JPB CAC

CORRESPONDENCE
AS OF

May 19, 2020

Givens, Patrice

From: Roland Lebrun <ccss@msn.com>
Sent: Wednesday, April 15, 2020 7:07 PM
To: cacsecretary [@caltrain.com]
Subject: Re: Caltrain CAC item 7 Business Plan Update

Categories: Green Category

Slide 7 shows that 20 years and $30B later an express train will take 5 minutes longer than a diesel baby bullet train did 10 years ago or more than twice as long as the 30-minute Prop1A mandate codified in Streets & Highways code section 2704.09(b)(3) https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=SHC&sectionNum=2704.09.

It is also unclear how Caltrain could possibly run 8 trains/hour until 16th Street is grade-separated in San Francisco.

Slide 16 Parking at Tamien is at 150% over capacity. Blossom Hill and Capitol are at less than 10% but the VTA are about to replace the entire Tamien parking lot with housing

The issue with clock-based timetables is caused by the lack of passing tracks

Slide 43 Parking. Have you considered autonomous vehicles, TNCs and kiss & ride instead of park & ride?

Slide 49 when will you provide hourly Baby Bullet service?

Slide 52 There is plenty of affordable housing in Gilroy, Hollister, Salinas and Watsonville

Slide 59 The distance between home and the Gilroy station is more like 10 miles, not 2 miles as and example, I live near the Blossom Hill Caltrain station but I have to ride 7 miles on the Light Rail to get to Tamien

Some people would be willing to pay $20 each way for a 30-minute trip between San Jose and San Francisco. Why don't we use this revenue to subsidize means-based fares?

STREETS AND HIGHWAYS CODE - SHC

DIVISION 3. APPORTIONMENT AND EXPENDITURE OF HIGHWAY FUNDS [2004.5 - 2704.78] *(Heading of Division 3 amended by Stats. 1953, Ch. 192.)*

CHAPTER 20. Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century [2704 - 2704.21] *(Chapter 20 added by Stats. 2008, Ch. 267, Sec. 9.)*

ARTICLE 2. High-Speed Passenger Train Financing Program [2704.04 - 2704.095] *(Article 2 added by Stats. 2008, Ch. 267, Sec. 9.)*

2704.09. The high-speed train system to be constructed pursuant to this chapter shall be designed to achieve the following characteristics:

(a) Electric trains that are capable of sustained maximum revenue operating speeds of no less than 200 miles per hour.

(b) Maximum nonstop service travel times for each corridor that shall not exceed the following:

(1) San Francisco-Los Angeles Union Station: two hours, 40 minutes.

(2) Oakland-Los Angeles Union Station: two hours, 40 minutes.

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

(4) San Jose-Los Angeles: two hours, 10 minutes.

(5) San Diego-Los Angeles: one hour, 20 minutes.

(6) Inland Empire-Los Angeles: 30 minutes.

(7) Sacramento-Los Angeles: two hours, 20 minutes.

(c) Achievable operating headway (time between successive trains) shall be five minutes or less.

(d) The total number of stations to be served by high-speed trains for all of the corridors described in subdivision (b) of Section 2704.04 shall not exceed 24. There shall be no station between the Gilroy station and the Merced station.

(e) Trains shall have the capability to transition intermediate stations, or to bypass those stations, at mainline operating speed.

(f) For each corridor described in subdivision (b), passengers shall have the capability of traveling from any station on that corridor to any other station on that corridor without being required to change trains.

(g) In order to reduce impacts on communities and the environment, the alignment for the high-speed train system shall follow existing transportation or utility corridors to the extent feasible and shall be financially viable, as determined by the authority.

(h) Stations shall be located in areas with good access to local mass transit or other modes of transportation.

(i) The high-speed train system shall be planned and constructed in a manner that minimizes urban sprawl and impacts on the natural environment.

(j) Preserving wildlife corridors and mitigating impacts to wildlife movement, where feasible as determined by the authority, in order to limit the extent to which the system may present an additional barrier to wildlife's natural movement.

(Added by Stats. 2008, Ch. 267, Sec. 9. Approved in Proposition 1A at the November 4, 2008, election.)

Givens, Patrice

From: Roland Lebrun <ccss@msn.com>
Sent: Wednesday, April 15, 2020 7:11 PM
To: cacsecretary [@caltrain.com]
Subject: Business plan comments

The email Jennifer read did not include what I said after CAC member comments.
The problem is that Brian called for public comment too early

Givens, Patrice

From: Roland Lebrun <ccss@msn.com>
Sent: Wednesday, April 15, 2020 7:12 PM
To: cacsecretary [@caltrain.com]
Subject: Brown Act training

Please focus on training the San Mateo County Transit District

Givens, Patrice

From: Roland Lebrun <ccss@msn.com>
Sent: Tuesday, April 21, 2020 3:02 AM
To: Steve Stamos, Clerk of the Board
Cc: Board (@caltrain.com); MTC-ABAG; CHSRA Board; Nila Gonzales; cacsecretary [@caltrain.com]; SFCTA CAC; TJPA CAC
Subject: DTX Phasing and Partial 15% design
Attachments: 09-21 Phasing & 15% Design Expenditure Plan.pdf

Dear supervisor Peskin and Commissioners,

The intent of this email is to follow up on the verbal comments I made at the April 14th Board meeting starting with congratulating you on the prudent and phased allocation of precious tax dollars.

Moving on to item #18 Phasing and Partial 15% design (attached), while there are many areas of concern which might require your attention in the near future, I would like to highlight one item in particular:

B.1 Project Phasing Concept. *Review opportunities for project phasing.*

Potential high-level review of the opportunity ***to lower profile on southern end to determine if there is a cost advantage to a one-tunnel solution for the Pennsylvania Avenue Extension***

This item speaks volume to a lack of familiarity with the advantages of smaller-diameter twin-bore (27 feet vs. 45 feet for single bore) tunnels such as:

- Eliminate the requirement to "*lower profile on southern end*" from 60 feet to 90 feet, including the Townsend station.
- Shortening the PAX tunnel length by 1,500 feet because a single bore tunnel would have to start south of 25th Street while twin bore TBMs can be launched from the existing 23rd Street pit without impacting Caltrain operations at 22nd Street
- $ 600M saving ($300M twin-bore cost vs. $900M for single bore).

Monthly progress reports may be calendared on a quarterly basis on the Transportation Authority Board and/or CAC meeting agendas

Recommendation:

Monthly progress reports should be published monthly (not quarterly), preferably through a website reporting on the progress of the project.

Last but not least, I strongly encourage you to request visual animations of construction phasing to inform stakeholders and elected officials about next steps:

- Trench: https://vimeo.com/305137732
- Tunnel: https://vimeo.com/371031684/9cecc5268b

Sincerely,

Roland Lebrun

CC
Caltrain Board of Directors
MTC Commisioners
High Speed Rail Authority Board of directors
TJPA Board of Directors
Caltrain CAC
SFCTA CAC
TJPA CAC

San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form

FY of Allocation Action:	FY2019/20
Project Name:	Downtown Extension - Phasing and Partial 15% Design
Grant Recipient:	Transbay Joint Powers Authority

EXPENDITURE PLAN INFORMATION

Prop K EP categories:	Transbay Terminal / Downtown Caltrain Extension
Current Prop K Request:	$11,906,558
Supervisorial District(s):	District 06

REQUEST

Brief Project Description
Extension of Caltrain 1.3 miles from Fourth and King Streets to the new Transbay Transit Center at First and Mission Streets, with accommodations for future high-speed rail. The requested funds will support preliminary engineering work including a phasing study, industry review, project delivery and other management plans, and development of 15% design submittals for key elements of the Caltrain Downtown Extension (DTX) project.

Detailed Scope, Project Benefits and Community Outreach
See attached document for details.

Project Location
First & Mission Streets, San Francisco, CA

Project Phase(s)
Design Engineering (PS&E)

5YPP/STRATEGIC PLAN INFORMATION

Type of Project in the Prop K 5YPP/Prop AA Strategic Plan?	Named Project
Is requested amount greater than the amount programmed in the relevant 5YPP or Strategic Plan?	Greater than Programmed Amount
Prop AA Strategic Plan Amount:	$7,096,290

Justification for Necessary Amendment

In 2018 the Transportation Authority programmed and allocated $9,678,626 In EP-5 funds for DTX 30% Design Part 1, of which $8,696,290 was deobligated in November 2019 pursuant to suspension of the grant by the Transportation Authority. Also in November 2019 the Board approved reprogramming and appropriation of $1.6 million of the deobligated funds for the Pennsylvania Avenue Extension Pre-environmental project. The TJPA and Transportation Authority are now requesting a total of $14.5 million for Downtown Extension—Phasing and Partial 15% Design and Rail Program Oversight. These requests require a Prop K Strategic Plan amendment to program the remdoneainder of the deobligated funds to the two projects in FY2019/20, and advance an additional $5.8 million in unprogrammed capacity in the Downtown Extension to a Rebuilt Transbay Terminal category.

Transbay Program Phase 2
Scope of Work, Deliverables and Schedule
May 1, 2020 –November 26, 2021

The DTX MOU includes work scope to achieve ready for procurement status; however, this allocation only the initial 18 months of this scope; the remainder of the scope will be the subject of future funding request. Based upon direction from SFCTA staff, the scope of services is split into two terms, each of which will have a separate Notice to Proceed (NTP). Scope indicated as being included in NTP#1 is anticipated to commence on May 1, 2020. Scope within NTP #1 is expected to take approximately 6 to eight months to complete. The scope of NTP#2 will be initiated once the scope of NTP#1 is complete.

NTP#1 (May 1, 2020 – November 30, 2020)

The work during NTP#1 will focus on a project phasing study which will review options for identifying an initial operating segment for the DTX project in support of planning and funding strategy efforts. The work will also include creating a log of changes made to the program since the Supplemental EIS/EIR, a real estate acquisition plan, and the preparation of a configuration management plan, all of which will support and inform the phasing study and the procedures for implementing findings from the phasing study. The NTP will also include an industry review with contractors which will feed into a review with contractors which will feed into a review of project delivery planned in NTP#2

A. Program Management **$1,078,311**

Manage program scope of work and develop and implement Program Management and Program Controls (PMPC). Other direct office costs. Manage staff and coordinate the following activities.

A.1 Program Manager and Staff

- Hire a Project Director in accordance with the Memorandum of Understanding prepared in coordination with all stakeholders. (TJPA)
- Provide a Program Manager and Deputy Program Manager (referred to collectively herein as the "Program Manager") with overall responsibility for managing the program scope of work and developing and implementing PMPC. The Program Manager shall provide staff planning, supervision, and support for the Program Team, including coordination among project teams. As requested by TJPA, the Program Manager shall also assist the TJPA in the acquisition of funding for the Program, various Program approvals, and other third party agreements. The Program Manager, or his or her designee, will attend the TJPA's weekly staff meetings and other meetings as required by the TJPA. The Program Manager will provide all other related services as requested by the TJPA. The Program Manager and Deputy Program Manager are designated as key personnel positions. The Program Manager also works with the project team to ensure schedule adherence.
- Program Management staff serve as a point of technical contact in connection to the planning and Phase 2 design. Coordinate and maintain contact with key Program members, PMPC consultant team members, the Transit Center design team, outside agency representatives, and others as directed.
- Staff provide assistance for the development and management of project design criteria, cost estimates and schedule.
- Staff also provides technical and project specific assistance to TJPA, including preparation of letters and presentations.

A.2 Program Management Plans

- Preparation of a log of changes to the configuration of the Program since issuance of the Supplemental EIS/EIR.
- Preparation of a configuration management plan. The supplemental environmental document for Phase 2 completed in late 2018 established the baseline configuration for Phase 2. A configuration management plan will be developed to document the baseline configuration and the processes for ensuring that the baseline configuration is not changed without a systematic review of the changes to the design and the impact that design changes may have on all other aspects of the project. The configuration management plan will address changes during the design and construction phases, interface management, O&M interfaces, and procurement bid documents.
- Develop a preliminary real estate acquisition plan. A real estate acquisition plan was completed in 2005. Between 2008 and 2014, fifteen parcels were acquired to preserve right- of-way for the DTX. Since then, the right-of-way estimate has been updated (2017), and during the supplemental environmental process, DTX designers determined that underpinning could be used to support several historic buildings along the DTX alignment that previously had been slated for partial demolition and rebuilding. Work associated with an updated plan includes
  - Evaluating all affected properties to determine what engineering solutions are available to preserve as much of the buildings as possible
  - Estimating the right-of-way costs based on market rates of the buildings/portions of the buildings, potential for occupancy during construction, and the cost of construction of the engineering solutions
  - Updating the 2017 ROW estimate including utility relocations

Deliverables/Schedule:

1. *Log of changes made to the Program (PMPC): NTP#1 plus 2 months*
2. *Configuration Management Plan (PMPC): NTP#1 plus 6 months*
3. *Preliminary Real Estate acquisition plan (PMPC): NTP#1 plus 5 months*

A.3 Program Meetings and Coordination. PMPC will plan and attend project meetings including bi-monthly meetings with SFCTA staff and the design team. PMPC Program Coordination activities including organizing project meetings with outside agencies and other stakeholder coordination activities to support the phasing concept study and stakeholder management efforts. Coordination with adjacent properties along the alignment to determine potential impacts to Phase 2 project elements and/or the properties.

Deliverables/Schedule:

1. *Bi-weekly meetings/meeting minutes (PMPC, attended by Design Team).*
2. *As-needed coordination and meetings/meeting minutes with stakeholders. (PMPC with Design Team support)*
3. *Analyze at a preliminary level impacts or benefits to the project if a specific concern or comment from a stakeholder increased or decreased project risk, scope, cost, or duration. (Design Team with support from PMPC)*
4. *Coordinate with rail operators on design criteria. (PMPC with Design Team support).*
5. *Prepare a draft updated East Bay Crossing memorandum including: coordination with BART on BART's second bay crossing effort, updated aerial mapping, updates to route constraints including potentially affected properties, and review Main Street route with reduced trainbox extension. (Design Team with management by PMPC)*

A.4 **Rebrand Program and Public Outreach.** TJPA and their consultants, in coordination with planning and modeling efforts by the SFCTA will develop a plan for re-branding of the Program with updated graphics and messaging based on economic benefits for the region, state, and nation. (TJPA)

A.5 **Public Outreach.** TJPA will perform outreach by engaging external stakeholders, advocacy groups, and the public at large, and perform pubic outreach. An external outreach plan will be developed. (TJPA)

A.6 **Design Team Invoicing, Subconsultant Management, Scheduling and Reporting.** Prepare monthly invoices including monthly invoice reports. Manage subconsultant contracts.

Deliverables/Schedule:

1. *Monthly invoice and invoice reports. (Design Team)*
2. *Bi-monthly updates to the design schedule. (Design Team)*

B **Program Implementation and Support Activities** **$1,151,000**

B.1 **Project Phasing Concept.** Review opportunities for project phasing.

- Develop evaluation criteria including, but not limited to: constructability, scalability, cost and risk. (PMPC)
- Workshop#1: Host a one-day "brainstorming" workshop with the project team, Caltrain, CHSRA, MTC and SFCTA staff and their consultants to agree initial and subsequent operational assumptions and constraints to form the basis of the review and develop phasing opportunities. (PMPC, attended by Design Team)
- Analyze ideas from first workshop which may be selected for further study, including but not limited to the following:
  - High-level review of the loop concept to determine if two tracks is feasible for a near term scenario before a loop is built with connection to a new bay crossing including alignment and operations analyses to determine the maximum number of Caltrain trains which can operate reliably on two tracks. (Design Team)
  - Potential high-level review of the opportunity to lower profile on southern end to determine if there is a cost advantage to a one-tunnel solution for the Pennsylvania Avenue Extension, if agreed at the brainstorming workshop. (Design Team)
  - Provide a cost estimate for a high-level study of at least five other options as determined at the first workshop. (Design Team for construction costs, PMPC for program costs)
  - Costs for all options reviewed including the cost of deferred project elements will be based on current understanding of tunnel costs per mile, adjusted based on professional opinion. (Design Team for construction costs, PMPC for program costs)
- Workshop#2: Host a second one-day workshop with the project team, Caltrain, CHSRA, MTC, and SFCTA staff and their consultants to present findings (a menu of options that details costs and assumed timing of the phasing and potential related issues that may be caused by deferral) from analyses of options carried forward from first workshop. (PMPC, Design Team to attend)
- Hold up to two additional two-hour meetings to review with stakeholders. (PMPC, Design Team to attend)
- Prepare draft project phasing report to summarize phasing opportunities, tradeoffs and recommendations consistent with DTX MOU. (PMPC with input from Design Team)

- Present the draft report to the Executive Steering Committee (ESC). (PMPC with input from Design Team)
- Prepare final report with feedback from ESC. (PMPC with input from Design Team)
- Present to the final report to the SFCTA board and CAC. (PMPC with input from Design Team)
- Present to the final report to the TJPA board. (PMPC with input from Design Team)

Deliverables/Schedule: *Evaluation criteria, preliminary risk matrix, phasing workshops and summary report and plan: NTP#1 plus 6 months. (PMPC with support from Design Team)*

B.2 **Project Implementation Plan.** Organize an initial Industry Review to review construction methodology, contract packaging, and project scheduling in consultation with the design teams and contractors and prepare a summary memorandum. Assumed five meetings at 2 hours/meeting. Design Team will provide on set of documents/graphics to support the meetings.
Deliverables/Schedule: *Industry Review with contractor interviews: NTP#1 plus 2 months (PMPC with attendance and input from Design Team)*

B.3 **Issue Resolution.** Track and resolve issues related to design, construction and operations with regulatory agencies and other stakeholders that have an interest or are participants in the Program. Maintain issue-action logs.

Deliverables/Schedule: *On-going. (PMPC)*

B.4 **Permit Management.** Prepare a list of required permits for the design and construction of Phase 2 of the Program.
Deliverables: *Permit list: NTP#1 plus 3 months (PMPC)*

C **Phase 2 Design** **$82,531**

The Phase 2 PMPC Project Manager will be responsible for managing the project scope, schedule, budgets and contracting during the design phase. The Phase 2 PMPC Project Manager and support staff will perform the following:

C.1 **Engineering Contract Management.** Assist in finalizing the scope, deliverables, schedule and budget for Engineering Contract. (PMPC)

C.2 **Project Management.** Provide project management oversight of the design team. (PMPC)

C.3 **Design Submittal Reviews.** Perform independent reviews of design submittal packages to verify that design intent is properly implemented, project scope is accurately represented in various contracts and QC/QA plans are effective. (PMPC)
Deliverables: *Comments on design submittals, as needed. (PMPC)*

C.4 **Design Work.** Perform a review of the throat trackwork geometry to reassess impacts on affected properties.
Deliverables: Trackwork sketches for coordination and discussion with stakeholders. (Design Team)

D Program/Project Controls **$285,533**

PMPC Program/Project Controls Manager will develop and implement program/project controls. The PMPC Program Controls Manager and support staff will work with the PMPC Project Managers in accomplishing the following scope of work.

D.1 **Project Phasing Concept.** Provide cost estimating support to develop phasing concept cost estimates based on different time horizons for phasing project elements. Participate in phasing concept workshops and provide cost and schedule support for the entirety of the phasing concept study.
Deliverables/Schedule: *On-going support throughout study.* (PMPC)

D.2 **Program Master Schedule.** Develop and maintain Program master schedule based on the WBS and the Project Delivery and Procurement Plan. Update the Program master schedule monthly, to include current information regarding project and contract progress.
Deliverables/Schedule: *Quarterly Program Master Schedule update.* (PMPC)

D.4 **Work Plan.** Develop a comprehensive work plan in accordance with the DTX MOU, which will describe all necessary tasks and their relationships, and includes the prepared Program Master Schedule. (PMPC)
Deliverables/Schedule: *Work Plan. (PMPC)*

D.5 **Status Reporting.** Prepare quarterly reports of Program status.
Deliverables/Schedule: *Quarterly Program Status Reports to the Authority Board, Stakeholders and Funding Agencies. (PMPC)*

D.6 **Work Breakdown Structure.** Update and maintain a work breakdown structure (WBS) as needed for the implementation of the Program that will be used for organizing and reporting on cost, schedule and scope. (PMPC)

D.7 **Invoicing and Subconsultant Contract Management.** Draft and receipt of appropriate approvals of subconsultant agreements, amendments and work authorizations in accordance with company and contractual guidelines. Coordination with TJPA staff on approvals of subconsultants scopes of work and authorizations including management of billing rates, overhead, coding of invoices and eligibility of charges. Work with TJPA staff on invoicing issues. (PMPC)

E Quality Control/Quality Assurance (QC/QA) **$37,586**

E.1 **QA Oversight.** Provide oversight of design activities relative to implementation of the adopted QC/QA program. Identify areas needing improvement, recommend corrective action plans and provide oversight to confirm compliance.
Deliverables/Schedule: *Quarterly audit reports. (PMPC)*

F Document Management and Administrative Support **$397,040**

F.1 **Administrative Support.** Administrative support will include, but not be limited to, documentation of meetings, report writing, and preparation of correspondence. Edits and produces technical documents and presentations issued by the PMPC team for the Transbay Program. This includes, but is not limited to: status reporting, Board reports and presentations, program plans and procedures, and letters and reports. Ensures that all documents reflect standard practices for good technical writing, are complete and accurate, and adhere overall to the Program's quality standards. Administrative staff are

also responsible for day-to-day operations of the Program office operations and for management of office resources such as scheduling conference rooms. (PMPC) TJPA staff will provide administrative support for the Executive Steering Committee. (TJPA)

F.2 **Document Control.** Maintain document control to serve as the official records management function for the Program and be the source for all official documentation and provide storage for all Program records and files. Coordinate with the TJPA IT Manager and Constructware representatives to ensure backup and disaster file procedures and protocols are in place. Perform day-to-day handling of all documents provided to Document Control for coding, reproduction, distribution, file sharing, storage and document searches and retrieval, and trouble-shooting office equipment such as printers and copiers. Provide quality assurance audits by checking documents for completeness. Provide the Program Information and Support Services as program software administrator responsible for creating and monitoring user accounts, profiles, permission levels, and training and assisting system users by trouble-shooting problems. Develop and updates databases used mostly by Document Control (e.g., software Interface, Protected Information List, Nondisclosure Agreements List, Annual Office Inventory, Reprographic Services, Messenger Services, and Agreements Lists). Implements the Program's compliance to its Protected Information Procedure by maintaining the Protected Information List and List of Approved Nondisclosure Agreement Holders while adhering to proper document handling protocol particularly involving the disseminating and securing of such documents. (PMPC)

F.3 **Presentation Support.** Provide data, graphics and other materials as required for internal, external and public presentation. Develop maps, diagrams, infographics and general graphics for the program including those needed for funding applications. Assist with all property issues including reviews of plats and legals, and existing and future use planning. (PMPC)

G. Management Information Systems (MIS) Support **$20,000**

G.1 **Program Software.** Maintain document management software to facilitate team communication and manage storage of Program documents. (PMPC)

NTP#2 (December 1, 2020 – November 26, 2021)

During NTP#2 the PMPC will be examining project delivery and developing a work plan. The NTP also will progress the design team's work on the design and cost estimate of the tunnel and Fourth and Townsend Street Station to a draft 15% design level and allow for a risk assessment to be performed. Additionally, the NTP supports the preparation of a third-party agreement plan. It is anticipated that this scope will take approximately 12 months after NTP.

A. Program Management **$2,853,865**

Manage program scope of work and develop and implement Program Management and Program Controls. Other direct office costs. Manage staff and coordinate the following activities.

A.1 Program Management Staff

- Maintain a Project Director in accordance with the Memorandum of Understanding prepared in coordination with all stakeholders. (TJPA)

- Provide a Program Manager and Deputy Program Manager (referred to collectively herein as the "Program Manager") with overall responsibility for managing the program scope of work and developing and implementing PMPC. The Program Manager shall provide staff planning, supervision, and support for the Program Team, including coordination among project teams. As requested by TJPA, the Program Manager shall also assist the TJPA in the acquisition of funding for the Program, various Program approvals, and other third party agreements. The Program Manager, or his or her designee, will attend the TJPA's weekly staff meetings and other meetings as required by the TJPA. The Program Manager will provide all other related services as requested by the TJPA. The Program Manager and Deputy Program Manager are designated as key personnel positions. The Program Manager also works with the project team to ensure schedule adherence.
- Program Management staff serve as a point of technical contact in connection to the planning and Phase 2 design. Coordinate and maintain contact with key Program members, PMPC consultant team members, the Transit Center design team, outside agency representatives, and others as directed.
- Staff provide assistance for the development and management of project design criteria, cost estimates and schedule.
- Staff also provides technical and project specific assistance to TJPA, including preparation of letters and presentations.

A.2 **Program Management Plans.** Preparation of a third-party agreement plan. A third-party agreement plan will be developed to address:

- New agreements with the operators Caltrain and CHSRA regarding design oversight, passenger facility charges, and operations and maintenance
- Coordination with utility companies and government agencies to determine the location of existing utility infrastructure, who will be responsible for relocation costs and the party that undertakes the relocation work, the phasing of the design and construction work needed; and the needed agreements with the various public agencies and utility companies
- Whether the existing agreements with the State and various City agencies and departments for various services can be amended or whether new agreements are required

The plan will include a matrix showing the status of all existing third-party agreements.
Deliverables/Schedule: *Third-party agreement plan: NTP#2 plus 8 months (PMPC)*

A.3 **Program Meetings and Coordination.** PMPC will plan and attend project meetings including bi-monthly meetings with SFCTA staff and the design team. PMPC Program Coordination activities including organizing project meetings with outside agencies and other stakeholder coordination activities to support design and stakeholder management efforts.

Deliverables/Schedule:

1. *Bi-weekly meetings/meeting minutes (PMPC, attended by Design Team).*
2. *As-needed coordination with stakeholders (PMPC and Design Team).*
3. *Analyze at a preliminary level impacts to the project if a specific concern or comment from a stakeholder increases project risk, scope, cost, or duration. (Design Team with support from PMPC)*
4. *Coordinate with rail operators on design criteria. (PMPC with Design Team support)*
5. *Updated East Bay Crossing memorandum with additional information from BART's second bay crossing effort as available during NTP#2 duration. (Design Team with management by PMPC)*

A.4 **Public Outreach.** TJPA and their consultants will conduct public outreach and advocacy group outreach. (TJPA)

A.5 **Construction Cost Estimating.** Update the construction cost estimate prepared in April 2018 based on updated quantities based on the updated design work performed in this scope of work and current market rates. Divide cost estimate into phases as determined and approved in NTP#1. Submit a draft construction cost estimate.
Deliverables/Schedule: *Draft Construction Cost Estimate. (Design Team)*

B. Program Implementation and Support Activities **$830,238**

B.1 Project Implementation Plan. An in depth, detailed study to determine the most appropriate delivery option for the DTX. This study will analyze traditional methods of delivery such as Design Bid Build and Design Build as well as alternative methods such as Construction Manager at Risk, Design Build Finance, Design Build Finance Maintain, and other forms of Public Private Partnerships as appropriate. Prepare and update the Contract Packaging Strategy Report including project phasing in consultation with the design teams and contractors. Prepare a work plan incorporating project phasing and contract packaging. Provide recommendations for optimization of program delivery as necessary. This work will support the DTX Work Program Funding Planing/Strategy development.
Deliverables/Schedule:
- *Project Delivery Report: NTP#2 plus 6 months (PMPC)*
- *Updated Contract Packaging Report: NTP#2 plus 6 months (PMPC)*
- *Work Plan Memorandum: NTP#2 plus 9 months (PMPC)*

B.2 Issue Resolution. Track and resolve issues related to design, construction and operations with regulatory agencies and other stakeholders that have an interest or are participants in the Program. Maintain issue-action logs.
Deliverables/Schedule: *On-going. (PMPC)*

B.3 **Risk Management.** Provide Risk Manager. Organize and facilitate risk management and follow up mitigations workshop in conjunction with FTA and stakeholders. Develop and maintain Risk Register. Update Risk Register quarterly in conjunction with stakeholders. Prepare risk simulation modeling sufficient to develop project risk-based contingency. Summarize all work in performed in risk assessment report. It is assumed that any external experts required to attend the workshop would be provided by the funding partner.
Deliverables/Schedule:
- *Conduct formal risk management process. (PMPC with participation and support of Design Team to resolve recommendations)*
- *Prepare risk assessment report: NTP#2 plus 5 months (PMPC)*
- *Develop and maintain Risk Register: Ongoing. (PMPC)*

B.4 Utility Coordination. Provide limited utility coordination oversight to verify project teams are successful in making arrangements for timely and cost-effective relocations of existing facilities. (PMPC)

C. Phase 2 Design **$3,924,490**

The PMPC Phase 2 Project Manager will be responsible for managing the project scope, schedule, budgets and contracting during the design phase. The PMPC Phase 2 Project Manager and support staff will perform the following:

C.1 **Engineering Contract Management.** Assist in finalizing the scope, deliverables, schedule and budget for Engineering Contract. (PMPC)

C.2 **Project Management.** Provide project management oversight of the design team. (PMPC)

C.3 **Design Submittal Reviews.** Perform independent reviews of design submittal packages to verify that design intent is properly implemented, project scope is accurately represented in various contracts and QC/QA plans are effective.
Deliverables: *Comments on design submittals, as needed. (PMPC)*

C.4 **Design Work.** Perform design work for limited Phase 2 elements as described below:

- **Train Operations:** Update alignment for TBM+SEM and new train operations model train for use in review. Review analysis performed by Caltrain, CHSRA and others that feed into DTX line. Prepare draft submittal. Assumption: No new analysis.
- **Track:** Revise precise 1"=40' PE track plan and profiles to include adjustments at Fourth and Townsend Street Station and lower profile for TBM+SEM. Verification of special trackwork elements and identification of long-lead specialty items. Revised at-grade interlocking design concept along Seventh Street, including MOW tracks, turnback tracks and provisions for at-grade crossings. Continue to coordinate with Transit Center Phase 2 planning. Update track alignment and profile design calculations. Prepare technical memorandum documenting assumptions, outstanding issues and variances. Develop staging plans for cut-over of tunnel stub to a future rail connecting tunnel. Prepare draft submittal. Exclusion: Incorporate Caltrain North Terminal design.
- **Fire/Life/Safety (FLS):** Update design plans for 2nd and Harrison emergency vent/exit building. Develop mechanical design for 3rd and Townsend emergency ventilation. Develop design for Fourth and Townsend Street Station emergency ventilation. Perform CFD station fire/life/safety modeling. Perform SES FLS modeling for DTX tunnel. Perform pedestrian flow/exit analysis for underground station. Update tunnel exiting technical memorandum (SES & CFD report). Prepare draft submittal. Assumption: Update for TBM+SEM and deeper tunnel profile.
- **Geotechnical:** Conceptual evaluation of 655 Fourth Street impact. All field efforts (including tunnel stub explorations) and 80% of needed lab testing. Monitor groundwater in the existing and new wells for 6 months. Update Geotechnical Data Report (GDR) to include the new explorations and lab testing. Provide update parameters for the soil and rock units as given in the original Geotechnical Interpretive Reports (GIR) in a technical memorandum. (No other evaluations and updates to the GIR to be performed.) Reapply permitting, signages, and re-start investigation program for additional tunnel stub explorations which were approved in 2018. Prepare draft submittals. Exclusion: Does not include preparation of GBR.
- **Tunnel:** Replace and extend with TBM+SEM method proposed in Tunnel Options Study including mining under 235 Second Street (and associated underpinning, as necessary) and mining under Howard Street. Assumes no code updates or review comments for previously accepted memos, calculations or drawings. Preparation of a draft submittal. Design temporary shafts, as needed.

Continue technical support of TJPA coordination with adjacent properties related to the staging locations by discipline lead.

- **Fourth and Townsend Street Station:** Prepare updated technical memorandum input and update 2016 conceptual plans to incorporate new station design utilizing third platform face on southside of station proposed by SFCTA Rail Operations Peer Review including updated rail operations analyses for third platform face. Includes coordination with Caltrain and CHSRA regarding platforms, Caltrain's surface station, and Prologis for underground station coordination. Includes update for TBM launch. Preparation of a draft submittal.
- **U-wall and Tunnel Stub:** Prepare technical memorandum and drawings for permanent structure and shoring to incorporate new track alignment (not to preclude future undergrounding of surface yard tracks by others) and tunnel stub transition. Perform impact analysis for U-Wall/Tunnel Stub adjacent to I-280 6th Street off-ramp foundations. Preparation of a draft submittal.
- **Fourth Street Central Subway Interface:** Technical support of TJPA coordination with SFMTA by discipline lead. Prepare conceptual design and technical memoranda of bridging structure/pipe canopy/tunnel. Prepare draft design plans.
- **Existing Building Settlement Analysis:** Update zone of influence of entire alignment using including Second Street based on new cross section and depth. Updated building assessment analysis as needed on Second Street. New development at 4th/Townsend coordination. Preparation of draft submittal.
- **Utilities:** Support advanced utility relocation package scoping by PMPC. Update technical memorandum and 1"=20' PE relocation plans to extend to Townsend Street, Seventh Street and at-grade crossings, including identification of temporary relocations. Technical support of TJPA coordination with City and utilities by discipline lead. Assist in coordination with utility providers as part of the Accela Notice of Intent process. Update existing utility CAD linework based on utility coordination. Coordination for potholing process. Utility potholing to confirm locations/depths/ sizes of utilities. Preparation of draft submittal. Assumptions: Utility companies and agencies will participate in the Accela Notice of Intent process at their own expense.

  Deliverables:

  - *Draft Train Operations submittal (Design Team)*
  - *Trackwork Technical Memorandum and draft updated trackwork drawings (Design Team)*
  - *FLS Modeling Technical Memorandum and draft updated submittal (Design Team)*
  - *Draft Update to GDR and Limited Updates to GIR. (Design Team)*
  - *Draft Tunnel Drawings for TBM+SEM method (Design Team)*
  - *Draft Underpinning Drawings for 235 Second Street (as necessary) (Design Team)*
  - *Draft Temporary Shaft Drawings (as necessary) (Design Team)*
  - *Draft Technical Memorandum and drawings for Fourth and Townsend Street Station Design (Design Team)*
  - *Draft U-wall and Tunnel Stub Technical Memorandum and drawings (Design Team)*
  - *Draft Fourth Street Interface Technical Memorandum and drawings (Design Team)*
  - *Draft Technical Memorandum on Existing Buildings (Design Team)*
  - *Draft Potholing Memorandum and Utility Drawings (Design Team)*

D. Program/Project Controls **$321,253**

PMPC Program/Project Controls Manager will develop and implement program/project controls. The PMPC Program Controls Manager and support staff will work with the Project Managers in accomplishing the following scope of work.

D.1 **Program Budget.** Update and maintain a Baseline Budget for the Program based on the results of the phasing study in accordance with the updated Work Breakdown Structure. Incorporate construction budgets using cost estimates developed by design teams. Estimate other soft costs for each line item. Conduct market and escalation studies to forecast potential cost increases and market pressures over the life of the Program. Work with Risk Manager to develop contingency budgets at the project and Program level that are consistent with the risks associated with each Program element. Monitor, update and manage the budget over the course of the Program. (PMPC)

D.2 **Program Master Schedule.** Develop and maintain Program master schedule based on the WBS and the Project Delivery and Procurement Plan. Update the Program master schedule monthly, to include current information regarding project and contract progress. Prepare an updated baseline schedule at the conclusion of the NTP#2.
Deliverables/Schedule: *Quarterly Program Master Schedule update including update to Program Baseline Schedule at conclusion of NTP#2. (PMPC)*

D.3 **Cash Flow Planning.** Working with the Authority's Program Grant Administration, Budgeting, Financial Management and Cost Control consultant, analyze, prepare and maintain current and projected cash flow requirements for the Program. Provide limited support for funding plan development by others. (PMPC)

D.4 **Status Reporting.** Prepare quarterly reports of Program status.
Deliverables/Schedule: *Quarterly Program Status Reports to the Authority Board, Stakeholders and Funding Agencies. (PMPC)*

D.5 **Work Breakdown Structure.** Update and maintain a work breakdown structure (WBS) as needed for the implementation of the Program that will be used for organizing and reporting on cost, schedule and scope. (PMPC)

D.6 **Invoicing and Subconsultant Contract Management.** Draft and receipt of appropriate approvals of subconsultant agreements, amendments and work authorizations in accordance with company and contractual guidelines. Coordination with TJPA staff on approvals of subconsultants scopes of work and authorizations including management of billing rates, overhead, coding of invoices and eligibility of charges. Work with TJPA staff on invoicing issues. (PMPC)

E. Quality Control/Quality Assurance (QC/QA) **$159,550**

E.1 **QA Oversight.** Provide oversight of design activities relative to implementation of the adopted QC/QA program. Identify areas needing improvement, recommend corrective action plans and provide oversight to confirm compliance.
Deliverables/Schedule: *Quarterly audit reports. (PMPC)*

F. Document Management and Administrative Support — $725,160

F.1 Administrative Support. Administrative support will include, but not be limited to, documentation of meetings, report writing, and preparation of correspondence. Edits and produces technical documents and presentations issued by the PMPC team for the Transbay Program. This includes, but is not limited to: status reporting, Board reports and presentations, program plans and procedures, and letters and reports. Ensures that all documents reflect standard practices for good technical writing, are complete and accurate, and adhere overall to the Program's quality standards. Administrative staff are also responsible for day-to-day operations of the Program office operations and for management of office resources such as scheduling conference rooms. (PMPC) TJPA staff will provide administrative support for the Executive Steering Committee. (TJPA)

F.2 Document Control. Maintain document control to serve as the official records management function for the Program and be the source for all official documentation and provide storage for all Program records and files. Perform day-to-day handling of all documents provided to Document Control for coding, reproduction, distribution, file sharing, storage and document searches and retrieval, and trouble-shooting office equipment such as printers and copiers. Provide quality assurance audits by checking documents for completeness. Provide the Program Information and Support Services as program software administrator responsible for creating and monitoring user accounts, profiles, permission levels, and training and assisting system users by trouble-shooting problems. Develop and updates databases used mostly by Document Control (e.g., software Interface, Protected Information List, Nondisclosure Agreements List, Annual Office Inventory, Reprographic Services, Messenger Services, and Agreements Lists). Implements the Program's compliance to its Protected Information Procedure by maintaining the Protected Information List and List of Approved Nondisclosure Agreement Holders while adhering to proper document handling protocol particularly involving the disseminating and securing of such documents. (PMPC)

F.3 Presentation Support. Provide data, graphics and other materials as required for internal, external and public presentation. Develop maps, diagrams, infographics and general graphics for the program including those needed for funding applications. Assist with all property issues including reviews of plats and legals, and existing and future use planning. (PMPC)

G. Management Information Systems (MIS) Support — $40,000

G.1 Program Software. Maintain the Constructware software to facilitate team communication and manage storage of Program documents. (PMPC)

Givens, Patrice

From: Roland Lebrun <ccss@msn.com>
Sent: Wednesday, May 06, 2020 11:07 AM
To: Board (@caltrain.com)
Cc: Steve Stamos, Clerk of the Board; VTA Board Secretary; MTC Info; CHSRA Board; SFCTA CAC; cacsecretary [@caltrain.com]
Subject: Item 6.c PCEP Monthly Progress Report
Attachments: Item #6.c PCEP Monthly Progress Report.pdf

Dear Chair Pine and Board members,

Please find attached comments and suggestions for resolving bottlenecks in the Stadler EMU procurement.

I hope that you find this information useful.

Roland Lebrun

cc:

SFCTA Commissioners
VTA Board
MTC commissioners
CHSRA Board of directors
SFCTA CAC
Caltrain CAC

Dear Chair Pine,

As you should be aware by now, the Caltrain Electrification Project (PCEP) has been spinning out of control for over a year and shows every sign of a repeat of the CBOSS PTC project which is now 5 years late and will result in a write-off of approximately $200M of scarce taxpayer dollars.

I believe that the issues pertaining to the electrification of the tracks are generally well understood and addressed. Having said that, I hope that you will consider a set of proposals focused on the elimination of bottlenecks in the EMU procurement schedule followed by another set of recommendations to accelerate the resolution of the Constant Warning Time (CWT) issue at a later date.

Stadler EMU procurement key issues

- Testing of Trainset No. 1 stopped **in February**.
- The Stadler test track has yet to be electrified.
- The Stadler test track does not have PTC.
- Neither JPB nor Stadler test tracks are capable of testing EMUs at 110 MPH.
- Assembly of trainsets 2-4 has been delayed by disruptions in the supply chain.
- Final Design Reviews (FDRs) are incomplete.
- **The FRA has not approved the crashworthiness waiver.**
- **SamTrans staff are proposing to rebaseline the schedule by another 6 months** (total two-year delay so far).

TTCI status

TTCI remains fully operational in support of our customers and the industry. *Our testing facility and headquarters in Pueblo, CO is following all CDC guidelines and taking strict precautions to protect the health and safety of staff and contractors while ensuring continued service. Mission-critical staff are operating on-site at our headquarters, and other TTCI employees are addressing client and industry needs remotely.* ***TTCI business functions remain uninterrupted, including customer testing projects and our support of the industry's strategic research initiatives***

https://www.ttci.tech/covid19

Recommendations:

- Ship Trainset No. 1 to Pueblo on 5/29 as scheduled
- **Transfer EMU testing and certification management to TTCI**
- Complete assembly of trainsets 2-4 with materials on hand
- **Suspend all shell manufacturing/shipping from Switzerland until the FRA and TTCI have reviewed and approved the alternate crashworthiness design standards**

Respectfully submitted for your consideration.

Roland Lebrun

PS. I had initially hoped to review the March Program Management Oversight Committee (PMOC) report before writing this letter but there is no sign of the report as of today May 6 2020, so I referred to the March PCEP monthly status report for the time being.

Excerpts from March PCEP Monthly Progress Report

"The program critical path runs through the manufacturing and testing of EMU trainsets"

*"**Salt Lake City-based testing of Trainset No. 1 has been halted** since key Stadler and sub-supplier personnel cannot travel. The current delay is estimated at a day for each day of COVID-19 restrictions."*

"Stadler and some sub-suppliers have submitted excusable delay notices.** – Stadler has material for about 3 trainsets, but the disrupted supply chain will likely create shortages and delays. – **Stadler and project oversight and administration unaffected."

"FDRs remain to be completed for three systems**. These software-based systems include 'Train Control,' 'Monitoring and Diagnostics,' and 'Car Control.' **Completion is scheduled for early '2020 and must be performed before design conformance Type Testing commences in April 2020."

"Two waiver requests remain with the FRA for review and disposition. One pertains to train alternate crashworthiness design standards"

"Re-baseline Stadler trainset delivery and testing schedule on Caltrain property to 2/26/2021" (originally 6/25/2019)
https://www.caltrain.com/Assets/Caltrain+Modernization+Program/Documents/MPR/2020-03+March+2020+Monthly+Progress+Report.pdf

Givens, Patrice

From: Roland Lebrun <ccss@msn.com>
Sent: Monday, May 11, 2020 11:15 AM
To: Board (@caltrain.com)
Cc: VTA Board Secretary; SFCTA Board Secretary; MTC Info; cacsecretary [@caltrain.com]; SFCTA CAC
Subject: Restoring Caltrain ridership
Attachments: Restoring Caltrain ridership.pdf

Dear Chair Pine and Board members,

Further to SamTrans staff's catastrophic decision to achieve physical distancing through the termination of the popular Baby Bullet service and the ensuing disappearance of 98% of the Caltrain ridership, the purpose of the attached letter is to:

1) Follow up on Director Collins' request for the implementation of rigid physical distancing protocols on trains.

2) Propose a schedule focused on restoring ridership during the pandemic.

Thank you in advance for your consideration

Roland Lebrun

cc

SFCTA Commissioners
VTA Board of Directors
MTC Commissioners
Caltrain CAC
SFCTA CAC
VTA CAC

Dear Chair Pine and Board members,

Further to SamTrans staff's catastrophic decision to achieve physical distancing through the termination of the popular Baby Bullet service and the ensuing disappearance of 98% of the Caltrain ridership, the purpose of this letter is to:

1) Follow up on Director Collins' request for the implementation of **rigid physical distancing protocols** on trains.
2) Propose a schedule focused on restoring ridership during the pandemic.

Background

Caltrain currently operates two kinds of railcars:
"Gallery" cars with a single high entrance door and two single rows of seats on the upper deck.

"Bombardier" cars with dual door entrances at opposite ends and 2+2 seating on both the upper and lower decks.

Physical Distancing

- 6-foot distancing on Gallery car upper decks is physically impossible, making it mandatory to **close off all Gallery car upper decks during the pandemic**.
- 6-foot distancing is achievable on the remaining 2+2 seating by **eliminating every isle seat and every other window seat** for a 75% reduction in capacity (6 out of every 8 seats).
- **Stair access must be restricted to a single direction** (either up or down).
- Face masks must be worn at all times (no exceptions). **Transit Police will carry spares for passengers needing assistance**.
- **Standees will not be allowed on any train except in the Gallery bicycle storage areas** (maximum 8 standees per bicycle car: total 16 standees).
- Conductors will walk the trains between stations to ensure that all protocols are being adhered to and may request Transit Police assistance.

Revised Schedule

- Hourly local (all stops) **Gallery trains** will continue during hours of operations.
- Hourly Bullet **Bombardier trains** will make stops at San Jose, Sunnyvale, Mountain View, Palo Alto, Redwood City, San Mateo, Millbrae and San Francisco during all hours of operations.
- Buses will be timed to provide connections with Bullet trains.
- Bullet service frequency will be increased to match demand.
- **Hourly local service will be terminated if it interferes with Bullet traffic.**
- **Two Bombardier trains will be on standby at Redwood Junction during peak to relieve overcrowding as necessary**.

Respectfully submitted for your consideration.

Roland Lebrun

Givens, Patrice

From: Adrian Brandt <adrian.brandt@gmail.com>
Sent: Wednesday, May 13, 2020 1:02 PM
To: Navarro, Joe
Cc: cacsecretary [@caltrain.com]
Subject: Concerns regarding Caltrain's proposed 2SC grade crossing solution
Attachments: CWT vs. Dual Speed Check (2SC).pdf

Hi Joe and fellow CAC members,

Regarding the "Grade Crossing Solutions" item set to be on our meeting agenda for our meeting next week (Wed., May 20), I wanted to share the following comments with you in advance.

My concern regarding Caltrain's proposed so-called "dual-speed check" (2SC) replacement for the present constant warning time (CWT) grade crossing protection as part of electrification concerns the potential for significantly increased and/or inconsistent (non-constant) warning times at crossings. See graph, below.

The crossing gate "warning time" is **from gate activation until train arrival at the crossing**. It needs to be at least 20 seconds (see reference, below).

To allow for a safe margin of error and to ensure compliance with the required 20-second minimum, signal engineers therefore typically try for a constant time warning of around 25 to 30 seconds.

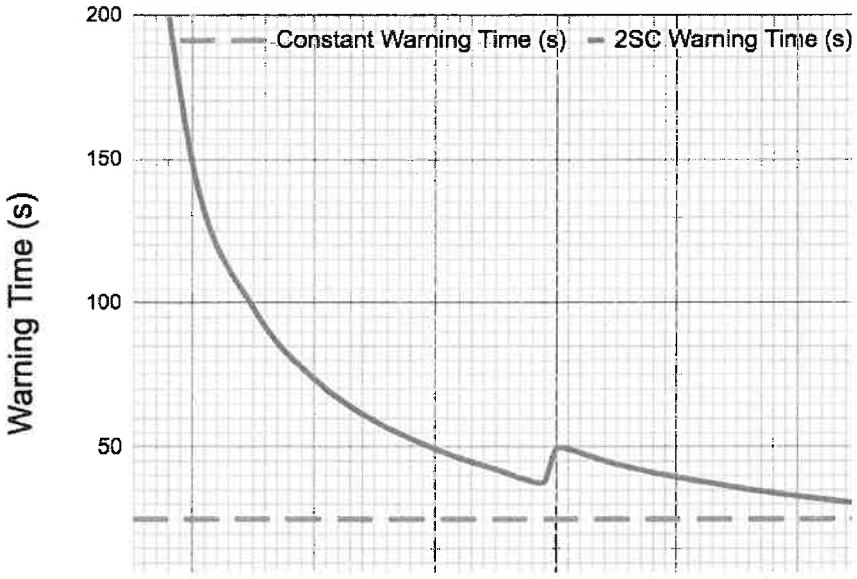
The following short video clip shows a warning time at Watkins in Atherton at 26 seconds:
https://www.youtube.com/watch?v=FaaNw_EwSUc

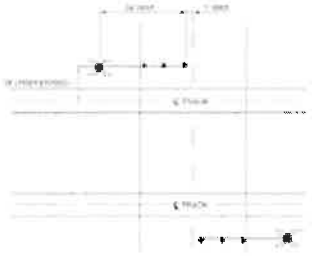
As the video shows, the gates activate at 12 seconds and the train arrives at the crossing at the 38-second mark, for a 26-second warning time.

As per the research and the regulatory agencies (FRA, state PUCs), not only do **excessively long warning times** back up traffic, they **result in more crashes over time** because road users who notice it takes a long time before trains actually reach the crossing and the incidence of walking, bicycling or driving past activated gates and associated crashes increases.

Inconsistent and excessively long warning times are precisely the reason the FRA and Colorado PUC ***forced*** the costly use of human guards to be posted around the clock (24/7) at Denver grade crossings along their newly-electrified rail line to the airport ... it was either that or a shutdown of trains!

Graphing Warning time (seconds) vs. Train Speed (mph) for both CWT and 2SC illustrates the concern. CWT, give a constant theoretically give a constant warning time, say 25 seconds, regardless of train speed (see calculated data in attached PDF). Whereas the warning times are inconsistent and substantially greater for certain train speeds using Caltrain's propose "dual speed check" (2SC). A train moving at a constant speed of 30 mph (under a slow order, for example) would result in a 50 second warning time (double 25 seconds). Trains moving even slower, as with slow orders, could result in warning times of over 2 minutes!



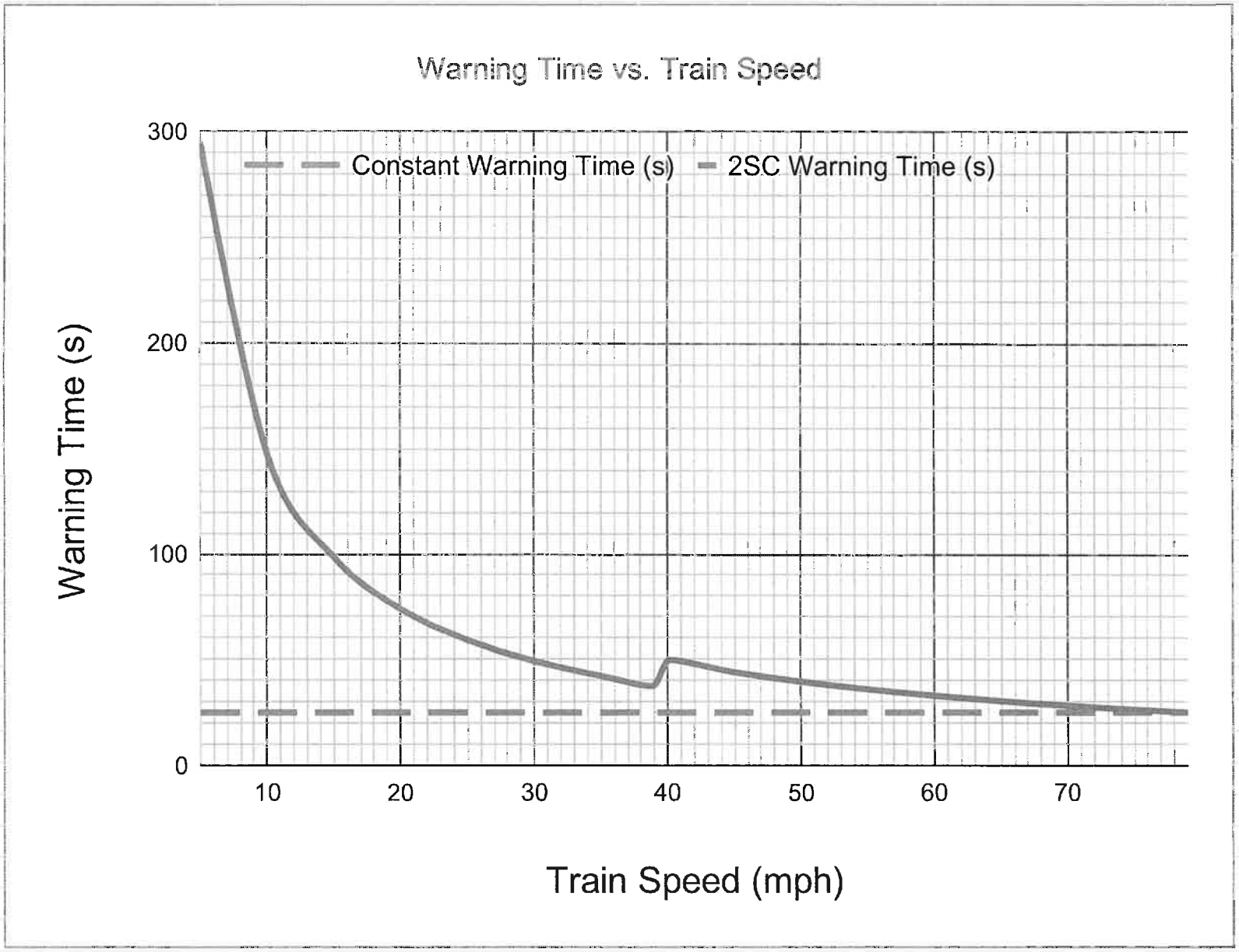


20 seconds

Train detection systems are designed to provide the **minimum warning time** for a **crossing**. The MUTCD and FRA regulations (49 CFR 234.225) **require** that the system provide for a **minimum** of 20 seconds of **warning time**.
Highway-Rail Crossing Handbook - Third Edition - FHWA Safety

CWT vs. Dual Speed Check (2SC)

Actual Train Speed (mph)	Constant Warning Time (s)	2SC assumed speed (mph)	2SC Warning Time (s)	2SC Gate Downtime increase (s)	2SC Gate Downtime increase (%)
5	25	59	**295.0**	270.0	1080%
10	25	59	**147.5**	122.5	490%
15	25	59	**98.3**	73.3	293%
20	25	59	**73.8**	48.8	195%
25	25	59	**59.0**	34.0	136%
30	25	59	**49.2**	24.2	97%
35	25	59	**42.1**	17.1	69%
39	25	59	**37.8**	12.8	51%
40	25	79	**49.4**	24.4	98%
45	25	79	**43.9**	18.9	76%
50	25	79	**39.5**	14.5	58%
55	25	79	**35.9**	10.9	44%
59	25	79	**33.5**	8.5	34%
60	25	79	**32.9**	7.9	32%
65	25	79	**30.4**	5.4	22%
70	25	79	**28.2**	3.2	13%
75	25	79	**26.3**	1.3	5%
79	25	79	**25.0**	0.0	0%


Warning Time vs. Train Speed
Constant Warning Time (s)
2SC Warning Time (s)
Warning Time (s)
300
200
100
0
10
20
30
40
50
60
70
Train Speed (mph)

Givens, Patrice

From: Kenneth Frederick <kencfred@aol.com>
Sent: Monday, May 18, 2020 9:23 AM
To: cacsecretary [@caltrain.com]
Subject: Question for the Citizens Advisory Committee

Question re: A new Business Plan?

Transit authorities world-wide are anticipating ~ 15 to 20% passenger volume for the summer. For the future, they are planning for "permanent" large reductions in passenger volumes. What does the Advisory Committee believe as to:

1) Ridership levels in the next 3, 6 & 12+ months?
2) What physical changes must be made to attract riders?
3) What major changes must be made to Caltrain's Plan & Budget?

We must move quickly.

Thanks, Ken

Kenneth Frederick
KenCFred@AOL.com
Silicon Valley, CA