTX Peer Review. This is correct. The Peer review had a limited scope, which was to review three independent operational studies to determine whether two or three tracks are needed for the DTX as well as opining on other operational elements of the project. Therefore, alternative alignments were not part of the scope.

#### **Cost and Schedule Impacts**

Mr. LeBrun's assertions that the costs could be lowered to a total of \$1.3B with the extension through the west side of the SFTC are unsubstantiated, particularly since both alignments are practically the same length. Lacking backup information, we can only guess that he did not factor in the additional right-of-way costs, the need for a third track, crossover passages in the tunnel, ventilation structures, nor the demolition and reconstruction of the west end of the SFTC, not to mention the extension of the train box one block to the west. MTC, TJPA, and various City departments along with Caltrain and other agencies have reviewed the DTX cost as currently envisioned and estimated it at \$4 billion. There is no information to support the assertions Mr. LeBrun puts forth.

#### **Conclusion**

The RAB Study, its peer review panels, and expert opinions all demonstrate the strengths of the Pennsylvania Avenue Alignment over other alignments to the Salesforce Transit Center (SFTC). However, at the current preliminary engineering stage (5-8% design completion) additional analysis and public outreach will be necessary to better understand needs, constraints and impacts. Agreeing on a preliminary preferred alignment is the best way to further the analysis and identify those impacts while also moving towards a common goal. We hope the above responses adequately address the concerns of CAC members as they have for the project team, consultants, peer reviewers, and the RAB Citizen's Working Group. If so, we look forward to returning to the SFCTA CAC for their approval of the Motion of Support.

As always, if there are any questions, feel free to contact me.

Sincerely

Susan Gygi, PE  
Project Manager  
SF Planning Department

**Low, Lori**

---

**From:** Roland Lebrun [REDACTED]  
**Sent:** Tuesday, September 04, 2018 11:53 PM  
**To:** Board (@caltrain.com)  
**Cc:** cacsecretary [@caltrain.com]; Caltrain, Bac (@caltrain.com)  
**Subject:** 8/9 Board meeting item #12 Correspondence  
**Attachments:** Safety barriers.pdf

---

Dear Chair Bruins,

Thank you for making Caltrain correspondence packets available for review by the general public.

Please consider the following suggestions for additional improvements:

- 1) Board correspondence packets should be uploaded as searchable (not image) PDF documents to facilitate copying/pasting of specific issues in subsequent emails.
  
- 2) Hyperlinks should be enabled.
  
- 3) Attachments should be included. As an example my 8/17 email to the CAC included an attachment depicting station track layout and safety barriers designed to improve passenger safety while simultaneously increasing line speed and capacity (see attached). This attachment is missing from the August correspondence packet.
  
- 4) Existing Board policy mandates that *"Any correspondence to be included in the Board reading file must be received by 10 a.m. the day before the Board meeting"* (not the last day of the month prior to the Board meeting). A potential solution would be to post two correspondence packets per Board meeting:
  - The first packet would cover the period between the previous Board meeting cutoff date and the end of the month.
  - The second packet would cover the period between the first of the month and the Board meeting cutoff date.

5) Links to archived correspondence packets should be added retroactively to the list of materials for every archived Board meeting.

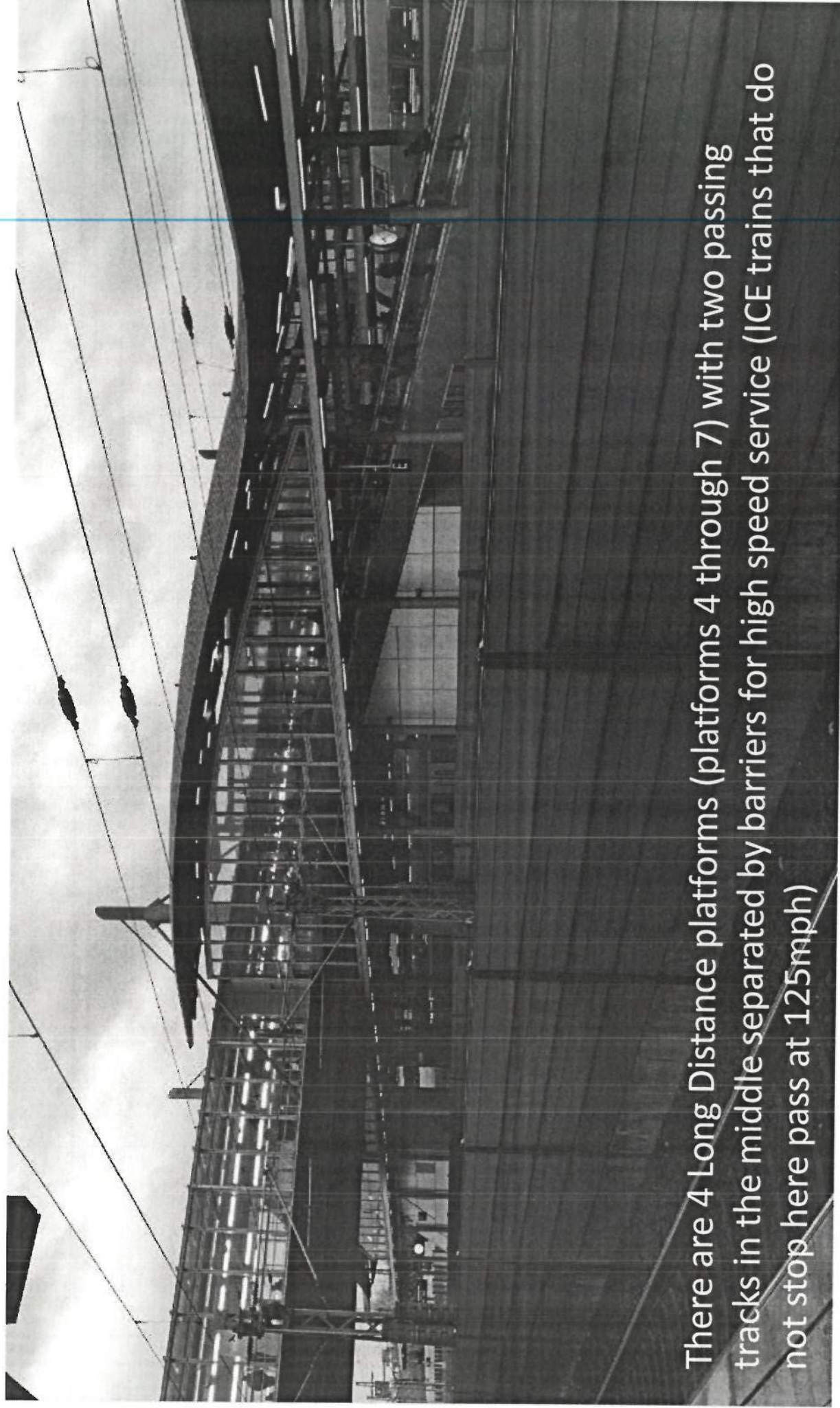
Sincerely,

Roland Lebrun

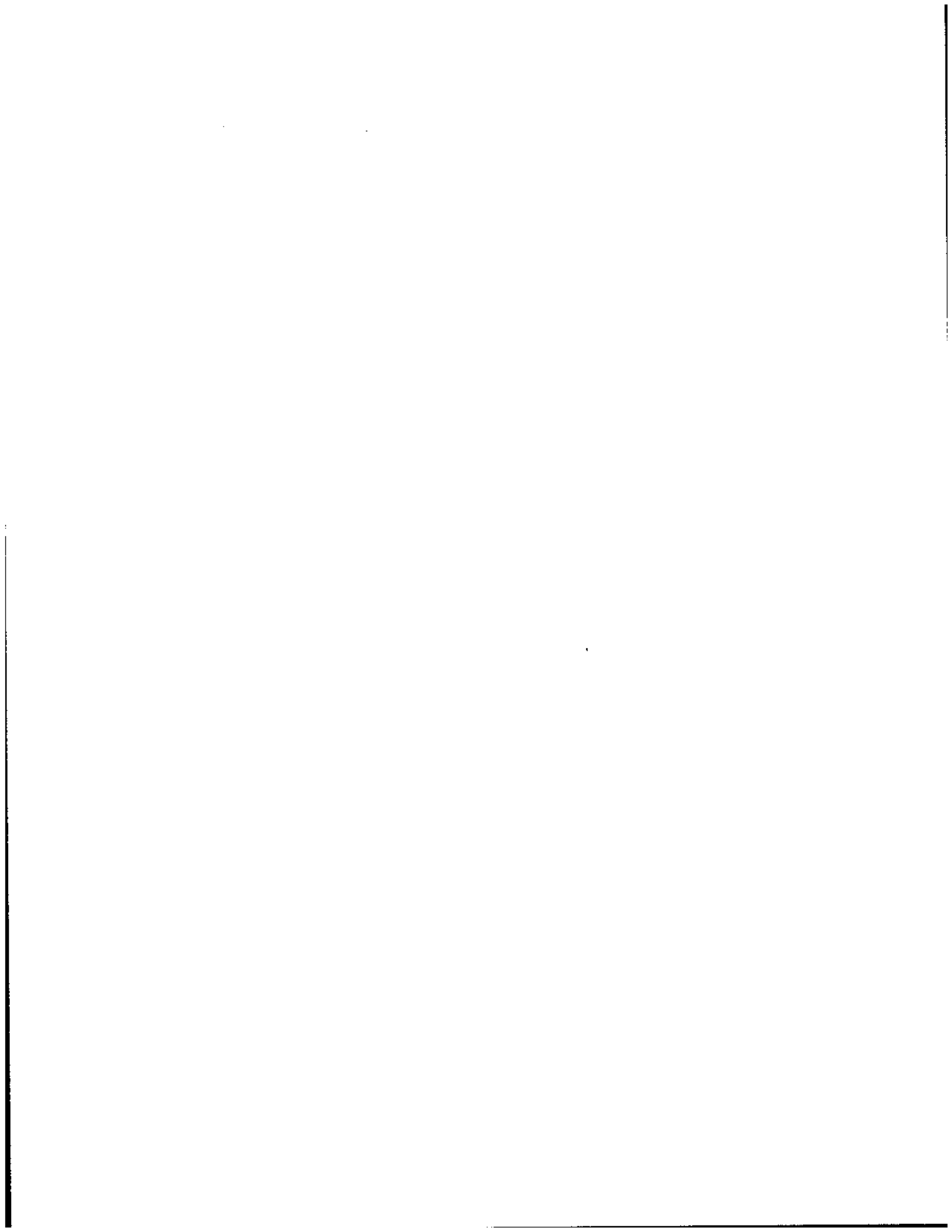


Dusseldorf Airport

## LONG DISTANCE RAIL STATION DESIGN



There are 4 Long Distance platforms (platforms 4 through 7) with two passing tracks in the middle separated by barriers for high speed service (ICE trains that do not stop here pass at 125mph)



**Low, Lori**

---

**From:** Roland Lebrun <[REDACTED]>  
**Sent:** Wednesday, August 15, 2018 1:12 PM  
**To:** cacsecretary [@caltrain.com]  
**Cc:** Board (@caltrain.com); Caltrain, Bac (@caltrain.com); SFCTA CAC  
**Subject:** Engineering Rail Safety & Suicide Prevention  
**Attachments:** Safety barriers.pdf

---

Dear CAC Secretary,

Please distribute the attached image to members of the CAC.

Thank You.

Roland Lebrun

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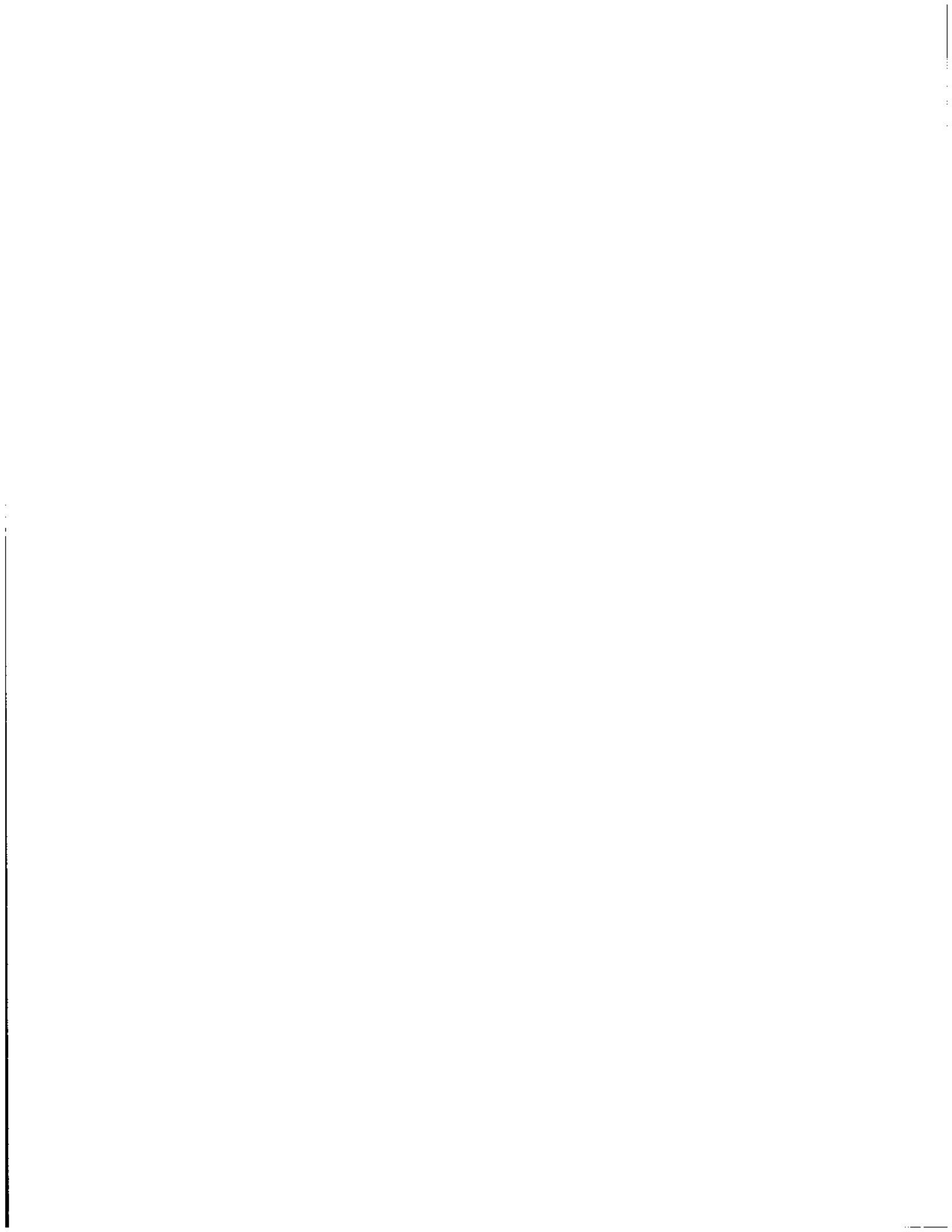
**From:** [cacsecretary@caltrain.com](mailto:cacsecretary@caltrain.com) <[cacsecretary@caltrain.com](mailto:cacsecretary@caltrain.com)>  
**Sent:** Wednesday, August 15, 2018 12:05 PM  
**To:** [ccss@msn.com](mailto:ccss@msn.com)  
**Subject:** Updated Webpages

The following pages have been updated:

[Citizens Advisory Committee Meetings Calendar](#) - *Wednesday, August 15, 2018 8:55 AM*

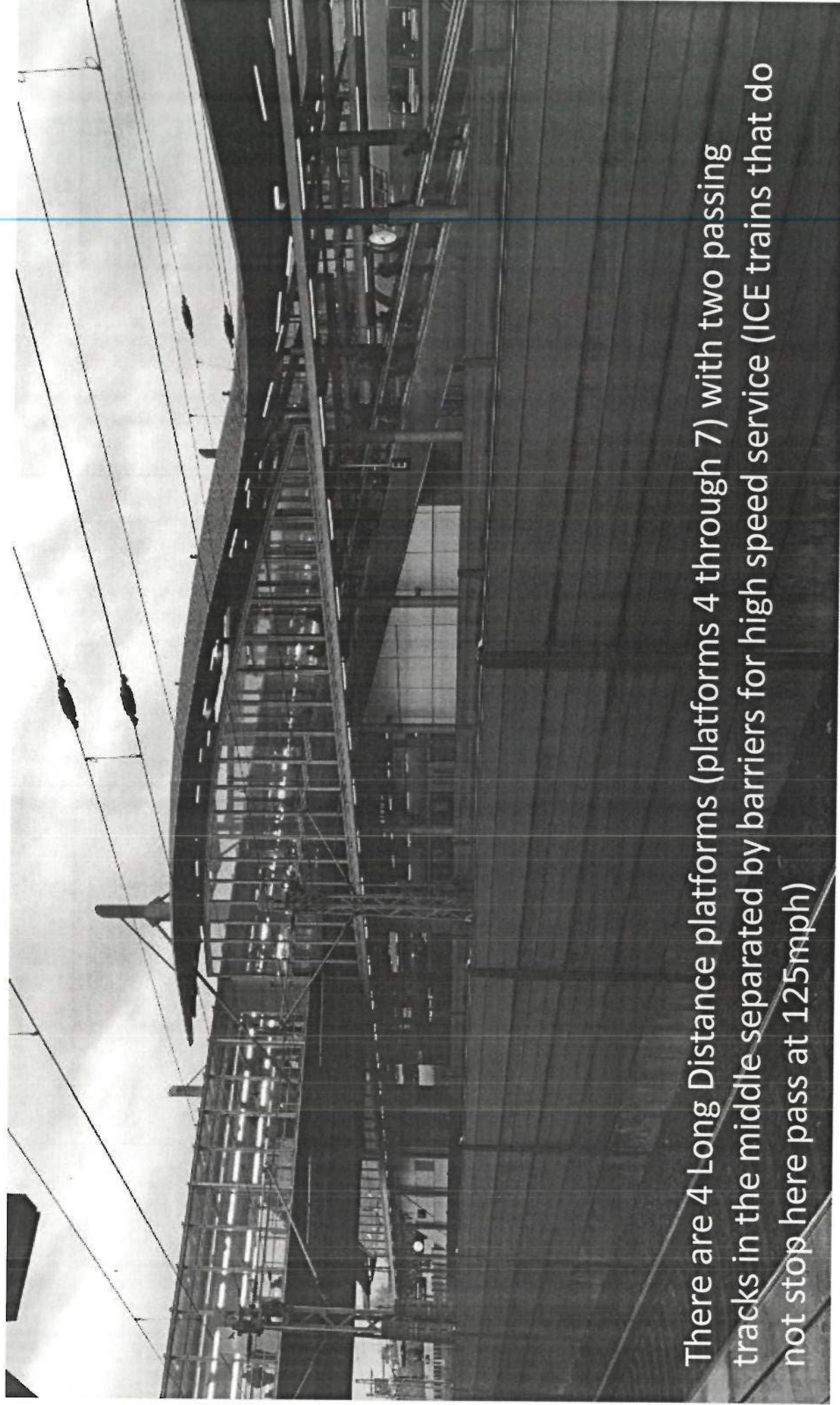
The JPB CAC Presentation for August 15, 2018 meeting is now available.

To stop receiving email notifications, please unsubscribe [here](#).

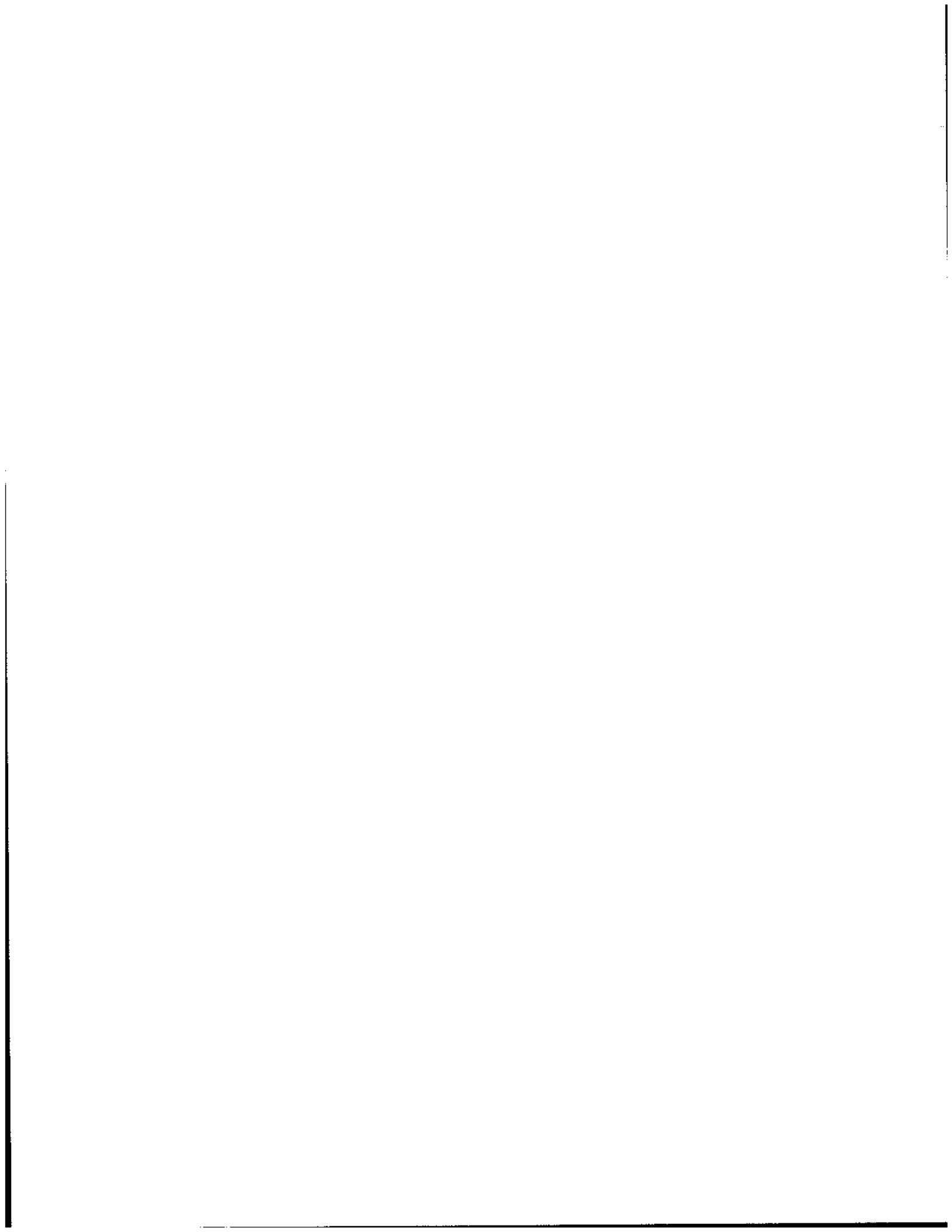


Dusseldorf Airport

## LONG DISTANCE RAIL STATION DESIGN



There are 4 Long Distance platforms (platforms 4 through 7) with two passing tracks in the middle separated by barriers for high speed service (ICE trains that do not stop here pass at 125mph)



July 19, 2018

Peninsula Corridor Joint Powers Board  
Caltrain Citizens Advisory Committee  
1250 San Carlos Ave.  
San Carlos, CA 94070

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**Re: Calling for improved bicycle security and capacity on board future Caltrain EMUs**

Dear Caltrain Joint Powers Board and Caltrain Citizens Advisory Committee,

The Caltrain Bicycle Advisory Committee (BAC), a voice for passengers who use bicycles to access Caltrain, wishes to provide input about Caltrain modernization to the Joint Powers Board (JPB).

Commuters across the Bay Area are experiencing longer and longer commutes (some even termed “megacommutes”), often requiring combinations of two or more modes of travel. Caltrain users in particular come from far and wide, including passengers commuting from Marin and Alameda Counties to San Mateo and Santa Clara Counties.

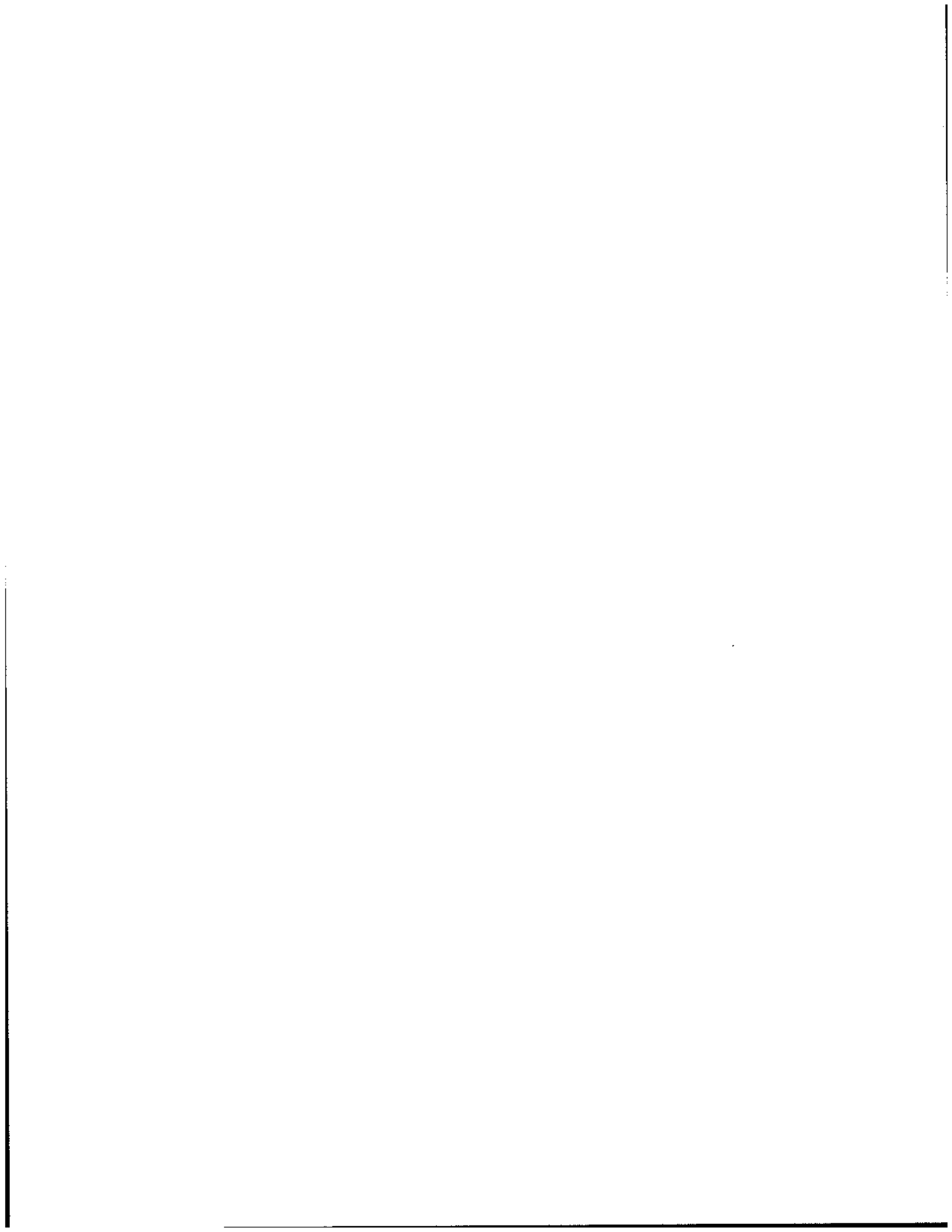
Scores of passengers have written emails and/or made public comment expressing concern over capacity and bicycle security due to a lack of dedicated seats within view of bicycles in the proposed EMU train cars and hundreds of paid-ticket holders with bicycles are left behind on the platform every year due to insufficient onboard bike capacity. The wayside Bike Parking Management Plan is a great step forward for passengers who need their bicycle on only one end of their trip, but the timeline and results are uncertain and Caltrain’s passenger surveys indicate that a large majority of passengers who bring their bikes on board require them on both ends of their trip.

The currently proposed “mixed fleet” may carry more bikes and more passengers per hour but a smaller proportion of bikes, with no indication that a smaller proportion of passengers will require bikes as ridership continues to grow. Further, the Caltrain Joint Powers Board approved a ratio of one bicycle space for every 8 seats in 2015.

When it comes to bicycle security, a survey of tweets by Caltrain riders shows that bicycle thefts are already on average at least a monthly occurrence on board Caltrain, with many going unreported to the Transit Police. There are even reports of passengers seated in the bike car thwarting attempted bicycle thefts.

As Caltrain has received additional funds from the California State Transportation Agency’s SBI Transit and Intercity Rail grant program to procure more train cars, the BAC encourages the JPB to work with staff to **add more bike cars to longer trains** (both EMUs and diesel trainsets) while **increasing the number of seats within view of bikes** on EMUs to improve onboard bicycle security. When bicycle owners can see their bikes it reduces the risk of theft. The BAC also recommends that, without reducing overall bike capacity, each bike car have at minimum half as many seats in view of the bikes as there are bike spaces to allow passengers to watch their bikes to guard against theft.

Sincerely,  
The Caltrain Bicycle Advisory Committee





July 19, 2018

Peninsula Corridor Joint Powers Board  
Caltrain Citizens Advisory Committee  
1250 San Carlos Ave.  
San Carlos, CA 94070

**Re: Townsend Corridor Improvement Project**

Dear Peninsula Corridor Joint Powers Board and Caltrain Citizens Advisory Committee,

The Caltrain Bicycle Advisory Committee (BAC), a committee of Caltrain riders representing the interests of passengers who access the train by bicycle, strongly urges the SFMTA to implement the Townsend Street protected bike lanes as soon as possible.

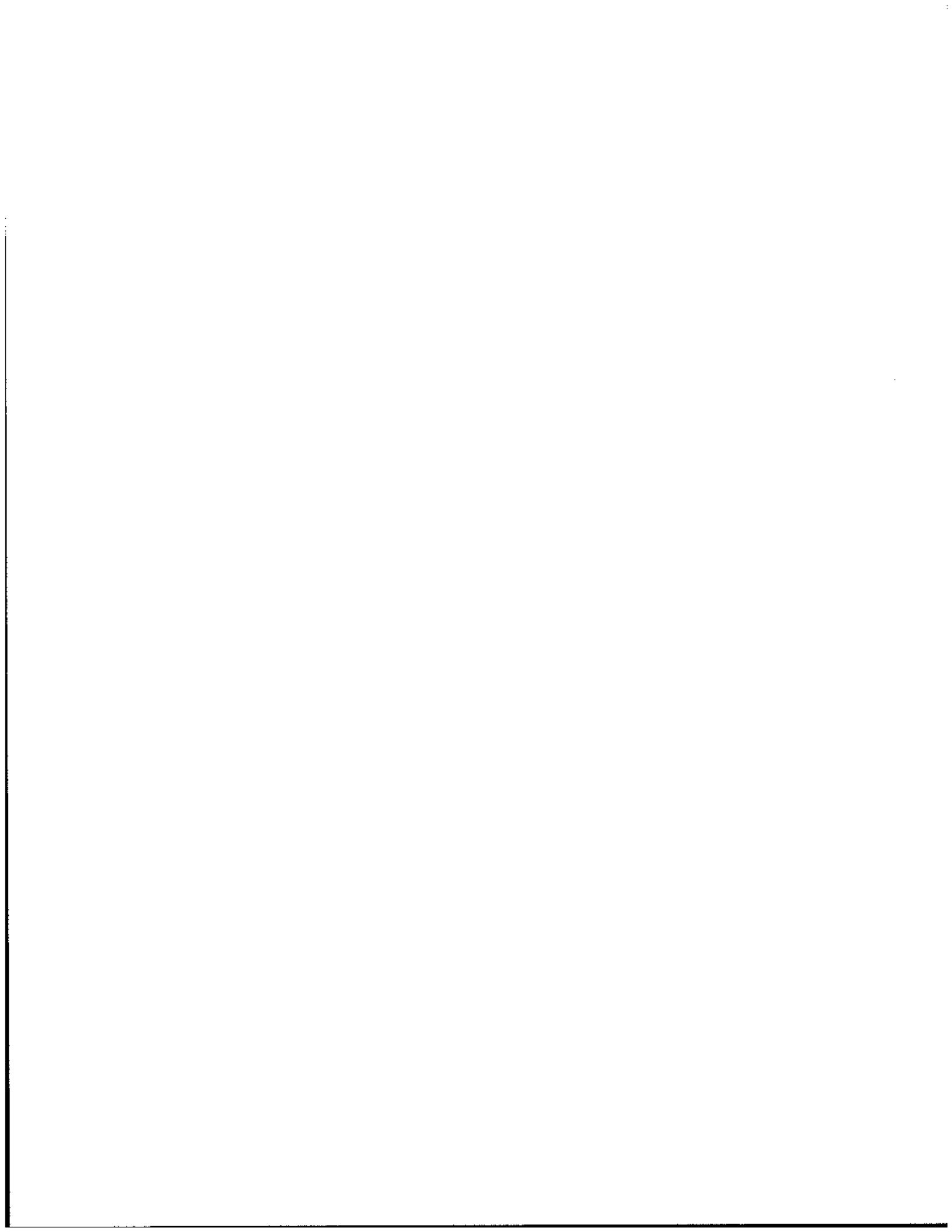
Caltrain's customer data shows that Caltrain's San Francisco (4th and King) Station is by far the system's busiest, seeing over a quarter of all train boardings and exits. The data further shows that over 15 percent of Caltrain passengers access the train by bicycle across the whole system. At 4th and King, there are over 1,400 average weekday bike boardings, not including users of bike share or those who leave their bikes at the station. Moreover, Ford GoBike's data shows that 4th and Townsend's two docks are the bike sharing system's busiest.

A large number of Caltrain riders brave dangerous conditions in the existing bike lanes, having to frequently dodge Ubers, Lyfts, parked cars, megabuses and other shuttles and even terrible quality pavement. The two blocks of Townsend Street closest to the train station are considered a high-injury corridor, with 43 bicyclists injured in the last five years. Seeing this project completed by the end of 2018 is not only of great importance to these riders but can help encourage more riders to access the train by bicycle, lessening the volume of TNCs on Townsend.

Fourth & King Station is a crucial regional transit connection for San Francisco and needs to have safe bike infrastructure to facilitate the travel of these thousands of daily riders. Please restore the plan for protected bike lanes and get them installed as soon as possible.

Sincerely,  
The Caltrain Bicycle Advisory Committee

Cc: SFMTA Director of Transportation Ed Reiskin  
SFMTA Board of Directors



**Low, Lori**

---

**From:** Roland Lebrun [redacted] <[redacted]@msn.com>  
**Sent:** Thursday, July 19, 2018 2:39 PM  
**To:** Low, Lori  
**Cc:** Caltrain, Bac (@caltrain.com); cacsecretary [cacsecretary@caltrain.com]  
**Subject:** Fw: July 10 SFCTA Board Item #2. Citizens Advisory Committee Report  
**Attachments:** Item #2 Citizens Advisory Committee Report.pdf; Rethinking DTX.pdf; Northbound DTX refined alignment.pdf

Hi Lori,

The attachments to my July 9 letter to the SFCTA are missing from the BAC correspondence packet. These attachments were included in yesterday's CAC packet which is not available to the general public.

On a related note, the July CAC correspondence packet is in machine-readable (OCR) format while the BAC packet was scanned in TIF (image) format which makes it somewhat illegible.

Would it be possible to resolve the above issues and repost the BAC correspondence packet?

Thank you in advance.

Roland.

---

**From:** Roland Lebrun <ccss@msn.com>  
**Sent:** Monday, July 9, 2018 3:06 PM  
**To:** Supervisor Aaron Peskin; [London.Breed@sfgov.org](mailto:London.Breed@sfgov.org); Supervisor Jane Kim; Supervisor Malia Cohen; [Sandra.Fewer@sfgov.org](mailto:Sandra.Fewer@sfgov.org); [Hillary.Ronen@sfgov.org](mailto:Hillary.Ronen@sfgov.org); [Ahsha.Safai@sfgov.org](mailto:Ahsha.Safai@sfgov.org); [Jeff.Sheehy@sfgov.org](mailto:Jeff.Sheehy@sfgov.org); [Catherine.Stefani@sfgov.org](mailto:Catherine.Stefani@sfgov.org); [Katy.Tang@sfgov.org](mailto:Katy.Tang@sfgov.org); [Norman.Yee@sfgov.org](mailto:Norman.Yee@sfgov.org)  
**Cc:** Nila Gonzales; Caltrain Board; CHSRA Board; MTC Commission; SFCTA CAC; [CAC@TJPA.org](mailto:CAC@TJPA.org); Caltrain CAC Secretary; Caltrain BAC  
**Subject:** July 10 SFCTA Board Item #2. Citizens Advisory Committee Report

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

Please find attached my response to staff's response to a question from the CAC about the 7th Street alignment:

*"Mr. Zurinaga said that the 7th Street alignment had been looked at multiple times and been rejected because of the complexity to build around and under city buildings. He said the alignment of the project had been carefully looked at for the last 14 years by industry experts."*

Key points:

- The 7th Street alignment was NOT reviewed by the 2018 DTX Peer Review Panel
- The 2011 Engineering Charette did NOT consider twin-bore tunnel construction modeled after London's Channel Tunnel Rail Link.
- The TJPA did NOT comply with the terms of the 2008 \$400M ARRA grant for the train box.
- The TJPA did NOT offer an alternative to the 3-track cut & cover approach between Townsend and Howard.

**- Cost estimates are approximately \$4B (300%) above similar recent tunnel projects.**

This short video clip and the attached "Rethinking DTX" presentation show the proposed path for the two TBMs between 22nd Street and the STC <https://youtu.be/v-QYQJYDTt4>



DTX 3D Flyover

youtu.be

San Francisco Downtown Extension (DTX) via twin bore single track from 22nd St. north to the Transbay Transit Center (TTC)

Sincerely,

Roland Lebrun

CC

TJPA Board of Directors  
Caltrain Board of Directors  
CHSRA Board of Directors  
MTC Commissioners  
SFCTA CAC  
TJPA CAC  
Caltrain CAC  
Caltrain BAC

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

The intent of this letter is to elaborate on my response to the following comments made at the June 27 CAC meeting:

*“Mr. Zurinaga said that the 7th Street alignment had been looked at multiple times and been rejected because of the complexity to build around and under city buildings. He said the alignment of the project had been carefully looked at for the last 14 years by industry experts.”*

The only slide referring to the 7<sup>th</sup> Street alignment is found on page 40 of the May 2018 DTX Peer Review Panel report (the 7<sup>th</sup> Street alignment was not reviewed by the Panel)

## DTX Project Background: 40 Other Alignments (2010)

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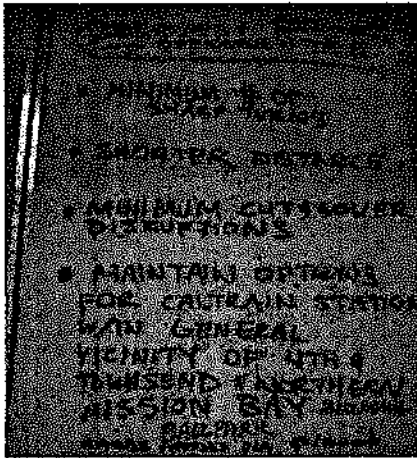
- Seventh St. reviewed in 2010
- Determined that conflicts with Central Subway and buildings along Minna/Natoma required alignment to be up to 130 ft deep.
- New required Throat Structure would require demolition of buildings between the Transit Center and Third St. including SF MOMA.



7

This slide appears to refer to the “San Francisco Technical Working Group DTX Engineering Charette and Alternative Alignment Analysis” held at the SFCTA offices on October 11-12, 2011 which identified the following issues and opportunities:

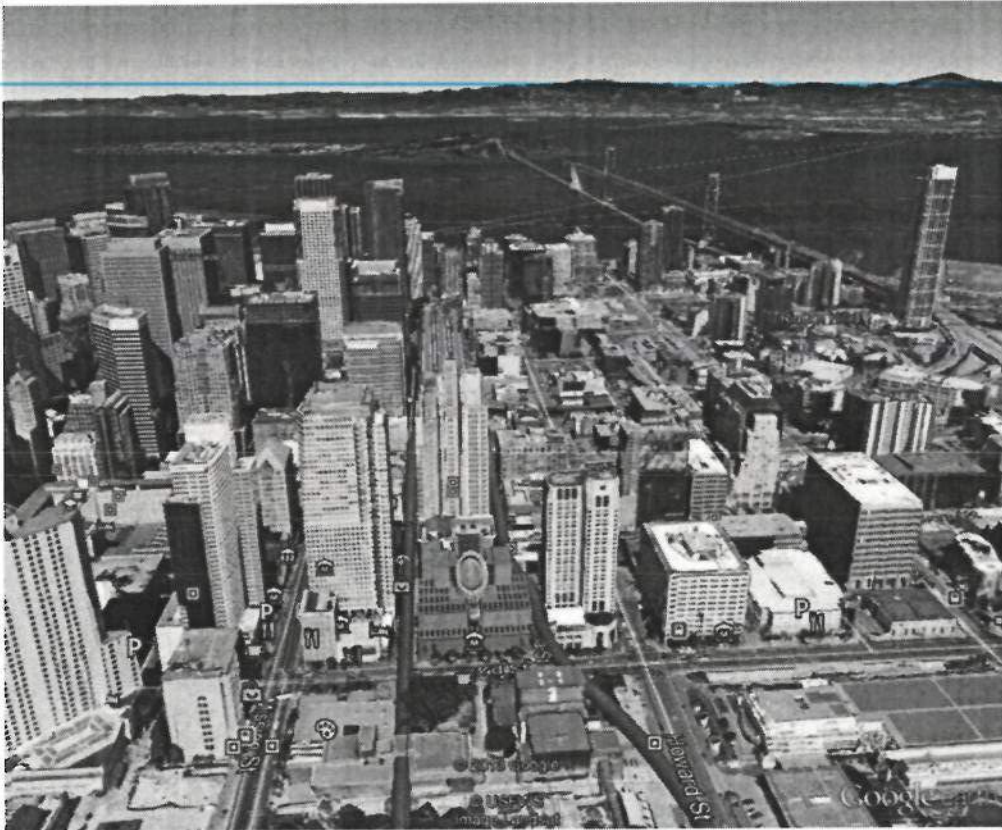
- Minimum # of sharp turns
- Shorter distance
- Minimum cut & cover disruption



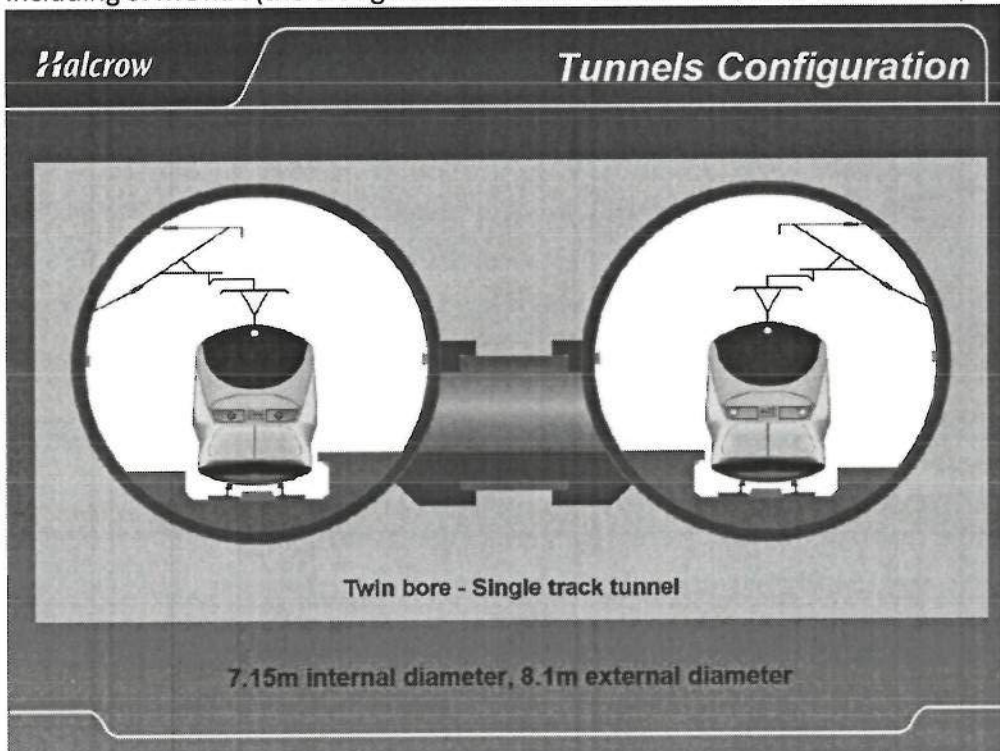
The Orange alignment above is the "7<sup>th</sup> Street alignment" with a fatal flaw (a single 44-foot diameter two-track tunnel).

*"Alternative 1B mimics Alternative 1A, but the alignment is routed under Natoma Street. Similar to Minna Street, the ROW available on Natoma Street is approximately 30 feet. Given that about 60 feet ROW will be needed to accommodate the 44 feet tunnel bore, the buildings abutting on either side of Natoma Street will be impacted."*

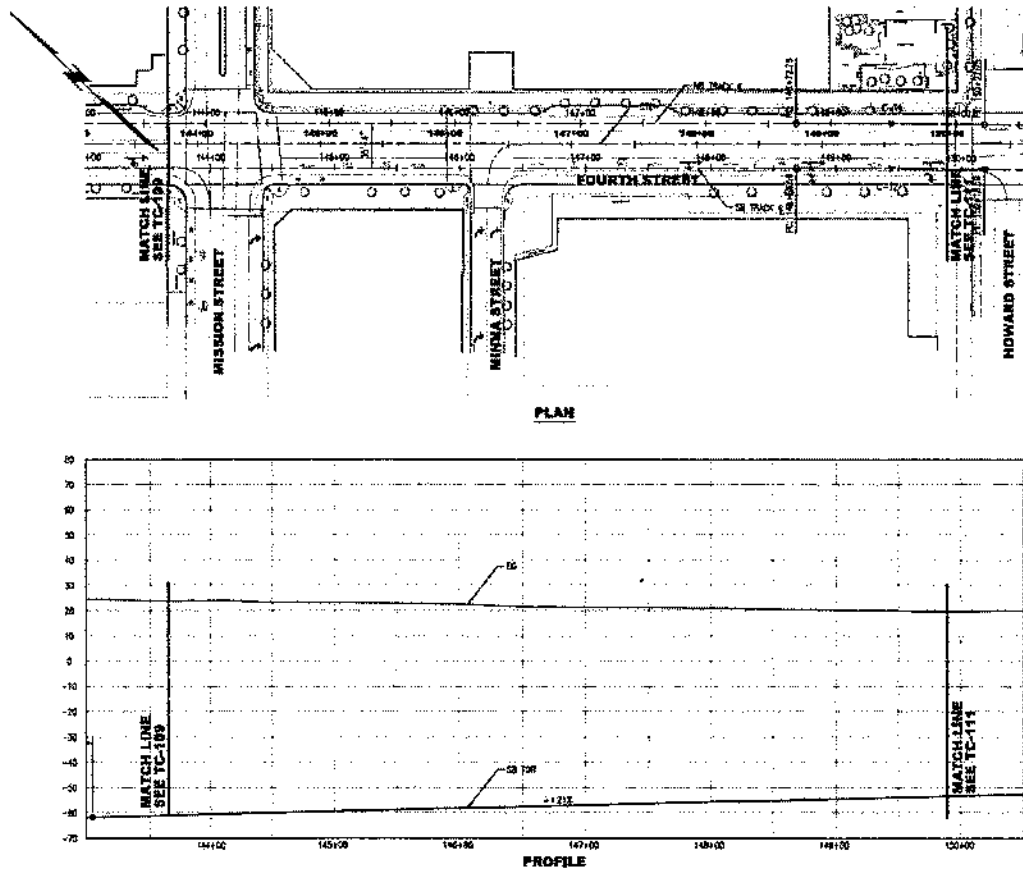
The solution outlined in the attached "Rethinking DTX" (2012) presentation is to locate the northbound and southbound tracks in separate 27-foot tunnel bores (one each under Minna and Natoma Street) similar to the high-speed tunnels linking London to the Channel Tunnel.



As seen above, there is no need to demolish any buildings between Second & Third, including SFMOMA (the orange tunnels under Minna & Natoma are to scale).



The smaller tunnel diameters provide an opportunity to cross the Central Subway.



### Additional issues resolved by the 7<sup>th</sup> Street alignment

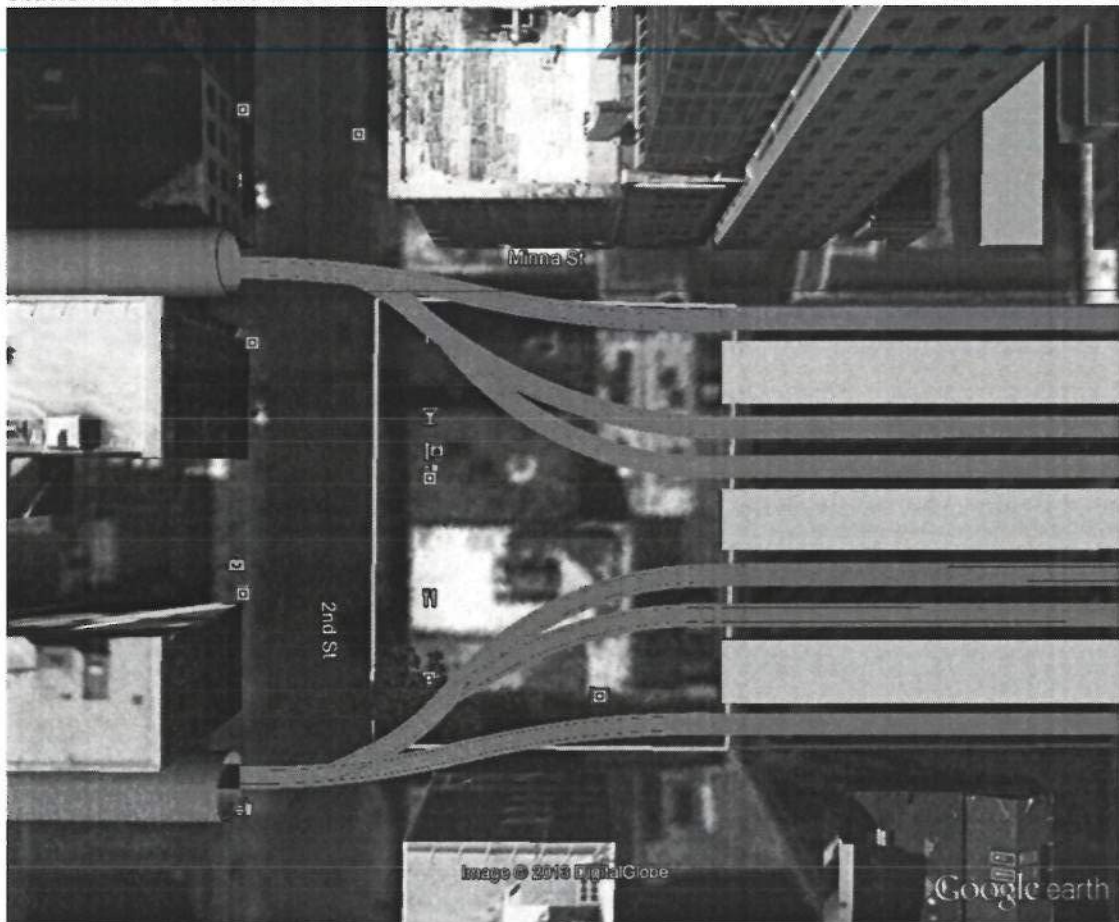
- Elimination of six-track station throat under 2<sup>nd</sup> Street

***"The structural column configuration in the built Salesforce Transit Center limits the flexibility for changing the track geometry within the train box and at the throat leading into the terminal, but options that entail adjustments to track design criteria at the throat to minimize right-of-way impacts should be explored with CHSRA, TJPA, Caltrain and SENER. "***

This problem is resolved through the replacement of the 90 degree curved throat under Second Street with two mini-throats each serving 3 sets of platform faces. These mini-throats are modeled after the approach to St Pancras domestic platforms 11, 12 and 13 (please refer to "Elimination of the requirement for a third track" on page 7 below).



Station mini-throats under Second Street

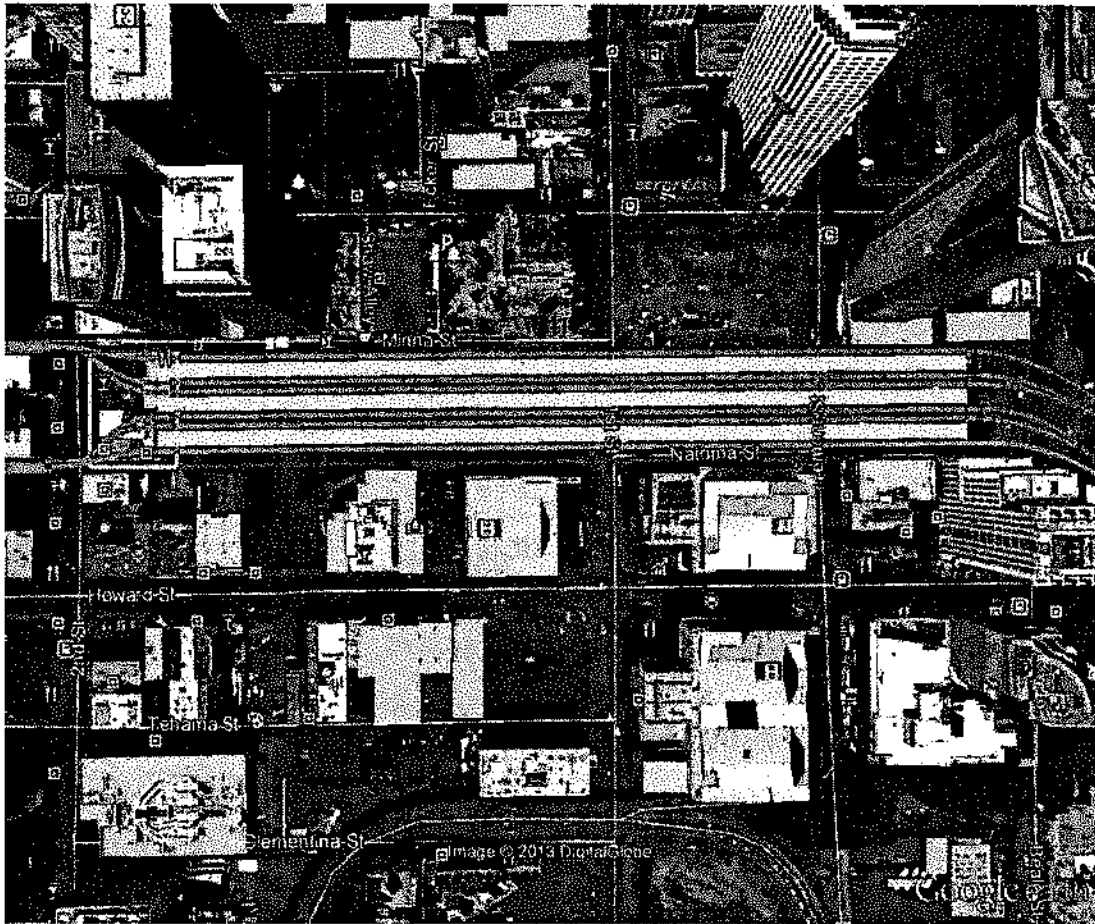


Entering the STC train box (no conflicts). Minna is on the left and Natoma is on the right



- **Platform lengths**

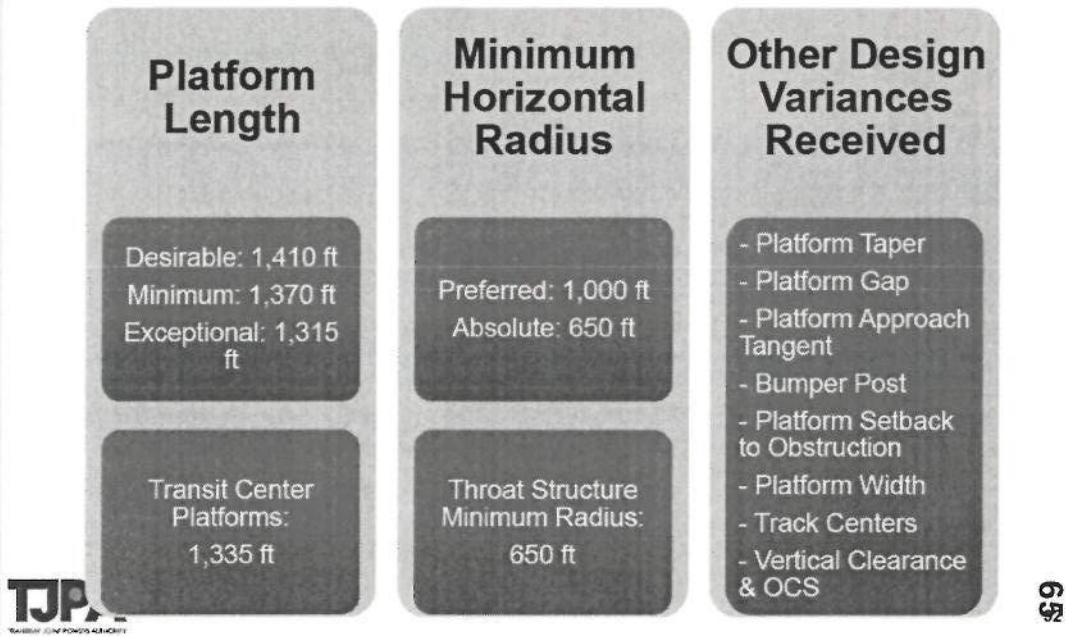
One of the conditions of the \$400M 2008 ARRA grant was 400-meter (1,312 feet) straight platforms. The 7<sup>th</sup> Street alignment makes it possible to have six (not five) full-length platforms without impacts on the 201 Mission foundations by sliding the southern tip of the platforms to the location previously occupied by the six-track angled station throat located between Second & First.



- **Vacation of 4<sup>th</sup> & King Railyard**

Doubling the length of the six STC platforms makes it possible to store two 650-foot trains per platform resulting in the same capacity as the existing twelve 650-foot platforms at the 4<sup>th</sup> & King railyard.

## CHSRA Design Guidance



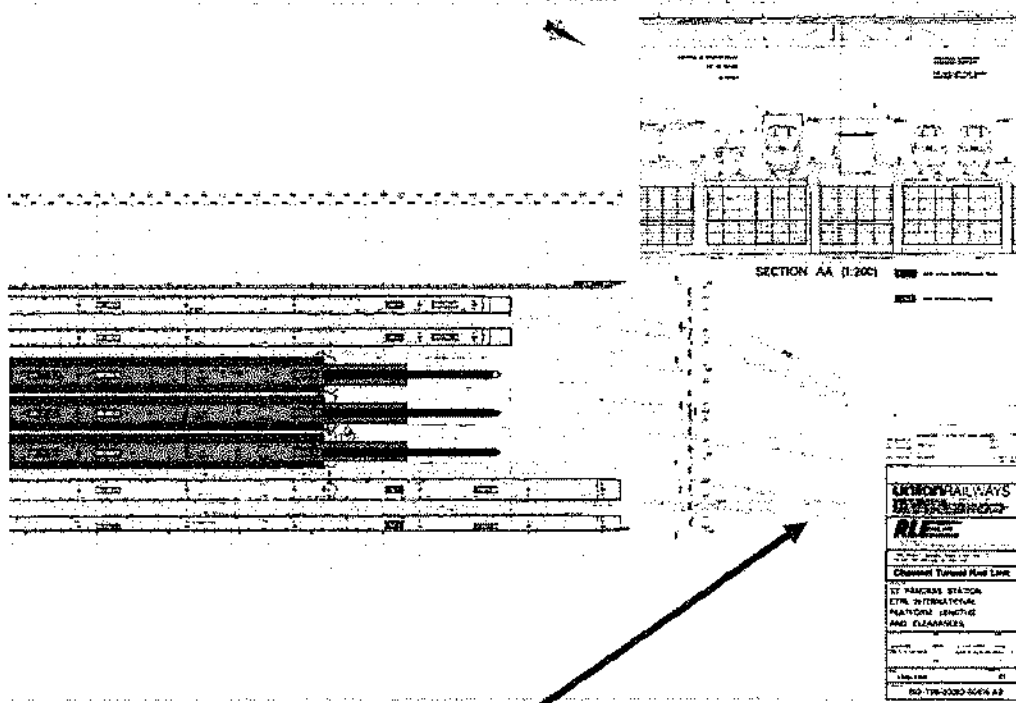
### - Elimination of the requirement for a third track

*“Only one of the studies, completed by Parsons and Carl Wood for TJPA, performed a detailed service perturbation analysis. It shows that if there is a delay or track blockage in the tracks leading to the “throat” of the terminal, then three tracks are required to support reliable train service and to facilitate recovery from operational delays.”*

This problem is resolved by a combination of

- Two 3-track mini throats
- Two mined crossovers (at Howard & Seven and under Yerba Buena Gardens)
- Four tracks between 16<sup>th</sup> and Townsend (new 7<sup>th</sup> & King station)

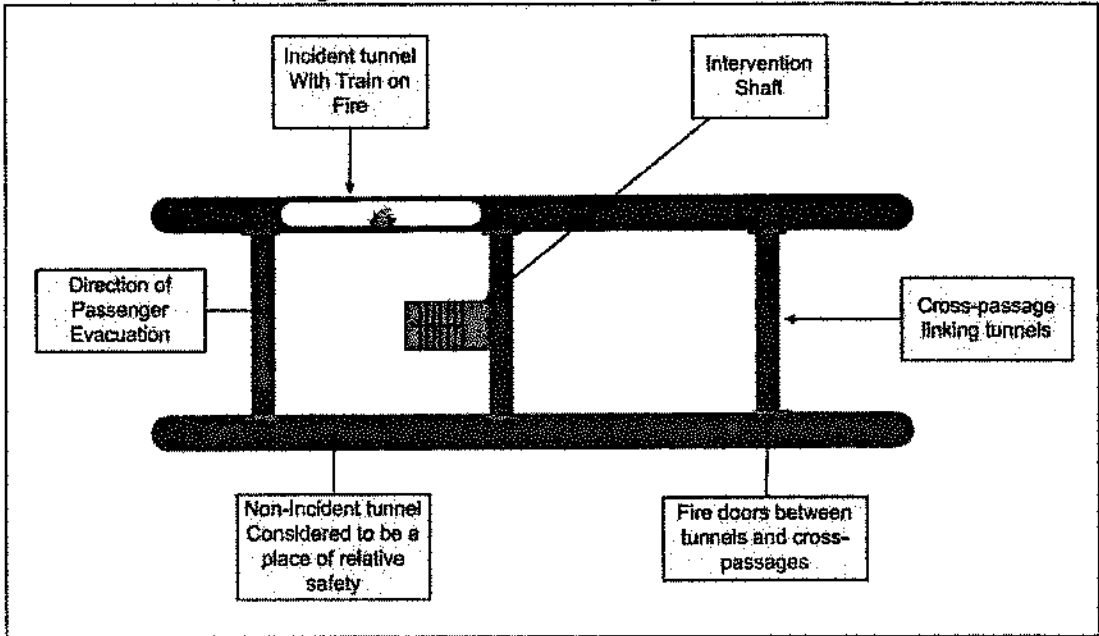
Please refer to the attached “Northbound refined DTX alignment” letter dated November 17<sup>th</sup> 2013 which explained how London was able to support 12 trains/hour with 3 (not six) platforms faces and **two tracks** (not three) during the 2012 Olympics.



TWO Tracks

- Elimination of multiple vent/evacuation structures

The elimination of the third track enables the implementation of a twin-bore ventilation/evacuation system similar to BART's Transbay tube (in the event of a fire in the Minna tunnel, passengers would evacuate through the Natoma tunnel).



**-\$4B (2/3) cost reduction**

This slide lists recent tunnel project with an average cost of **\$350M/mile**.

Tunnel	Year completed	Diameter (ft)	Bores	Alignment length (miles)	Total length of tunnels (miles)	Reported cost (\$ million)	Cost per mile of tunnel (million \$/mile)
Port of Miami Tunnel	proposed	36	twin	0.7	1.5	1,000	\$677
Lefortovo	2005	47	single	1.4	1.4	600	\$439
Airport Link Brisbane	2012	41	twin	3.3	6.5	2,206	\$338
Groene Hart Tunnel	2006	48	single	1.4	1.4	450	\$332
4th Tube of the Elbe	2002	47	single	2.6	2.6	775	\$303
I-710 (A3)	proposed	50 <sup>1</sup>	triple	4.1	12.4	3,585	\$290
I-710 (C3)	proposed	42 <sup>1</sup>	triple	4.0	12.0	3,195	\$266
A86W	2010	37.9 <sup>1</sup>	single	10.9	10.9	2,641	\$242
Wesertunnel	2001	38	twin	1.0	2.0	358	\$180
Beacon Hill Tunnel	2009	21	twin	0.8	1.6	280	\$172
M-30	2008	50	twin	2.2	4.3	570	\$131
Dublin Port Tunnel	2006	38	twin	2.8	5.6	530	\$94
Pannerdenschkanaal	2003	32	twin	1.0	2.0	173	\$86
SMART	2007	43	single	6.0	6.0	515	\$85
Wuhan	2008	37	twin	1.7	3.4	288	\$85
Nanjing	2013	49	twin	1.9	3.7	245	\$66
Westerschelde	2002	37	twin	4.1	8.2	490	\$60
Shanghai River Crossing	2008	51	twin	4.6	9.3	245	\$27

<sup>1</sup> This scheme contains multiple tunnel diameters. This number presented is the average tunnel diameter.

This is in sharp contrast with the **\$2B/mile** costs presented to the CAC on June 27

**PRELIMINARY ESTIMATES OF PROBABLE COSTS AND SCHEDULES**

ALIGNMENT	COST <sup>1</sup>	EXPECTED COMPLETION DATE <sup>2</sup>
FUTURE WITH SURFACE RAIL: DTX + TRENCHED STREETS	\$5.1 Billion	2026
PENNSYLVANIA AVENUE: DTX + EXTENDED TUNNEL	\$6.0 Billion	2027
MISSION BAY: MODIFIED DTX + 3 <sup>RD</sup> STREET TUNNEL	\$9.3 Billion	2031

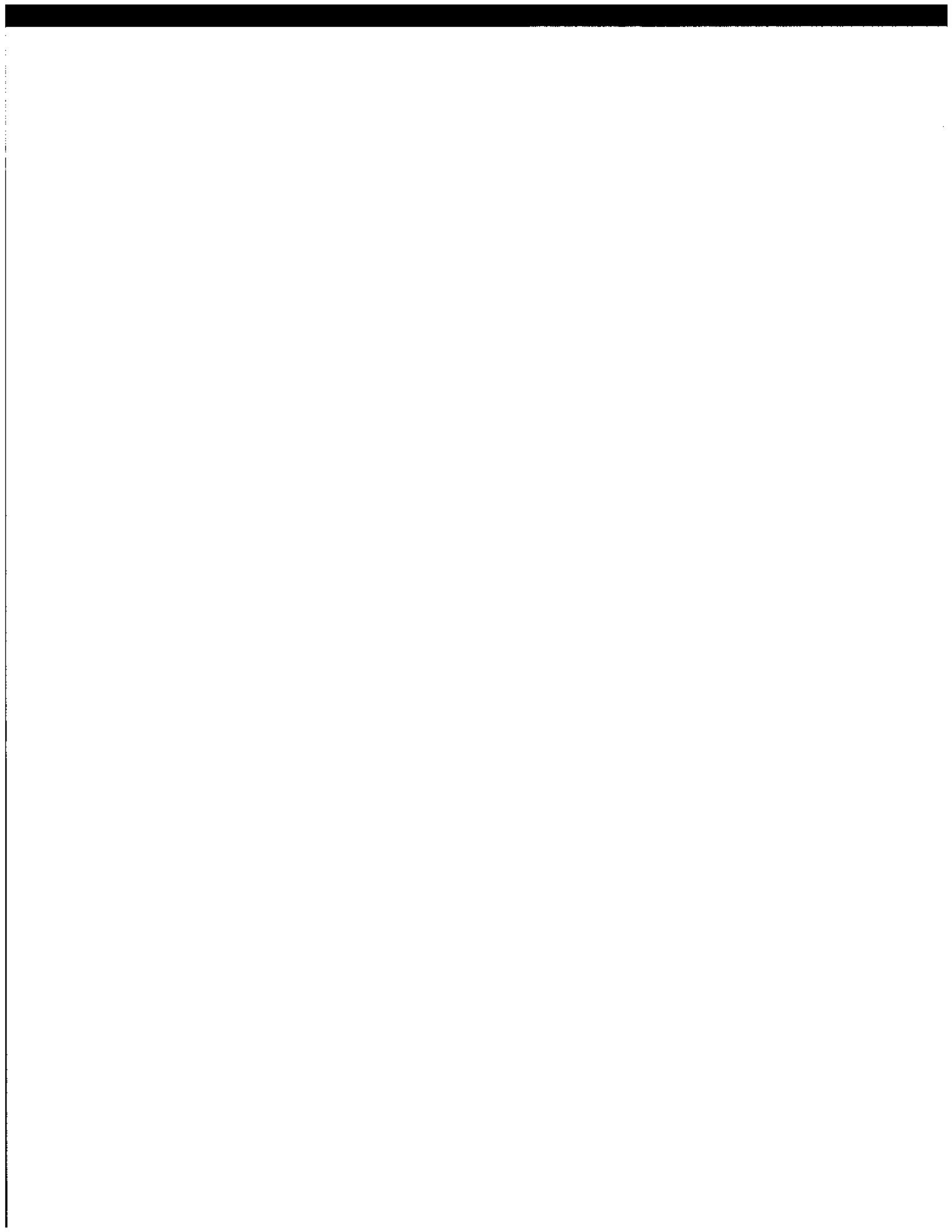
1. Includes construction costs, value capture, and impact costs  
 2. Completion date estimate if all money were available on January 1, 2017

Conceptual Level  
 Comparative Cost  
 Estimates

Respectfully presented for your consideration.

Sincerely,

Roland Lebrun

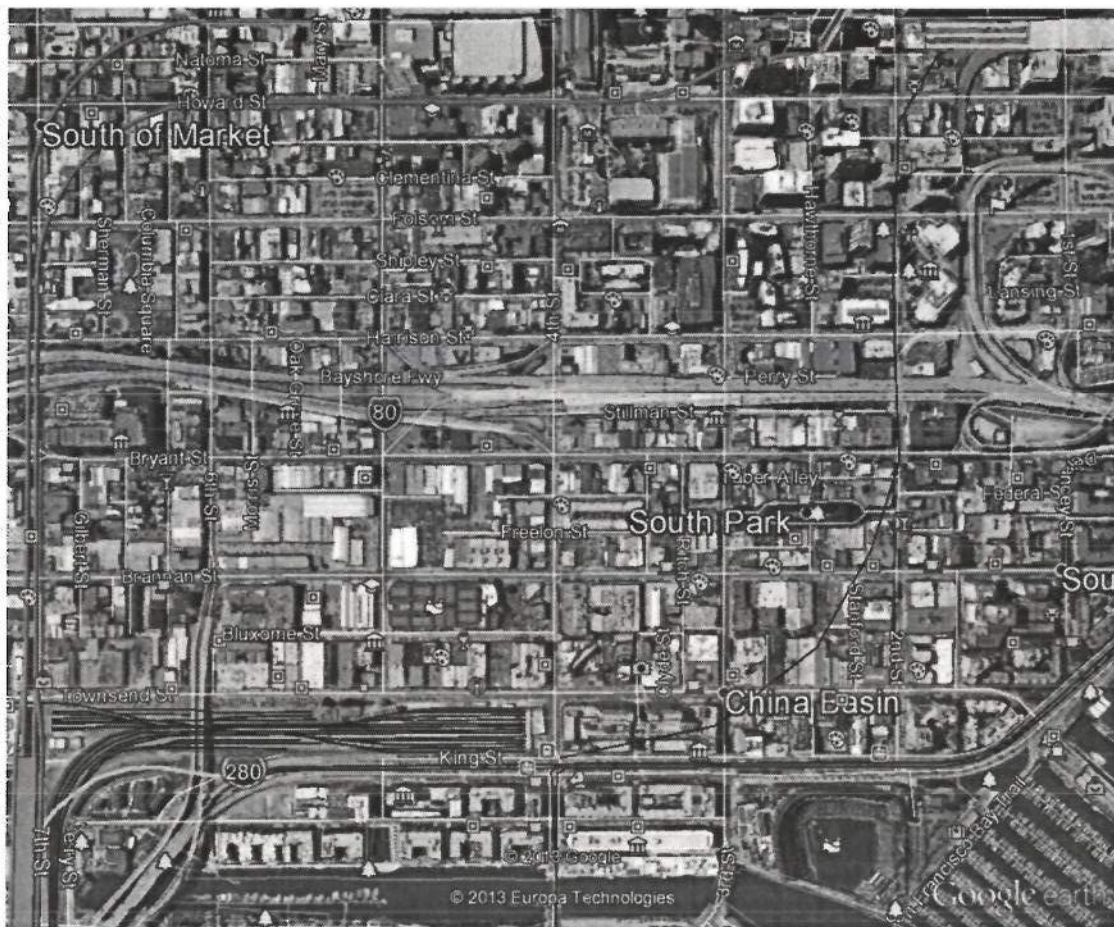


The purpose of this short paper is to outline a refined northbound DTX tunnel alignment capable of delivering substantially higher TTC capacity if the crossover under Main Street is not available.

The refined alignment enables the implementation of Crossrail crossover designs and construction techniques to deliver a track layout with the same capacity as the connection between the HS1 tunnels and St Pancras platforms 11, 12 & 13.

#### Background:

The current northbound DTX tunnel proposal avoids existing building foundations by veering east off 7<sup>th</sup> Street under Howard before lining up with Natoma east of 3<sup>rd</sup> Street.



The refined northbound tunnel alignment lines up with Natoma east of 7<sup>th</sup> Street and runs deep enough to avoid any current or future building foundations between 7<sup>th</sup> and 3<sup>rd</sup> Street, including Moscone Center which is understood to have foundations supported by micropiles extending 100 feet below the surface.





Moving the northbound DTX tunnel alignment to Natoma makes it feasible to connect the two tunnels with additional crossovers as follows:

- 1) Crossover from Northbound to Southbound tunnel between 3<sup>rd</sup> and 4<sup>th</sup> Street. This crossover's purpose is to route northbound trains to TTC platforms 1, 2 & 3 (northern-most platforms closest to Mission Street) which should be reserved for high-volume traffic (12 trains/hour).



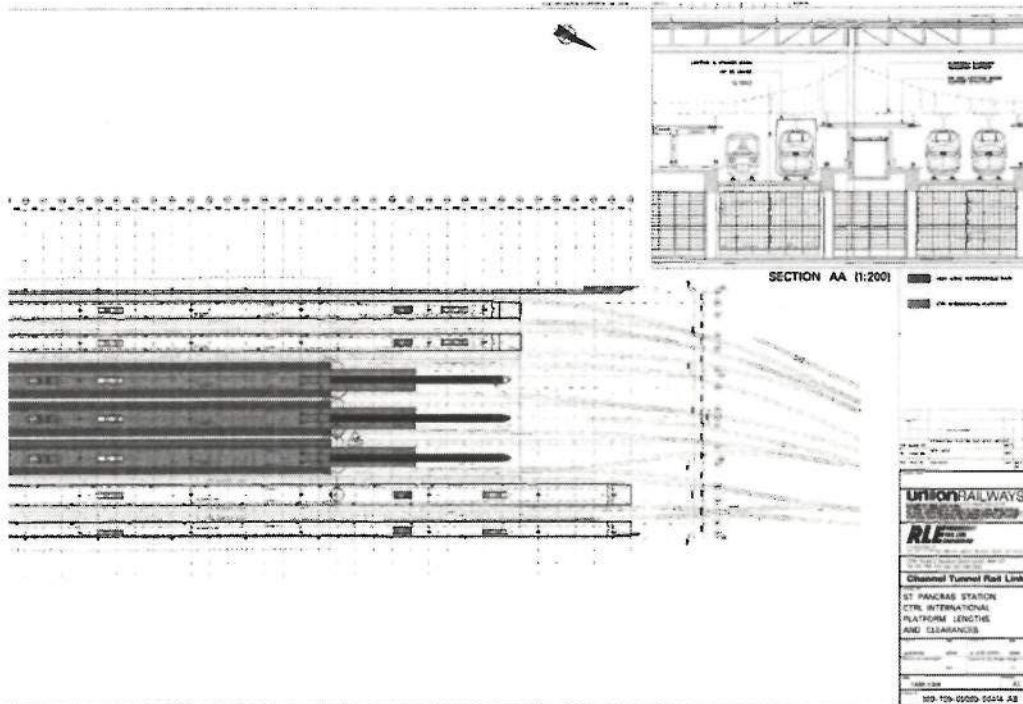
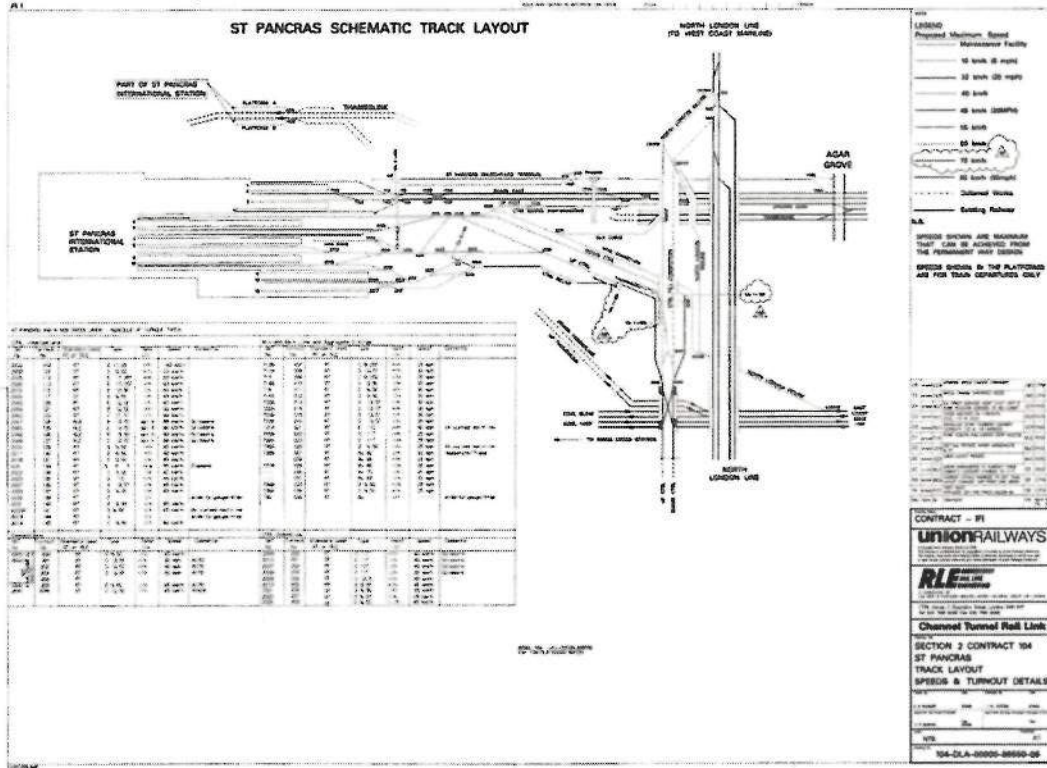
2) Crossover from Northbound to Southbound tunnel between 6<sup>th</sup> & 7<sup>th</sup> Street.  
This crossover is for southbound traffic originating from TTC platforms 4, 5 & 6 which should be reserved for low-volume traffic (maximum 4 trains/hour) because southbound trains originating from these platforms can potentially interfere with northbound traffic between 7<sup>th</sup> street and the TTC.



Last but not least, the refined alignment is expected to deliver costs savings through shorter cross-passages between the northbound and southbound tunnels and these savings are expected to cover the construction costs of the two crossovers.

Reference material:

St Pancras track layout



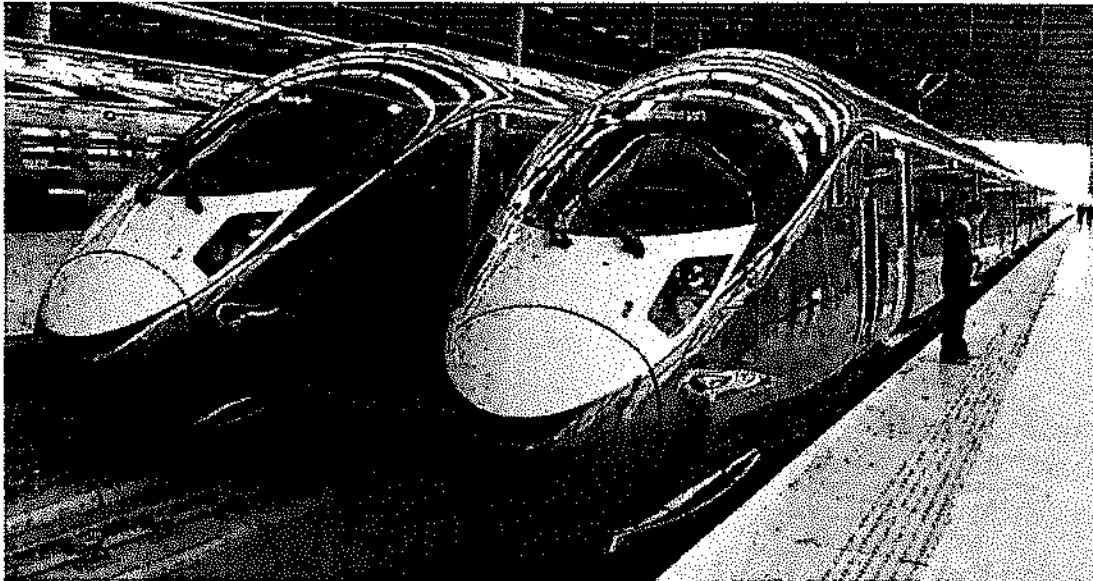
# 2012 Summer Olympics timetable (12 trains/hour)

Service	Platform	06:00	06:15	06:30	06:45	07:00	07:15	07:30	07:45	08:00	08:15	08:30	08:45	09:00	09:15	09:30	09:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00	19:15	19:30	19:45	20:00	20:15	20:30	20:45	21:00	21:15	21:30	21:45	22:00	22:15	22:30	22:45	23:00	23:15	23:30	23:45	24:00
St Pancras International	11	06:00	06:15	06:30	06:45	07:00	07:15	07:30	07:45	08:00	08:15	08:30	08:45	09:00	09:15	09:30	09:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00	19:15	19:30	19:45	20:00	20:15	20:30	20:45	21:00	21:15	21:30	21:45	22:00	22:15	22:30	22:45	23:00	23:15	23:30	23:45	24:00
St Pancras International	12	06:00	06:15	06:30	06:45	07:00	07:15	07:30	07:45	08:00	08:15	08:30	08:45	09:00	09:15	09:30	09:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00	19:15	19:30	19:45	20:00	20:15	20:30	20:45	21:00	21:15	21:30	21:45	22:00	22:15	22:30	22:45	23:00	23:15	23:30	23:45	24:00
St Pancras International	13	06:00	06:15	06:30	06:45	07:00	07:15	07:30	07:45	08:00	08:15	08:30	08:45	09:00	09:15	09:30	09:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00	19:15	19:30	19:45	20:00	20:15	20:30	20:45	21:00	21:15	21:30	21:45	22:00	22:15	22:30	22:45	23:00	23:15	23:30	23:45	24:00

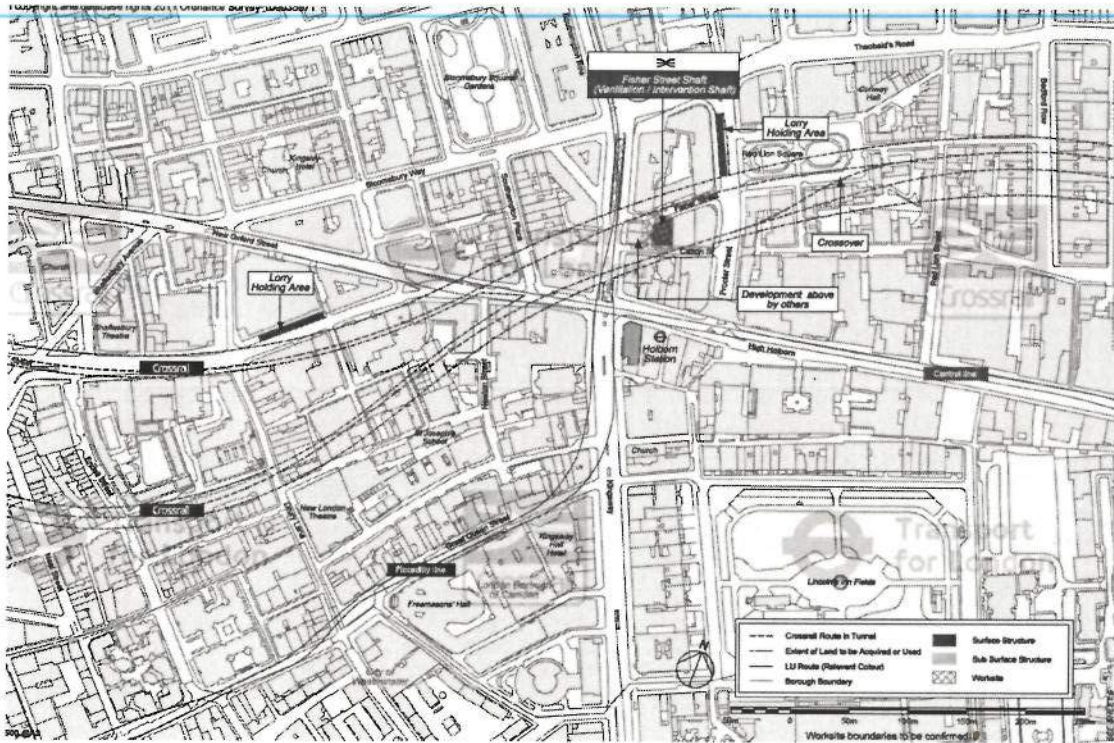
For guide to notes & symbols see page 7. \* Services run in the early hours of Friday 27 July but WILL RUN in the early hours of Monday 23 August

27 July to 10 August 2012  
 Mondays to Fridays  
 High speed - London to St Pancras International, Epsom, Gatwick, Brighton, Reading, Southampton, Exeter and Cardiff International

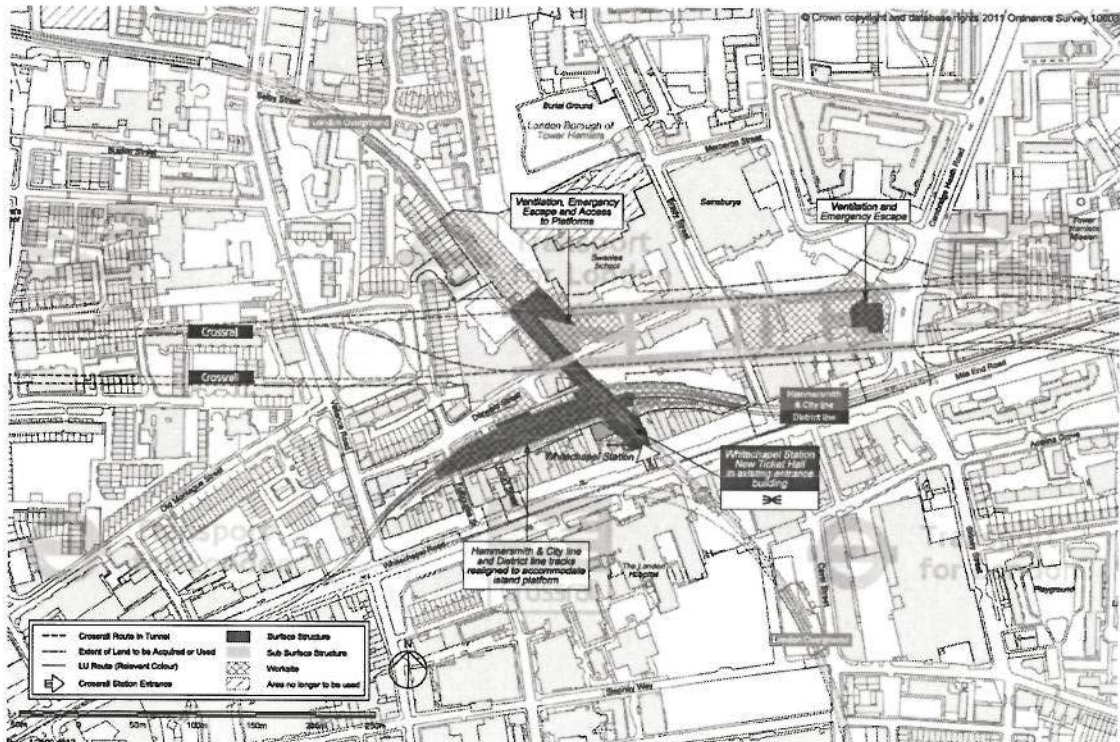
## St Pancras domestic platforms 11, 12 & 13



## Red Lion Square (London WC1) Crossrail crossover

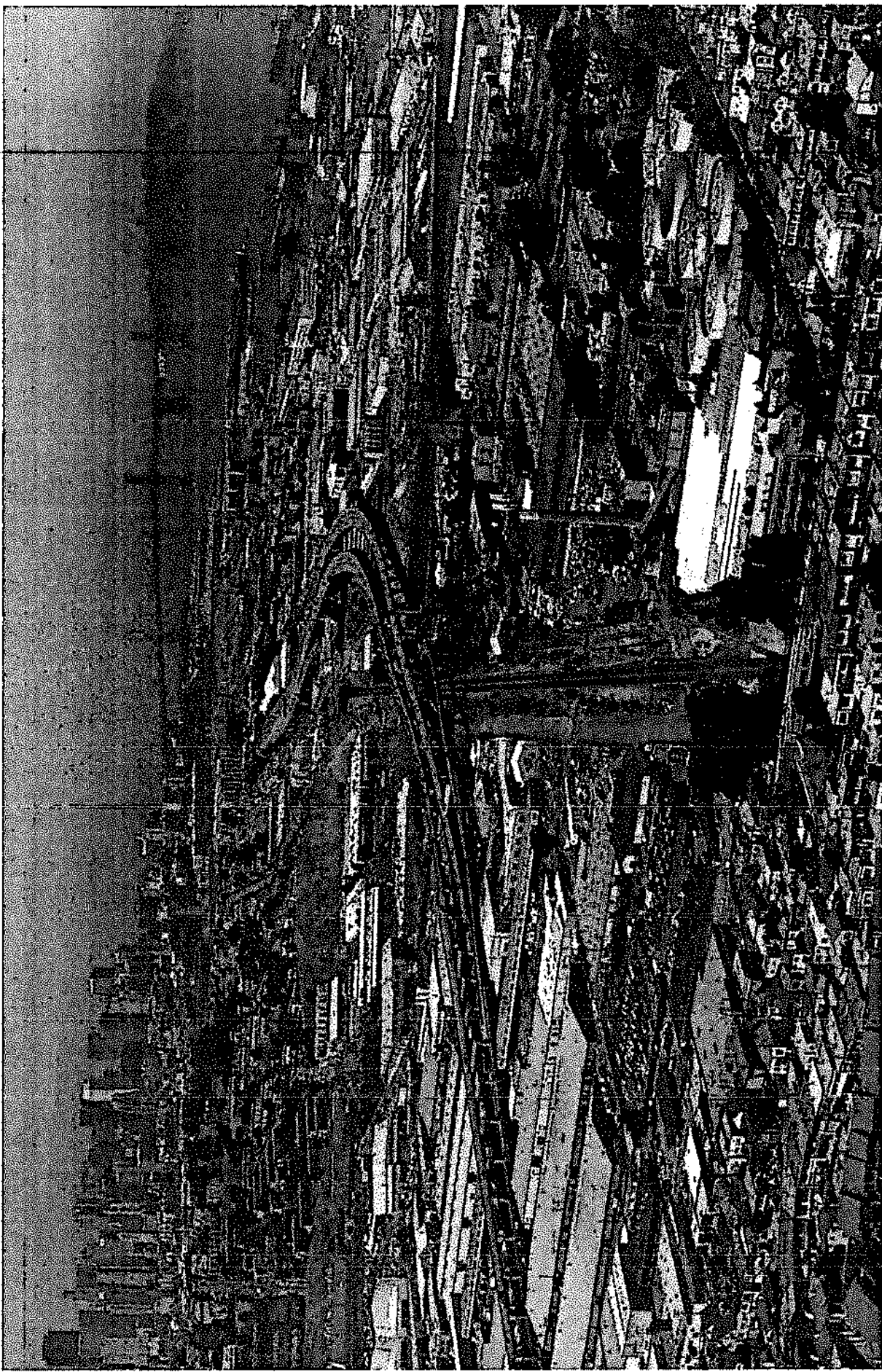


## Whitechapel Crossrail station (London E14) crossover





# Rethinking DTX



# Guiding principles

- Address DTX cost issues (currently \$2.5B+)
- Full-size straight HSR platforms
- Improve DTX alignment (faster, straighter curves)
- Minimize surface impacts in SOMA
- No construction impacts on Caltrain operations
- Mission Bay station (redevelop 4th&King Caltrain yard)
- Provide Muni (Central Subway) connection
- Grade-separate 16th street
- Reconnect King, Berry and Channel Street
- Enable tearing down 280 @ Mariposa
- Eliminate Transbay approach bottlenecks
- Provide nearby HSR storage/maintenance facility



# Rethinking DTX

- Extended DTX tunnels (DTX South & DTX North)
- Mission Bay station @ 7<sup>th</sup> & King
- Launch box under 23<sup>rd</sup> (or 22<sup>nd</sup> for new station)
- 1.3 mile twin-bore tunnel to 7<sup>th</sup> & King station
- 1.3 mile twin-bore tunnel to Transbay train box
- No surface impacts north of Townsend
- DTX first, Mission Bay as funding becomes available
- No dependency on 280 @ Mariposa
- Storage facility within 4 miles of Transbay
- TTC track layout redesign (enable Bay tunnel)
- Total cost: \$1B (includes DTX & 7<sup>th</sup> & King station)

DTX North

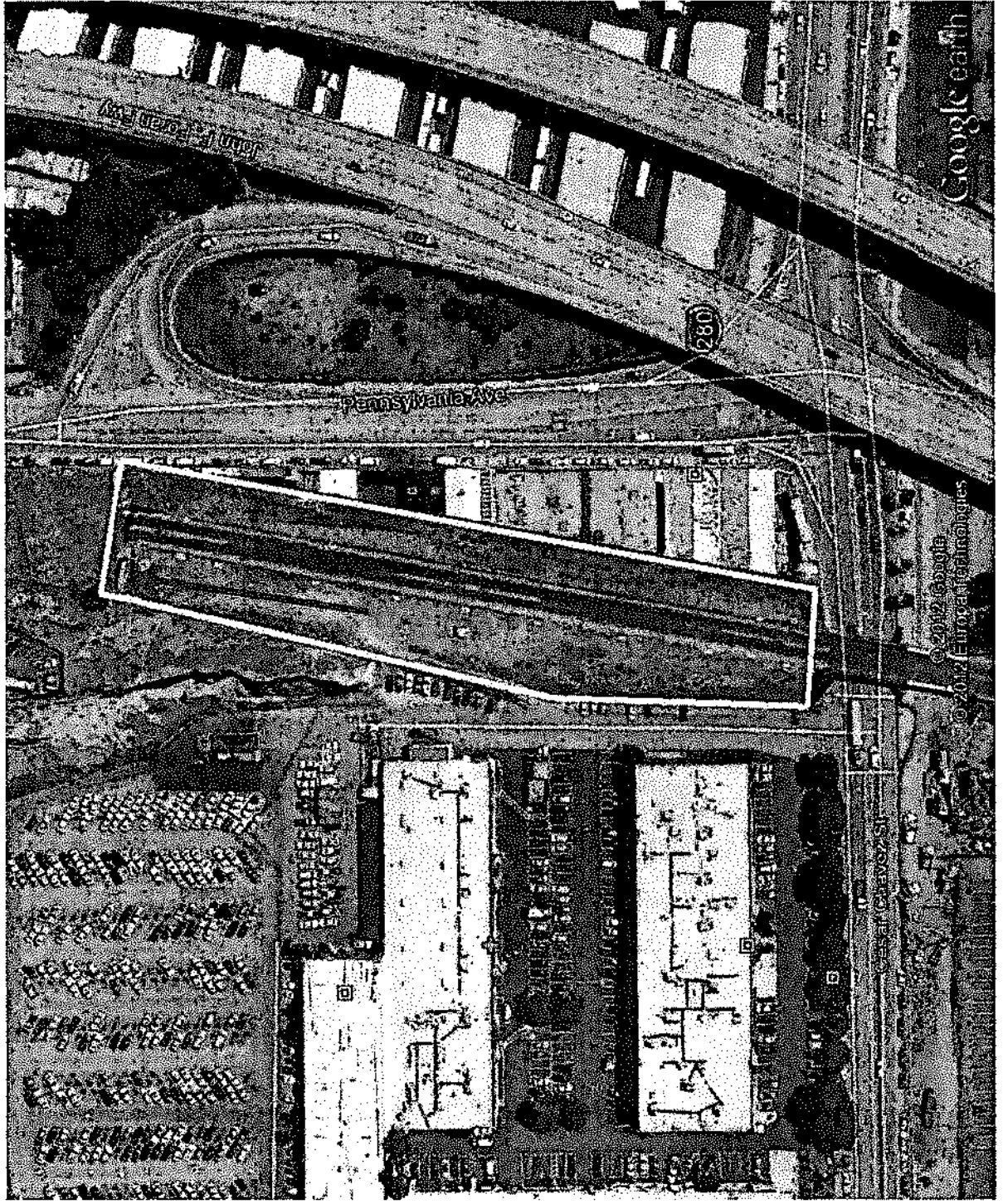


DTX South

# TBM staging and soil removal area (Bayshore Baylands fill?)



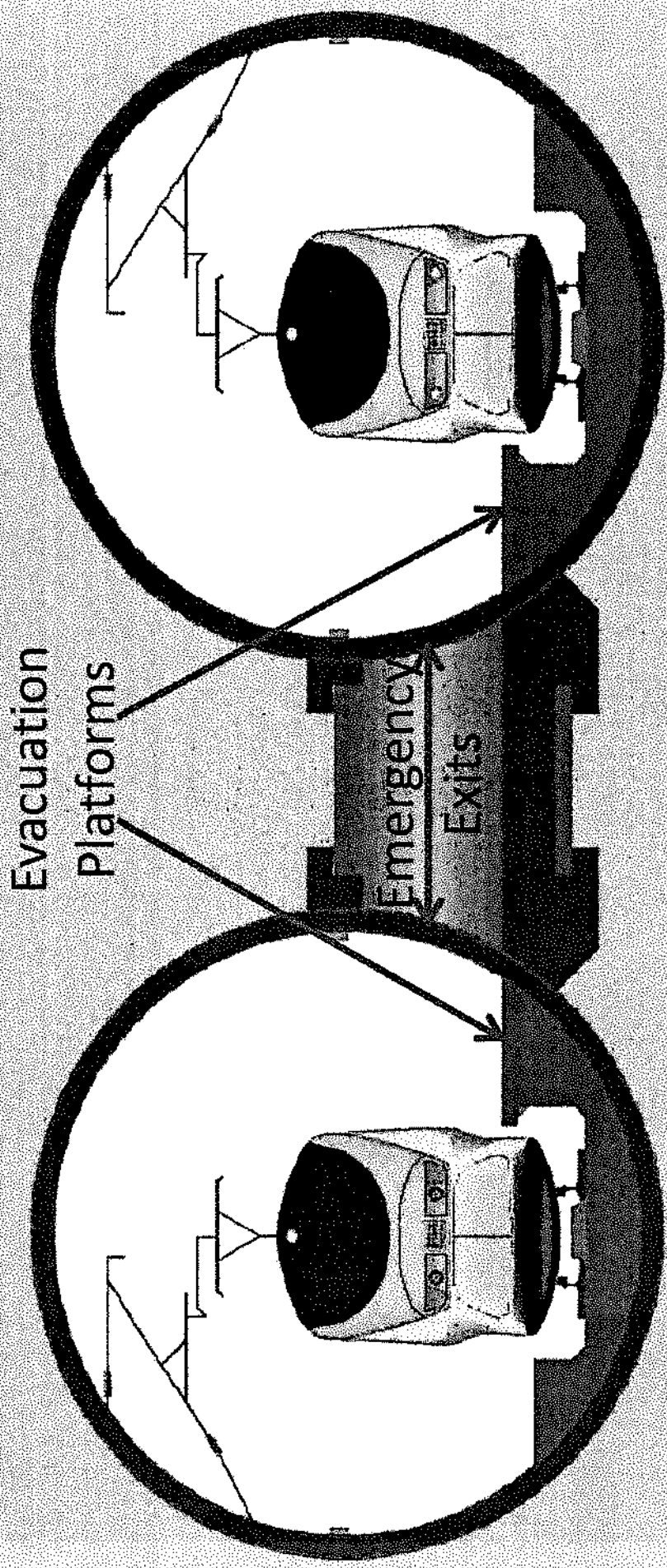
# Western Tunnel #2 reopening



# Potential HSR Storage/Maintenance



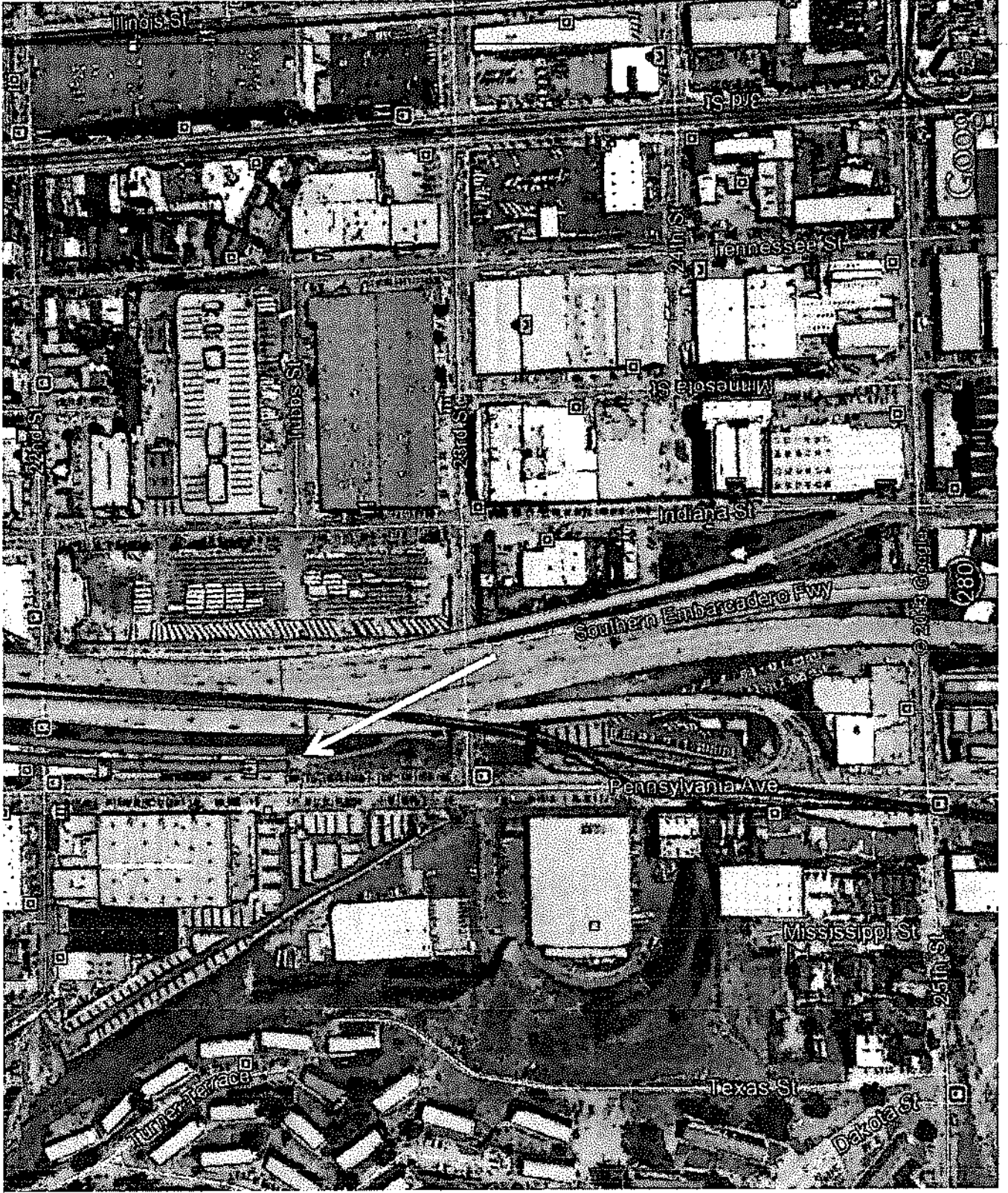
# 160 MPH Tunnel Design (large enough for Caltrain bi-level EMUs)



**Twin bore - Single track tunnel**

**7.15m internal diameter, 8.1m external diameter**

# DTX South Portal @ 23rd



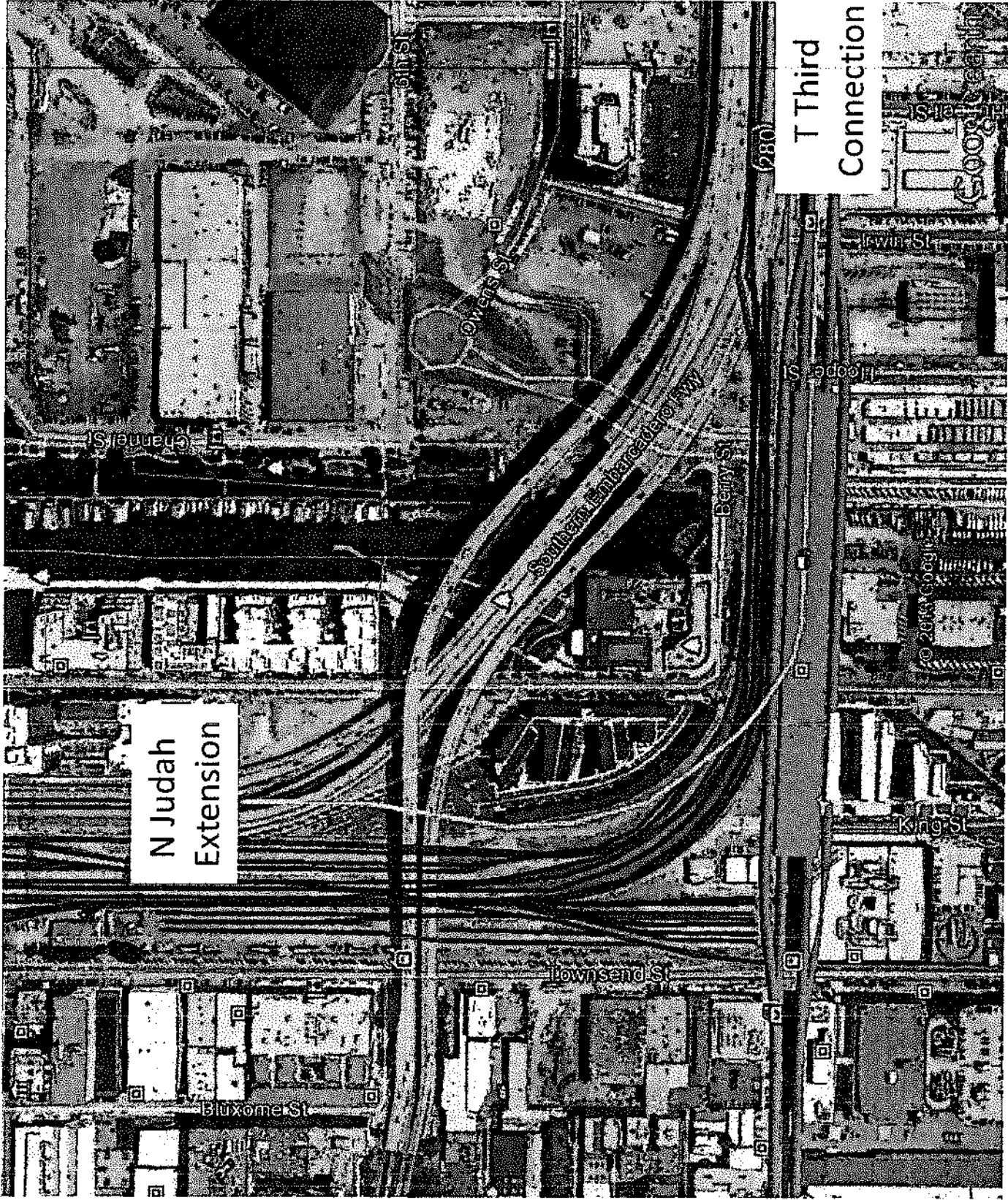
# DTX South to Mission Bay station

T Third  
Connection

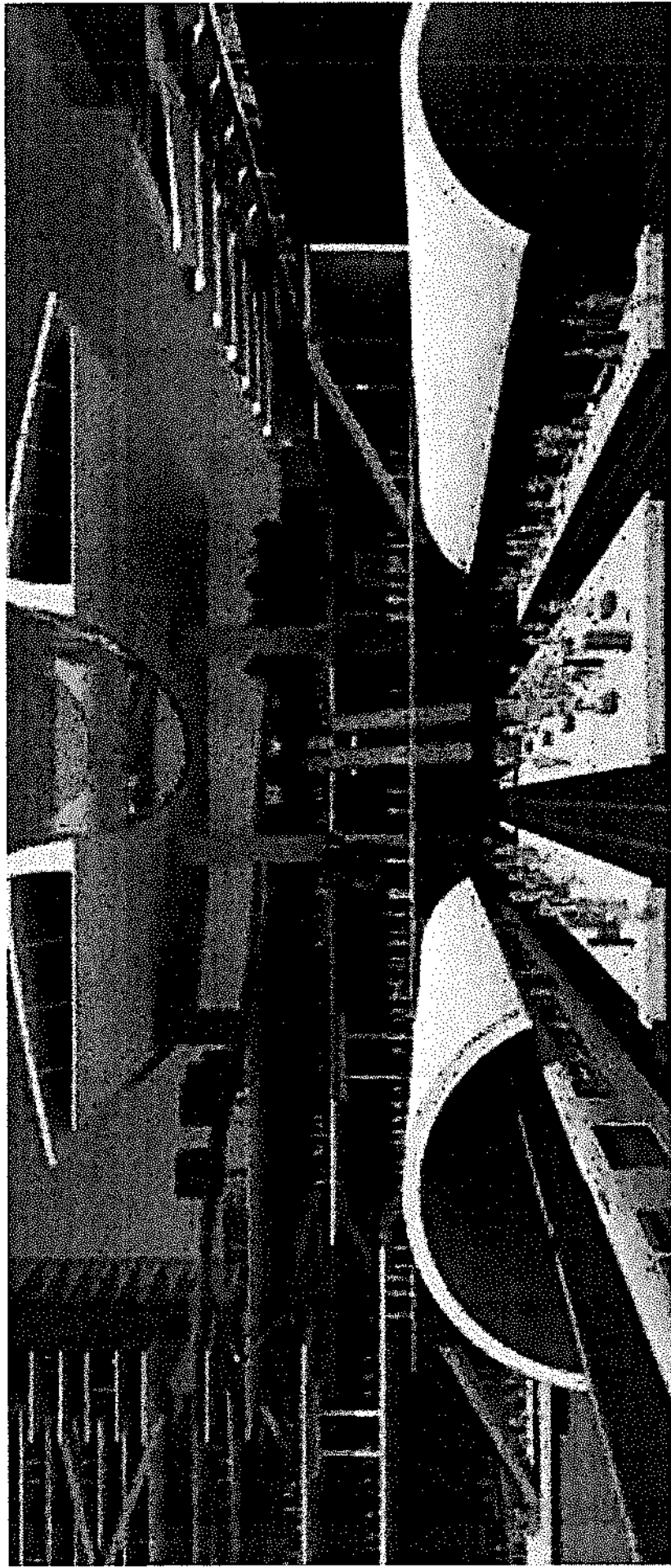




# Mission Bay station (7th & King)



# Mission Bay station

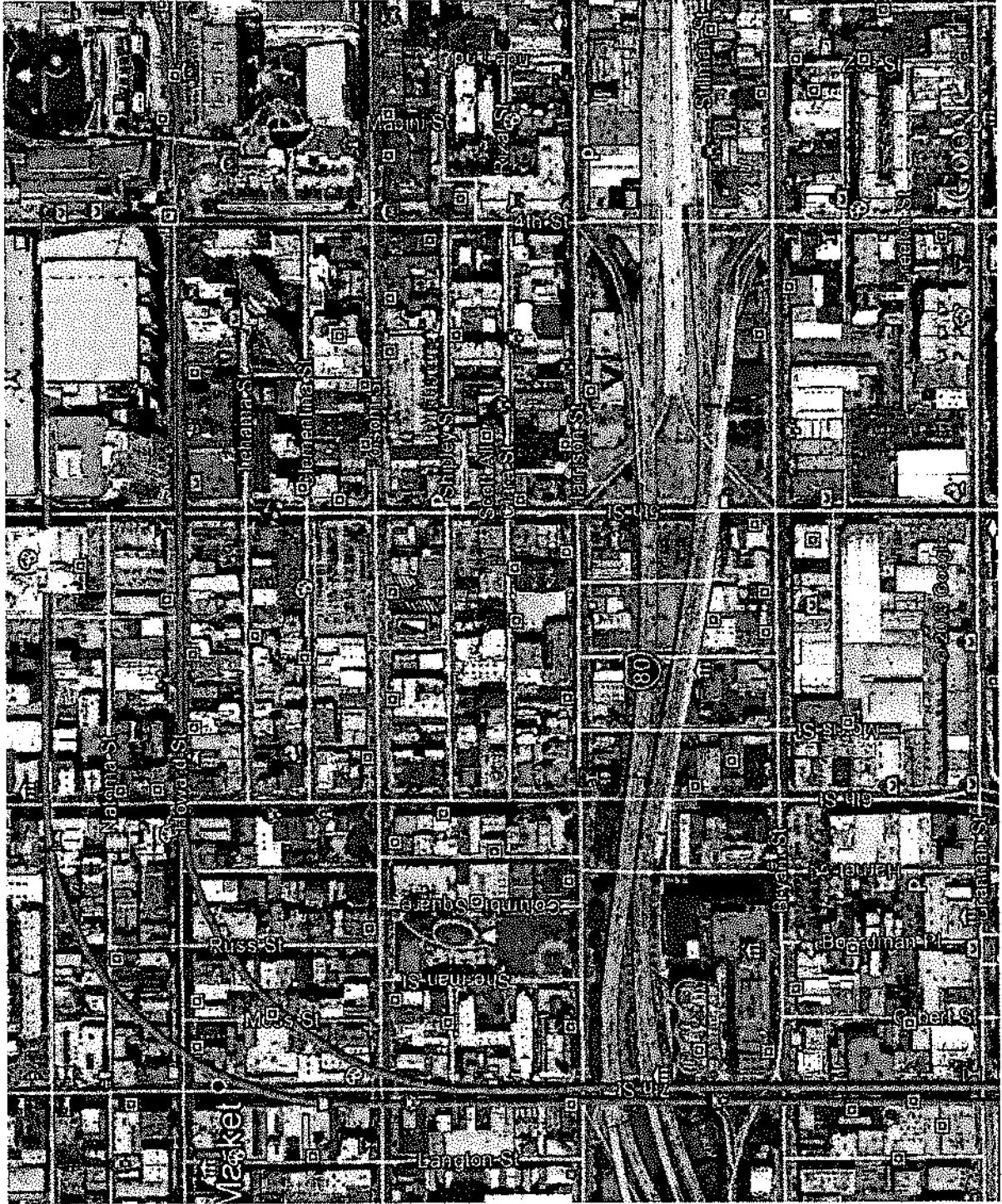


Southbound DTX                      Under 7<sup>th</sup> Street                      Northbound DTX  
(future Grand Boulevard)                      (under existing tracks)

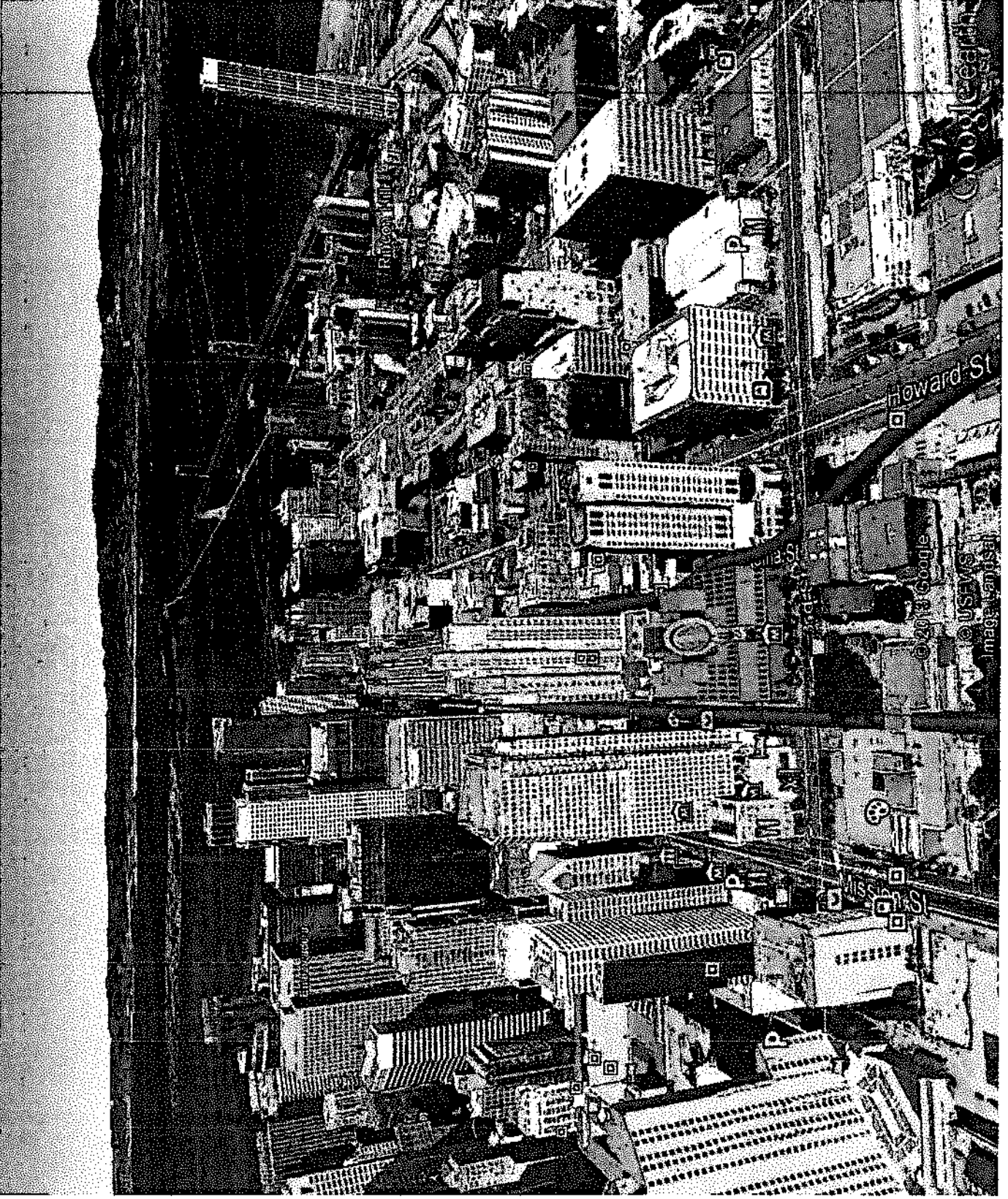
# DTX South score card

- No construction impacts on Caltrain operations
- Mission Bay station (redevelop 4<sup>th</sup> & King Yard)
- Caltrain/Muni (Central Subway) connection @ 7th
- Reconnect King St, Berry St and Channel St
- Grade-separation @ 16th street (tunnel)
- Enable tearing down 280 @ Mariposa
- Eliminate Transbay approach bottlenecks (4 tracks)

# DTX North



# Crossing the Central Subway

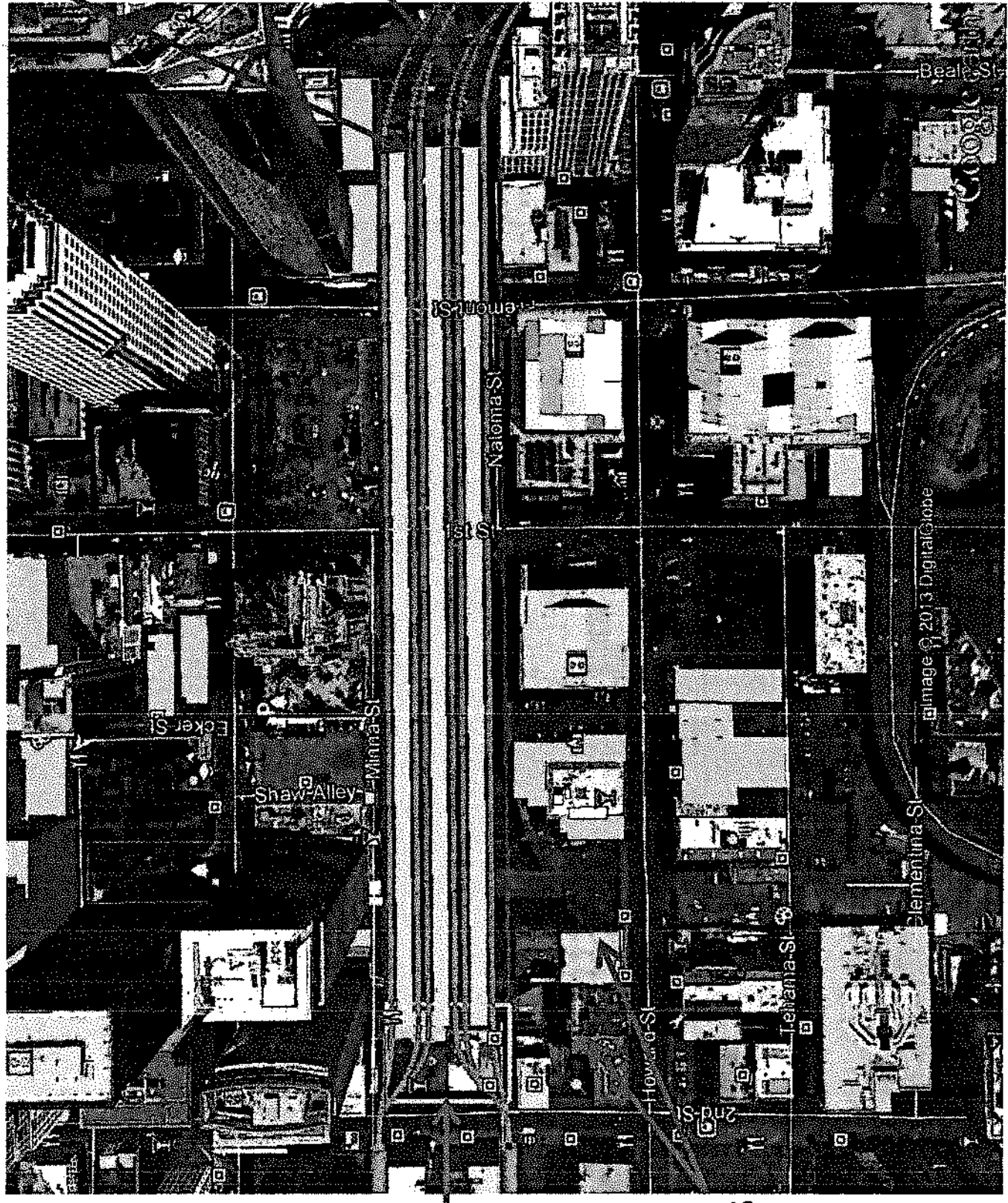


# Crossing the Central Subway

- Central Subway runs 80 feet down @ Moscone
- Add 20-foot clearance between DTX & CS tunnels
- Add 26-foot DTX TBM outer diameter
- Total: DTX needs to go down at least 126 feet deep
- Distance between 4<sup>th</sup> & TTC: 2,000 feet
- Maximum climb @ 3.5%: 70 feet
- Minimum depth at entry to TTC: 56 feet

# Transbay train box

1,330 feet  
platforms

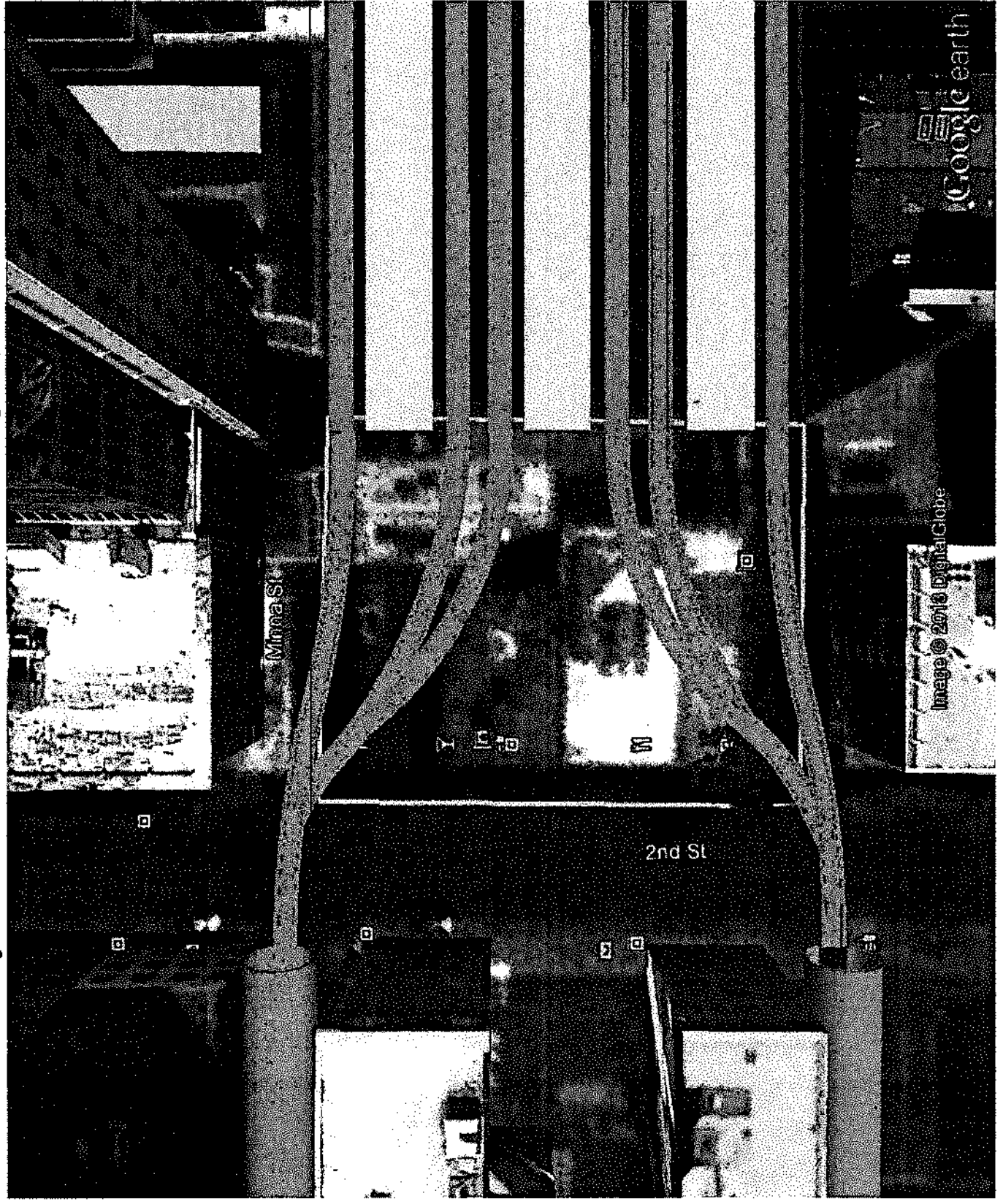


Beale  
Street

Park

Future  
Towers

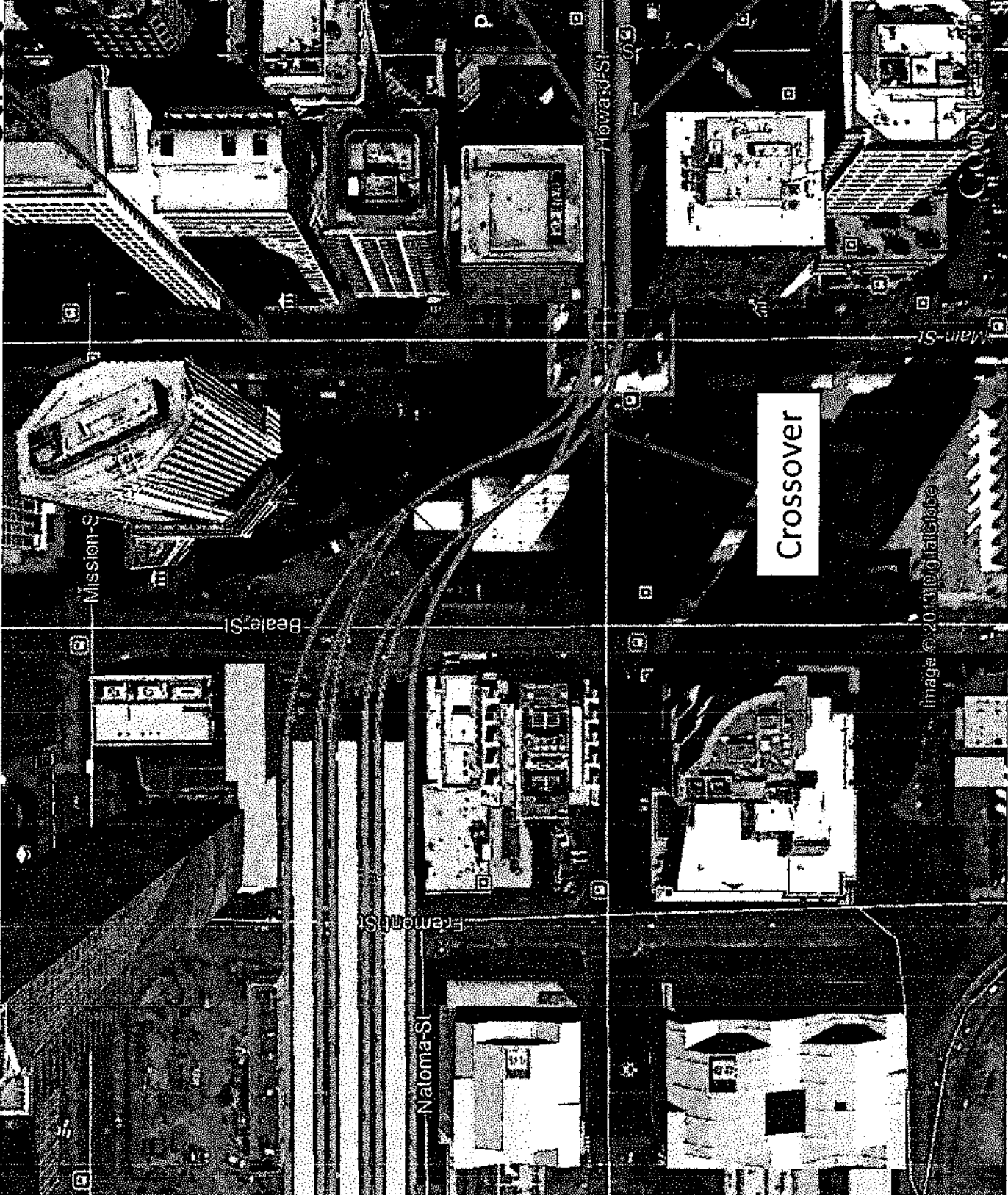
# Track layout at TTC entry (2<sup>nd</sup> street)





# Embarcadero Extension

Main Street



Train Storage

Future Bay Tunnel

Crossover

Image © 2013 Bigstate

## Estimated costs

- DTX South: \$250M
- Mission Bay Station: \$500M
- DTX North: \$300M
- Embarcadero extension: \$250M
- Total: \$1.3B

# DTX Final score card

- Addresses cost issues (+/- \$1.3B vs. \$2.5B+)
- Full-size (1,330 feet) straight HSR platforms
- Improved DTX Alignment (faster, straighter curves)
- No surface impacts north of Townsend
- No construction impacts on Caltrain operations
- Enabled Future Mission Bay station (7<sup>th</sup> & King)
- Muni (Central Subway) connection @ 7<sup>th</sup> & King
- Reconnected King St, Channel St & Berry St
- Grade-separated 16th street (DTX south tunnel)
- Eliminated Transbay approach bottlenecks
- Prepared for tearing down 280 @ Mariposa
- Provided nearby HSR storage/maintenance facility
- Prepared Transbay for future Bay tunnel

# Q&A

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