5 NEW INFORMATION AND CHANGED CONDITIONS SINCE SEPTEMBER 2, 2010, PRIOR DECISIONS

As part of the development of this document, new information subsequent to the Authority's September 2, 2010, decision has been considered to determine whether it has an effect on prior Program EIR analysis that would require revisions. This chapter discusses the types of new information reviewed and the conclusions about the information. The analysis has been guided by the consideration of whether the information constitutes "significant new information" under CEQA, as guided by CEQA Guidelines, § 15088.5. This chapter also includes a brief additional discussion and programmatic analysis related to grade separations. Changes to text from the Partially Revised Draft Program EIR are shown with a bar in the margin; added text is noted with underlining and deleted text is noted with strikeout.

5.1 New HST Project Information Subsequent to September 2, 2010, and Effect on Program EIR Analysis

5.1.1 Information on HST Project Sections

A review was performed of the documentation generated as part of development of project level EIR/EISs for the San Francisco to San Jose, San Jose to Merced, Sacramento to Merced, and Merced to Fresno sections of the HST project. Each of the HST project sections are at different stages in the project-level EIR/EIS process. The major environmental activities on the San Francisco to San Jose section were put on hold as of May 2011, and further work toward completing the San Francisco to San Jose Draft EIR/EIS was halted. The development of the Draft EIR/EIS for the San Jose to Merced section is underway, but not completed. The Draft EIR/EIS for the Sacramento to Merced section is underway, but environmental work on this section has been limited.

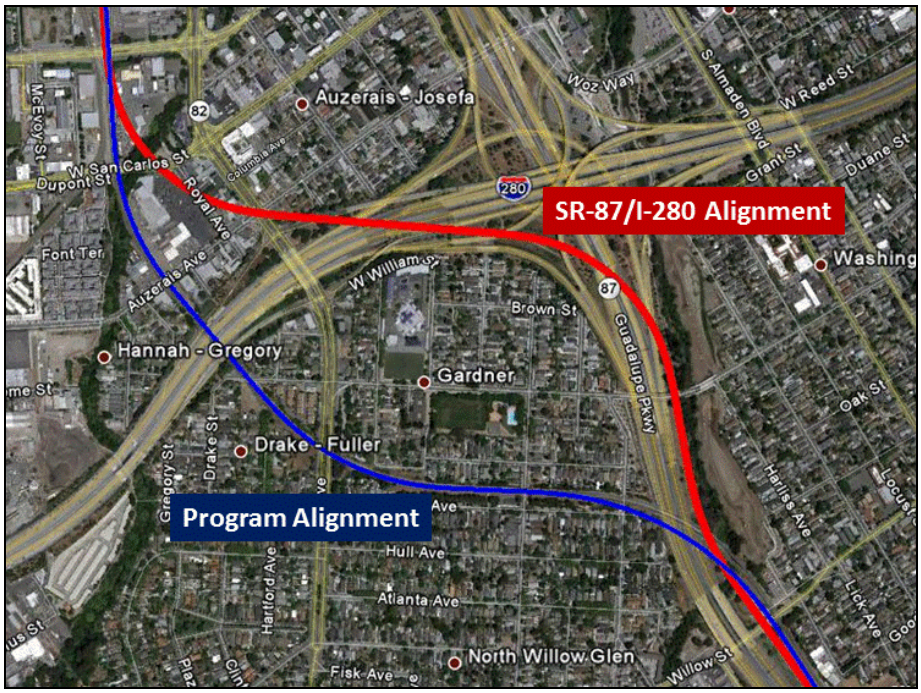
The major focus for the Authority has been on the Central Valley sections from Merced to Fresno and Fresno to Bakersfield, of which only the Merced to Fresno section overlaps with the study area for this Program EIR. The Merced to Fresno section Draft EIR/EIS circulated for public comment in the fall and preparation of the Final EIR/EIS is underway. This section, which has an overlap with the Bay Area to Central Valley Program EIR study area, has been based on a wye connection to a Pacheco Pass crossing to the Bay Area. As disclosed in that Draft EIR/EIS, however, the Authority will not make a decision on the wye area based on the Merced to Fresno EIR/EIS, and will study the wye connections to the Bay Area in a subsequent EIR/EIS, either for San Jose to Merced or for an alternative Altamont crossing, depending on the outcome of this Program EIR process. The portion of the Merced to Fresno second-tier project for which a decision is proposed is also tiered from the Authority's 2005 Statewide HST Program EIR.

The City of San Jose in cooperation with the Authority issued an in-progress draft of Visual Design Guidelines for the HST project within the City of San Jose. The Guidelines have not been approved or adopted by either the City of San Jose or the Authority at this time, but represent additional design concepts for the City of San Jose that may be carried forward as part of project-level EIR/EIS work.

Based on the review of the HST project documentation for the various sections subsequent to the September 2, 2010, prior programmatic decisions, it was determined that these project-level processes have not generated new information that would necessitate further revision of the Program EIR. Specifically, the project-level processes have resulted in refinements to the horizontal placement of the alignment alternatives and consideration of profile variations (below grade, at grade, above grade). This type of design detail is appropriately considered in second-tier, project-level environmental documents because it does not prevent adequate identification of the impacts of the programmatic decision at hand.

In contrast to the type of design refinement discussed above, additional work examining alternatives as part of the second-tier project-level environmental evaluation for San Jose to Merced has resulted in consideration of multiple different alignment options for the area immediately south of the San Jose station and approximately one mile to the south. The multiple alignments in this area have been developed as part of project-level alternatives screening to identify options that would reduce land use, noise, and community effects. Based on this work, the program alignment that would parallel the Caltrain Corridor in this roughly one-mile stretch approaching the San Jose station from the south has been replaced by an alignment that would cross over SR-87 and I-280 as shown in Figure 5-1. While many areas of the HST alignment in the San Jose to Merced area have been subject to refinements, the evolution of the design in this area has resulted in , a different design solution that departs from the Caltrain Corridor and represents a different linear alignment than the program alignment.

Figure 5-1
San Jose to Merced: SR-87/I-280 Alignment Comparison to Program Alignment



The SR-87/I-280 Alignment Alternative as shown in Figure 5-1 would have differences in environmental impact from the prior program alignment along the Caltrain corridor (also shown in Figure 5-1) in the following respects:

- Noise and vibration impacts based on programmatic screening, as well as consideration of the new location of the alignment as necessarily elevated to cross SR-87 and I-280, would result in the same medium ranking for noise and vibration for the San Jose station area, as well as for the alignment itself, which is categorized as part of the Pacheco alignment in the 2008 Final Program EIR. The screening process captures fewer sensitive receptors for the SR 87/I 280 Alignment Alternative than for the program alignment, but out of an abundance of caution the ranking is deemed medium. At the program level, for the Pacheco alignment as a whole, the difference in this one-mile area does not change the conclusion that noise and vibration impacts are significant under CEQA.
- Land use and community cohesion impacts would be lower for the SR-87/I-280 Alignment Alternative than for the program alignment because the HST would utilize the existing freeway

corridors for much of the station approach, requiring fewer residential and business displacements, and also would be located further from the Greater Gardner community. Land use, community, and property impacts in this area would still be considered significant under CEQA.

- Aesthetic and visual impacts would be slightly different. The program alignment, including elevated portions south of San Jose station were deemed to have low visual impacts in the 2008 Final Program EIR, and were considered significant under CEQA. The SR-87/I-280 alignment would traverse the two freeway corridors on a longer elevated structure than for the program alignment, but this structure would be over existing freeways. The low visual impact ranking would therefore be the same. As with the previous program alignment south of the station, the visual impacts are still considered significant under CEQA.

At the program level, other resource area impacts would be the same as described in the 2008 Final Program EIR.

5.1.2 Information on Altamont Corridor Rail Project

The Altamont Corridor Rail Project is a proposed regional intercity and commuter passenger rail project between Stockton and San Jose as a complementary project to the HST system. The Authority has worked under agreement with a regional partner, the San Joaquin Regional Rail Commission (SJRRC), to plan a joint-use rail line through the Altamont Pass that would support new regional intercity and commuter passenger rail services operating in northern California between Stockton and San José as well as eastern and southern Alameda County. The Authority and the SJRRC are proposing to develop a new joint-use rail line to improve connectivity and accessibility between the northern San Joaquin Valley and the Bay Area. The rail line would be designed and equipped to accommodate electrified lightweight passenger trains and could be used by HST-compatible equipment at intermediate speeds.

Subsequent to the Authority's 2010 Revised Final Program EIR, work has progressed on the Altamont Corridor Rail Project, resulting in a ~~January~~ February 2011 Preliminary Alternatives Analysis Report examining various route alternatives to identify those appropriate for consideration in an EIR/EIS. Based on a review of this documentation, it was determined that the information related to the Altamont Corridor Rail Project does not necessitate further revision of the Program EIR. This conclusion is based on the fact that the Altamont Corridor Rail Project has a different purpose and need and project objectives that are focused on regional transportation connectivity rather than the northern California/southern California connectivity of the HST. In addition, the Altamont Corridor Rail Project has different design and performance criteria than the HST, including slower speeds allowing for a more curved alignment than HST, and no requirement for passing tracks at stations. These differences distinguish the conceptual route alternatives in the Altamont Corridor Rail Project Preliminary Alternatives Analysis Report from HST alignments.

5.1.3 Draft 2012 Business Plan and Revised 2012 Business Plan

The Authority's Draft 2012 Business Plan (November 2011) and Revised 2012 Business Plan (April 2012)~~, which was released in November 2011,~~ have also been considered in the development of the~~is~~ Partially Revised Draft Program EIR and Partially Revised Final Program EIR. The purpose of the ~~Draft~~ Business Plan is to comply with the requirements of Public Utilities Code section 185033, which requires the Authority to develop a plan with the content specified in the statute, and offer it for public review and comment. The plan represents an implementation strategy for construction of the HST system. This implementation strategy describes a phased approach, consistent with how high-speed train projects are built around the world and how other major infrastructure in California has been developed, including the California State Water Project and State highway system. Consistent with statutory requirements, the Authority will consider adoption of the Revised 2012 Business Plan at a publicly noticed Board meeting. The following discussion refers to the Revised 2012 Business Plan, except where reference to the Draft

2012 Business Plan is helpful in identifying differences in the implementation strategy approach that evolved between November 2011 and March 2012.

A. THE DRAFT 2012 BUSINESS PLAN, THE REVISED 2012 BUSINESS PLAN, AND PHASED IMPLEMENTATION

The concept of phasing is not new for the HST system. Proposition 1A, passed by voters in 2008, contemplated that Phase 1 of the HST system would extend from San Francisco in the north to Los Angeles in the south, and that Phase 2 would then connect to Sacramento and San Diego.

The discussion of phasing in the Draft and Revised 2012 Business Plan expands on this initial phasing described in Proposition 1A, and illustrates how construction of the statewide HST would be accomplished in further sub-phases (phases of implementation), as funding is available and project-level environmental review for individual sections of the system is completed. The first ~~initial~~ construction ~~section (ICS)~~ is planned from north of Fresno to north of Bakersfield. Under the Revised 2012 Business Plan, t~~T~~his first construction ~~ICS~~ would then be extended ~~either over the Pacheco Pass to San Jose, as an Initial Operating Section north (IOS north), or~~ south to the San Fernando Valley, as an Initial Operating Section ("IOS") ~~south (IOS south)~~. The IOS ~~(either north or south)~~ would then be extended north to complete a "Bay to Basin" system extending from San Jose to the San Fernando Valley. The Bay to Basin system could then be extended to reach San Francisco in the north and Los Angeles/Anaheim in the south to complete Phase 1 of the system. Phase 2 of the system would expand Phase 1 to include from Merced north to Sacramento, and from Los Angeles south to San Diego.

The Revised 2012 Business Plan includes an emphasis on a blended system approach, early investments, and delivering early benefits to California travelers by using and leveraging investments as they are made. In contrast to the Draft 2012 Business Plan, which would have extending initial construction outward from the Central Valley and reach the urbanized areas of the San Franacisco Bay and the Los Angeles Basin last, the Revised 2012 Business Plan prioritizes early investments in these "bookend" sections to upgrade existing rail services, improve safety, and build train ridership as a foundation for the HST system. These early investments are intended to proceed in the same general timeframe as the ICS construction in the Central Valley, so that the book-end sections see improvements earlier than identified in the Draft 2012 Business Plan.

The ~~Draft~~Revised 2012 Business Plan, which includes the phased implementation of the HST system, reflects that the cost of building the system will be higher than originally anticipated. In addition, phased implementation recognizes that funding for construction will not become available all at once, and therefore construction of the system will take longer than originally anticipated. For example, the 2008 Final Program EIR anticipated that the HST system would be fully constructed in phases and operational in roughly 2020. The Revised~~Draft~~ 2012 Business Plan discloses that with phased implementation, and in light of increased costs and limits to financing, construction may take considerably longer, with completion of a Bay to Basin system in 2026, a Phase 1 blended system (see below) in 2028, and a full Phase 1 system occurring in 2033.

For the highly urbanized sections between San Francisco and San Jose, San Fernando Valley and Los Angeles, as well as Los Angeles to Anaheim, a concept called a "blended system approach" is also described in the ~~Draft~~Revised 2012 Business Plan. The blended system would provide an additional phasing option for the urbanized sections that have existing commuter rail corridors, which would allow for integrating HST service into an existing commuter rail system with certain, limited upgrades, in advance of construction of the currently planned shared or dedicated HST facilities. For example, a passenger traveling from Los Angeles could potentially travel on dedicated, fully constructed HST facilities to a particular station, such as San Jose, and then continue with a "one-seat ride" that would have the HST complete its journey to San Francisco on an upgraded and electrified commuter rail line at slower speeds. The blended system concept has the potential to provide earlier travel benefits by

allowing some level of HST service to reach San Francisco, Los Angeles, and Anaheim with a smaller investment than would be required for the fully constructed HST facilities. This approach wasis highly conceptual at theis time of release of the Draft 2012 Business Plan in November 2011. The blended system approach remains conceptual in the Revised 2012 Business Plan, however, some additional information has been included. With respect to the Caltrain corridor between San Francisco and San Jose, the proposal is for a primarily two-track system shared by Caltrain and HST that would stay substantially within the existing right-of-way. Key improvements to support a blended system approach include an advanced signal system, electrification of the rail alignment, and infrastructure upgrades such as grade separations or grade crossing improvements.

The Revised Draft 2012 Business Plan illustrates the HST system and phased implementation with a crossing between the Bay Area and the Central Valley over the Pacheco Pass. The Revised 2012 Draft Business Plan identifies that it is illustrative, and is not intended to indicate any precommitment or approval of any project prior to CEQA compliance. is a draft, and is currently circulating for its own statutorily required public comment period which will close on January 16, 2012, and has not been approved by the Authority Board as of the release of this Partially Revised Draft Program EIR. If the Authority makes a different decision on the HST network alternative to connect the Bay Area to the Central Valley, the phased implementation approach described in the Business Plan would be adjusted as necessary and is anticipated to be equally effective whether the train travels over the Pacheco Pass or the Altamont Pass. Similarly, the blended system approachconcept has the potential to be effective for both Altamont Pass and Pacheco Pass network alternatives.

B. PHASED IMPLEMENTATION AND PRIOR PROGRAM EIR ANALYSIS

Phased implementation does not change the HST project described and analyzed in the 2008 Final Program EIR, the 2010 Revised Final Program EIR, or in this Partially Revised Draft Final Program EIR. The Authority's proposed first-tier project continues to be the statewide HST system connecting the Bay Area and Central Valley, consistent with its statutory mission, and as described in Chapters 1 and 2 of the 2008 Final Program EIR. The RevisedDraft 2012 Business Plan does explain, however, that the necessity of phased implementation will result in a longer construction period for the HST project and a later date for full operation than previously anticipated. In addition, in accordance with statutory requirements, the Business Plan presents an array of ridership forecasts that are lower than those previously used for the 2008 Final Program EIR, because they represent more conservative assumptions for investment and business planning purposes. The longer duration of construction and also lower ridership forecasts may result in differences in the environmental impacts and benefits as described in the 2008 Final Program EIR, the 2010 Revised Final Program EIR, and in this document. This discussion provides a qualitative, general assessment of these differences. The environmental consequences of phased implementation would be explored in more detail as part of second-tier, project level EIRs.

Statewide and Regional Environmental Benefits from the HST Will Accrue More Slowly

In general, phased implementation and consequently lower ridership means that the statewide environmental benefits of the HST system, including traffic improvement on major highways and freeways (reduced vehicle miles travelled or VMT), reduced energy consumption, and improved air quality, will accrue more slowly than described in the 2008 Final Program EIR. This is the case because the benefits of the HST system as a whole are based on its operation, and its ability to shift automobile and aircraft trips to HST trips, thereby reducing VMT, reducing air pollution, and saving energy. These benefits will begin to accrue once an initial HST system is operating, and will build over time as the entire HST infrastructure is placed in operation. Accordingly, the benefits described in the 2008 Final Program EIR as of 2030 will be lower. Nevertheless, these benefits will continue to accrue over many decades beyond the 2030 time horizon evaluated in the 2008 Final Program EIR and these benefits will be achieved, just more slowly.

Localized Adverse Impacts from Construction of Phased Sections Will Be Delayed

In addition, the adverse environmental impacts and project benefits on a more local scale may not occur for the end point sections of the selected network alternative for a longer period of time (e.g. San Jose to San Francisco, San Jose to Oakland, Union City to San Jose and Union City to Oakland). For stations that would become an interim northern terminus, unique consequences would be in the areas of traffic congestion around the station, parking demand, and the potential increased demand for local feeder services from HST passengers arriving at the northern terminus station seeking to transfer to the local service.

Phasing May Change the Level and Duration of Adverse Traffic Congestion at Temporary Northern Terminus Stations and May Create a New Adverse Impact on Connecting Commuter Rail Services

The Revised 2012 ~~Draft~~ Business Plan proposes a "Bay to Basin" phase that relies on the concept of reaching the major population centers in both northern and southern California with the HST service and then providing seamless intermodal connections with the existing regional commuter rail and transit services to complete the trip to the major HST destination cities such as San Jose, San Francisco, Oakland, Los Angeles and Anaheim. For purposes of this analysis, the Bay to Basin phase has been examined to identify how it would differ from the full system implementation described and analyzed in the 2008 Final Program EIR. The Bay to Basin level of ridership would be approximately a third of the full system ridership. For example, in the case of the two "base" Network Alternatives for the Program EIR (A1 - Altamont to San Jose and San Francisco and P1 - Pacheco to San Jose and San Francisco), their annual ridership would be reduced from roughly 88 million to 28 million and from roughly 93 million to 30 million riders respectively. In general, the lower level of ridership has the potential to reduce adverse impacts for station area traffic congestion and station area air quality impacts, which were conservatively described in the 2008 Final Program EIR. This is the case because lower ridership in general means lower levels of access and egress to the HST stations. As discussed in the following examples, however, there are unique differences in impacts that would occur at a temporary northern terminus station for a Bay to Basin phased system that would be different than as described in the 2008 Final Program EIR.

Pacheco Pass Network Alternative Example With San Jose Temporary Northern Terminus
Traffic impacts around the San Jose station with the HST at full system ridership were not expected to be significant. (2008 Program Final EIR, Chapter 3.1.) However, if San Jose were a temporary northern terminus station as part of a Pacheco Pass network alternative, even with the reduction in total system-wide ridership from a Bay to Basin phase rather than the full system, the total number of passengers getting on trains in San Jose would be considerably higher than under the full build scenario (around 9.0 million per year for a Bay to Basin system versus 4.0 – 5.8 million per year for the full system, depending on Network Alternative). The reason for this is straightforward: if the HST is not able to provide a "one seat ride" from south of San Jose to San Francisco, then the north bound passengers need to travel by some other means to get to their final destination on the Peninsula or in San Francisco. For purposes of this analysis, the majority of these travelers (half to two-thirds) are assumed to be transferring at San Jose from high-speed trains to Caltrain trains and vice versa with most of these passengers never leaving the station. Consequently the number of riders per day accessing the HST system at San Jose by road (auto, taxi, rental car, buses and shuttles) would be less in the Bay to Basin phase then it would in the full system (6,000 – 7,000 for Bay to Basin phase versus 8,000-9,000 for full system). This change in access mode from automobile to Caltrain could reduce the station area traffic impacts and parking demand described in the 2008 Final Program EIR for the full system scenario at a San Jose station.

There remains a possibility, however, that station area traffic impacts in San Jose in a Bay to Basin phase could be higher if the percentage of riders disembarking at San Jose and traveling by road to San Francisco or other Bay Area destinations is higher. For purposes of this analysis, traffic impacts at the San Jose station from an interim Bay to Basin phase are identified as potentially significant.

Mitigation strategies to address station area traffic congestion include both regional and local strategies as outlined in Chapter 3.1, Section 3.1.5 of the 2008 Final Program Level EIR:

Regional Strategies:

- Coordinate with regional transportation (highway and transit) planning (e.g., regional transportation plans, congestion management plans, freeway deficiency plans, etc.).
- Implement Intelligent Transportation Systems Strategies (ITS).

Local Strategies:

- Work with public transportation providers to coordinate services and to increase service and/or add routes, as necessary, to serve the HST station areas.
- Provide additional parking for the interim period.
- Consider offsite parking with shuttles.
- Share parking strategies.
- Implement parking permit plans for neighborhoods.
- Employ parking and curbside use restrictions.
- Develop and implement a construction phasing and traffic management plan.
- Widen roadways.
- Install new traffic signals.
- Improve capacity of local streets with upgrades in geometrics, such as providing standard roadway lane widths, traffic controls, bicycle lanes, shoulders, and sidewalks
- Install modifications at intersections, such as signalization and/or capacity improvements (widening for additional left-turn and/or through lanes)
- Coordinate and optimize signals (including retiming and rephrasing)
- Designate one-way street patterns near some station locations
- Implement turn prohibitions
- Use one-way streets and traffic diversion to alternate routes
- Minimize closure of any proximate freight or passenger rail line or highway facility during construction.

The above mitigation strategies would be refined and applied at the project level and are expected to substantially avoid or lessen impacts around station areas to a less-than-significant level in most circumstances. Planning multi-modal stations, coordinating with transit services, providing accessible locations and street improvements, and encouraging transit-oriented development in station areas would help to ease traffic constraints in station areas. At the project level, it is expected that for various HST station projects, impacts would be mitigated to a less-than-significant level, but it is possible that some stations impacts would not be mitigated to the less-than-significant level. Sufficient information is not available at this programmatic level to conclude with certainty that the above mitigation strategies would reduce impacts around stations to a less-than-significant level in all circumstances, including in a situation where San Jose would be a temporary northern terminus under a Bay to Basin phased approach to HST construction. Traffic impacts around station areas may be significant, even with the application of mitigation strategies. Additional environmental assessment will allow a more precise evaluation in the second-tier, project-level environmental analyses.

There is the potential that the number of passengers transferring between Caltrain and the HST system at San Jose could result in significant impacts to the Caltrain system including overcrowding of trains with HST passengers and consequently displacing regular Caltrain passengers. This would result in a new significant impact under CEQA that was not described previously in the Program EIR. This adverse impact on Caltrain commuter rail service would be resolved once the San Jose station becomes a "through" station and HST passengers are no longer required to transfer to and from the Caltrain service to complete their journey. However, in the interim, there could be the need for mitigation of the additional passengers on the Caltrain system as a result of the San Jose station operating as a terminal. Mitigation strategies to increase the capacity of the Caltrain system include:

- Adding more train cars (i.e., seats) to the existing train consists.
- Providing additional and more frequent Caltrain train service to and from San Jose.
- Providing a dedicated train service that would specifically serve the HST customers between San Francisco and San Jose.
- Working with public transportation providers to add or enhance connectivity to commuter rail stations.
- Providing commuter station improvements (i.e., interim additional on-site or off-site parking, expanded or enhanced waiting areas for passengers).

These mitigation strategies are expected to be effective in substantially lessening the potential impact on Caltrain commuter service, however with the available information it is not clear that these strategies would reduce the impact to a less than significant level. For purposes of this programmatic assessment, the impact on Caltrain commuter service is therefore considered significant even with application of mitigation strategies. As second-tier, project-level environmental documents are prepared, the potential consequences of phased implementation on connecting commuter rail service will be evaluated in more detail.

Altamont Pass Network Alternative Example With East Bay (Union City) Temporary Northern Terminus

Traffic impacts around the Union City station with the HST at full system ridership were not expected be significant. (2008 Program Final EIR, Chapter 3.1.) Although there are not comparable 2012 Draft Business Plan forecasts for a Bay to Basin phase that terminates in an East Bay location such as Union City, it can be inferred that under a Bay to Basin phase that the same order-of-magnitude volume of passengers in San Jose in the Bay to Basin phase would be found at an East Bay (Union City) terminal. This would imply roughly 9 million annual passengers boarding in 2030 in a Bay to Basin Phase with an interim northern terminus at Union City. Similar to the San Jose example above, half to two-thirds are assumed to connect to the HST system via BART at the Union City station. Although most of the transferring passengers from the HST to the BART system would not be leaving the station, the total number of passengers accessing the HST system by auto and other road-based modes could be roughly 3 million passengers per year. This Bay to Basin phase number is far greater than the number of passengers accessing the station by auto and other road-based modes under the full system scenario (3 million for Bay to Basin phase versus less than 500,000 for full system). Under the Bay to Basin phase, the change in total ridership at Union City and access mode from auto to BART would increase traffic impacts and the demand for parking, resulting in a new significant impact under CEQA for the Union City station that was not described previously in the 2008 Program EIR.

The mitigation strategies listed above for the San Jose station are available to address station area traffic congestion, including the impacts if Union City is a temporary northern terminus in a Bay to Basin phased scenario. Sufficient information is not available at this programmatic level to conclude with certainty that the above mitigation strategies would reduce impacts around stations to a less-than-significant level in all circumstances, including in a situation where Union City would be a

temporary northern terminus under a Bay to Basin phased approach to HST construction. Traffic impacts around station areas may be significant, even with the application of mitigation strategies. Additional environmental assessment will allow a more precise evaluation in the second-tier, project-level environmental analyses.

The number of passengers transferring between the HST system and the BART system could result in potentially significant impacts to the BART system, including overcrowding of trains with HST passengers and consequently displacing regular BART passengers. This situation would be resolved once the Union City station becomes a "through" station and HST passengers are no longer required to transfer to and from the BART service to complete their journey. However, in the interim, there could be the need for mitigation of the additional passengers on the BART system as a result of the Union City station operating as a HST terminal. Mitigation strategies to address the need for increased capacity of the BART system include:

- Adding more train cars (i.e., seats) to the existing train consists
- Providing additional and more frequent BART service to and from Union City
- Working with public transportation providers to add or enhance connectivity to commuter rail stations.
- Providing commuter station improvements (i.e., interim additional on-site or off-site parking, expanded or enhanced waiting areas for passengers).

These mitigation strategies are expected to be effective in substantially lessening the potential impact on BART service, however with the available information it is not clear that these strategies would reduce the impact to a less than significant level. For purposes of this programmatic assessment, the impact on BART service is therefore considered significant even with application of mitigation strategies. As second-tier, project-level environmental documents are prepared, the potential consequences of phased implementation on connecting BART service will be evaluated in more detail.

Conclusion Regarding Impacts at Temporary Northern Terminus Stations
The examples provided above are just two possible temporary northern terminus locations for a phased approach for bringing HST service to the Bay Area by either the Pacheco Pass or the Altamont Pass Network Alternatives. Phasing of the HST system remains uncertain, and the purpose of this discussion is to disclose at a programmatic level the general types of differences that a phased approach would have in terms of environmental impacts and benefits. In conclusion, phased implementation of the HST project would alter the timing and duration of adverse environmental impacts and benefits discussed in the 2008 Final Program EIR and the 2010 Revised Final Program EIR, and would be anticipated to create new significant impacts in the temporary northern terminus station in the areas of station-area traffic congestion and impacts on connecting commuter rail service. As second-tier, project-level environmental documents are prepared, the potential consequences of phased implementation on the temporary northern terminus station area will be evaluated in more detail.

C. BLENDED SYSTEM CONCEPT AND PRIOR PROGRAM EIR ANALYSIS

The blended system discussed in the Revised~~Draft~~ 2012 Business Plan would provide for a HST to reach its end-point destination by traveling a portion of the trip on upgraded commuter rail lines. This approach is highly conceptual at this time. The blended system is an additional potential method of phasing that could have differences in environmental impact from those discussed above. In general, if a blended system approach were to be implemented along the Caltrain Corridor between San Jose and San Francisco, it would delay the environmental impacts associated with expanding the right-of-way for a four-track, shared alignment. For example, local land use and property adverse impacts would be delayed. The benefits of grade separations that would occur with

the full HST project, including the traffic circulation and noise reduction benefits, would also be delayed.

To ensure adequate consideration of any first-tier, programmatic implications of a blended approach for second-tier projects, a sample blended approach was defined for the San Francisco to San Jose corridor that would be primarily two tracks, except where the right-of-way currently has four tracks. The blended approach would involve electrification of the rail corridor, advanced signaling systems, and would include some grade separations, but was assumed to not be fully grade separated. An assumption was used involving HST running two to four trains per hour during the peak period each direction, and one to two trains per hour during the off peak period, in contrast to a full, four track alignment that would involve 10 trains per hour during the peak period and six trains per hour during the off-peak period per direction.

Considering this sample, illustrative scenario, the environmental impact differences explained above can be further amplified as follows:

- Fewer traffic, air quality, noise & vibration, energy, aesthetic, water quality, property, hazardous materials/wastes, cultural, and biological resources impacts from construction due to the lesser amount of civil construction involved than for the full four-track alignment. Rather than expanding the existing right-of-way, the right-of-way would remain predominantly the same and construction would occur mainly in this already disturbed, active rail corridor.
- Fewer localized traffic impacts at stations, elimination of adverse traffic effects from potential lane loss along Peninsula streets, less noise and vibration from operating trains, elimination of potential impact of moving freight trains incrementally closer to existing residences and businesses, less operational energy used, and fewer aesthetics impacts from operations due to the comparatively fewer high-speed trains per hour and per day. The fewer high-speed trains per hour would result in a great reduction in impacts from operations.
- Lower project benefits in the areas of vehicle miles travelled reduction, air quality benefits and GHG emissions reductions, and less total energy savings relative to other transportation energy needs due to fewer high-speed trains per hour in operation. The benefits of eliminating all at-grade crossings, and therefore eliminating the noise associated with train horns and crossing gates, would also be reduced.

In the areas of safety and localized traffic, the implications of a blended system approach are very speculative until a more refined proposal is put forward. The safety impacts of introducing additional trains onto the Caltrain corridor may result in some safety improvements relative to the existing condition if the blended system approach includes key grade separations. Without full grade separation, as proposed and evaluated in the Program EIR as part of the four-track system, the safety implications will depend on currently unknown factors, such as the number and location of key grade separations, and the type of safety enhancements at remaining at-grade crossings, if any. In general, the lack of complete grade separation would appear to result in reduced safety benefits as compared to the four-track, fully grade separated alignment.

Local traffic effects of introducing additional trains onto the Caltrain corridor with a blended system approach are also highly speculative. In general, the grade separation proposed as part of the four-track alignment analyzed in the Program EIR provides traffic circulation benefits by eliminating the congestion of traffic having to stop for passing commuter trains. This local traffic benefit would be eliminated in those areas that do not have grade separation. The local traffic effects of potential lane reductions adjacent to a four-track alignment would also be eliminated, or largely eliminated with a blended system, because the blended system would operate predominantly within the existing right-of-way. The one area of potential, adverse local traffic impact is in the area of localized congestion from additional trains, resulting in additional periods of traffic being stopped at the at-grade crossings.

5.2 Changed Conditions and Effect on Program Environmental Setting and Analysis

An evaluation of the environmental setting was conducted to assess whether conditions have changed across the study area in a manner that would necessitate a change in the Program EIR. Based on the evaluation, it was determined that the description of the environmental setting of the study corridors and station area cities described in the 2008 Final Program EIR, and as augmented by the 2010 Revised Final Program EIR, remains accurate. While specific conditions have changed in different cities and counties since the 2008 Final Program EIR and the 2010 Revised Final Program EIR, with new development projects under consideration, approved, and/or under construction, these changes are consistent with the general descriptions in each chapter of the environmental analysis and do not raise new environmental impact issues. Likewise, the economic recession has resulted in changes to the economic characteristics across the study area, as well as resulted in some planned and approved development projects no longer proceeding forward. These localized changes do not raise new environmental impact issues.

5.3 Additional Consideration of Grade Separations

As part of this Partially Revised ~~Draft~~ Final Program EIR, additional consideration has been given to the impacts of grade separations that would be a component of the HST project to clarify that these impacts are significant at the program level. The high-speed train design criteria require it to be fully grade separated from all crossing transportation facilities. To accomplish grade separations, the HST could be placed over or under the perpendicular facility, or the perpendicular facility could be placed over or under the HST alignment. It is also possible for a grade separation to be accomplished by blending the configuration, and having a perpendicular road partially lowered and the HST partially raised. Finally, it is also possible for certain roads to be closed. No decision will be made at the program level regarding how to accomplish grade separations or whether to close certain roads.

The precise impacts of a particular grade separation or groups of grade separations cannot be evaluated at the program level, because the impacts are dependent on design details that are not available. Nevertheless, certain broad statements about the impacts of implementing grade separations can be made. In general, grade separations would result in the same types of adverse impacts described for the HST alignments as described in the 2008 Final Program EIR. These impacts include the need for real property, displacement of existing land uses, impacts on biological, hydrological, and parks resources, visual effects, the potential for impacts to cultural resources or public utilities, potential hazardous materials effects, as well as traffic, air quality, and noise and vibration effects. Grade separations also have the potential for beneficial impacts, including improved traffic circulation, reduced noise from eliminating existing railroad crossing noise, improved vehicular and pedestrian safety, and improved community cohesion. The level of impact or benefit is dependent on the particular design. At a programmatic level, the impacts associated with grade separations are considered significant, particularly in light of the uncertainty associated with how they would be accomplished. The mitigation strategies to address these impacts from grade separations are the same as the strategies identified in the impacts analysis in 2008 Final Program EIR for each resource area. At the program level, out of an abundance of caution, the impacts of grade separations are considered significant even with the application of mitigation strategies since more detailed design information is needed to conclude otherwise.