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TRANSPORTATION
COMMISSION

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Memorandum

TO: Commission

DATE: March 21, 2012

FR: Executive Director

RE: MTC Resolution No. 4056 — Memorandum of Understanding: High-Speed Rail Early Investment Strategy for a Blended System on the Peninsula Corridor

Background

Proposition 1A, approved by California voters in November 2008, provides almost $10 billion to plan, build and maintain an 800-mile statewide high-speed rail system. The California High Speed Rail Authority's (CHSRA) 2012 draft business plan has proposed a major shift toward a blended system approach that that will coordinate the development and operations of high-speed trains with existing passenger rail systems, such as Caltrain on the San Francisco Peninsula. This approach also improves, enhances and expands the integration of high-speed and regional/local passenger rail systems and targets cost-effective near-term solutions in areas that share existing commuter rail facilities to reduce the environmental impacts of the planned full system and to achieve substantial cost savings.

Memorandum of Understanding

Attachment A to Resolution No. 4056 is a Memorandum of Understanding (MOU) between and among MTC, five Bay Area transportation agencies, two municipalities and the California High Speed Rail Authority proposing a set of improvements to the Peninsula rail corridor. The MOU includes the following provisions:

- Establishes an Inter-related Program of Projects that addresses corridor capacity, operational efficiency and public safety issues required to accommodate the mixed traffic capacity requirements of high-speed rail, commuter and freight services.

- Identifies the Inter-related Program of Projects as the Corridor Electrification Infrastructure Project, Advance Signal System (also known as Positive Train Control or PTC), an extension of the service to the Transbay Transit Center, which is the Proposition 1A designated northern terminus of high-speed rail, new high-speed rail stations at Diridon Station in San Jose and a Millbrae Station at San Francisco International Airport, and a Core Capacity project of needed upgrades to stations, tunnels, bridges, passing tracks, and other track modifications such as selected grade separations.

- The MOU recognizes that the most substantial and tangible near term investment benefits will be realized when two essential system wide improvements are delivered: the Corridor Electrification Infrastructure Project that includes the needed rolling stock and the Advance Signal System project. Attachment B to the MOU is a detailed funding plan for these two early investment projects.

Corridor Electrification Infrastructure Project and the Advance Signal System

As explicitly recognized in the San Mateo County Transportation Authority's (2004), and Santa Clara Valley Transportation Authority's (2000) local half-cent expenditure plans and MTC Resolution No. 3434, the electrification project has had broad public support for many years.

The electrification project and the switch-over to light-weight Electric-multiple Units (EMUs) was included in MTC Resolution 3434 in 2001 and was further analyzed and included in the Regional Rail Plan adopted by the Commission in 2007.

The sustained level of support for the electrification project reflects the critical nature of this project as it will usher in modern passenger rail service on the Peninsula that will lead to cost savings, faster service, operational efficiencies, quieter trains, and fewer emissions. Electrification of the corridor will also pave the way for a future when California's high speed trains can operate from downtown San Francisco to the greater Los Angles basin.

The Advanced Signal System project is also a foundation for all future improvements on the Peninsula Corridor. It is a required feature not just to meet safety requirements, but is essential to operate the blended system on the Peninsula right-of-way and to control train traffic during all future construction work and upgrades. Importantly, Advanced Signal Systems are a federal mandate as the Rail Safety Improvement Act of 2008 requires the widespread installation of such systems by December 2015 (the reauthorization bill recently approved by the U.S. Senate would extend this deadline by a few years). See Attachment C for further descriptions of the Electrification and the PTC projects.

Funding Framework

Our objective for the MOU is to focus on a set of meaningful projects that offer substantial near-term benefits to residents of the Bay Area, that strategically benefit the Bay Area's economy for the future, that can be delivered with a realistic funding plan, and that pave the way for future high speed rail service.

The proposed funding plan includes $1.5 billion in local, regional, state, and federal funds to pay for the electrification and advance signal system elements of the blended system. Of this amount, approximately half, or $706 million, is expected to come from state-wide high-speed rail sources, namely $600 million of Proposition 1A high-speed rail funds and $106 million of Proposition 1A high-speed rail connectivity funds, monies that are directed by statutory formula to individual Bay Area transit operators.

The remaining non-state match funds are a mix of local sales taxes, Proposition 1B transit bond funds, Federal Transit Administration (FTA) funds, bridge tolls, and Air District funds. Note

that the Proposition 1A bond funds require a one-to-one match from other funds; this funding plan slightly exceeds the match requirement. The MOU preserves the ability to substitute other matching fund sources that might become available in the future, such as US DOT TIGER funding or other discretionary grants.

Of the matching funds included in the proposal, MTC would be responsible for programming the following:

- $342 million in current and future FTA formula funds that MTC, in the most recent Capital Improvement Program from 2009, anticipated using to pay for the replacement of Caltrain's rail cars. The funds would still be used for that purpose — procuring the Electric Multiple Units that would be used on an electrified rail line.

- $125 million in future FTA funds that would have been dedicated to Caltrain's fixed guideway state of repair projects. The fixed guideway funding amounts here are proposed to be dedicated to the signal and system upgrades needed for the blended strategy, between FY 2012-2013 and FY 2022-2023.

- $11 million in Regional Measure 1 West Bay rail toll funds that are currently unassigned.

As the current action is a policy-level commitment, staff would return to the Commission for more specific programming and allocation actions as the funds become available (in the case of the FTA funds, which are appropriated by Congress annually) and are needed for the project elements.

Recommendation

We recommend the Commission adopt MTC Resolution No. 4056 to enter into a memorandum of understanding and funding framework with the California High Speed Rail Authority and the identified transportation partners and local jurisdictions to begin work on this early investment strategy for a blended system on the Peninsula Corridor.

Steve Heminger

Date: March 28, 2012
W.I.: 1512
Referred By: Commission

ABSTRACT

Resolution No. 4056

This resolution approves an Agreement and establishes a funding framework among MTC, the California High Speed Rail Authority (the Authority), the Peninsula Corridor Joint Powers Board (JPB), the San Francisco County Transportation Authority (SFCTA), the San Mateo County Transportation Authority (SMCTA), VTA, the City of San Jose, the City and County of San Francisco, and the Transbay Joint Powers Authority (TJPA), for a High Speed Rail Early Investment Strategy for a blended system in the Peninsula Corridor.

Further discussion of the High Speed Rail Early Investment Strategy is contained in the Executive Director's memorandum dated March 21, 2012.

Date: March 28, 2012
W.I.: 1512
Referred by: Commission

Re: High Speed Rail Early Investment Strategy

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4056

WHEREAS, the Metropolitan Transportation Commission (MTC) is the regional transportation planning agency for the San Francisco Bay Area pursuant to Government Code 66500 et. seq.; and

WHEREAS, the California High-Speed Rail Authority (Authority) is responsible for planning, building and maintaining an 800-mile statewide high-speed rail system and improved mobility through the development of safe, clean, reliable rail technology; and

WHEREAS, the Authority is exclusively charged with accepting grants, fees and allocations from the state, from political subdivisions of the state and from the federal government, foreign governments, and private sources; and

WHEREAS, the Authority's 2012 Business Plan proposes to incrementally develop the California High-Speed Train (HST) system utilizing a blended system approach that will coordinate the development and operations of HST with existing passenger rail systems that improves, enhances and expands the integration of high-speed and regional/local passenger rail systems; and

WHEREAS, this blended approach requires a series of incremental investments in the peninsula corridor to prepare for integrated service and operations and the Authority recognizes the need for a collaborative effort with regional and local agencies to identify early investment projects along existing rail corridors that increases service, improves safety and efficiency, and creates linkages between HST and local passenger rail service; and

WHEREAS, on December 19, 2001, MTC adopted the Regional Transit Expansion Program of Projects (Resolution 3434) which includes the Transbay Transit Center Phase 2

Downtown Extension and Caltrain Electrification projects as regional priorities for transit expansion; and

WHEREAS, MTC, the Authority, the Peninsula Corridor Joint Powers Board (JPB), the San Francisco County Transportation Authority (SFCTA), the San Mateo County Transportation Authority (SMCTA), VTA, the City of San Jose, the City and County of San Francisco, and the Transbay Joint Powers Authority (TJPA) (collectively, Parties) staff have collaboratively and in good faith prepared a Memorandum of Understanding, as set forth in Attachment A to this Resolution, attached hereto and incorporated herein as though set forth at length, that sets forth principles for developing the corridor electrification and advance signal system elements of the blended system; and

WHEREAS, all Parties are involved in the planning, funding, construction and/or operation of heavy and light rail transit, buses, and/or commuter train services in the peninsula corridor and are considering intermodal service integration, including linkages to the proposed HST service; and

WHEREAS, all Parties wish to establish a policy-level commitment of funding for the electrification and advance signal system elements of the blended system, as set forth in Attachments B and C to this Resolution, attached hereto and incorporated herein as though set forth at length; now therefore be it

RESOLVED, that MTC approves the Memorandum of Understanding for a High Speed Rail Early Investment Strategy as set forth in Attachment A and incorporated herein; and be it further

RESOLVED, that all Parties have agreed to and approve the funding plan set forth in Attachment B and incorporated herein; and be it further

RESOLVED, that the Executive Director is authorized to execute Attachment A on behalf of MTC, and to make non-substantive changes or minor amendments as deemed appropriate subject to review by MTC's Office of General Counsel for form; and, be it further

RESOLVED, that MTC agrees to provide the funds as shown in Attachment B subject to the Authority, JPB, VTA, SFCTA and BART also agrees to provide the funds as shown in Attachment B; and be it further

RESOLVED, that MTC agrees to take timely follow-up approval actions as may be necessary to allocate and program specific funding indentified in Attachment B.

METROPOLITAN TRANSPORTATION COMMISSION

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Adrienne J. Tissier, Chair

This resolution was entered into by the Metropolitan Transportation Commission at a regular meeting of the Commission held in Oakland, California, on March 28, 2012.

MEMORANDUM OF UNDERSTANDING

HIGH SPEED RAIL EARLY INVESTMENT STRATEGY FOR A BLENDED SYSTEM IN THE SAN FRANCISCO TO SAN JOSE SEGMENT KNOWN AS THE PENINSULA CORRIDOR OF THE STATEWIDE HIGH-SPEED RAIL SYSTEM

BY AND AMOUNG THE FOLLOWING PARTIES (PARTIES)

CALIFORNIA HIGH SPEED RAIL AUTHORITY (AUTHORITY)
METROPOLITAN TRANSPORTATION COMMISSION (MTC)
PENINSULA CORRIDOR JOINT POWERS BOARD (JPB)
SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY (SFCTA)
SAN MATEO COUNTY TRANSPORTATION AUTHORITY (SMCTA)
SANTA CLARA VALLEY TRANSPORTATION AUTHORITY (VTA)
CITY OF SAN JOSE
CITY AND COUNTY OF SAN FRANCISCO
TRANSBAY JOINT POWERS AUTHORITY (TJPA)

Recitals

Whereas, the California High-Speed Rail AUTHORITY (AUTHORITY) is responsible for planning, building and maintaining an 800-mile statewide high-speed rail system and improved mobility through the development of safe, clean, reliable rail technology; and

Whereas, the AUTHORITY, in partnership with the Federal Railroad Administration is advancing a California High-Speed Train (HST) network that links the major metropolitan areas of the State of California utilizing corridors into and through Southern, Central and Northern California; and

Whereas, the AUTHORITY has responsibility for planning, construction and operation of high-speed passenger train service in California and is exclusively charged with accepting grants, fees and allocations from the state, from political subdivisions of the state and from the federal government, foreign governments, and private sources; and

Whereas, the AUTHORITY's 2012 Business Plan proposes to incrementally develop the HST system utilizing a blended system approach that will coordinate the development and operations of HST with existing passenger rail systems that improves, enhances and expands the integration of high-speed and regional/local passenger rail systems; and

Whereas, this blended approach requires a series of incremental investments in the Peninsula corridor to prepare for integrated service and operations and the AUTHORITY recognizes the need for a collaborative effort with regional and local agencies to identify early investment projects along existing rail corridors that improves service, improves safety and efficiency, and creates linkages between HST and local passenger rail service; and

Whereas, a blended system will remain substantially within the existing Caltrain right-of-way and will accommodate future high-speed rail and modernized Caltrain service along the Peninsula corridor by primarily utilizing the existing track configuration on the Peninsula; and

Whereas, this MOU is specific to project investments that upgrade existing rail service and prepare for a future high-speed train project that is limited to infrastructure necessary to support a blended system, which will primarily be a two-track system shared by both Caltrain and high-speed rail and will be designed to continue to support existing passenger and freight rail tenants; and

Whereas, local transportation improvement projects are required to be included in a Regional Transportation Plan (Plan), and the Metropolitan Transportation Commission, working closely with local agencies is charged with developing the Plan every four years to provide guidance for transportation investments within the Bay Area and with development of regional transportation strategies to address the needs of the San Francisco Bay Area; and

Whereas, on December 19, 2001, MTC adopted the Regional Transit Expansion Program of Projects (Resolution 3434) which includes the Transbay Transit Center Phase 2 Downtown Extension and Caltrain Electrification projects as regional priorities for transit expansion; and

Whereas, the Sustainable Communities and Climate Protection Act of 2008 (SB 375, Steinberg, Statutes of 2008) requires the Plan to include a Sustainable Communities Strategy (SCS), showing evidence of integrated planning, goals that establish and strengthen the crucial linkages between the economy, land use development and the regional transportation system to improve access to jobs, education, healthcare, and other amenities in ways that improve the overall quality of life in the Bay Area and the blended system on the Peninsula corridor in the California High-Speed Rail program are consistent with achieving SB 375 goals to reduce greenhouse gas emissions; and

Whereas, all Parties are involved in the planning, funding, construction and/or operation of heavy and light rail transit, buses, and/or commuter train services in the Peninsula corridor and are considering intermodal service integration, including linkages to the proposed HST service; and

Whereas, it is the intent and purpose of this MOU to strengthen the working relationship between the PARTIES to facilitate the development and implementation of passenger rail improvements that will improve local passenger rail service and operations while preparing

designated HST corridors for eventual HST operation to achieve region wide systems integration of rail service in Northern California; and

Whereas, local transportation improvement projects are required to be environmentally evaluated according to CEQA and NEPA regulations and where necessary, existing environmental approval covering incremental improvements to the Peninsula corridor will be updated to reflect evolving local and regional conditions and concerns; and

Whereas, incremental improvements and the blended system project will be planned, designed and constructed in a way that supports local land use and Transit Oriented Development policies along the Peninsula corridor; and

Now, THEREFORE, it is mutually understood and agreed to by the PARTIES as follows:

To jointly support and pursue the implementation of a statewide high speed rail system that utilizes a blended system and operational model on the Peninsula corridor and that has it's northern terminus at the Transbay Transit Center in San Francisco as specified in law, and it's southern limit at Mile Post 51.4 at the Tamien Station in San Jose. The blended system will support and benefit operation of both Caltrain and future high speed train service.

To jointly recognize a defined set of Inter-related Program of Projects that are consistent with the AUTHORITY's phased implementation plan, are consistent with a blended system operation of the corridor and achieve objectives that include but are not limited to system capacity and connectivity for Caltrain, HST and freight, public safety, operational efficiency, effectiveness and connectivity.

To generally describe, identify and work to fully fund an Inter-related Program of Projects known as the Corridor Electrification Infrastructure Project, Advanced Signal System (also known as Positive Train Control), the Downtown Extension to the Transbay Transit Center, which is the Proposition 1A designated northern terminus of high-speed rail, new high-speed stations at San Jose Diridon Station and a Millbrae BART/Caltrain Station with a connection to San Francisco International Airport, and a Core Capacity project of needed upgrades to stations, tunnels, bridges, potential passing tracks and other track modifications and rail crossing improvements including improvements and selected grade separations required to accommodate the mixed traffic capacity requirements of high-speed rail service and commuter services.

To recognize that of the set of Inter-related Program of Projects, the most substantial and tangible early-investment benefits will be realized when two essential projects are identified for an Initial Investment Strategy to secure, at the earliest possible date, the benefits of the blended system for the traveling public and an Initial Investment Strategy is needed to provide the groundwork upon which future construction can more readily progress.

To recognize that the two Inter-related projects for Initial Investment Strategy are the Corridor Electrification Infrastructure Project that includes the needed rolling stock to operate revenue

service; and the Advanced Signal System project and to adopt as part of this MOU, the funding plans needed to move as expeditiously as possible toward construction of these two essential projects.

To work toward the implementation of the Initial Investment Strategy to the maximum extent feasible and that the PARTIES shall endeavor to incorporate the Electrification Infrastructure and Advanced Signal System projects into their respective plans and that the AUTHORITY shall reflect this MOU in its Business Plan by December 31, 2012.

That the aforementioned projects will need to be environmentally analyzed and cleared according to CEQA and NEPA guidelines as appropriate, including updating and recirculation of the Caltrain Electrification EA/FEIR completed in 2009.

That the AUTHORITY will endeavor in good faith to secure approval and release of $ 600 million of Proposition 1A funds and $106 million of Proposition 1A "connectivity" funds consistent with the funding plans contained in this MOU as required to complete at the earliest possible date, the Corridor Electrification Infrastructure and Advanced Signal System projects.

That the AUTHORITY will endeavor in good faith to secure approval of Proposition 1A "connectivity" funds for Bay Area project sponsors consistent with and in accordance with the schedule and project expenditure plan approved and as amended by the California Transportation Commission.

That the AUTHORITY will work with funding partners to assist in seeking and releasing the funds necessary to implement the Electrification Infrastructure Project and Advanced Signal System project. Local agencies may provide local funds, real property, or in-kind resources as matching funds where matching funds are required to qualify for grant funds. PARTIES agree to work together to identify the appropriate amounts and types of local resources that may be used to support the completion of the Electrification Infrastructure Project and the Advanced Signal System Project.

That the AUTHORITY and appropriate PARTIES will coordinate to obtain funding using a mutually agreed-upon strategy. In the event that funding for the program is constrained by statute, recession of existing law, change in funding requirements or eligibility, reduction in funding level or availability, the AUTHORITY and the PARTIES shall takes steps notify each other as needed in a timely manner.

Date: March 28, 2012
W.I.: 1512
Referred by: Commission

Attachment B
Resolution No. 4056
Page 1 of 2

FUNDING PLAN

Program Costs and Proposed Funding for Peninsula Corridor Projects: Electrification and Advance Signal System

Program Costs *(in $ millions, year of expenditure)*	
Advance Signal System / Positive Train Control (PTC)	$231
Electrification and Electric Multiple Units (EMUs)	$1,225
Total	**$1,456**

Program Funding *(in $ millions)*	
Source	**Amount**
JPB Contributions	$180
JPB Local - Currently Available	$11
Caltrain PTC	$4
Subtotal Local	***$195***
Prop 1A Connectivity	$106
Prop 1A High Speed Rail Authority	$600
Prop 1B Caltrain	$24
Subtotal State	***$730***
Federal RR Admin. for PTC	$17
Federal Transit Admin prior/current obligations	$43
Federal Transit Admin future obligations	$440
Subtotal Federal	***$500***
MTC Bridge Tolls	$11
BAAQMD Carl Moyer	$20
Subtotal Regional	***$31***
Total	**$1,456**

See Next Page for Notes.

Funding Plan Notes:

1. Caltrain Joint Powers Board (JPB) Local Contribution is $60 million from San Mateo sales tax, $60 million from VTA sales tax, and $60 million from San Francisco ($23 million from sales tax, $37 million from Regional Transportation Improvement Program (RTIP)/local/other). Each agency's contribution is contingent on a like amount from the other two JPB partners.
2. Prop 1A Connectivity is $42 million from Caltrain, $26 million from VTA, and $38 million from BART (2nd priority for BART after receipt of $150 million for railcars).
3. Prop 1B Caltrain is $20 million Public Transportation Modernization, Improvement, and Service Enhancement Account (PTMISEA), $4 million State-Local Partnership Program (SLPP).
4. FTA Prior/Current Obligations is $16 million for electrification in prior years, $27 million for EMUs in FY12.
5. FTA Future Obligations is $315 million for electric multiple units (EMUs), $125 million from fixed guideway caps. Funds will be programmed in accordance with MTC Transit Capital Priorities process between approximately FY2012-2013 and FY2022-2023.
6. Bridge Tolls is from Regional Measure 1 (RM1) West Bay Rail Reserve.
7. Bay Area Air Quality Management District (BAAQMD) funds to be confirmed.
8. Assumes that all local sources, Prop 1B PTMISEA, all federal sources, and bridge tolls can be used as match to Prop 1A funds, totaling $726 million in matching funds for $706 million in Prop 1A funds.
9. Other potential future funding sources could be substituted if secured, including federal Transportation Investment Generating Economic Recovery (TIGER) funds (such as current Caltrain application for $44 million), State Interregional Transportation Improvement Program (ITIP) funds, and private financing.

PREPARING THE CALTRAIN CORRIDOR

FOR HIGH – SPEED RAIL:

ELECTRIFICATION AND

ADVANCED SIGNAL SYSTEM PROJECTS

MARCH 2012

ELECTRIFICATION INFRASTRUCTURE PROJECT

Electrification of the peninsula rail corridor is a necessary investment to support a blended Caltrain and high-speed rail system. In the short-term, electrification will bring more commuter service to our region in a quieter and greener way. For the long-term, electrification prepares the corridor to receive the high-speed rail system, which will provide a one-seat ride from downtown San Francisco to Los Angeles.

Project Scope

The electrification infrastructure project includes the installation of traction power facilities, poles and an overhead contact system, and the purchase of electric rolling stock to replace the current diesel trains, known as electric multiple units (EMUs). The project would extend for 52 miles from San Francisco to San Jose.

Short-Term Benefits

Caltrain electrification and use of EMUs will result in the following benefits:

- Faster and more frequent service
- Reduction of air pollutant emissions
- Reduction of noise and vibration

Project Status

In 2009, 35% design and federal environmental clearance were completed. Board certification of the Environmental Assessment /Final Environmental Impact Report (EA/FEIR) to complete the state environmental process has not yet been obtained. If full funding is secured by Summer 2012, the planned project schedule is:

Project Status and Schedule*

Phase	Start	Complete
Environmental Clearance **	2012	2013
Final Design & Procurement	2013	2015
Construction & Vehicle Testing	2015	2019

* Schedule assumes design-bid-build procurement process.

** Update/recirculation of the Caltrain Electrification project EA/FEIR.

Caltrain EMU Vehicle

ADVANCED SIGNAL SYSTEM

The advancedd signal system is needed to support Caltrain and high-speed rail blended services on the peninsula corridor. The system is called Communications Based Overlay Signal System, also known as Positive Train Control (PTC).

Project Scope

The project serves two purposes. One is to provide enhanced performance attributes to maximize train throughput in the rail corridor. The other is to reduce the risk of train-to-train collisions and prevent trains from exceeding authorized speed limits. The system includes control center upgrades, wayside signals, sensors in the tracks, on-board computers, and connections to global positioning systems. The advancedd signal system meets a federal mandate to achieve PTC by 2015.

Project Benefits

The advanced signal system will:

- Accommodate blended Caltrain and high-speed trains in the peninsula corridor;
- Increase the safety of the current signal system;
- Enable more frequent and dependable passenger service; and
- Improve grade crossing warning functions.

Additionally, it will enable Caltrain to maintain rail operations during construction, and support faster and more efficient construction schedules in a safer work environment. These capabilities will result in significant project cost savings and minimal service disruptions.

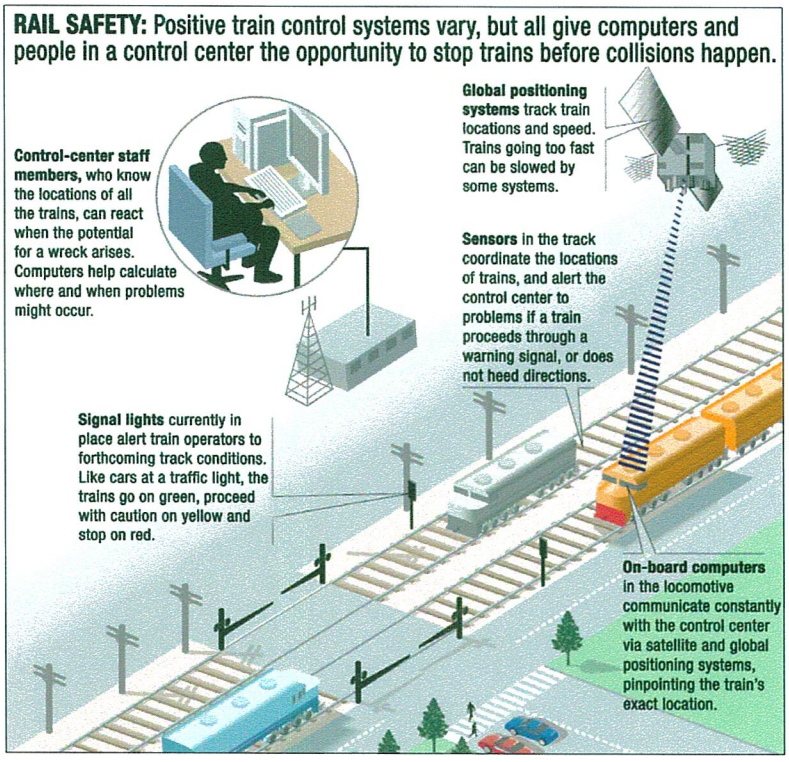
Project Status

If full funding is secured by Summer 2012, the planned project schedule is:

Project Phases and Schedule

Phase	Start	Complete
Planning and Preliminary Design*	January 2008	July 2010
Procurement of DB Contractor	August 2010	December 2011
Hardware & Software Engineering	2012	2013
Construction / Installation	2013	2014
System Testing and Integration	2014	2015
Revenue Service		2015

* Project is exempt from environmental review.



Chris Ramos | The Press-Enterprise

Diagram of how an advancedd signal system works