APPENDIX 6-A: SAN FRANCISCO TO SAN JOSE PROJECT SECTION: PEPD RECORD SET CAPITAL COST ESTIMATE REPORT

California High Speed Rail Authority

San Francisco to San Jose Project Section

PEPD Record Set Capital Cost Estimate Report

July 2019

CALIFORNIA High-Speed Rail Authority

U.S. Department of Transportation
Federal Railroad Administration

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1.0 INTRODUCTION

1.1 Purpose and Scope

The purpose of this report is to present the Capital Cost Estimating Methodology (CCEM) in the preparation of reasonably reliable and accurate capital cost estimates for the PEPD Design level.

This document describes the methodology for preparation of estimated capital cost for the California High-Speed Rail Project (CHSRP) San Francisco to San Jose PEPD document. In addition, it presents the summary of Capital Cost Estimates along with detailed FRA Standard Cost Categories (SCC) and sub-categories or cost elements. Refinement of these cost estimates will be on-going during the advancement of engineering during subsequent project development phases.

The primary objectives of this report are:

- Identify the methods and processes used to develop the capital cost estimate during PEPD Design Level Phase;
- Identify the source documents and/or methodology used for pricing work;
- Specify how estimating assumptions have been documented during the course of the estimate development;
- Describe Unit Price Elements;
- Define the approach and methodology with respect to FRA Standard Cost Categories (SCC);
- Present estimates have been developed for each complete alignment alternative for the San Francisco to San Jose Project Section.

The estimating approach has been done in a manner that (1) allows consistent application to each alternative to facilitate comparisons; (2) provides the proper foundation for more detailed estimates as selected alternative(s) are further evaluated; and (3) provides the basis for subsequent construction package procurement level estimates with additional guidelines for a more detailed capital cost estimate.

Considering CHSRP's size, complexity, phased design, and number of participants, it is important that the CCEM is flexible enough to be applied at each point in the project development process to appropriately support the tracking, monitoring and control of cost changes through each of the program's design and implementation phases. This document addresses only the capital cost estimating requirements for the PEPD Design level. Additional guidelines have been developed for the preparation of capital cost estimates for subsequent phases of the CHSRP.

1.2 Statement of Technical Issue

The document is intended to address the preparation of a program cost estimate, including construction, acquisition of right-of-way, vehicles, and professional services during execution of the project.

The CCEM is intended to provide guidelines for accurately and consistently estimating the costs of capital infrastructure and systems for the PEPD Design level. It also provides a framework for defining the scope and technical basis for the estimates, the roles and responsibilities for specific estimating tasks among the project participations, and the structure, organization, and format for reporting capital costs for all geographic sections of CHSRP.

1.3 General Information

1.3.1 Definition of Terms

Technical terms, acronyms, or other cost estimating terminology specifically used for capital cost estimating purposes, unless otherwise indicated, will follow the standard definition of terms published by the Association for the Advancement of Cost Engineering (AACE) International in their Recommend Practice No. 10S-90 – Cost Engineering Terminology.

The following acronyms used in this document have specific connotations with regard to California High Speed Rail system.

Acronyms

AACE	Association for the Advancement of Cost Engineering
CCEM	Capital Cost Estimating Methodology
Authority	California High-Speed Rail Authority
CHSRP	California High-Speed Rail Project
ENR	Engineering News Record
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
HST	High Speed Train
LCCA	Life Cycle Cost Analysis
O&M	Operating and Maintenance
PMT	Program Management Team
RC	Regional Consultant(s)
SCC	Standard Cost Categories
TM	Technical Memorandum
UPE	Unit Price Elements
WBS	Work Breakdown Structure

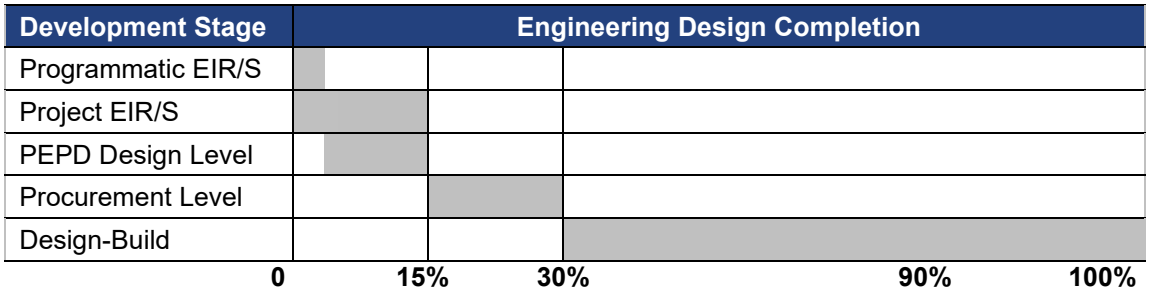
1.3.2 Units

The California High-Speed Rail Project is based on U.S. Customary Units consistent with guidelines prepared by the California Department of Transportation and defined by the National Institute of Standards and Technology (NIST). U.S. Customary Units are officially used in the United States and are also known in the US as “English” or “Imperial” units. In order to avoid confusion, all formal references to units of measure shall be made in terms of U.S. Customary Units.

Guidance for units of measure terminology, values, and conversions can be found in the Caltrans Metric Program Transitional Plan, Appendice B U.S. Customary General Primer (http://www.dot.ca.gov/hq/oppd/metric/TransitionPlan/Appendice-B-US-Customary-General-Primer.pdf). Caltrans Metric Program Transitional Plan, Appendice B can also be found as an attachment to the CHSRP Mapping and Survey Technical Memorandum.

2.0 CAPITAL COST ESTIMATING METHODOLOGY

Estimating methodologies are not static and must be flexible enough to adjust to the needs of the project's stage in the development process. The development process is described by the overall level of engineering design associated with the major development stages defined for the CHSRP:



Each development stage is represented by a range of engineering design completion and influenced by ongoing updates to the ridership demand forecast and associated revisions to estimated system capacity, service design and operating plans. Because of this variability, the appropriate estimating methods or procedures at a given milestone will be based on the actual levels of project engineering and scope definition present at that time. Because the program will be designed in multiple segments, the level of engineering design completed for major high-speed rail system elements will be at different levels at any point in time. The goal of using established estimating methodologies is to assure that project estimates are prepared in a consistent and uniform manner, organized and standardized in methods, and formatted in order to facilitate estimate review and reporting.

2.1 Estimating Format

A consistent format is developed for the reporting, estimating, and managing of the project's capital costs. This document recommends using standard cost categories (SCC) established by the Federal Railroad Administration (FRA) as part of American Recovery and Reinvestment Act (ARRA) grant application requirements. Preparation of capital costs in SCC format is adopted throughout the PEPD Design phase.

2.2 Estimating Software

Commercially available database software systems are used depending on the type of work elements. For example, Timberline is used for surface heavy construction work elements and HCSS is used for underground work elements. However, in order to provide uniformity between numerous work elements and sections of the corridor and to provide consistent platform for reporting and analysis requirements, the cost data are exported to Microsoft Excel. This will better enable the review, edit consolidation and reporting of estimate components over the course and provide more flexibility to make adjustments.

2.3 FRA Standard Cost Category (SCC)

The methodology used for generating capital cost estimates has been consistent with FRA guidelines for estimating capital costs. The heart of the FRA guidance is the SCC, which enables FRA-funded projects to develop budget baselines that summarize to the SCC. This cost structure is used for capital cost detail and summary sheets and is described below. Where the level of design does not support quantity measurements, parametric estimating techniques were utilized.

2.3.1 Work Breakdown Structure (WBS)

This involves the development of the Work Breakdown Structure (WBS) that is applied to cost estimating and cost reporting. The WBS for estimating includes a coding system that is used for estimating elements. The WBS for reporting includes the development of a coding system that allows the cost estimates to be sorted and presented by categories and subcategories as prescribed by the FRA.

The WBS for capital cost estimates for the PEPD Design level is based upon the FRA Standard Cost Categories is presented in Appendix A.

The primary WBS for quantities and unit prices are Unit Price Element's (UPE's). UPE's were originally developed as an estimating tool to assist in the development of conceptual level cost estimates and provide a method for translating typical construction items into a unit-based unit of measurement. The scope and definition of UPE's are developed by the Regional Consultant based on the unique design present in their project section.

2.3.2 Estimated Unit Costs

The development of construction unit costs for each of the construction activities that is identified and quantified from the design documents. The development of individual or composite estimated unit costs is accomplished through the use of historical bid data and by unit cost analysis, as appropriate, using labor, equipment and material rates. Unit costs are expressed in current year dollars and are adjusted to reflect any regional variations.

These methods are used either individually or in combination. For the PEPD Design level, when limited engineering details are available, the historical bid price method is typically used.

2.3.2.1 Historical Bid Price Method

Historical bid prices are typically used to develop costs for common construction elements. When using this method, the time of bid and conditions of the historical project used for pricing is considered and factors applied as needed:

- Adjust bid prices where the bid date is older than 12 months from the current date by using an appropriate escalation factor
- Adjust bid prices to reflect conditions of the project, such as type of terrain, geographical location, soil, traffic and other related factors. For location factor adjustments, the City Cost Index as published by RS Means is used.

Sources for historical bid prices that are used may come from local, regional, statewide and national levels, as well as from international high-speed rail projects with unique high-speed elements. Historical unit prices that are used for the CHSRP will be verified for appropriateness and documented as to their source as well as any adjustments for site, escalation or location factors.

2.3.2.2 Unit Cost Analysis Method

The estimated unit cost analysis method is typically used to develop costs for complex construction elements including but not limited to viaducts, retained earth systems, tunneling and underground structures. This method allows for unit costs to be developed based on current local construction and market conditions, such as changes which might affect productivity or the cost of labor or materials. The following steps are required in order to develop a unit price using this method:

- Analyze the proposed construction conditions
- Estimate production rates where applicable
- Obtain materials prices using local available sources
- Determine labor and equipment rates where applicable
- Calculate direct unit price using the above factors

The following sources are used to obtain basic cost data that is input into the database estimating program in order to develop any needed construction unit prices:

- Labor Rates – RS Means national wages adjusted by City Cost Index factor, Federal Davis-Bacon Wage Determination and/or California Department of Industrial Relations Prevailing Wage Determinations.
- Equipment Rates – RS Means and/or Corp of Engineers Construction Equipment Ownership and Operating Expense Schedule, Region VII.
- Material Prices - Material and supply prices for locally available material are obtained from local supplier quotes, if possible. Secondary sources of material cost data may be taken from RS Means, Engineering News-Report (ENR) or other published resource.

A list of prototypical work elements and the units of measure are estimated for PEPD Design level with corresponding estimated unit cost. Appendix A presents the list of variable cost elements within each FRA SCC 10's to 60's series. When required, additional project-specific work elements reflecting unique site conditions and configurations are identified and their estimated costs are developed in addition to prototypical unit costs. Examples of these project-specific unit costs include very high and/or long span iconic bridge structures, grade separations, specific roadway improvements, unique utility relocations, staged construction to accommodate existing rail or vehicular traffic, or restrictive site access conditions in urban areas.

2.3.3 Quantity Takeoffs

The task of quantity takeoffs involves preparation of estimated quantities either by direct measurement and calculation of construction elements that are shown in design drawings, sketches, electronically calculated from CADD files or established as an allowance quantity based on professional experience and judgment. Quantity take-offs have been prepared by the Regional Consultant and are presented in the San Francisco to San Jose PEPD quantities document "FJ_Record_PEPD_AppA_Qty_20190517" and "JM Draft_PEPD_AppA-Qty-v9_20190515_mod"

2.3.4 Allocated and Unallocated Contingencies

Contingency, in the statistical sense, is the estimated percentage by which a calculated value may differ from its true or final value and is typically included in an estimate as an allowance for the level of engineering design completion or to address imperfections in the estimating methods used at the various project development stages. Contingency is typically added to a particular item or group of items by the use of percentage multipliers. Contingency is generally greatest for the early stage of project development and decreases with advancement in the level of engineering design and pricing detail. During the preliminary design of the high-speed rail project, the limited level of design information that is available requires the use of contingency allowances that are allocated against specific construction or procurement cost categories. The percentage selected for a given cost category are generally based on level of definition of the scope of work involved and substantiated by professional judgment and experience relative to level of uncertainty and historical cost variability typically seen for work within a particular cost category. For the purposes of this estimating program, contingency is assigned into two major categories – allocated and unallocated.

Allocated contingency is added to each cost category based on an assessment of the quality of design information; means and methods; and site accessibility available for individual items of work. This contingency typically falls in a range of 10% to 25%. The exact percentage selected for each cost category is based on professional judgment and experience related to the cost variability typically seen for items of work within a particular cost category. The contingency is generally higher for underground elements reflecting the additional exposure for unknowns as well as the construction complexity. It is also higher for stations, terminals, storage yard facilities and utilities since their design progress is still in the conceptual level and identification of all the utilities are not determined. The percentages shown in Table 2-1 are the values that are normally used; however, slightly higher or lower values are used if a project-specific condition warrant.

Unallocated contingency is typically included to address uncertainties that are more global in nature like schedule delays, changes in contracting environment, or other such issues that are not associated with individual construction activities. Unallocated contingencies will be estimated at 5 percent of the total construction costs.

Table 2-1 Allocated Contingency Percentages by Cost Category

Cost Category No.	Description	Allocated Contingency Percentage
10 Track Structures and Track		
10.01	Track structure: Viaduct	15%
10.02	Track structure: Major/Movable bridges	15%
10.03	Track structure: Under grade bridges	15%
10.04	Track structure: Culverts and drainage structures	15%
10.05	Track structure: Cut and Fill (> 4' height/depth)	20%
10.06	Track structure: At-grade (grading and subgrade stabilization)	10%
10.07	Track structure: Tunnel	25%
10.08	Track structure: Retaining walls and systems	15%
10.09	Track new construction: Conventional ballasted	15%
10.10	Track new construction: Non-ballasted	15%
10.11	Track rehabilitation: Ballast and surfacing	15%
10.12	Track rehabilitation: Ditching and drainage	15%
10.13	Track rehabilitation: Component replacement (rail, ties, etc)	15%
10.14	Track: Special track work (switches, turnouts, insulated joints)	15%
10.15	Track: Major interlocking	15%
10.16	Track: Switch heaters (with power and control)	15%
10.17	Track: Vibration and noise dampening	15%
10.18	Other linear structures including fencing, sound walls	15%
20 Stations, Terminals, Intermodal		25%
30 Support Facilities: Yards, Shops, Admin. Bldgs		25%
40 Sitework, Right of Way, Land, Existing Improvements		
40.01	Demolition, clearing, site preparation	25%
40.02	Site utilities, utility relocation	25%
40.03	Hazardous material, contaminated soil removal/mitigation, ground water treatments	15%
40.04	Environmental mitigation: wetlands, historic/archeology, parks	20%
40.05	Site structures including retaining walls, sound walls	25%
40.06	Temporary facilities and other indirect costs during construction	10%

40.07	Purchase or lease of real estate	35%
40.08	Highway/pedestrian overpass/grade separations	20%
40.09	Relocation of existing households and businesses	0%
50 Communications & Signaling		15%
60 Electric Traction		15%
70 Vehicles		0%
80 Professional Services		0%

2.3.5 Environmental Mitigation

An allowance to account for the cost of environmental mitigation that relates to hydrology and water resources; wetland impact; hazardous material and waste; historic/archeology; safety and security; noise, vibration and air quality during construction and permanent aesthetic is included in the total capital cost. This allowance is based on 3% of the total cost of track structures, track work, station buildings, roadway modification and highway grade separation.

2.3.6 Right-of-Way Cost Estimate

This involves preparing estimated quantities of impacted properties, either permanent takes or temporary easements, which result from construction, operation, and maintenance of proposed high-speed rail alignment alternatives. In order to arrive at the estimated cost, professional experience and judgment in the area of property valuation, business damages, and legal and administrative issues as they relate to the estimation of right-of-way costs have been applied. The values used in the cost estimate were developed by the Regional consultant to reflect the design changes. “FJ_Record_PEPD_ROW_Report_April_2019” and “Memorandum - HSR JM Segment - Scott to W Alma Segregation 5.7.19”

2.3.7 Vehicle Estimate

The costs for the San Francisco to San Jose section do not include acquisition of high-speed train vehicles. Acquisition of trainsets is considered to be a system-wide procurement and is not associated with construction of individual sections of the CHSRP System. Consistent with the Revised 2016 Business Plan, the cost of vehicles was determined by using publicly available data regarding recent sales of comparable equipment to other CHSRP projects around the world and by informal consultations with the manufacturers.

2.3.8 Program Implementation/Professional Services Add-ons

Program Implementation costs are included to represent the costs of engineering, project and construction management, contract administration, permits and fees, training/start-up/testing and any force account work. These add-on costs are calculated as a percentage of construction costs only (applied individually and not cumulatively and excluding vehicle procurement and right-of-way costs) and presented under Professional Services cost category in the estimate. The management and administration cost associated with right-of-way and rolling stock are included with the respective items.

Preliminary Engineering	2.0%
Program Management	3.0%
Final Design	6.0%
Construction Management	4.0%
Agency Costs	0.5%
Total	15.5%

In addition, an allowance for system start-up and pre-revenue testing is added to the Professional Services cost category in the amount of 6% of the Train Controls, Communications and Electrification construction costs.

2.3.9 Escalation

Estimates are prepared in Base Year dollars with the Base Year defined as the current calendar year. Unit costs are updated annually or as required. For cost estimates with a base year that is older than the current calendar by one or more years, actual historical construction cost index values are used to calculate the escalation rate to be applied to bring a cost from the period in question to the present.

2.3.10 Finance Charge

Finance charges are not included in the capital cost estimates.

2.4 Estimate Validation

Following preparation of the PEPD Design level estimates, cost estimates are subjected to a validation process including reviews by subject matter experts in the areas of engineering and construction.

2.5 Estimate Reconciliation

Reconciliations are made between current cost estimates and cost estimates that were developed in previous design phases. The goal of reconciliation is to identify and document significant changes that may have occurred since the preparation of the prior capital cost estimate. Significant changes are identified in the reconciliation under one of three categories that best reflects the cause for the change: Quantity, Unit Price, or Scope, as applicable.

2.6 Estimate Assumption and Exclusions

- All costs are in 2018$ Q3.
- Allocated contingency is included in all costs.
- Track relocations in an active corridor have been considered but final costs will vary as design gets finalized through coordination with Caltrain.
- ROW costs have been included based on current ROW report as referenced in the list of documents from the RC. An average price between the high and low has been used.
- ROW costs do not include any procurement costs or contribution for sharing the corridor with railroads.

- This estimate includes the section from Scott Blvd. to Alma Ave including the San Jose station.
- Costs contained in Appendix C are broken down by the 2 main Alternatives A and B going from 4th & King Street Station to Scott Blvd. In addition to the 2 main alternatives there are 4 supplemental alternatives going from Scott Blvd. to Alma Ave. (alts. 1,2,3,4) including San Jose/Diridon Station. The estimate tables have been combined in the following manner: Alt. A+ Alt. 4; Alt. B+ Alt 1; Alt. B+ Alt. 2; Alt. B+ Alt. 3.
- Appendix C is divided into 2 parts summarized by UPE's and FRA SCC major categories.
- This estimate does not include costs that may be necessary for integration of communications and train control with the Caltrain systems.
- Allowance for Transbay Terminal termination and any costs towards the contribution of the Caltrain electrification project are not included in this estimate as they are budgetary set asides at the programmatic level.

APPENDIX A WORK BREAKDOWN STRUCTURE (WBS)

WORK BREAKDOWN STRUCTURE (FRA STANDARD COST CATEGORIES)

10 TRACK STRUCTURES & TRACK	
10.01	Track structure: Viaduct
10.02	Track structure: Major/Movable bridge
10.03	Track structure: Under grade Bridges
10.04	Track structure: Culverts and drainage structures
10.05	Track structure: Cut and Fill (> 4' height/depth)
10.06	Track structure: At-grade (grading and subgrade stabilization)
10.07	Track structure: Tunnel
10.08	Track structure: Retaining walls and systems
10.09	Track new construction: Conventional ballasted
10.10	Track new construction: Non-ballasted
10.11	Track rehabilitation: Ballast and surfacing
10.12	Track rehabilitation: Ditching and drainage
10.13	Track rehabilitation: Component replacement (rail, ties, etc)
10.14	Track: Special track work (switches, turnouts, insulated joints)
10.15	Track: Major interlockings
10.16	Track: Switch heaters (with power and control)
10.17	Track: Vibration and noise dampening
10.18	Other linear structures including fencing, sound walls
20 STATIONS, TERMINALS, INTERMODAL	
20.01	Station buildings: Intercity passenger rail only
20.02	Station buildings: Joint use (commuter rail, intercity bus)
20.03	Platforms
20.04	Elevators, escalators
20.05	Joint commercial development
20.06	Pedestrian / bike access and accommodation, landscaping, parking lots
20.07	Automobile, bus, van accessways including roads
20.08	Fare collection systems and equipment
20.09	Station security

30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	
30.01	Administration building: Office, sales, storage, revenue counting
30.02	Light maintenance facility
30.03	Heavy maintenance facility
30.04	Storage or maintenance-of-way building/bases
30.05	Yard and yard track
40 SITEWORK, RIGHT OF WAY, LAND, EXISTING IMPROVEMENTS	
40.01	Demolition, clearing, site preparation
40.02	Site utilities, utility relocation
40.03	Hazardous material, contaminated soil removal/mitigation, ground water treatments
40.04	Environmental mitigation: wetlands, historic/archeology, parks
40.05	Site structures including retaining walls, sound walls
40.06	Temporary facilities and other indirect costs during construction
40.07	Purchase or lease of real estate
40.08	Highway/pedestrian overpass/grade separations
40.09	Relocation of existing households and businesses
50 COMMUNICATIONS & SIGNALING	
50.01	Wayside signaling equipment
50.02	Signal power access and distribution
50.03	On-board signaling equipment
50.04	Traffic control and dispatching systems
50.05	Communications
50.06	Grade crossing protection
50.07	Hazard detectors: dragging equipment high water, slide, etc.
50.08	Station train approach warning system
60 ELECTRIC TRACTION	
60.01	Traction power transmission: High voltage
60.02	Traction power supply: Substations
60.03	Traction power distribution: Catenary and third rail
60.04	Traction power control
70 VEHICLES	
70.00	Vehicle acquisition: Electric locomotive
70.01	Vehicle acquisition: Non-electric locomotive

70.02	Vehicle acquisition: Electric multiple unit
70.03	Vehicle acquisition: Diesel multiple unit
70.04	Vehicle acquisition: Loco-hauled passenger cars w/ ticketed space
70.05	Vehicle acquisition: Loco-hauled passenger cars w/o ticketed space
70.06	Vehicle acquisition: Maintenance of way vehicles
70.07	Vehicle acquisition: Non-railroad support vehicles
70.08	Vehicle refurbishment: Electric locomotive
70.09	Vehicle refurbishment: Non-electric locomotive
70.10	Vehicle refurbishment: Electric multiple unit
70.11	Vehicle refurbishment: Diesel multiple unit
70.12	Vehicle refurbished: Passenger loco-hauled car w/ ticketed space
70.13	Vehicle refurbished: Non-passenger loco-hauled car w/o ticketed space
70.14	Vehicle refurbishment: Maintenance of way vehicles
70.15	Spare parts
80 PROFESSIONAL SERVICES (applies to Cats. 10 60)	
80.01	Service Development Plan/Service Environmental
80.02	Preliminary Engineering/Project Environmental
80.03	Final design
80.04	Project management for design and construction
80.05	Construction administration & management
80.06	Professional liability and other non-construction insurance
80.07	Legal; Permits; Review Fees by other agencies, cities, etc.
80.08	Surveys, testing, investigation
80.09	Engineering inspection
80.10	Start up
90 UNALLOCATED CONTINGENCY	
100 FINANCE CHARGES	

APPENDIX B TYPICAL UNIT COST ELEMENTS

No.	DESCRIPTION	UNIT
10.01	**Track structure: Viaduct**	
10.01.122	Elevated Structure - 1 Track (20' Avg. Pier Ht)	Route Mile
10.01.123	Elevated Structure - 1 Track (30' Avg. Pier Ht)	Route Mile
10.01.124	Elevated Structure - 1 Track (40' Avg. Pier Ht)	Route Mile
10.01.125	Elevated Structure - 1 Track (50' Avg. Pier Ht)	Route Mile
10.01.126	Elevated Structure - 1 Track (60' Avg. Pier Ht)	Route Mile
10.01.127	Elevated Structure - 1 Track (70' Avg. Pier Ht)	Route Mile
10.01.222	Elevated Structure - 2 Track (20' Avg. Pier Ht)	Route Mile
10.01.223	Elevated Structure - 2 Track (30' Avg. Pier Ht)	Route Mile
10.01.224	Elevated Structure - 2 Track (40' Avg. Pier Ht)	Route Mile
10.01.225	Elevated Structure - 2 Track (50' Avg. Pier Ht)	Route Mile
10.01.226	Elevated Structure - 2 Track (60' Avg. Pier Ht)	Route Mile
10.01.227	Elevated Structure - 2 Track (70' Avg. Pier Ht)	Route Mile
10.01.242	Elevated Structure - 4 Track (20' Avg. Pier Ht)	Route Mile
10.01.243	Elevated Structure - 4 Track (30' Avg. Pier Ht)	Route Mile
10.01.244	Elevated Structure - 4 Track (40' Avg. Pier Ht)	Route Mile
10.01.245	Elevated Structure - 4 Track (50' Avg. Pier Ht)	Route Mile
10.01.246	Elevated Structure - 4 Track (60' Avg. Pier Ht)	Route Mile
10.01.247	Elevated Structure - 4 Track (70' Avg. Pier Ht)	Route Mile
10.01.322	Elevated Structure (LS) - 1 Track (20' Avg. Pier Ht)	Route Mile
10.01.323	Elevated Structure (LS) - 1 Track (30' Avg. Pier Ht)	Route Mile
10.01.324	Elevated Structure (LS) - 1 Track (40' Avg. Pier Ht)	Route Mile
10.01.325	Elevated Structure (LS) - 1 Track (50' Avg. Pier Ht)	Route Mile
10.01.326	Elevated Structure (LS) - 1 Track (60' Avg. Pier Ht)	Route Mile
10.01.327	Elevated Structure (LS) - 1 Track (70' Avg. Pier Ht)	Route Mile
10.01.422	Elevated Structure (LS) - 2 Track (20' Avg. Pier Ht)	Route Mile
10.01.423	Elevated Structure (LS) - 2 Track (30' Avg. Pier Ht)	Route Mile
10.01.424	Elevated Structure (LS) - 2 Track (40' Avg. Pier Ht)	Route Mile
10.01.425	Elevated Structure (LS) - 2 Track (50' Avg. Pier Ht)	Route Mile
10.01.426	Elevated Structure (LS) - 2 Track (60' Avg. Pier Ht)	Route Mile
10.01.427	Elevated Structure (LS) - 2 Track (70' Avg. Pier Ht)	Route Mile
10.01.431	Elevated Structure (LS-Tall) - 2-Single Tracks (110' Avg. Pier Ht)	Route Mile

No.	DESCRIPTION	UNIT
10.01.432	Elevated Structure (LS-Tall) - 2-Single Tracks (120' Avg. Pier Ht)	Route Mile
10.01.512	Elevated Structure Straddle over 2 RR - 1 Track (20' Avg. Pier Ht)	Route Mile
10.01.513	Elevated Structure Straddle over 2 RR - 1 Track (30' Avg. Pier Ht)	Route Mile
10.01.514	Elevated Structure Straddle over 2 RR - 1 Track (40' Avg. Pier Ht)	Route Mile
10.01.515	Elevated Structure Straddle over 2 RR - 1 Track (50' Avg. Pier Ht)	Route Mile
10.01.522	Elevated Structure Straddle over 2 RR - 2 Track (20' Avg. Pier Ht)	Route Mile
10.01.523	Elevated Structure Straddle over 2 RR - 2 Track (30' Avg. Pier Ht)	Route Mile
10.01.524	Elevated Structure Straddle over 2 RR - 2 Track (40' Avg. Pier Ht)	Route Mile
10.01.525	Elevated Structure Straddle over 2 RR - 2 Track (50' Avg. Pier Ht)	Route Mile
10.01.612	Elevated Structure Straddle over 4 RR - 1 Track (20' Avg. Pier Ht)	Route Mile
10.01.613	Elevated Structure Straddle over 4 RR - 1 Track (30' Avg. Pier Ht)	Route Mile
10.01.614	Elevated Structure Straddle over 4 RR - 1 Track (40' Avg. Pier Ht)	Route Mile
10.01.615	Elevated Structure Straddle over 4 RR - 1 Track (50' Avg. Pier Ht)	Route Mile
10.01.622	Elevated Structure Straddle over 4 RR - 2 Track (20' Avg. Pier Ht)	Route Mile
10.01.623	Elevated Structure Straddle over 4 RR - 2 Track (30' Avg. Pier Ht)	Route Mile
10.01.624	Elevated Structure Straddle over 4 RR - 2 Track (40' Avg. Pier Ht)	Route Mile
10.01.625	Elevated Structure Straddle over 4 RR - 2 Track (50' Avg. Pier Ht)	Route Mile
10.01.944	Elevated Structure - 2 Track w/ 2 Single Trenches	Route Mile
10.02	**Track structure: Major/Movable bridge**	
10.02.013	Bridge Structure - 3 span with 1 Track	Route Mile
10.02.023	Bridge Structure - 3 span with 2 Track	Route Mile
10.02.043	Bridge Structure - 3 span with 4 Track	Route Mile
10.05	**Track structure: Cut and Fill (> 4' height/depth)**	
10.05.111	At-Grade Track-bed in Cut - 1 Track (5' Avg. Exc Depth)	Route Mile

No.	DESCRIPTION	UNIT
10.05.112	At-Grade Track-bed in Cut - 1 Track (10' Avg. Exc Depth)	Route Mile
10.05.113	At-Grade Track-bed in Cut - 1 Track (15' Avg. Exc Depth)	Route Mile
10.05.114	At-Grade Track-bed in Cut - 1 Track (20' Avg. Exc Depth)	Route Mile
10.05.121	At-Grade Track-bed in Cut - 2 Track (5' Avg. Exc Depth)	Route Mile
10.05.122	At-Grade Track-bed in Cut - 2 Track (10' Avg. Exc Depth)	Route Mile
10.05.123	At-Grade Track-bed in Cut - 2 Track (15' Avg. Exc Depth)	Route Mile
10.05.124	At-Grade Track-bed in Cut - 2 Track (20' Avg. Exc Depth)	Route Mile
10.05.126	At-Grade Track-bed in Cut - 2 Track (40' Avg. Exc Depth)	Route Mile
10.05.128	At-Grade Track-bed in Cut - 2 Track (60' Avg. Exc Depth)	Route Mile
10.05.130	At-Grade Track-bed in Cut - 2 Track (80' Avg. Exc Depth)	Route Mile
10.05.132	At-Grade Track-bed in Cut - 2 Track (100' Avg. Exc Depth)	Route Mile
10.05.211	At-Grade Track-bed in Fill - 1 Track (5' Avg. Fill Ht)	Route Mile
10.05.212	At-Grade Track-bed in Fill - 1 Track (10' Avg. Fill Ht)	Route Mile
10.05.213	At-Grade Track-bed in Fill - 1 Track (15' Avg. Fill Ht)	Route Mile
10.05.214	At-Grade Track-bed in Fill - 1 Track (20' Avg. Fill Ht)	Route Mile
10.05.221	At-Grade Track-bed in Fill - 2 Track (5' Avg. Fill Ht)	Route Mile
10.05.222	At-Grade Track-bed in Fill - 2 Track (10' Avg. Fill Ht)	Route Mile
10.05.223	At-Grade Track-bed in Fill - 2 Track (15' Avg. Fill Ht)	Route Mile
10.05.224	At-Grade Track-bed in Fill - 2 Track (20' Avg. Fill Ht)	Route Mile
10.05.226	At-Grade Track-bed in Fill - 2 Track (40' Avg. Fill Ht)	Route Mile
10.05.228	At-Grade Track-bed in Fill - 2 Track (60' Avg. Fill Ht)	Route Mile
10.05.230	At-Grade Track-bed in Fill - 2 Track (80' Avg. Fill Ht)	Route Mile
10.05.232	At-Grade Track-bed in Fill - 2 Track (100' Avg. Fill Ht)	Route Mile
10.06	**Track structure: At-grade (grading and subgrade stabilization)**	
10.06.210	At-Grade Track-bed with Closed Drainage - 1 Track	Route Mile
10.06.220	At-Grade Track-bed with Closed Drainage - 2 Track	Route Mile
10.06.230	At-Grade Track-bed with Closed Drainage - 3 Track	Route Mile
10.06.240	At-Grade Track-bed with Closed Drainage - 4 Track	Route Mile
10.07	**Track structure: Tunnel**	
10.07.101	TBM Single Track Twin Tunnel 30ft ID Unpressurized TBM in hard rock	Route Mile
10.07.102	TBM Single Track Twin Tunnel 30ft ID Slurry TBM in hard rock	Route Mile
10.07.103	TBM Single Track Twin Tunnel 30ft ID in soft ground	Route Mile
10.07.104	TBM Double Track Tunnel 50ft ID in soft ground	Route Mile

No.	DESCRIPTION	UNIT
10.07.105	TBM Double Track Tunnel 40ft ID in soft ground	Route Mile
10.07.201	D&B Single Track Twin Tunnel 30ft ID in hard rock	Route Mile
10.07.202	D&B Single Track Twin Tunnel 30ft ID in rock	Route Mile
10.07.203	D&B Double Track Tunnel 40ft ID in hard rock	Route Mile
10.07.204	D&B Double Track Tunnel 40ft ID in rock	Route Mile
10.07.205	D&B Double Track Tunnel 50ft ID in hard rock	Route Mile
10.07.206	D&B Double Track Tunnel 50ft ID in rock	Route Mile
10.07.301	SEM Single Track Twin Tunnel 30ft ID in soft ground	Route Mile
10.07.302	SEM Single Track Twin Tunnel 30ft ID in soft ground	Route Mile
10.07.303	SEM Double Track Tunnel 40ft ID in soft ground	Route Mile
10.07.304	SEM Double Track Tunnel 40ft ID in soft ground	Route Mile
10.07.305	SEM Double Track Tunnel 50ft ID in soft ground	Route Mile
10.07.306	SEM Double Track Tunnel 50ft ID in soft ground	Route Mile
10.07.401	RH Single Track Twin Tunnel 30ft ID in soft rock	Route Mile
10.07.402	RH Single Track Twin Tunnel 30ft ID in soft rock	Route Mile
10.07.403	RH Double Track Tunnel 40ft ID in soft rock	Route Mile
10.07.404	RH Double Track Tunnel 40ft ID in soft rock	Route Mile
10.07.405	RH Double Track Tunnel 50ft ID in soft rock	Route Mile
10.07.406	RH Double Track Tunnel 50ft ID in soft rock	Route Mile
10.07.207	D&B Cross Passage conservative cost in rock	Linear Feet
10.07.407	RH Cross Passage conservative cost in soft rock	Linear Feet
10.07.501	Cross Passage in Soft Ground	Linear Feet
10.07.502	Cross Passage in Soft Ground, including jet grout	Linear Feet
10.07.114	Cut & Cover Box - 1 Track/ 1 Box (40' Avg. Exc Depth)	Route Mile
10.07.115	Cut & Cover Box - 1 Track/ 1 Box (50' Avg. Exc Depth)	Route Mile
10.07.116	Cut & Cover Box - 1 Track/ 1 Box (60' Avg. Exc Depth)	Route Mile
10.07.214	Cut & Cover Box - 2 Track / 1 Box (40' Avg. Exc Depth)	Route Mile
10.07.215	Cut & Cover Box - 2 Track / 1 Box (50' Avg. Exc Depth)	Route Mile
10.07.216	Cut & Cover Box - 2 Track / 1 Box (60' Avg. Exc Depth)	Route Mile
10.07.224	Cut & Cover Box - 2 Track/ 2 Box (40' Avg. Exc Depth)	Route Mile
10.07.225	Cut & Cover Box - 2 Track / 2 Box (50' Avg. Exc Depth)	Route Mile
10.07.226	Cut & Cover Box - 2 Track / 2 Box (60' Avg. Exc Depth)	Route Mile
10.07.414	Cut & Cover Box - 4 Track / 1 Box (40' Avg. Exc Depth)	Route Mile
10.07.415	Cut & Cover Box - 4 Track / 1 Box (50' Avg. Exc Depth)	Route Mile
10.07.416	Cut & Cover Box - 4 Track / 1 Box (60' Avg. Exc Depth)	Route Mile

No.	DESCRIPTION	UNIT
10.07.801	Ventilation Shaft	VF
10.07.802	Mid-Line Ventilation Structure	LS
10.07.803	Tunnel Portal Structure	LS
10.07.805	Emergency Access Shaft	VF
10.07.850	Pumping Station	EA
10.07.901	Mechanical & Electrical Allowance for Underground (Single)	Route Mile
10.07.902	Mechanical & Electrical Allowance for Underground (Double)	Route Mile
10.07.920	Ventilation Equipment Allowance	EA
10.07.922	Double Deck - 2 Track Trench on Top of 2 Track C&C Box	Route Mile
10.07.950	Allowance for Construction Monitoring	Route Mile
10.08	**Track structure: Retaining walls and systems**	
10.08.211	Retained Cut, Trench - 1 Track (10' Avg. Exc Depth)	Route Mile
10.08.212	Retained Cut, Trench - 1 Track (20' Avg. Exc Depth)	Route Mile
10.08.213	Retained Cut, Trench - 1 Track (30' Avg. Exc Depth)	Route Mile
10.08.221	Retained Cut, Trench - 2 Track (10' Avg. Exc Depth)	Route Mile
10.08.222	Retained Cut, Trench - 2 Track (20' Avg. Exc Depth)	Route Mile
10.08.223	Retained Cut, Trench - 2 Track (30' Avg. Exc Depth)	Route Mile
10.08.241	Retained Cut, Trench - 4 Track (10' Avg. Exc Depth)	Route Mile
10.08.242	Retained Cut, Trench - 4 Track (20' Avg. Exc Depth)	Route Mile
10.08.243	Retained Cut, Trench - 4 Track (30' Avg. Exc Depth)	Route Mile
10.08.344	Retained Cut, Staged Trench - 4 Track (40' Avg. Exc Depth)	Route Mile
10.08.346	Retained Cut, Staged Trench - 4 Track (60' Avg. Exc Depth)	Route Mile
10.08.411	Retained Fill, Walls Both Sides - 1 Tracks (10' Avg. Wall Ht)	Route Mile
10.08.412	Retained Fill, Walls Both Sides - 1 Tracks (20' Avg. Wall Ht)	Route Mile
10.08.413	Retained Fill, Walls Both Sides - 1 Tracks (30' Avg. Wall Ht)	Route Mile
10.08.421	Retained Fill, Walls Both Sides - 2 Tracks (10' Avg. Wall Ht)	Route Mile
10.08.422	Retained Fill, Walls Both Sides - 2 Tracks (20' Avg. Wall Ht)	Route Mile
10.08.423	Retained Fill, Walls Both Sides - 2 Tracks (30' Avg. Wall Ht)	Route Mile
10.09	**Track new construction: Conventional ballasted**	
10.09.110	Ballasted Track - 1 Track	Route Mile
10.09.112	Ballasted Track (Track Laying Machine) - 1 Track	Route Mile
10.09.120	Ballasted Track - 2 Track	Route Mile
10.09.122	Ballasted Track (Track Laying Machine) - 2 Track	Route Mile
10.09.240	Ballasted Track - 2 Track (Station Track)	Route Mile
10.09.810	Ballasted Freight Track - 1 Track	Route Mile

No.	DESCRIPTION	UNIT
10.09.820	Ballasted Freight Track - 2 Track	Route Mile
10.09.910	Ballasted Track Relocation - 1 Track (Temporary)	Route Mile
10.09.920	Ballasted Track Relocation - 1 Track (Permanent)	Route Mile
10.10	**Track new construction: Non-ballasted**	
10.10.110	Direct Fixation Track - 1 Track	Route Mile
10.10.120	Direct Fixation Track - 2 Track	Route Mile
10.10.140	Direct Fixation Track - 4 Track	Route Mile
10.10.210	Independent Dual Block Track - 1 Track	Route Mile
10.10.220	Independent Dual Block Track - 2 Track	Route Mile
10.10.240	Independent Dual Block Track - 4 Track	Route Mile
10.14	**Track: Special track work (switches, turnouts, insulated joints)**	
10.14.100	Direct Fixation Turnout (60 MPH)	EA
10.14.105	Direct Fixation Turnout (80 MPH)	EA
10.14.110	Direct Fixation Turnout (110 MPH)	EA
10.14.115	Direct Fixation Turnout (150 MPH)	EA
10.14.130	Direct Fixation Crossover (60 MPH)	EA
10.14.135	Direct Fixation Crossover (80 MPH)	EA
10.14.140	Direct Fixation Crossover (110 MPH)	EA
10.14.145	Direct Fixation Crossover (150 MPH)	EA
10.14.200	Ballasted Turnout (60 MPH)	EA
10.14.205	Ballasted Turnout (80 MPH)	EA
10.14.210	Ballasted Turnout (110 MPH)	EA
10.14.215	Ballasted Turnout (150 MPH)	EA
10.14.300	Ballasted Crossover (60 MPH)	EA
10.14.305	Ballasted Crossover (80 MPH)	EA
10.14.310	Ballasted Crossover (110 MPH)	EA
10.14.315	Ballasted Crossover (150 MPH)	EA
10.14.400	Terminal - Bumping Post	
20.01	**Station buildings: Intercity passenger rail only**	
20.01.105	Millbrae Station	LS
20.01.105	Millbrae Station - Site Elements	LS
20.02.200	Redwood/Palo Alto Station	LS
20.02.201	Redwood/Palo Alto Station - Site Elements	LS
20.02.215	Gilroy Station	LS

No.	DESCRIPTION	UNIT
20.02.216	Gilroy Station - Site Elements	LS
20.02.225	San Jose Station	LS
20.02.226	San Jose Station-Site Elements	LS
20.01.100	Artic Station	LS
20.01.110	LA Union Station	LS
20.02.205	Norwalk Station	LS
20.02.206	Norwalk Station - Site Elements	LS
20.02.210	Tulare Station	LS
20.02.211	Tulare Station - Site Elements	LS
20.02.220	Burbank Station	LS
20.02.221	Burbank Station - Site Elements	LS
20.02.230	Merced Station	LS
20.02.231	Merced Station - Site Elements	LS
20.02.235	Fresno Station	LS
20.02.236	Fresno Station - Site Elements	LS
20.02.240	Bakersfield Station	LS
20.02.241	Bakersfield Station - Site Elements	LS
20.02.245	Palmdale Station	LS
20.02.246	Palmdale Station - Site Elements	LS
20.02.250	Sylmar Station	LS
20.02.251	Sylmar Station - Site Elements	LS
20.06	**Pedestrian / bike access and accommodation, landscaping, parking lots**	
20.06.120	Pedestrian Access (Cut & Cover)	LF
20.06.140	Pedestrian Plaza	SF
20.06.160	Pedestrian Access, Vertical Structure, 30' Height	EA
20.06.210	Parking - At Grade	STL
20.06.250	Parking - Structured (Above Grade)	STL
20.06.800	Landscaping Allowance	SF
20.06.810	Landscaping Allowance, Guideway	Route Mile
20.07	**Automobile, bus, van accessways including roads**	
20.07.010	Roadway Modification, New AC Paving	SF
20.07.020	Roadway Modification, New AC Paving (including Curb & Sidewalk)	SF
20.07.710	Permanent Service/Emergency Access Road (20' Wide)	Route Mile

No.	DESCRIPTION	UNIT
20.07.715	Access Road Entrance Point	EA
20.07.800	Streetscaping Allowance	ESF
30.02	**Light maintenance facility**	
30.02.010	Light Maintenance Facility (LMF)	EA
30.03	**Heavy maintenance facility**	
30.03.010	Heavy Maintenance Facility (HMF)	EA
30.04	**Storage or maintenance-of-way building/bases**	
30.04.010	Maintenance of Way Facility (MOWF)	EA
30.05	**Yard and yard track**	
30.05.110	Ballasted Track - Yard Track	Route Mile
30.05.200	Ballasted Turnout, No. 15	EA
30.05.210	Ballasted Diamond Crossover, No. 15	EA
30.05.250	Heavy Duty Rubber Grade Crossing	TF
40.01	**Demolition, clearing, site preparation**	
40.01.010	Demolition Allowance, Bridge	SF
40.01.050	Demolition Allowance, Building (1 Story)	SF
40.01.060	Demolition Allowance, Building (2 Story)	SF
40.01.110	Demolition Allowance, Asphalt Pavement	SY
40.01.140	Demolition Allowance, Concrete Curb	LF
40.01.150	Demolition Allowance, Concrete Sidewalk	SY
40.01.810	Demolition Allowance, Remove Railroad Track	Route Mile
40.01.900	Miscellaneous Excavation & Support Items	LS
40.02	**Site utilities, utility relocation**	
40.02.001	Utility Relocation Allowance, Level 1	Route Mile
40.02.002	Utility Relocation Allowance, Level 2	Route Mile
40.02.003	Utility Relocation Allowance, Level 3	Route Mile
40.02.004	Utility Relocation Allowance, Level 4	Route Mile
40.02.005	Utility Relocation Allowance, Level 5	Route Mile
40.02.050	Site Utility Allowance	Route Mile
40.03	**Hazardous material, contaminated soil removal/mitigation, ground water treatments**	
40.03.100	Hazardous Material Removal Allowance, Light	Route Mile
40.03.105	Hazardous Material Removal Allowance, Medium	Route Mile
40.03.110	Hazardous Material Removal Allowance, Heavy	Route Mile
40.03.150	Removal of Contaminated Soil	CF

No.	DESCRIPTION	UNIT
40.04	**Environmental mitigation: wetlands, historic/archeology, parks**	
40.04.100	Environmental Mitigation Allowance, Light	Route Mile
40.04.105	Environmental Mitigation Allowance, Medium	Route Mile
40.04.110	Environmental Mitigation Allowance, Heavy	Route Mile
40.05	**Site structures including retaining walls, sound walls**	
40.05.012	Retaining Wall - 1 Wall (12' Avg. Height)	LF
40.05.111	Containment (Crash) Wall - 1 Wall (6' Avg. Height Above Rail)	LF
40.05.120	Blast Wall (At Stations) - 1 Wall (20' Avg. Height Above Platform)	LF
40.05.211	Sound Wall - 1 Wall (8' Avg. Height)	LF
40.05.310	Intrusion Protection Berm	LF
40.06	**Temporary facilities and other indirect costs during construction**	
40.07	**Purchase or lease of real estate**	
	Right-of-Way Required for Segment	
40.07.100	Dense Urban	Acre
40.07.101	Urban	Acre
40.07.102	Dense Suburban	Acre
40.07.103	Suburban	Acre
40.07.104	Farmland	Acre
40.07.105	Undeveloped	Acre
	Right-of-Way Required for Stations and Maintenance Facilities	
40.07.200	Dense Urban	Acre
40.07.201	Urban	Acre
40.07.202	Dense Suburban	Acre
40.07.203	Suburban	Acre
40.07.204	Undeveloped	Acre
40.08	**Highway/pedestrian overpass/grade separations**	
40.08.322	Roadway Overcrossing HSR - 2 lane retained fill roadway over 2 tracks	EA
40.08.324	Roadway Overcrossing HSR - 4 lane retained fill roadway over 2 tracks	EA
40.08.326	Roadway Overcrossing HSR - 6 lane retained fill roadway over 2 tracks	EA

No.	DESCRIPTION	UNIT
40.08.342	Roadway Overcrossing HSR - 2 lane retained fill roadway over 4 tracks	EA
40.08.344	Roadway Overcrossing HSR - 4 lane retained fill roadway over 4 tracks	EA
40.08.346	Roadway Overcrossing HSR - 6 lane retained fill roadway over 4 tracks	EA
40.08.422	Roadway Overcrossing HSR - 2 lane roadway on embankment over 2 tracks	EA
40.08.424	Roadway Overcrossing HSR - 4 lane roadway on embankment over 2 tracks	EA
40.08.426	Roadway Overcrossing HSR - 6 lane roadway on embankment over 2 tracks	EA
50.01	**Wayside signaling equipment**	
50.01.010	Train Controls (ATC)	Route Mile
50.01.020	Wayside Protection System	Route Mile
50.01.030	Train Control, Wayside Facility Site Work	EA
50.05	**Communications**	
50.05.010	Communications (w/Fiber Optic Backbone)	Route Mile
60.02	**Traction power supply: Substations**	
60.02.100	Traction Power Supply	Route Mile
60.02.010	Traction Power, Supply Station Site Work	EA
60.02.020	Traction Power, Switching Station Site Work	EA
60.02.030	Traction Power, Paralleling Station Site Work	EA
60.03	**Traction power distribution: Catenary and third rail**	
60.03.100	Traction Power Distribution	Route Mile

APPENDIX C DETAILED COST BUDGET

Detail Cost Budget Data

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
1			FJ (Alt A)					
		10.02.060	Pergola structure	55,552.00	SF	923.74	/SF	51,315,609
		10.02.081	Hillcrest Blvd Underpass at Sta 807+00	1,520.00	SF	360.64	/SF	548,173
		10.06.210	At-Grade Track Bed in Fill - 2 Track (10'Avg fill ht)	1.89	RM	3,735,562.31	/RM	7,060,213
		10.06.220	At-Grade Track Bed w/ closed Drainage - 2 Track	1.31	RM	6,515,670.76	/RM	8,535,529
		10.06.230	At-Grade Track-bed with Closed Drainage - 3 Track	0.21	RM	6,785,904.38	/RM	1,425,040
		10.06.240	At-Grade Track-bed with Closed Drainage - 4 Track	0.32	RM	7,051,809.44	/RM	2,256,579
		10.06.323	Decrease Existing Track Height up to 3" - 2 Track	5.06	RM	5,225,339.75	/RM	26,440,219
		10.06.326	Increase Existing Track Height up to 6" - 2 Track	26.27	RM	5,225,339.75	/RM	137,269,675
		10.06.328	Increase Existing Track Height 6"-2' - 2 Track	4.05	RM	5,305,305.07	/RM	21,486,486
		10.06.350	Increase Existing Track Height >2" - 2 Track	0.78	RM	12,469,608.83	/RM	9,726,295
		10.06.351	Decrease Existing Track Height more than 3" - 2 Track	2.37	RM	11,817,880.81	/RM	28,008,378
		10.08.411	Retained Fill, Walls One Side - 2 Tracks (10' Avg. Wall Ht)	0.62	RM	5,755,060.58	/RM	3,568,138
		10.08.412	Retained Fill, Walls One Side - 2 Tracks (20' Avg. Wall Ht)	0.50	RM	9,622,196.62	/RM	4,811,098
		10.08.422	Retained Fill, Walls Both Sides - 2 Tracks (20' Avg. Wall Ht)	0.35	RM	19,244,393.29	/RM	6,735,538

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		10.09.911	Ballasted Track Relocation - 1 Track (Permanent) 0'-1'	15.12	RM	408,038.40	/RM	6,169,541
		10.09.912	Ballasted Track Relocation - 1 Track (Permanent) 1'-10'	15.85	RM	1,177,105.78	/RM	18,657,127
		10.09.913	Ballasted Track Relocation - 1 Track (Permanent) 10'-21'	1.61	RM	4,678,242.69	/RM	7,531,971
		10.09.914	Ballasted Track Relocation - 1 Track (Permanent) More than 21'	1.97	RM	3,994,623.81	/RM	7,869,409
		10.09.990	Shoefly Track - 1 Track (Includes all sitework, drainage, ballast, etc	0.21	RM	4,012,460.00	/RM	842,617
		10.09.995	Connection between shoefly track and other track	3.00	EA	71,669.47	/EA	215,008
		10.10.110	Direct Fixation Track - 1 Track	3.08	RM	5,711,721.56	/RM	17,592,102
		10.14.200	Ballasted Turnout (60 MPH)	28.00	EA	586,040.00	/EA	16,409,120
		10.16.150	Widen Drainage Structure	3.00	EA	140,000.00	/EA	420,000
		10.16.151	Cover Existing Structure	1.00	EA	7,000.00	/EA	7,000
		20.01.100	4th and King Station	1.00	LS	21,504,000.00	/LS	21,504,000
		20.01.101	4th and King Station - Site Elements	1.00	LS	1,120,000.00	/LS	1,120,000
		20.01.103	Bayshore Station	1.00	LS	18,099,200.00	/LS	18,099,200
		20.01.105	Millbrea Station	1.00	LS	50,060,640.00	/LS	50,060,640
		20.01.108	San Bruno Station	1.00	LS	3,584,000.00	/LS	3,584,000
		20.01.109	Broadway Station	1.00	LS	8,848,000.00	/LS	8,848,000
		20.01.112	Hayward Park Station	1.00	LS	12,544,000.00	/LS	12,544,000
		20.01.118	Atherton Station	1.00	LS	12,544,000.00	/LS	12,544,000
		20.06.160	Pedestrian Access, Vertical Structure, 30' Height	1.00	ea	1,013,368.29	/ea	1,013,368
		20.06.161	Pedestrian Access, Extend pedestrian Undercrossing - San Bruno Station	1.00	EA	294,000.00	/EA	294,000

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		20.06.164	Pedestrian Access, Vertical Structure, Modify Existing - 22nd St Sta	2.00	EA	1,013,368.30	/EA	2,026,737
		20.07.901	Quad Gate Prototype A	8.00	EA	511,700.00	/EA	4,093,600
		20.07.902	Quad Gate Prototype B	11.00	EA	505,113.94	/EA	5,556,253
		20.07.903	Quad Gate Prototype B1	2.00	EA	416,913.91	/EA	833,828
		20.07.904	Quad Gate Prototype C	4.00	EA	959,413.90	/EA	3,837,656
		20.07.905	Quad Gate Prototype D	7.00	EA	654,913.93	/EA	4,584,397
		20.07.907	Quad Gate Prototype E	6.00	EA	407,607.00	/EA	2,445,642
		30.02.010	Light Maintenance Facility (LMF)	1.00	EA	394,533,505.32	/EA	394,533,505
		40.02.004	Natural Gas/Oil, 26"-33"	285.00	LF	177.32	/LF	50,537
		40.02.005	Natural Gas/Oil, Unk	1,475.00	LF	126.27	/LF	186,246
		40.02.006	Jet Fuel, 6"-12"	5,100.00	LF	151.09	/LF	770,549
		40.02.007	Potable Water, 4"-10"	1,915.00	LF	166.64	/LF	319,124
		40.02.008	Potable Water,11"-24'	3,215.00	LF	358.30	/LF	1,151,941
		40.02.009	Potable Water, 25"-36"	185.00	LF	386.30	/LF	71,466
		40.02.012	Potable Water, Unk"	490.00	EA	330.30	/EA	161,848
		40.02.013	Sanitary Sewer, 6"-15"	3,810.00	LF	161.18	/LF	614,080
		40.02.014	Sanitary Sewer, 16"-24"	575.00	LF	142.80	/LF	82,110
		40.02.015	Sanitary Sewer, 25"-36"	540.00	EA	179.68	/EA	97,025
		40.02.016	Sanitary Sewer, 37"-48"	1,585.00	LF	366.14	/LF	580,335
		40.02.017	Sanitary Sewer, 49"-54"	5,070.00	LF	397.00	/LF	2,012,780
		40.02.018	Sanitary Sewer, Unk	400.00	LF	179.68	/LF	71,870
		40.02.019	Storm Drain, 6"-18"	630.00	LF	197.93	/LF	124,697
		40.02.020	Storm Drain, 19"-30"	2,150.00	LF	291.20	/LF	626,080

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		40.02.024	Storm Drain, Unk	3,540.00	LF	288.40	/LF	1,020,936
		40.02.025	Box Culvert, All Sizes	2,480.00	LF	2,240.00	/LF	5,555,200
		40.02.026	Drainage Canal, All Sizes	1,520.00	SF	70.00	/SF	106,400
		40.02.027	Pump Station (Storm)	1.00	EA	560,000.00	/EA	560,000
		40.02.029	Telecomm/Fiber Optic UG, All Sizes	32,690.00	LF	381.85	/LF	12,482,676
		40.02.036	Electric OH, 115 kV	17,400.00	LF	223.16	/LF	3,882,984
		40.02.038	Electric OH, unknown	4,090.00	LF	223.16	/LF	912,724
		40.02.040	Electric & Telecomm OH on JP, Unk	5,080.00	LF	223.16	/LF	1,133,653
		40.04	Environmental Mitigation (% Calculation)	1.00	LS	32,330,869.00	/LS	32,330,869
		40.06	Temp Facilities	1.00	LS	39,515,507.00	/LS	39,515,507
		40.07	Right of Way Purchase (From Regional Consultant)	1.00	LS	1,150,467,000.00	/LS	1,150,467,000
		40.08.152	Roadway Overcrossing HSR (Tunnel Avenue): 2-Lane Roadway OVER Five-Trk	1.00	EA	123,704,245.00	/EA	123,704,245
		50.05.010	Communications (w/Fiber Optic Backbone) - 2 Track	51.00	RM	1,701,791.86	/RM	86,791,385
		60.03.100	Traction power distribution: Catenary and third rail	51.00	RM	2,309,340.38	/RM	117,776,359
		80.00.00	Professional Services	1.00	LS	215,449,517.00	/LS	215,449,517
		90.00.00	Unallocated Contingency	1.00	LS	114,445,087.00	/LS	114,445,087
			Total	51.00	RM	55,793,704	/RM	2,845,478,919
4			**Scott-Alma (Alt 4)**					
	SS401		Scott Blvd to Diridon Station					
		10.05.300	Transition Wedge - 1 Trk (Fill Ht < 20' Avg.)	14.000	EA	180,803.27	/EA	2,531,246
		10.05.310	Transition Wedge - 2 Trk (Fill Ht < 20' Avg.)	6.000	EA	649,037.41	/EA	3,894,224

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		10.06.210	At-Grade Track-Bed With Closed Drainage - 1 Track	1.300	RM	3,862,520.72	/RM	5,021,277
		10.09.110	Ballasted Trk - 1 Trk	1.300	RM	2,215,058.90	/RM	2,879,577
		10.14.201	Ballasted Turnout #9	2.000	EA	119,861.28	/EA	239,723
		10.14.202	Ballasted Turnout #10	2.000	EA	130,515.62	/EA	261,031
		10.14.320a	Ballasted Crossover #9	3.000	EA	615,287.90	/EA	1,845,864
		10.14.321	Ballasted Crossover #10	3.000	EA	679,213.92	/EA	2,037,642
		10.14.323	Ballasted Crossover #14	2.000	EA	945,572.32	/EA	1,891,145
		20.02.225a	San Jose (Diridon) Station	1.000	LS	163,469,711.96	/LS	163,469,712
		20.02.297	College Park Station	1.000	LS	1,542,240.00	/LS	1,542,240
		20.07.020	Rdwy, New AC Paving - Access Rd	10,800.000	SF	160.56	/SF	1,734,057
		40.02.011	Pump Station (Storm)	1.000	EA	361,900.00	/EA	361,900
		40.02.013	Telecomm/Fiber Optic UG, All Sizes	11,505.000	LF	266.69	/LF	3,068,222
		40.02.016	Electric UG	300.000	LF	292.04	/LF	87,612
		40.02.020	Electric OH, 115 kV	920.000	LF	230.75	/LF	212,288
		40.02.024	Transmission Tower	1.000	EA	579,040.00	/EA	579,040
		40.02.039	Storm Drain, 6"-18"	70.000	LF	204.67	/LF	14,327
		40.02.040	Storm Drain, 19"-30"	620.000	LF	298.20	/LF	184,884
		40.08.200.au	Rdwy Underxing UPRR (Taylor St): Exist Rd Under 1 Trk	1.000	EA	3,153,117.04	/EA	3,153,117
	SS402		Diridon Station to Alma Ave					
		10.01.001	Topsoil	14,929.220	CY	3.99	/CY	59,609
		10.01.002	Cut	27,304.870	CY	12.65	/CY	345,358
		10.01.004	Overbreak In Embankment	8,514.750	CY	18.65	/CY	158,807
		10.01.005	Embankment	27,993.800	CY	21.30	/CY	596,371

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		10.01.006	Overbreak Fill In Cut	17,083.050	CY	18.65	/CY	318,602
		10.01.007	Overbreak Fill In Embankment	8,514.750	CY	18.65	/CY	158,807
		10.01.008	Subballast	11,249.910	CY	55.94	/CY	629,301
		10.02.055	Steel Through Girder - I-280	1.000	EA	10,548,179.80	/EA	10,548,180
		10.02.056	Concrete Through Girder - SR-87	1.000	EA	15,761,881.29	/EA	15,761,881
		10.06.210	At-Grade Track-Bed With Closed Drainage - 1 Track	1.950	RM	3,862,520.73	/RM	7,531,915
		10.06.220	At-Grade Track-Bed With Closed Drainage - 2 Track	1.790	RM	6,737,165.80	/RM	12,059,527
		10.09.110	Ballasted Trk - 1 Trk	1.950	RM	2,215,058.89	/RM	4,319,365
		10.09.120	Ballasted Trk - 2 Trk	1.790	RM	4,377,096.08	/RM	7,835,002
		10.14.202	Ballasted Turnout #10	7.000	EA	130,515.62	/EA	913,609
		10.14.323	Ballasted Crossover #14	3.000	EA	945,572.32	/EA	2,836,717
		20.06.211	Bike Path Realignment (Almaden Expy)	1.000	EA	21,023,374.96	/EA	21,023,375
		20.07.020	Rdwy, New AC Paving - Access Rd	6,100.000	SF	160.56	/SF	979,421
		20.07.801	Quad Gate Prototype A	2.000	EA	2,354,815.46	/EA	4,709,631
		40.02.011	Pump Station (Storm)	2.000	EA	361,900.00	/EA	723,800
		40.02.022	Electirc OH, unknown	370.000	LF	183.13	/LF	67,760
		40.02.045	Electric OH & Telecom OH on JP, Unknown	1,150.000	LF	183.13	/LF	210,604
		40.05.025	Retaining Wall In Fill - 1 Wall (20' Avg. Height)	4,584.100	LF	7,238.00	/LF	33,179,716
		40.05.026	Retaining Wall In Fill - 1 Wall (30' Avg. Height)	237.940	LF	8,685.60	/LF	2,066,652
		40.05.050	Retaining Wall In Cut - 1 Wall (10' Avg. Exc Depth)	1,966.250	LF	2,895.20	/LF	5,692,687
		40.08.200.av	Rdwy Underxing HSR (Guadalupe River): Creek Under 1 Trk	1.000	EA	4,345,792.24	/EA	4,345,792

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		40.08.200.aw	Roadway Undercrossing HSR (Bird Ave): Exist road UNDER Three Tracks	1.000	EA	3,771,274.28	/EA	3,771,274
		40.08.200.aw1	Southbound Underpass	1.000	EA	4,355,246.27	/EA	4,355,246
		40.08.200.ax	Rdwy Underxing HSR (Delmas Ave): Exist Rd Under 3 Trk	1.000	EA	3,619,305.42	/EA	3,619,305
		40.08.200.ay	Rdwy Underxing HSR (Prevost St): Exist Rd Under 1 Trk	1.000	EA	1,709,253.16	/EA	1,709,253
		40.08.200.az	Rdwy Underxing HSR (Willow St): Exist Rd Under 1 Trk	1.000	EA	3,218,243.22	/EA	3,218,243
		40.08.200.ba	Rdwy Underxing HSR (Alma Ave): Exist Rd Under 2 Trk	1.000	EA	3,125,672.92	/EA	3,125,673
	SS99-4		Alternative 4 Complete					
		40.04.110	Environmental Mitigation Allowance, Heavy	1.000	LS	12,229,387.76	/LS	12,229,388
		40.06.100	Temporary facilities and other indirect costs during construction	1.000	LS	14,947,029.49	/LS	14,947,029
		40.07.100	ROW Procurement Acquisition	1.000	LS	549,303,000.00	/LS	549,303,000
		50.01	Way Side Signalling equipment	5.950	RM	6,824,616.15	/RM	40,606,466
		50.01.010	Signals/Comm -Relocation of<E>	5.950	RM	561,983.49	/RM	3,343,802
		50.04	Traffic Control and dispatching systems	5.950	RM	64,257.86	/RM	382,334
		50.05	Communications	5.950	RM	755,767.26	/RM	4,496,815
		50.07	Hazard detectors	5.950	RM	197,213.36	/RM	1,173,420
		60.03	Traction Power distribution: catenary and third rail	5.950	RM	2,157,021.57	/RM	12,834,278
		60.03.150	OCS - Double Track on Embankment	5.950	RM	834,989.07	/RM	4,968,185
		60.04	Traction power control	5.950	RM	84,119.36	/RM	500,510
		80.00.00	Professional Services	1.000	LS	73,408,376.25	/LS	73,408,376
		90.00.00	Unallocated Contingency	1.000	LS	47,582,610.86	/LS	47,582,611

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
			FJ (Alt A) + Alt 4	**56.95**	**RM**	**69,589,741**	**/RM**	**3,963,135,744**
2			**FJ (Alt B1)**					
		10.01.002	**Cut**	**177,119.60**	**CY**	**12.24**	**/CY**	**2,167,235**
		10.01.004	**Overbreak in embankment**	**161,733.20**	**CY**	**18.03**	**/CY**	**2,916,373**
		10.01.005	**Embankment**	**619,314.60**	**CY**	**18.03**	**/CY**	**11,167,481**
		10.01.006	**Overbreak fill in cut**	**87,057.00**	**CY**	**18.03**	**/CY**	**1,569,826**
		10.01.007	**Overbreak fill in embankment**	**161,733.20**	**CY**	**18.03**	**/CY**	**2,916,373**
		10.01.008	**Subballast**	**855,448.90**	**CY**	**54.10**	**/CY**	**46,276,364**
		10.02.060	**Pergola structure**	**48,072.00**	**SF**	**923.74**	**/SF**	**44,406,033**
		10.02.082	**25th Ave Underpass at Sta 1142+00**	**3,192.00**	**SF**	**360.64**	**/SF**	**1,151,163**
		10.02.083	**28th Ave Underpass at Sta 1156+00**	**3,458.00**	**SF**	**360.64**	**/SF**	**1,247,093**
		10.02.085	**31st Ave Underpass at Sta 1168+00**	**3,686.00**	**SF**	**360.64**	**/SF**	**1,329,319**
		10.02.086	**Hillsdale Blvd at Sta 1178+00**	**4,066.00**	**SF**	**360.64**	**/SF**	**1,466,362**
		10.02.087	**42nd Ave Underpass at Sta 1213+00**	**3,724.00**	**SF**	**360.64**	**/SF**	**1,343,023**
		10.02.088	**Belmont Station Ped Underpass at Sta 1262+00**	**7,208.00**	**SF**	**360.64**	**/SF**	**2,599,493**
		10.02.089	**Ralston Ave Underpass at Sta 1265+00**	**14,688.00**	**SF**	**360.64**	**/SF**	**5,297,080**
		10.02.090	**Harbor Blvd Underpass at Sta 1282+00**	**3,800.00**	**SF**	**360.64**	**/SF**	**1,370,432**
		10.02.091	**Holly Street Underpass at 1325+00**	**8,228.00**	**SF**	**360.64**	**/SF**	**2,967,346**
		10.02.092	**San Carlos Station Pedestrian Underpass at Sta 1350+00**	**10,608.00**	**SF**	**360.64**	**/SF**	**3,825,669**
		10.02.093	**Brittan Ave Underpass at Sta 1364+00**	**3,762.00**	**SF**	**360.64**	**/SF**	**1,356,728**

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		10.02.094	Howard Ave Underpass at Sta 1374+00	3,762.00	SF	360.64	/SF	1,356,728
		10.05.301	Transition wedge - 1 Track (20' Avg. < Fill Ht < 40' Avg.)	2.00	EA	896,521.79	/EA	1,793,044
		10.05.311	Transition wedge - 2 Tracks (20' Avg. < Fill Ht < 40' Avg.)	4.00	EA	1,379,264.25	/EA	5,517,057
		10.06.210	At-Grade Track Bed in Fill - 2 Track (10'Avg fill ht)	1.45	RM	3,735,562.32	/RM	5,416,565
		10.06.220	At-Grade Track Bed w/ closed Drainage - 2 Track	1.03	RM	6,515,670.73	/RM	6,711,141
		10.06.323	Decrease Existing Track Height up to 3" - 2 Track	4.38	RM	5,225,339.75	/RM	22,886,988
		10.06.326	Increase Existing Track Height up to 6" - 2 Track	25.77	RM	5,225,339.75	/RM	134,657,005
		10.06.328	Increase Existing Track Height 6"-2' - 2 Track	3.20	RM	5,305,305.08	/RM	16,976,976
		10.06.350	Increase Existing Track Height >2" - 2 Track	1.02	RM	12,469,608.82	/RM	12,719,001
		10.06.351	Decrease Existing Track Height more than 3" - 2 Track	1.88	RM	11,817,880.80	/RM	22,217,616
		10.08.221	Retained Cut, Trench - 2 Track (10' Avg. Exc Depth)	0.93	RM	68,811,749.41	/RM	63,994,927
		10.08.412	Retained Fill, Walls One Side - 2 Tracks (20' Avg. Wall Ht)	1.27	RM	9,622,196.63	/RM	12,220,190
		10.08.413	Retained Fill, Walls Both Sides - 1 Tracks (30'Avg Wall Ht)	2.94	RM	9,735,808.14	/RM	28,623,276
		10.08.421	Retained Fill, Walls Both Sides - 2 Tracks (10' Avg. Wall Ht)	0.64	RM	11,510,120.34	/RM	7,366,477
		10.08.422	Retained Fill, Walls Both Sides - 2 Tracks (20' Avg. Wall Ht)	0.69	RM	19,244,393.26	/RM	13,278,631
		10.08.423	Retained Fill, Walls Both Sides - 2 Tracks (30' Avg. Wall Ht)	0.44	RM	19,471,616.23	/RM	8,567,511
		10.09.110	Ballasted Track - 1 Track	3.02	RM	2,229,793.81	/RM	6,733,977

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		10.09.120	Ballasted Track - 2 Track	9.67	RM	3,975,246.12	/RM	38,440,630
		10.09.911	Ballasted Track Relocation - 1 Track (Permanent) 0'-1'	14.70	RM	408,038.40	/RM	5,998,164
		10.09.912	Ballasted Track Relocation - 1 Track (Permanent) 1'-10'	23.70	RM	1,177,105.78	/RM	27,897,407
		10.09.913	Ballasted Track Relocation - 1 Track (Permanent) 10'-21'	3.17	RM	4,678,242.69	/RM	14,830,029
		10.09.914	Ballasted Track Relocation - 1 Track (Permanent) More than 21'	0.41	RM	3,994,623.76	/RM	1,637,796
		10.09.990	Shoefly Track - 1 Track (Includes all sitework, drainage, ballast, etc	1.73	RM	4,012,460.03	/RM	6,941,556
		10.09.995	Connection between shoefly track and other track	37.00	EA	71,669.47	/EA	2,651,770
		10.10.110	Direct Fixation Track - 1 Track	3.08	RM	5,711,721.56	/RM	17,592,102
		10.14.200	Ballasted Turnout (60 MPH)	15.00	EA	586,040.00	/EA	8,790,600
		10.14.201	Ballasted Turnout #9	4.00	EA	586,040.00	/EA	2,344,160
		10.14.250	Ballasted Turnout #9	1.00	EA	115,920.00	/EA	115,920
		10.14.260	Ballasted Turnout #10	1.00	EA	96,600.00	/EA	96,600
		10.14.280	Ballasted Turnout #20	6.00	EA	309,120.00	/EA	1,854,720
		10.14.340	Ballasted Crossover #20	6.00	EA	1,288,000.00	/EA	7,728,000
		10.16.150	Widen Drainage Structure	5.00	EA	140,000.00	/EA	700,000
		10.16.151	Cover Existing Structure	1.00	EA	7,000.00	/EA	7,000
		20.01.100	4th and King Station	1.00	LS	21,504,000.00	/LS	21,504,000
		20.01.101	4th and King Station - Site Elements	1.00	LS	1,120,000.00	/LS	1,120,000
		20.01.103	Bayshore Station	1.00	LS	18,099,200.00	/LS	18,099,200
		20.01.105	Millbrea Station	1.00	LS	50,060,640.00	/LS	50,060,640
		20.01.108	San Bruno Station	1.00	LS	3,584,000.00	/LS	3,584,000

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		20.01.109	Broadway Station	1.00	LS	8,848,000.00	/LS	8,848,000
		20.01.112	Hayward Park Station	1.00	LS	12,544,000.00	/LS	12,544,000
		20.01.113	Hillsdale Station - Alt B	1.00	LS	11,760,000.00	/LS	11,760,000
		20.01.114	Belmont Station - Alt B	1.00	LS	14,112,000.00	/LS	14,112,000
		20.01.115	San Carlos Station - Alt B	1.00	LS	12,544,000.00	/LS	12,544,000
		20.01.118	Atherton Station	1.00	LS	12,544,000.00	/LS	12,544,000
		20.06.120	Pedestrian Access (Cut & Cover)	180.00	LF	30,591.74	/LF	5,506,512
		20.06.161	Pedestrian Access, Extend pedestrian Undercrossing - San Bruno Station	1.00	EA	294,000.00	/EA	294,000
		20.06.162	Pedestrian Access, Pedestrian access ramp & stairway - Belmont Station	1.00	EA	420,000.00	/EA	420,000
		20.06.163	Pedestrian Access, Pedestrian access ramp & stairway - San Carlos Sta	1.00	EA	420,000.00	/EA	420,000
		20.06.164	Pedestrian Access, Vertical Structure, Modify Existing - 22nd St Sta	2.00	EA	1,013,368.30	/EA	2,026,737
		20.07.901	Quad Gate Prototype A	8.00	EA	511,700.00	/EA	4,093,600
		20.07.902	Quad Gate Prototype B	11.00	EA	505,113.96	/EA	5,556,254
		20.07.903	Quad Gate Prototype B1	1.00	EA	833,827.81	/EA	833,828
		20.07.904	Quad Gate Prototype C	4.00	EA	959,413.90	/EA	3,837,656
		20.07.905	Quad Gate Prototype D	7.00	EA	654,913.93	/EA	4,584,398
		20.07.907	Quad Gate Prototype E	6.00	EA	407,607.00	/EA	2,445,642
		30.02.015	Light Maintenance Facility (LMF)- West Brisbane	1.00	EA	420,992,190.95	/EA	420,992,191
		40.01.810	Demolition Allowance, Remove Railroad Tracks	15.79	RM	280,000.00	/RM	4,421,200
		40.01.820	Demolition Allowance, Remove Railroad Track - Special Track Work	6.00	EA	28,000.00	/EA	168,000

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		40.02.004	Natural Gas/Oil, 26"-33"	285.00	LF	177.32	/LF	50,537
		40.02.005	Natural Gas/Oil, Unk	1,165.00	LF	152.10	/LF	177,192
		40.02.006	Jet Fuel, 6"-12"	16,270.00	LF	151.09	/LF	2,458,202
		40.02.007	Potable Water, 4"-10"	1,245.00	LF	183.34	/LF	228,263
		40.02.008	Potable Water,11"-24'	5,740.00	LF	358.30	/LF	2,056,653
		40.02.009	Potable Water, 25"-36"	465	LF	386.3	/LF	179,630
		40.02.012	Potable Water, Unk"	2,215.00	EA	330.30	/EA	731,619
		40.02.013	Sanitary Sewer, 6"-15"	2,465.00	LF	177.32	/LF	437,104
		40.02.014	Sanitary Sewer, 16"-24"	2,945.00	LF	142.80	/LF	420,546
		40.02.015	Sanitary Sewer, 25"-36"	3,080.00	EA	179.68	/EA	553,402
		40.02.018	Sanitary Sewer, Unk	3,285.00	LF	179.68	/LF	590,236
		40.02.019	Storm Drain, 6"-18"	1,055.00	LF	197.93	/LF	208,818
		40.02.020	Storm Drain, 19"-30"	2,715.00	LF	291.20	/LF	790,608
		40.02.021	Storm Drain, 31"-42"	805.00	LF	288.40	/LF	232,162
		40.02.022	Storm Drain, 43"-54"	295.00	LF	318.02	/LF	93,817
		40.02.023	Storm Drain, 55"-72"	2,510.00	LF	338.80	/LF	850,388
		40.02.024	Storm Drain, Unk	2,520.00	LF	288.40	/LF	726,768
		40.02.025	Box Culvert, All Sizes	1,375.00	LF	2,240.00	/LF	3,080,000
		40.02.026	Drainage Canal, All Sizes	14,945.00	SF	70.00	/SF	1,046,150
		40.02.027	Pump Station (Storm)	4.00	EA	560,000.00	/EA	2,240,000
		40.02.028	Pump Station (Sanitary)	2.00	EA	700,000.00	/EA	1,400,000
		40.02.029	Telecomm/Fiber Optic UG, All Sizes	72,595.00	LF	381.85	/LF	27,720,401
		40.02.031	Telecommunication Facility	1.00	EA	420,000.00	/EA	420,000
		40.02.032	Electric UG, Unk	5,295.00	LF	282.44	/LF	1,495,499

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		40.02.033	Electric OH, 0-21 kV	1,520.00	LF	81.69	/LF	124,169
		40.02.035	Electric OH, 51-114 kV	500.00	LF	118.16	/LF	59,080
		40.02.036	Electric OH, 115 kV	4,610.00	LF	223.16	/LF	1,028,768
		40.02.038	Electirc OH, unknown	7,365.00	LF	223.16	/LF	1,643,573
		40.02.040	Electric & Telecomm OH on JP, Unk	8,170.00	LF	223.16	/LF	1,823,217
		40.04	Environmental Mitigation (% Calculation)	1.00	LS	42,978,900.00	/LS	42,978,900
		40.06	Temp Facilities	1.00	LS	52,529,767.00	/LS	52,529,767
		40.07	Right of Way Purchase (From Regional Consultant)	1.00	LS	1,419,924,500.00	/LS	1,419,924,500
		40.08.152	Roadway Overcrossing HSR (Tunnel Avenue): 2-Lane Roadway OVER Five-Trk	1.00	EA	116,626,684.99	/EA	116,626,685
		50.05.010	Communications (w/Fiber Optic Backbone) - 2 Track	51.00	RM	2,003,007.91	/RM	102,153,404
		60.03.100	Traction power distribution: Catenary and third rail	51.00	RM	2,840,488.66	/RM	144,864,922
		80.00.00	Professional Services	1.00	LS	279,717,956.00	/LS	279,717,956
		90.00.00	Unallocated Contingency	1.00	LS	237,327,310.00	/LS	237,327,310
			Total	**51.00**	**RM**	**72,849,942**	**/RM**	**3,715,347,061**
1			**Scott-Alma (Alt 1)**					
	SS1		San Jose Diridon Sta Approach: Viaduct to I-880 (Scott to Diridon Sta)					
		10.01.222	Elevated Structure - 2 Track (20' Avg. Pier Ht) - 110' Spacing	0.040	RM	153,610,096.00	/RM	6,144,404
		10.01.223	Elevated Structure - 2 Track (30' Avg. Pier Ht, 90' Span)	0.020	RM	149,970,322.00	/RM	2,999,406
		10.01.225b	Elevated Structure - 2 Track (50' Avg. Pier Ht) - 110' Spacing	0.330	RM	159,615,664.67	/RM	52,673,169

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		10.01.226a	Elevated Structure - 2 Track (60' Avg. Pier Ht, 90' Span)	0.030	RM	209,849,178.00	/RM	6,295,475
		10.01.226c	Elevated Structure - 2 Track (60' Avg. Pier Ht) - 110' Spacing	0.040	RM	168,268,235.25	/RM	6,730,729
		10.01.226d	Elevated Structure - 2 Track (60' Avg. Pier Ht, 120' Span)	0.050	RM	138,495,218.60	/RM	6,924,761
		10.02.044	Scott-Diridon - 4 Trk over 3 Trk (60' Avg. Pier Ht) - 120' Spacing	0.290	RM	457,655,970.97	/RM	132,720,232
		10.02.045	Scott-Diridon - Diridon-Tamien - 4 Trk	0.190	RM	542,670,797.16	/RM	103,107,451
		10.02.048	Scott-Diridon - BC -160-220-160 Span - Taylor St	0.100	RM	113,104,704.30	/RM	11,310,470
		10.02.051	Scott-Diridon - BC -180-180 span - SJ City Market, Wye S Trk	0.070	RM	92,236,515.57	/RM	6,456,556
		10.02.052	Scott-Diridon - 4 Trk BC-150-240-150 Span - Santa Clara Street	0.100	RM	213,382,912.60	/RM	21,338,291
		10.06.210	At-Grade Track-Bed With Closed Drainage - 1 Track	3.110	RM	3,857,628.14	/RM	11,997,224
		10.06.220	At-Grade Track-Bed With Closed Drainage - 2 Track	3.000	RM	6,739,287.41	/RM	20,217,862
		10.06.230	At-Grade Track-Bed With Closed Drainage - 3 Track	0.680	RM	7,015,822.82	/RM	4,770,760
		10.06.240	At-Grade Track-Bed With Closed Drainage - 4 Track	0.850	RM	7,286,698.04	/RM	6,193,693
		10.08.421	Ret Fill, Walls Both Sides - 2 Trk (10' Avg. Wall Ht)	0.130	RM	12,136,551.38	/RM	1,577,752
		10.08.422	Retained Fill, Wall Both Sides - 2 Trks (20¦Avg. Wall Ht)	0.090	RM	20,516,322.78	/RM	1,846,469
		10.09.112	Ballasted Track (Track Laying Machine) - 1 Track	3.110	RM	1,474,842.88	/RM	4,586,761
		10.09.122	Ballasted Track (Track Laying Machine) - 2 Track	3.230	RM	2,897,105.63	/RM	9,357,651

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		10.09.132	Ballasted Track (Track Laying Machine) - 3 Track	0.680	RM	4,438,862.76	/RM	3,018,427
		10.09.142	Ballasted Track (Track Laying Machine) - 4 Track	0.850	RM	5,911,521.46	/RM	5,024,793
		10.10.120	Direct Fixation Trk - 2 Trk	0.680	RM	4,260,727.43	/RM	2,897,295
		10.10.140	Direct Fixation Track - 4 Track	0.580	RM	8,537,777.79	/RM	4,951,911
		10.14.201	Ballasted Turnout #9	2.000	EA	119,861.28	/EA	239,723
		10.14.202	Ballasted Turnout #10	2.000	EA	130,515.62	/EA	261,031
		10.14.203	Ballasted Turnout #11 & #14	4.000	EA	146,497.12	/EA	585,988
		10.14.204	Ballasted Turnout #15	2.000	EA	199,768.80	/EA	399,538
		10.14.206	Ballasted Turnout #20	2.000	EA	319,630.08	/EA	639,260
		10.14.321	Ballasted Crossover #10	3.000	EA	679,213.92	/EA	2,037,642
		10.14.400	Terminal - Bumping Post	2.000	EA	42,617.35	/EA	85,235
		20.02.225	San Jose (Diridon) Sta	1.000	LS	289,669,562.97	/LS	289,669,563
		20.06.173	Ped Brdg Undercrossing HSR & Ramps/Stairs (College Park Sta):	1.000	EA	21,431,590.60	/EA	21,431,591
		20.06.210	Parking, at grade	207.000	STL	8,095.26	/STL	1,675,719
		20.07.010	Roadway Modification, New AC Paving	60,800.000	SF	160.56	/SF	9,762,098
		20.07.715	Access Road Entrance Point	1.000	EA	45,836.67	/EA	45,837
		40.02.002	Natural Gas/Oil, 9"-16"	1,890.000	LF	183.36	/LF	346,547
		40.02.003	Potable Water, 10"-16"	3,267.000	LF	289.52	/LF	945,862
		40.02.005	Sanitary Sewer, 24"-36"	1,233.000	LF	185.78	/LF	229,067
		40.02.006	Sanitary Sewer, 37"-48"	1,964.000	LF	376.38	/LF	739,202
		40.02.008	Storm Drain, 42"-54"	2,295.000	LF	328.61	/LF	754,155
		40.02.011	Pump Station (Storm)	2.000	EA	361,900.00	/EA	723,800
		40.02.013	Telecomm/Fiber Optic UG, All Sizes	2,301.000	LF	266.69	/LF	613,644
		40.02.020	Electric OH, 115 kV	6,753.000	LF	230.75	/LF	1,558,241

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		40.02.022	Electirc OH, unknown	153.000	LF	183.13	/LF	28,020
		40.08.100.v	Rdwy Overxing HSR (West Hedding): 2-Ln Rdwy Over 2 Trk	1.000	EA	25,149,627.06	/EA	25,149,627
		40.08.200.ad	Rdwy Underxing HSR (West Taylor): 2-Ln Rdwy Under 3 Trk	1.000	EA	4,120,183.88	/EA	4,120,184
		40.08.200.ad1	Rdwy Underxing Rail- 3 Trk (Main) Over 4 Ln Rdwy	1.000	EA	5,836,021.26	/EA	5,836,021
		40.08.200.ad2	Trench Base Slab - Taylor	1.000	EA	14,326,585.54	/EA	14,326,586
			SS1 San Jose Diridon Sta Approach: Viaduct to I-880 (Scott to Diridon Sta)	4.180	RM	195,058,785.46	/RM	815,345,723
	SS3		San Jose to Monterey Corridor:Diridon Sta to Alma Ave Diridon Sta to					
		10.01.225d	Elevated Structure - 2 Track (50' Avg. Pier Ht) - 150' Spacing	0.142	RM	139,370,872.82	/RM	19,790,664
		10.01.226e	Elevated Structure - 2 Track (60' Avg. Pier Ht, 150' Span)	0.114	RM	141,833,951.32	/RM	16,169,070
		10.02.040	Diridon-Tamien - 2 Track	1.059	RM	133,481,722.80	/RM	141,357,144
		10.02.041	Diridon-Tamien - 4 Track	0.517	RM	327,544,059.86	/RM	169,340,279
		10.10.120	Direct Fixation Trk - 2 Trk	1.348	RM	4,243,224.83	/RM	5,719,867
		10.10.140	Direct Fixation Track - 4 Track	0.485	RM	8,575,433.94	/RM	4,159,085
		10.14.150	Direct Fixation Crossover #15	1.000	EA	2,401,862.40	/EA	2,401,862
		20.06.211	Bike Path Realignment (Almaden Expy)	1.000	EA	21,023,374.97	/EA	21,023,375
		20.07.020	Rdwy, New AC Paving - Access Rd	9,800.000	SF	160.56	/SF	1,573,496
		40.02.005	Sanitary Sewer, 24"-36"	750.000	LF	185.78	/LF	139,335
		40.02.013	Telecomm/Fiber Optic UG, All Sizes	2,040.000	LF	266.69	/LF	544,039
		40.02.020	Electric OH, 115 kV	1,400.000	LF	230.75	/LF	323,047
		40.02.024	Transmission Tower	1.000	EA	579,040.00	/EA	579,040

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
			SS3 San Jose to Monterey Corridor:Diridon Sta to Alma Ave Diridon Sta to					383,120,305
	SS99-1		Alternative 1 Complete					
		40.04.110	Environmental Mitigation Allowance, Heavy	1.000	LS	36,510,103.76	/LS	36,510,104
		40.06.100	Temporary facilities and other indirect costs during construction	1.000	LS	44,623,460.15	/LS	44,623,460
		40.07.100	ROW Procurement Acquisition	1.000	LS	775,240,500.00	/LS	775,240,500
		50.01	Way Side Signalling equipment	6.030	RM	5,313,232.00	/RM	32,038,789
		50.04	Traffic Control and dispatching systems	6.030	RM	65,086.80	/RM	392,473
		50.05	Communications	6.030	RM	788,633.60	/RM	4,755,461
		50.07	Hazard detectors	6.030	RM	162,834.38	/RM	981,891
		60.03	Traction Power distribution: catenary and third rail	6.030	RM	2,719,677.49	/RM	16,399,655
		60.04	Traction power control	6.030	RM	85,204.43	/RM	513,783
		80.00.00	Professional Services	1.000	LS	207,752,817.82	/LS	207,752,818
		90.00.00	Unallocated Contingency	1.000	LS	95,378,060.43	/LS	95,378,060
			SS99-1 Alternative 1 Complete					1,214,586,994
			1 Alternative 1				/RM	2,413,053,023
			FJ (ALT B1) + Alt 1	57.03	RM	107,459,233	/RM	6,128,400,084
2			FJ (Alt B2)					
		10.01.002	Cut	177,119.60	CY	12.24	/CY	2,167,235
		10.01.004	Overbreak in embankment	161,733.20	CY	18.03	/CY	2,916,373
		10.01.005	Embankment	619,314.60	CY	18.03	/CY	11,167,481
		10.01.006	Overbreak fill in cut	87,057.00	CY	18.03	/CY	1,569,826

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		10.01.007	Overbreak fill in embankment	161,733.20	CY	18.03	/CY	2,916,373
		10.01.008	Subballast	855,448.90	CY	54.10	/CY	46,276,364
		10.02.060	Pergola structure	48,072.00	SF	923.74	/SF	44,406,033
		10.02.082	25th Ave Underpass at Sta 1142+00	3,192.00	SF	360.64	/SF	1,151,163
		10.02.083	28th Ave Underpass at Sta 1156+00	3,458.00	SF	360.64	/SF	1,247,093
		10.02.085	31st Ave Underpass at Sta 1168+00	3,686.00	SF	360.64	/SF	1,329,319
		10.02.086	Hillsdale Blvd at Sta 1178+00	4,066.00	SF	360.64	/SF	1,466,362
		10.02.087	42nd Ave Underpass at Sta 1213+00	3,724.00	SF	360.64	/SF	1,343,023
		10.02.088	Belmont Station Ped Underpass at Sta 1262+00	7,208.00	SF	360.64	/SF	2,599,493
		10.02.089	Ralston Ave Underpass at Sta 1265+00	14,688.00	SF	360.64	/SF	5,297,080
		10.02.090	Harbor Blvd Underpass at Sta 1282+00	3,800.00	SF	360.64	/SF	1,370,432
		10.02.091	Holly Street Underpass at 1325+00	8,228.00	SF	360.64	/SF	2,967,346
		10.02.092	San Carlos Station Pedestrian Underpass at Sta 1350+00	10,608.00	SF	360.64	/SF	3,825,669
		10.02.093	Brittan Ave Underpass at Sta 1364+00	3,762.00	SF	360.64	/SF	1,356,728
		10.02.094	Howard Ave Underpass at Sta 1374+00	3,762.00	SF	360.64	/SF	1,356,728
		10.05.301	Transition wedge - 1 Track (20' Avg. < Fill Ht < 40' Avg.)	2.00	EA	896,521.79	/EA	1,793,044
		10.05.311	Transition wedge - 2 Tracks (20' Avg. < Fill Ht < 40' Avg.)	4.00	EA	1,379,264.25	/EA	5,517,057
		10.06.210	At-Grade Track Bed in Fill - 2 Track (10'Avg fill ht)	1.45	RM	3,735,562.32	/RM	5,416,565
		10.06.220	At-Grade Track Bed w/ closed Drainage - 2 Track	1.03	RM	6,515,670.73	/RM	6,711,141
		10.06.323	Decrease Existing Track Height up to 3" - 2 Track	4.38	RM	5,225,339.75	/RM	22,886,988

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		10.06.326	Increase Existing Track Height up to 6" - 2 Track	25.77	RM	5,225,339.75	/RM	134,657,005
		10.06.328	Increase Existing Track Height 6"-2' - 2 Track	3.20	RM	5,305,305.08	/RM	16,976,976
		10.06.350	Increase Existing Track Height >2" - 2 Track	1.02	RM	12,469,608.82	/RM	12,719,001
		10.06.351	Decrease Existing Track Height more than 3" - 2 Track	1.88	RM	11,817,880.80	/RM	22,217,616
		10.08.221	Retained Cut, Trench - 2 Track (10' Avg. Exc Depth)	0.93	RM	68,811,749.41	/RM	63,994,927
		10.08.412	Retained Fill, Walls One Side - 2 Tracks (20' Avg. Wall Ht)	1.27	RM	9,622,196.63	/RM	12,220,190
		10.08.413	Retained Fill, Walls Both Sides - 1 Tracks (30'Avg Wall Ht)	2.94	RM	9,735,808.14	/RM	28,623,276
		10.08.421	Retained Fill, Walls Both Sides - 2 Tracks (10' Avg. Wall Ht)	0.64	RM	11,510,120.34	/RM	7,366,477
		10.08.422	Retained Fill, Walls Both Sides - 2 Tracks (20' Avg. Wall Ht)	0.69	RM	19,244,393.26	/RM	13,278,631
		10.08.423	Retained Fill, Walls Both Sides - 2 Tracks (30' Avg. Wall Ht)	0.44	RM	19,471,616.23	/RM	8,567,511
		10.09.110	Ballasted Track - 1 Track	3.02	RM	2,229,793.81	/RM	6,733,977
		10.09.120	Ballasted Track - 2 Track	9.67	RM	3,975,246.12	/RM	38,440,630
		10.09.911	Ballasted Track Relocation - 1 Track (Permanent) 0'-1'	14.70	RM	408,038.40	/RM	5,998,164
		10.09.912	Ballasted Track Relocation - 1 Track (Permanent) 1'-10'	23.70	RM	1,177,105.78	/RM	27,897,407
		10.09.913	Ballasted Track Relocation - 1 Track (Permanent) 10'-21'	3.17	RM	4,678,242.69	/RM	14,830,029
		10.09.914	Ballasted Track Relocation - 1 Track (Permanent) More than 21'	0.41	RM	3,994,623.76	/RM	1,637,796
		10.09.990	Shoefly Track - 1 Track (Includes all sitework, drainage, ballast, etc	1.73	RM	4,012,460.03	/RM	6,941,556

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		10.09.995	Connection between shoefly track and other track	37.00	EA	71,669.47	/EA	2,651,770
		10.10.110	Direct Fixation Track - 1 Track	3.08	RM	5,711,721.56	/RM	17,592,102
		10.14.200	Ballasted Turnout (60 MPH)	15.00	EA	586,040.00	/EA	8,790,600
		10.14.201	Ballasted Turnout #9	4.00	EA	586,040.00	/EA	2,344,160
		10.14.250	Ballasted Turnout #9	1.00	EA	115,920.00	/EA	115,920
		10.14.260	Ballasted Turnout #10	1.00	EA	96,600.00	/EA	96,600
		10.14.280	Ballasted Turnout #20	6.00	EA	309,120.00	/EA	1,854,720
		10.14.340	Ballasted Crossover #20	6.00	EA	1,288,000.00	/EA	7,728,000
		10.16.150	Widen Drainage Structure	5.00	EA	140,000.00	/EA	700,000
		10.16.151	Cover Existing Structure	1.00	EA	7,000.00	/EA	7,000
		20.01.100	4th and King Station	1.00	LS	21,504,000.00	/LS	21,504,000
		20.01.101	4th and King Station - Site Elements	1.00	LS	1,120,000.00	/LS	1,120,000
		20.01.103	Bayshore Station	1.00	LS	18,099,200.00	/LS	18,099,200
		20.01.105	Millbrea Station	1.00	LS	50,060,640.00	/LS	50,060,640
		20.01.108	San Bruno Station	1.00	LS	3,584,000.00	/LS	3,584,000
		20.01.109	Broadway Station	1.00	LS	8,848,000.00	/LS	8,848,000
		20.01.112	Hayward Park Station	1.00	LS	12,544,000.00	/LS	12,544,000
		20.01.113	Hillsdale Station - Alt B	1.00	LS	11,760,000.00	/LS	11,760,000
		20.01.114	Belmont Station - Alt B	1.00	LS	14,112,000.00	/LS	14,112,000
		20.01.115	San Carlos Station - Alt B	1.00	LS	12,544,000.00	/LS	12,544,000
		20.01.118	Atherton Station	1.00	LS	12,544,000.00	/LS	12,544,000
		20.06.120	Pedestrian Access (Cut & Cover)	180.00	LF	30,591.74	/LF	5,506,512
		20.06.161	Pedestrian Access, Extend pedestrian Undercrossing - San Bruno Station	1.00	EA	294,000.00	/EA	294,000
		20.06.162	Pedestrian Access, Pedestrian access ramp & stairway - Belmont Station	1.00	EA	420,000.00	/EA	420,000

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		20.06.163	Pedestrian Access, Pedestrian access ramp & stairway - San Carlos Sta	1.00	EA	420,000.00	/EA	420,000
		20.06.164	Pedestrian Access, Vertical Structure, Modify Existing - 22nd St Sta	2.00	EA	1,013,368.30	/EA	2,026,737
		20.07.901	Quad Gate Prototype A	8.00	EA	511,700.00	/EA	4,093,600
		20.07.902	Quad Gate Prototype B	11.00	EA	505,113.96	/EA	5,556,254
		20.07.903	Quad Gate Prototype B1	1.00	EA	833,827.81	/EA	833,828
		20.07.904	Quad Gate Prototype C	4.00	EA	959,413.90	/EA	3,837,656
		20.07.905	Quad Gate Prototype D	7.00	EA	654,913.93	/EA	4,584,398
		20.07.907	Quad Gate Prototype E	6.00	EA	407,607.00	/EA	2,445,642
		30.02.015	Light Maintenance Facility (LMF)- West Brisbane	1.00	EA	420,992,190.95	/EA	420,992,191
		40.01.810	Demolition Allowance, Remove Railroad Tracks	15.79	RM	280,000.00	/RM	4,421,200
		40.01.820	Demolition Allowance, Remove Railroad Track - Special Track Work	6.00	EA	28,000.00	/EA	168,000
		40.02.004	Natural Gas/Oil, 26"-33"	285.00	LF	177.32	/LF	50,537
		40.02.005	Natural Gas/Oil, Unk	1,165.00	LF	152.10	/LF	177,192
		40.02.006	Jet Fuel, 6"-12"	16,270.00	LF	151.09	/LF	2,458,202
		40.02.007	Potable Water, 4"-10"	1,245.00	LF	183.34	/LF	228,263
		40.02.008	Potable Water,11"-24'	5,740.00	LF	358.30	/LF	2,056,653
		40.02.009	Potable Water, 25"-36"	465	LF	386.3	/LF	179,630
		40.02.012	Potable Water, Unk"	2,215.00	EA	330.30	/EA	731,619
		40.02.013	Sanitary Sewer, 6"-15"	2,465.00	LF	177.32	/LF	437,104
		40.02.014	Sanitary Sewer, 16"-24"	2,945.00	LF	142.80	/LF	420,546
		40.02.015	Sanitary Sewer, 25"-36"	3,080.00	EA	179.68	/EA	553,402
		40.02.018	Sanitary Sewer, Unk	3,285.00	LF	179.68	/LF	590,236

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		40.02.019	Storm Drain, 6"-18"	1,055.00	LF	197.93	/LF	208,818
		40.02.020	Storm Drain, 19"-30"	2,715.00	LF	291.20	/LF	790,608
		40.02.021	Storm Drain, 31"-42"	805.00	LF	288.40	/LF	232,162
		40.02.022	Storm Drain, 43"-54"	295.00	LF	318.02	/LF	93,817
		40.02.023	Storm Drain, 55"-72"	2,510.00	LF	338.80	/LF	850,388
		40.02.024	Storm Drain, Unk	2,520.00	LF	288.40	/LF	726,768
		40.02.025	Box Culvert, All Sizes	1,375.00	LF	2,240.00	/LF	3,080,000
		40.02.026	Drainage Canal, All Sizes	14,945.00	SF	70.00	/SF	1,046,150
		40.02.027	Pump Station (Storm)	4.00	EA	560,000.00	/EA	2,240,000
		40.02.028	Pump Station (Sanitary)	2.00	EA	700,000.00	/EA	1,400,000
		40.02.029	Telecomm/Fiber Optic UG, All Sizes	72,595.00	LF	381.85	/LF	27,720,401
		40.02.031	Telecommunication Facility	1.00	EA	420,000.00	/EA	420,000
		40.02.032	Electric UG, Unk	5,295.00	LF	282.44	/LF	1,495,499
		40.02.033	Electric OH, 0-21 kV	1,520.00	LF	81.69	/LF	124,169
		40.02.035	Electric OH, 51-114 kV	500.00	LF	118.16	/LF	59,080
		40.02.036	Electric OH, 115 kV	4,610.00	LF	223.16	/LF	1,028,768
		40.02.038	Electirc OH, unknown	7,365.00	LF	223.16	/LF	1,643,573
		40.02.040	Electric & Telecomm OH on JP, Unk	8,170.00	LF	223.16	/LF	1,823,217
		40.04	Environmental Mitigation (% Calculation)	1.00	LS	42,978,900.00	/LS	42,978,900
		40.06	Temp Facilities	1.00	LS	52,529,767.00	/LS	52,529,767
		40.07	Right of Way Purchase (From Regional Consultant)	1.00	LS	1,419,924,500.00	/LS	1,419,924,500
		40.08.152	Roadway Overcrossing HSR (Tunnel Avenue): 2-Lane Roadway OVER Five-Trk	1.00	EA	116,626,684.99	/EA	116,626,685
		50.05.010	Communications (w/Fiber Optic Backbone) - 2 Track	51.00	RM	2,003,007.91	/RM	102,153,404

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		60.03.100	Traction power distribution: Catenary and third rail	51.00	RM	2,840,488.66	/RM	144,864,922
		80.00.00	Professional Services	1.00	LS	279,717,956.00	/LS	279,717,956
		90.00.00	Unallocated Contingency	1.00	LS	237,327,310.00	/LS	237,327,310
			Total	51.00	RM	72,849,942	/RM	3,715,347,061
2			Scott-Alma (Alt 2)					
	SS2		San Jose Diridon Sta Approach: Viaduct to Scott (Scott to Diridon Sta)					
		10.01.222	Elevated Structure - 2 Track (20' Avg. Pier Ht) - 110' Spacing	0.230	RM	146,931,314.78	/RM	33,794,202
		10.01.222a	Elevated Structure - 2 Track (20' Avg. Pier Ht, 120' Span)	0.160	RM	138,653,204.00	/RM	22,184,513
		10.01.222b	Elevated Structure - 2 Track (20' Avg. Pier Ht, 150' Span)	0.140	RM	132,303,199.71	/RM	18,522,448
		10.01.223	Elevated Structure - 2 Track (30' Avg. Pier Ht, 90' Span)	0.290	RM	178,757,559.86	/RM	51,839,692
		10.01.223a	Elevated Structure - 2 Track (30' Avg. Pier Ht) - 110' Spacing	0.880	RM	150,125,701.26	/RM	132,110,617
		10.01.224	Elevated Structure - 2 Track (40' Avg. Pier Ht) - 110' Spacing	0.310	RM	155,747,512.81	/RM	48,281,729
		10.01.227b	Elevated Structure - 2 Track (70' Avg. Pier Ht, 110' Span)	0.020	RM	171,932,625.50	/RM	3,438,653
		10.02.042	Scott-Diridon - 2 Trk over 3 Trk (30' Avg. Pier Ht) - 110' Spacing	0.230	RM	407,621,588.48	/RM	93,752,965
		10.02.043	Scott-Diridon - 2 Trk over 5 Trk (30' Avg. Pier Ht) - 110' Spacing	0.150	RM	429,859,853.60	/RM	64,478,978
		10.02.044	Scott-Diridon - 4 Trk over 3 Trk (60' Avg. Pier Ht) - 120' Spacing	0.290	RM	457,655,970.93	/RM	132,720,232
		10.02.045	Scott-Diridon - Diridon-Tamien - 4 Trk	0.190	RM	542,670,797.21	/RM	103,107,451

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		10.02.046	Scott-Diridon - BC -160-220-160 Span - Lafayette St	0.100	RM	156,622,977.90	/RM	15,662,298
		10.02.047	Scott-Diridon - BC -160-220-160 Span - I-880	0.100	RM	114,847,427.60	/RM	11,484,743
		10.02.048	Scott-Diridon - BC -160-220-160 Span - Taylor St	0.100	RM	113,104,704.20	/RM	11,310,470
		10.02.049	Scott-Diridon - BC-120-240-120 Span - Santa Clara Sta	0.090	RM	163,995,403.56	/RM	14,759,586
		10.02.051	Scott-Diridon - BC -180-180 span - SJ City Market, Wye S Trk	0.140	RM	92,236,421.14	/RM	12,913,099
		10.02.052	Scott-Diridon - 4 Trk BC-150-240-150 Span - Santa Clara Street	0.100	RM	213,382,912.70	/RM	21,338,291
		10.06.210	At-Grade Track-Bed With Closed Drainage - 1 Track	0.740	RM	3,885,060.00	/RM	2,874,944
		10.06.220	At-Grade Track-Bed With Closed Drainage - 2 Track	0.120	RM	6,805,213.08	/RM	816,626
		10.06.230	At-Grade Track-Bed With Closed Drainage - 3 Track	1.200	RM	7,021,034.20	/RM	8,425,241
		10.06.240	At-Grade Track-Bed With Closed Drainage - 4 Track	0.770	RM	7,245,659.00	/RM	5,579,157
		10.08.421	Ret Fill, Walls Both Sides - 2 Trk (10' Avg. Wall Ht)	0.140	RM	12,074,630.29	/RM	1,690,448
		10.08.422	Retained Fill, Wall Both Sides - 2 Trks (20¦Avg. Wall Ht)	0.200	RM	19,689,389.30	/RM	3,937,878
		10.09.112	Ballasted Track (Track Laying Machine) - 1 Track	0.740	RM	1,485,330.59	/RM	1,099,145
		10.09.122	Ballasted Track (Track Laying Machine) - 2 Track	0.460	RM	2,907,808.85	/RM	1,337,592
		10.09.132	Ballasted Track (Track Laying Machine) - 3 Track	1.200	RM	4,442,562.08	/RM	5,331,075
		10.09.142	Ballasted Track (Track Laying Machine) - 4 Track	0.770	RM	5,880,051.19	/RM	4,527,639

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		10.10.120	Direct Fixation Trk - 2 Trk	2.920	RM	4,236,076.40	/RM	12,369,343
		10.10.140	Direct Fixation Track - 4 Track	0.560	RM	8,578,694.00	/RM	4,804,069
		10.14.321	Ballasted Crossover #10	1.000	EA	679,213.92	/EA	679,214
		10.14.322	Ballasted Crossover #11	3.000	EA	760,453.23	/EA	2,281,360
		10.14.323	Ballasted Crossover #14	4.000	EA	945,572.32	/EA	3,782,289
		10.14.324	Ballasted Crossover #20	1.000	EA	1,331,792.00	/EA	1,331,792
		10.14.400	Terminal - Bumping Post	2.000	EA	42,617.35	/EA	85,235
		20.02.225	San Jose (Diridon) Sta	1.000	LS	289,669,562.95	/LS	289,669,563
		20.06.120	Ped Access (Cut & Cover)	650.000	LF	29,233.32	/LF	19,001,660
		20.06.172	Ped Brdg Undercrossing HSR (Lafayette St) Alt2:	1.000	EA	2,367,538.61	/EA	2,367,539
		20.06.210	Parking, at grade	242.000	STL	8,095.26	/STL	1,959,053
		20.07.010	Roadway Modification, New AC Paving	60,800.000	SF	160.56	/SF	9,762,098
		20.07.715	Access Road Entrance Point	1.000	EA	45,836.67	/EA	45,837
		40.02.002	Natural Gas/Oil, 9"-16"	472.000	LF	183.36	/LF	86,545
		40.02.003	Potable Water, 10"-16"	1,703.000	LF	289.52	/LF	493,053
		40.02.005	Sanitary Sewer, 24"-36"	1,650.000	LF	185.78	/LF	306,537
		40.02.006	Sanitary Sewer, 37"-48"	2,404.000	LF	376.38	/LF	904,808
		40.02.008	Storm Drain, 42"-54"	631.000	LF	328.61	/LF	207,352
		40.02.009	Storm Drain, 55"-72"	1,592.000	LF	350.32	/LF	557,713
		40.02.011	Pump Station (Storm)	2.000	EA	361,900.00	/EA	723,800
		40.02.013	Telecomm/Fiber Optic UG, All Sizes	29,283.000	LF	266.69	/LF	7,809,366
		40.02.016	Electric UG	3,478.000	LF	292.04	/LF	1,015,715
		40.02.019	Electric OH, 51-114 kV	2,971.000	LF	122.18	/LF	362,991
		40.02.020	Electric OH, 115 kV	7,511.000	LF	230.75	/LF	1,733,148

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		40.08.200.ae	Rdwy Underxing HSR (West Hedding): 2-Ln Rdwy Under 5 Trk	1.000	EA	10,869,832.18	/EA	10,869,832
		40.08.200.ae1	Rdwy Overxing Rdwy - 2-Ln Rdwy Over 4-Ln Rdwy (Stockton St)	1.000	EA	1,243,730.68	/EA	1,243,731
		40.08.200.ae2	Rdwy Overxing Rdwy- 10-Ln Rdwy Over 4-Ln Rdwy (Bellarmine Pking Lot 1)	1.000	EA	2,847,474.77	/EA	2,847,475
		40.08.200.ae3	Rdwy Overxing Rdwy- 10-Ln Rdwy Over 4-Ln Rdwy (Bellarmine Pking Lot 2)	1.000	EA	2,753,219.79	/EA	2,753,220
		40.08.200.ae4	RR Overxing Rdwy- 5 Trk Over 4-Ln Rdwy	1.000	EA	2,716,379.54	/EA	2,716,380
		40.08.200.ae5	Trench Base Slab - Hedding	1.000	EA	21,202,172.32	/EA	21,202,172
		40.08.200.af	Rdwy Uxing HSR (De La Cruz Blvd): 5-Ln, RF Rdwy Under 7 Trks/6-Ln Rdwy	1.000	EA	16,702,064.40	/EA	16,702,064
		40.08.200.af1	Rdwy Overxing Rdwy- 2 Ln Rdwy Over 1 Ln Rdwy De La Cruz Blvd (South)	1.000	EA	1,667,988.75	/EA	1,667,989
		40.08.200.af2	Rdwy Overxing Rdwy- 1 Ln Rdwy Over 1 Ln Rdwy De La Cruz (North)	1.000	EA	529,294.99	/EA	529,295
		40.08.200.af3	Rdwy Overxing Rdwy- 6 Ln Rdwy Over 4 Ln Rdwy De La Cruz (El Camino)	1.000	EA	3,037,800.42	/EA	3,037,800
		40.08.200.af4	RR Overxing Rdwy- 3 Trk Over 4 Ln Rdwy (UPRR)	1.000	EA	2,760,720.20	/EA	2,760,720
		40.08.200.af5	RR Overxing Rdwy- 2 Trk Over 4 Ln Rdwy (JPB)	1.000	EA	1,797,917.80	/EA	1,797,918
		40.08.200.af6	Trench Base Slab - De La Cruz	1.000	EA	49,161,247.50	/EA	49,161,248
		40.08.200.ah	Rdwy Underxing UPRR (Lafayette St) - 1 Trk (Main) Over 4 Ln Rdwy	1.000	EA	1,773,199.70	/EA	1,773,200
			SS2 San Jose Diridon Sta Approach: Viaduct to Scott (Scott to Diridon Sta)				/RM	1,308,722,834
	SS3		San Jose to Monterey Corridor:Diridon Sta to Alma Ave Diridon Sta to					

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		10.01.225d	Elevated Structure - 2 Track (50' Avg. Pier Ht) - 150' Spacing	0.142	RM	139,370,872.75	/RM	19,790,664
		10.01.226e	Elevated Structure - 2 Track (60' Avg. Pier Ht, 150' Span)	0.114	RM	141,833,951.32	/RM	16,169,070
		10.02.040	Diridon-Tamien - 2 Track	1.059	RM	133,481,722.80	/RM	141,357,144
		10.02.041	Diridon-Tamien - 4 Track	0.517	RM	327,544,059.86	/RM	169,340,279
		10.10.120	Direct Fixation Trk - 2 Trk	1.348	RM	4,243,224.83	/RM	5,719,867
		10.10.140	Direct Fixation Track - 4 Track	0.485	RM	8,575,433.96	/RM	4,159,085
		10.14.150	Direct Fixation Crossover #15	1.000	EA	2,401,862.40	/EA	2,401,862
		20.06.211	Bike Path Realignment (Almaden Expy)	1.000	EA	21,023,374.96	/EA	21,023,375
		20.07.020	Rdwy, New AC Paving - Access Rd	9,800.000	SF	160.56	/SF	1,573,496
		40.02.005	Sanitary Sewer, 24"-36"	750.000	LF	185.78	/LF	139,335
		40.02.013	Telecomm/Fiber Optic UG, All Sizes	2,040.000	LF	266.69	/LF	544,039
		40.02.020	Electric OH, 115 kV	1,400.000	LF	230.75	/LF	323,047
		40.02.024	Transmission Tower	1.000	EA	579,040.00	/EA	579,040
			SS3 San Jose to Monterey Corridor:Diridon Sta to Alma Ave Diridon Sta to					383,120,305
	SS99-2		Alternative 2 Complete					
		40.04.110	Environmental Mitigation Allowance, Heavy	1.000	LS	51,759,327.67	/LS	51,759,328
		40.06.100	Temporary facilities and other indirect costs during construction	1.000	LS	63,261,400.49	/LS	63,261,400
		40.07.100	ROW Procurement Acquisition	1.000	LS	868,479,500.00	/LS	868,479,500
		50.01	Way Side Signalling equipment	6.030	RM	5,313,232.00	/RM	32,038,789
		50.04	Traffic Control and dispatching systems	6.030	RM	65,086.80	/RM	392,473
		50.05	Communications	6.030	RM	788,633.60	/RM	4,755,461
		50.07	Hazard detectors	6.030	RM	162,834.38	/RM	981,891

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		60.03	Traction Power distribution: catenary and third rail	6.030	RM	2,719,677.49	/RM	16,399,655
		60.04	Traction power control	6.030	RM	85,204.43	/RM	513,783
		80.00.00	Professional Services	1.000	LS	289,478,780.41	/LS	289,478,780
		90.00.00	Unallocated Contingency	1.000	LS	122,702,051.52	/LS	122,702,052
			SS99-2 Alternative 2 Complete					1,450,763,112
			2 Alternative 2					3,142,606,252
			FJ (ALT B2) + Alt 2	**57.03**	**RM**	**120,251,680**	**/RM**	**6,857,953,313**
2			**FJ (Alt B3)**					
		10.01.002	Cut	177,119.60	CY	12.24	/CY	2,167,235
		10.01.004	Overbreak in embankment	161,733.20	CY	18.03	/CY	2,916,373
		10.01.005	Embankment	619,314.60	CY	18.03	/CY	11,167,481
		10.01.006	Overbreak fill in cut	87,057.00	CY	18.03	/CY	1,569,826
		10.01.007	Overbreak fill in embankment	161,733.20	CY	18.03	/CY	2,916,373
		10.01.008	Subballast	855,448.90	CY	54.10	/CY	46,276,364
		10.02.060	Pergola structure	48,072.00	SF	923.74	/SF	44,406,033
		10.02.082	25th Ave Underpass at Sta 1142+00	3,192.00	SF	360.64	/SF	1,151,163
		10.02.083	28th Ave Underpass at Sta 1156+00	3,458.00	SF	360.64	/SF	1,247,093
		10.02.085	31st Ave Underpass at Sta 1168+00	3,686.00	SF	360.64	/SF	1,329,319
		10.02.086	Hillsdale Blvd at Sta 1178+00	4,066.00	SF	360.64	/SF	1,466,362
		10.02.087	42nd Ave Underpass at Sta 1213+00	3,724.00	SF	360.64	/SF	1,343,023
		10.02.088	Belmont Station Ped Underpass at Sta 1262+00	7,208.00	SF	360.64	/SF	2,599,493
		10.02.089	Ralston Ave Underpass at Sta 1265+00	14,688.00	SF	360.64	/SF	5,297,080

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		10.02.090	Harbor Blvd Underpass at Sta 1282+00	3,800.00	SF	360.64	/SF	1,370,432
		10.02.091	Holly Street Underpass at 1325+00	8,228.00	SF	360.64	/SF	2,967,346
		10.02.092	San Carlos Station Pedestrian Underpass at Sta 1350+00	10,608.00	SF	360.64	/SF	3,825,669
		10.02.093	Brittan Ave Underpass at Sta 1364+00	3,762.00	SF	360.64	/SF	1,356,728
		10.02.094	Howard Ave Underpass at Sta 1374+00	3,762.00	SF	360.64	/SF	1,356,728
		10.05.301	Transition wedge - 1 Track (20' Avg. < Fill Ht < 40' Avg.)	2.00	EA	896,521.79	/EA	1,793,044
		10.05.311	Transition wedge - 2 Tracks (20' Avg. < Fill Ht < 40' Avg.)	4.00	EA	1,379,264.25	/EA	5,517,057
		10.06.210	At-Grade Track Bed in Fill - 2 Track (10'Avg fill ht)	1.45	RM	3,735,562.32	/RM	5,416,565
		10.06.220	At-Grade Track Bed w/ closed Drainage - 2 Track	1.03	RM	6,515,670.73	/RM	6,711,141
		10.06.323	Decrease Existing Track Height up to 3" - 2 Track	4.38	RM	5,225,339.75	/RM	22,886,988
		10.06.326	Increase Existing Track Height up to 6" - 2 Track	25.77	RM	5,225,339.75	/RM	134,657,005
		10.06.328	Increase Existing Track Height 6"-2' - 2 Track	3.20	RM	5,305,305.08	/RM	16,976,976
		10.06.350	Increase Existing Track Height >2" - 2 Track	1.02	RM	12,469,608.82	/RM	12,719,001
		10.06.351	Decrease Existing Track Height more than 3" - 2 Track	1.88	RM	11,817,880.80	/RM	22,217,616
		10.08.221	Retained Cut, Trench - 2 Track (10' Avg. Exc Depth)	0.93	RM	68,811,749.41	/RM	63,994,927
		10.08.412	Retained Fill, Walls One Side - 2 Tracks (20' Avg. Wall Ht)	1.27	RM	9,622,196.63	/RM	12,220,190
		10.08.413	Retained Fill, Walls Both Sides - 1 Tracks (30'Avg Wall Ht)	2.94	RM	9,735,808.14	/RM	28,623,276
		10.08.421	Retained Fill, Walls Both Sides - 2 Tracks (10' Avg. Wall Ht)	0.64	RM	11,510,120.34	/RM	7,366,477

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		10.08.422	Retained Fill, Walls Both Sides - 2 Tracks (20' Avg. Wall Ht)	0.69	RM	19,244,393.26	/RM	13,278,631
		10.08.423	Retained Fill, Walls Both Sides - 2 Tracks (30' Avg. Wall Ht)	0.44	RM	19,471,616.23	/RM	8,567,511
		10.09.110	Ballasted Track - 1 Track	3.02	RM	2,229,793.81	/RM	6,733,977
		10.09.120	Ballasted Track - 2 Track	9.67	RM	3,975,246.12	/RM	38,440,630
		10.09.911	Ballasted Track Relocation - 1 Track (Permanent) 0'-1'	14.70	RM	408,038.40	/RM	5,998,164
		10.09.912	Ballasted Track Relocation - 1 Track (Permanent) 1'-10'	23.70	RM	1,177,105.78	/RM	27,897,407
		10.09.913	Ballasted Track Relocation - 1 Track (Permanent) 10'-21'	3.17	RM	4,678,242.69	/RM	14,830,029
		10.09.914	Ballasted Track Relocation - 1 Track (Permanent) More than 21'	0.41	RM	3,994,623.76	/RM	1,637,796
		10.09.990	Shoefly Track - 1 Track (Includes all sitework, drainage, ballast, etc	1.73	RM	4,012,460.03	/RM	6,941,556
		10.09.995	Connection between shoefly track and other track	37.00	EA	71,669.47	/EA	2,651,770
		10.10.110	Direct Fixation Track - 1 Track	3.08	RM	5,711,721.56	/RM	17,592,102
		10.14.200	Ballasted Turnout (60 MPH)	15.00	EA	586,040.00	/EA	8,790,600
		10.14.201	Ballasted Turnout #9	4.00	EA	586,040.00	/EA	2,344,160
		10.14.250	Ballasted Turnout #9	1.00	EA	115,920.00	/EA	115,920
		10.14.260	Ballasted Turnout #10	1.00	EA	96,600.00	/EA	96,600
		10.14.280	Ballasted Turnout #20	6.00	EA	309,120.00	/EA	1,854,720
		10.14.340	Ballasted Crossover #20	6.00	EA	1,288,000.00	/EA	7,728,000
		10.16.150	Widen Drainage Structure	5.00	EA	140,000.00	/EA	700,000
		10.16.151	Cover Existing Structure	1.00	EA	7,000.00	/EA	7,000
		20.01.100	4th and King Station	1.00	LS	21,504,000.00	/LS	21,504,000

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		20.01.101	4th and King Station - Site Elements	1.00	LS	1,120,000.00	/LS	1,120,000
		20.01.103	Bayshore Station	1.00	LS	18,099,200.00	/LS	18,099,200
		20.01.105	Millbrea Station	1.00	LS	50,060,640.00	/LS	50,060,640
		20.01.108	San Bruno Station	1.00	LS	3,584,000.00	/LS	3,584,000
		20.01.109	Broadway Station	1.00	LS	8,848,000.00	/LS	8,848,000
		20.01.112	Hayward Park Station	1.00	LS	12,544,000.00	/LS	12,544,000
		20.01.113	Hillsdale Station - Alt B	1.00	LS	11,760,000.00	/LS	11,760,000
		20.01.114	Belmont Station - Alt B	1.00	LS	14,112,000.00	/LS	14,112,000
		20.01.115	San Carlos Station - Alt B	1.00	LS	12,544,000.00	/LS	12,544,000
		20.01.118	Atherton Station	1.00	LS	12,544,000.00	/LS	12,544,000
		20.06.120	Pedestrian Access (Cut & Cover)	180.00	LF	30,591.74	/LF	5,506,512
		20.06.161	Pedestrian Access, Extend pedestrian Undercrossing - San Bruno Station	1.00	EA	294,000.00	/EA	294,000
		20.06.162	Pedestrian Access, Pedestrian access ramp & stairway - Belmont Station	1.00	EA	420,000.00	/EA	420,000
		20.06.163	Pedestrian Access, Pedestrian access ramp & stairway - San Carlos Sta	1.00	EA	420,000.00	/EA	420,000
		20.06.164	Pedestrian Access, Vertical Structure, Modify Existing - 22nd St Sta	2.00	EA	1,013,368.30	/EA	2,026,737
		20.07.901	Quad Gate Prototype A	8.00	EA	511,700.00	/EA	4,093,600
		20.07.902	Quad Gate Prototype B	11.00	EA	505,113.96	/EA	5,556,254
		20.07.903	Quad Gate Prototype B1	1.00	EA	833,827.81	/EA	833,828
		20.07.904	Quad Gate Prototype C	4.00	EA	959,413.90	/EA	3,837,656
		20.07.905	Quad Gate Prototype D	7.00	EA	654,913.93	/EA	4,584,398
		20.07.907	Quad Gate Prototype E	6.00	EA	407,607.00	/EA	2,445,642
		30.02.015	Light Maintenance Facility (LMF)- West Brisbane	1.00	EA	420,992,190.95	/EA	420,992,191

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		40.01.810	Demolition Allowance, Remove Railroad Tracks	15.79	RM	280,000.00	/RM	4,421,200
		40.01.820	Demolition Allowance, Remove Railroad Track - Special Track Work	6.00	EA	28,000.00	/EA	168,000
		40.02.004	Natural Gas/Oil, 26"-33"	285.00	LF	177.32	/LF	50,537
		40.02.005	Natural Gas/Oil, Unk	1,165.00	LF	152.10	/LF	177,192
		40.02.006	Jet Fuel, 6"-12"	16,270.00	LF	151.09	/LF	2,458,202
		40.02.007	Potable Water, 4"-10"	1,245.00	LF	183.34	/LF	228,263
		40.02.008	Potable Water,11"-24'	5,740.00	LF	358.30	/LF	2,056,653
		40.02.009	Potable Water, 25"-36"	465	LF	386.3	/LF	179,630
		40.02.012	Potable Water, Unk"	2,215.00	EA	330.30	/EA	731,619
		40.02.013	Sanitary Sewer, 6"-15"	2,465.00	LF	177.32	/LF	437,104
		40.02.014	Sanitary Sewer, 16"-24"	2,945.00	LF	142.80	/LF	420,546
		40.02.015	Sanitary Sewer, 25"-36"	3,080.00	EA	179.68	/EA	553,402
		40.02.018	Sanitary Sewer, Unk	3,285.00	LF	179.68	/LF	590,236
		40.02.019	Storm Drain, 6"-18"	1,055.00	LF	197.93	/LF	208,818
		40.02.020	Storm Drain, 19"-30"	2,715.00	LF	291.20	/LF	790,608
		40.02.021	Storm Drain, 31"-42"	805.00	LF	288.40	/LF	232,162
		40.02.022	Storm Drain, 43"-54"	295.00	LF	318.02	/LF	93,817
		40.02.023	Storm Drain, 55"-72"	2,510.00	LF	338.80	/LF	850,388
		40.02.024	Storm Drain, Unk	2,520.00	LF	288.40	/LF	726,768
		40.02.025	Box Culvert, All Sizes	1,375.00	LF	2,240.00	/LF	3,080,000
		40.02.026	Drainage Canal, All Sizes	14,945.00	SF	70.00	/SF	1,046,150
		40.02.027	Pump Station (Storm)	4.00	EA	560,000.00	/EA	2,240,000
		40.02.028	Pump Station (Sanitary)	2.00	EA	700,000.00	/EA	1,400,000
		40.02.029	Telecomm/Fiber Optic UG, All Sizes	72,595.00	LF	381.85	/LF	27,720,401

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		40.02.031	Telecommunication Facility	1.00	EA	420,000.00	/EA	420,000
		40.02.032	Electric UG, Unk	5,295.00	LF	282.44	/LF	1,495,499
		40.02.033	Electric OH, 0-21 kV	1,520.00	LF	81.69	/LF	124,169
		40.02.035	Electric OH, 51-114 kV	500.00	LF	118.16	/LF	59,080
		40.02.036	Electric OH, 115 kV	4,610.00	LF	223.16	/LF	1,028,768
		40.02.038	Electirc OH, unknown	7,365.00	LF	223.16	/LF	1,643,573
		40.02.040	Electric & Telecomm OH on JP, Unk	8,170.00	LF	223.16	/LF	1,823,217
		40.04	Environmental Mitigation (% Calculation)	1.00	LS	42,978,900.00	/LS	42,978,900
		40.06	Temp Facilities	1.00	LS	52,529,767.00	/LS	52,529,767
		40.07	Right of Way Purchase (From Regional Consultant)	1.00	LS	1,419,924,500.00	/LS	1,419,924,500
		40.08.152	Roadway Overcrossing HSR (Tunnel Avenue): 2-Lane Roadway OVER Five-Trk	1.00	EA	116,626,684.99	/EA	116,626,685
		50.05.010	Communications (w/Fiber Optic Backbone) - 2 Track	51.00	RM	2,003,007.91	/RM	102,153,404
		60.03.100	Traction power distribution: Catenary and third rail	51.00	RM	2,840,488.66	/RM	144,864,922
		80.00.00	Professional Services	1.00	LS	279,717,956.00	/LS	279,717,956
		90.00.00	Unallocated Contingency	1.00	LS	237,327,310.00	/LS	237,327,310
			Total				/RM	3,715,347,061
3			Scott-Alma (Alt 3)					
	SS2		San Jose Diridon Sta Approach: Viaduct to Scott (Scott to Diridon Sta)					
		10.01.222	Elevated Structure - 2 Track (20' Avg. Pier Ht) - 110' Spacing	0.230	RM	146,931,314.78	/RM	33,794,202
		10.01.222a	Elevated Structure - 2 Track (20' Avg. Pier Ht, 120' Span)	0.160	RM	138,653,204.00	/RM	22,184,513

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		10.01.222b	Elevated Structure - 2 Track (20' Avg. Pier Ht, 150' Span)	0.140	RM	132,303,199.64	/RM	18,522,448
		10.01.223	Elevated Structure - 2 Track (30' Avg. Pier Ht, 90' Span)	0.290	RM	178,757,559.86	/RM	51,839,692
		10.01.223a	Elevated Structure - 2 Track (30' Avg. Pier Ht) - 110' Spacing	0.880	RM	150,125,701.27	/RM	132,110,617
		10.01.224	Elevated Structure - 2 Track (40' Avg. Pier Ht) - 110' Spacing	0.310	RM	155,747,512.81	/RM	48,281,729
		10.01.227b	Elevated Structure - 2 Track (70' Avg. Pier Ht, 110' Span)	0.020	RM	171,932,625.50	/RM	3,438,653
		10.02.042	Scott-Diridon - 2 Trk over 3 Trk (30' Avg. Pier Ht) - 110' Spacing	0.230	RM	407,621,588.48	/RM	93,752,965
		10.02.043	Scott-Diridon - 2 Trk over 5 Trk (30' Avg. Pier Ht) - 110' Spacing	0.150	RM	429,859,853.60	/RM	64,478,978
		10.02.044	Scott-Diridon - 4 Trk over 3 Trk (60' Avg. Pier Ht) - 120' Spacing	0.290	RM	457,655,970.97	/RM	132,720,232
		10.02.045	Scott-Diridon - Diridon-Tamien - 4 Trk	0.190	RM	542,670,797.16	/RM	103,107,451
		10.02.046	Scott-Diridon - BC -160-220-160 Span - Lafayette St	0.100	RM	156,622,977.90	/RM	15,662,298
		10.02.047	Scott-Diridon - BC -160-220-160 Span - I-880	0.100	RM	114,847,427.60	/RM	11,484,743
		10.02.048	Scott-Diridon - BC -160-220-160 Span - Taylor St	0.100	RM	113,104,704.20	/RM	11,310,470
		10.02.049	Scott-Diridon - BC-120-240-120 Span - Santa Clara Sta	0.090	RM	163,995,403.44	/RM	14,759,586
		10.02.051	Scott-Diridon - BC -180-180 span - SJ City Market, Wye S Trk	0.140	RM	92,236,421.21	/RM	12,913,099
		10.02.052	Scott-Diridon - 4 Trk BC-150-240-150 Span - Santa Clara Street	0.100	RM	213,382,912.60	/RM	21,338,291
		10.06.210	At-Grade Track-Bed With Closed Drainage - 1 Track	0.740	RM	3,885,060.03	/RM	2,874,944

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		10.06.220	At-Grade Track-Bed With Closed Drainage - 2 Track	0.120	RM	6,805,212.92	/RM	816,626
		10.06.230	At-Grade Track-Bed With Closed Drainage - 3 Track	1.200	RM	7,021,034.20	/RM	8,425,241
		10.06.240	At-Grade Track-Bed With Closed Drainage - 4 Track	0.770	RM	7,245,659.00	/RM	5,579,157
		10.08.421	Ret Fill, Walls Both Sides - 2 Trk (10' Avg. Wall Ht)	0.140	RM	12,074,630.29	/RM	1,690,448
		10.08.422	Retained Fill, Wall Both Sides - 2 Trks (20¦Avg. Wall Ht)	0.200	RM	19,689,389.30	/RM	3,937,878
		10.09.112	Ballasted Track (Track Laying Machine) - 1 Track	0.740	RM	1,485,330.61	/RM	1,099,145
		10.09.122	Ballasted Track (Track Laying Machine) - 2 Track	0.460	RM	2,907,808.85	/RM	1,337,592
		10.09.132	Ballasted Track (Track Laying Machine) - 3 Track	1.200	RM	4,442,562.08	/RM	5,331,075
		10.09.142	Ballasted Track (Track Laying Machine) - 4 Track	0.770	RM	5,880,051.19	/RM	4,527,639
		10.10.120	Direct Fixation Trk - 2 Trk	2.920	RM	4,236,076.40	/RM	12,369,343
		10.10.140	Direct Fixation Track - 4 Track	0.560	RM	8,578,693.98	/RM	4,804,069
		10.14.321	Ballasted Crossover #10	1.000	EA	679,213.92	/EA	679,214
		10.14.322	Ballasted Crossover #11	3.000	EA	760,453.23	/EA	2,281,360
		10.14.323	Ballasted Crossover #14	4.000	EA	945,572.32	/EA	3,782,289
		10.14.324	Ballasted Crossover #20	1.000	EA	1,331,792.00	/EA	1,331,792
		10.14.400	Terminal - Bumping Post	2.000	EA	42,617.35	/EA	85,235
		20.02.225	San Jose (Diridon) Sta	1.000	LS	289,669,562.97	/LS	289,669,563
		20.06.120	Ped Access (Cut & Cover)	650.000	LF	29,233.32	/LF	19,001,660
		20.06.172	Ped Brdg Undercrossing HSR (Lafayette St) Alt2:	1.000	EA	2,367,538.60	/EA	2,367,539

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		20.06.210	Parking, at grade	242.000	STL	8,095.26	/STL	1,959,053
		20.07.010	Roadway Modification, New AC Paving	60,800.000	SF	160.56	/SF	9,762,098
		20.07.715	Access Road Entrance Point	1.000	EA	45,836.66	/EA	45,837
		40.02.002	Natural Gas/Oil, 9"-16"	472.000	LF	183.36	/LF	86,545
		40.02.003	Potable Water, 10"-16"	1,703.000	LF	289.52	/LF	493,053
		40.02.005	Sanitary Sewer, 24"-36"	1,650.000	LF	185.78	/LF	306,537
		40.02.006	Sanitary Sewer, 37"-48"	2,404.000	LF	376.38	/LF	904,808
		40.02.008	Storm Drain, 42"-54"	631.000	LF	328.61	/LF	207,352
		40.02.009	Storm Drain, 55"-72"	1,592.000	LF	350.32	/LF	557,713
		40.02.011	Pump Station (Storm)	2.000	EA	361,900.00	/EA	723,800
		40.02.013	Telecomm/Fiber Optic UG, All Sizes	29,238.000	LF	267.10	/LF	7,809,366
		40.02.016	Electric UG	3,478.000	LF	292.04	/LF	1,015,715
		40.02.019	Electric OH, 51-114 kV	2,971.000	LF	122.18	/LF	362,991
		40.02.020	Electric OH, 115 kV	7,511.000	LF	230.75	/LF	1,733,148
		40.08.200.ae	Rdwy Underxing HSR (West Hedding): 2-Ln Rdwy Under 5 Trk	1.000	EA	10,869,832.19	/EA	10,869,832
		40.08.200.ae1	Rdwy Overxing Rdwy - 2-Ln Rdwy Over 4-Ln Rdwy (Stockton St)	1.000	EA	1,243,730.68	/EA	1,243,731
		40.08.200.ae2	Rdwy Overxing Rdwy- 10-Ln Rdwy Over 4-Ln Rdwy (Bellarmine Pking Lot 1)	1.000	EA	2,847,474.77	/EA	2,847,475
		40.08.200.ae3	Rdwy Overxing Rdwy- 10-Ln Rdwy Over 4-Ln Rdwy (Bellarmine Pking Lot 2)	1.000	EA	2,753,219.79	/EA	2,753,220
		40.08.200.ae4	RR Overxing Rdwy- 5 Trk Over 4-Ln Rdwy	1.000	EA	2,716,379.53	/EA	2,716,380
		40.08.200.ae5	Trench Base Slab - Hedding	1.000	EA	21,202,172.33	/EA	21,202,172
		40.08.200.af	Rdwy Uxing HSR (De La Cruz Blvd): 5-Ln, RF Rdwy Under 7 Trks/6-Ln Rdwy	1.000	EA	16,702,064.40	/EA	16,702,064

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		40.08.200.af1	Rdwy Overxing Rdwy- 2 Ln Rdwy Over 1 Ln Rdwy De La Cruz Blvd (South)	1.000	EA	1,667,988.75	/EA	1,667,989
		40.08.200.af2	Rdwy Overxing Rdwy- 1 Ln Rdwy Over 1 Ln Rdwy De La Cruz (North)	1.000	EA	529,295.00	/EA	529,295
		40.08.200.af3	Rdwy Overxing Rdwy- 6 Ln Rdwy Over 4 Ln Rdwy De La Cruz (El Camino)	1.000	EA	3,037,800.41	/EA	3,037,800
		40.08.200.af4	RR Overxing Rdwy- 3 Trk Over 4 Ln Rdwy (UPRR)	1.000	EA	2,760,720.20	/EA	2,760,720
		40.08.200.af5	RR Overxing Rdwy- 2 Trk Over 4 Ln Rdwy (JPB)	1.000	EA	1,797,917.80	/EA	1,797,918
		40.08.200.af6	Trench Base Slab - De La Cruz	1.000	EA	49,161,247.50	/EA	49,161,248
		40.08.200.ah	Rdwy Underxing UPRR (Lafayette St) - 1 Trk (Main) Over 4 Ln Rdwy	1.000	EA	1,773,199.70	/EA	1,773,200
			SS2 San Jose Diridon Sta Approach: Viaduct to Scott (Scott to Diridon Sta)				/RM	1,308,722,834
	SS3		San Jose to Monterey Corridor:Diridon Sta to Alma Ave Diridon Sta to					
		10.01.225d	Elevated Structure - 2 Track (50' Avg. Pier Ht) - 150' Spacing	0.142	RM	139,370,872.82	/RM	19,790,664
		10.01.226e	Elevated Structure - 2 Track (60' Avg. Pier Ht, 150' Span)	0.114	RM	141,833,951.32	/RM	16,169,070
		10.02.040	Diridon-Tamien - 2 Track	1.059	RM	133,481,722.79	/RM	141,357,144
		10.02.041	Diridon-Tamien - 4 Track	0.517	RM	327,544,059.86	/RM	169,340,279
		10.10.120	Direct Fixation Trk - 2 Trk	1.348	RM	4,243,224.83	/RM	5,719,867
		10.10.140	Direct Fixation Track - 4 Track	0.485	RM	8,575,433.96	/RM	4,159,085
		10.14.150	Direct Fixation Crossover #15	1.000	EA	2,401,862.40	/EA	2,401,862
		20.06.211	Bike Path Realignment (Almaden Expy)	1.000	EA	21,023,374.97	/EA	21,023,375
		20.07.020	Rdwy, New AC Paving - Access Rd	9,800.000	SF	160.56	/SF	1,573,496
		40.02.005	Sanitary Sewer, 24"-36"	750.000	LF	185.78	/LF	139,335

Alt	Sub Section	UPE	Description	Takeoff QTY		Grand total Unit Price		Grand Total
		40.02.013	Telecomm/Fiber Optic UG, All Sizes	2,040.000	LF	266.69	/LF	544,039
		40.02.020	Electric OH, 115 kV	1,400.000	LF	230.75	/LF	323,047
		40.02.024	Transmission Tower	1.000	EA	579,040.00	/EA	579,040
			SS3 San Jose to Monterey Corridor:Diridon Sta to Alma Ave Diridon Sta to					383,120,305
	SS99-3		Alternative 3 Complete					
		40.04.110	Environmental Mitigation Allowance, Heavy	1.000	LS	51,759,327.67	/LS	51,759,328
		40.06.100	Temporary facilities and other indirect costs during construction	1.000	LS	63,261,400.49	/LS	63,261,400
		40.07.100	ROW Procurement Acquisition	1.000	LS	868,479,500.00	/LS	868,479,500
		50.01	Way Side Signalling equipment	6.030	RM	5,313,232.00	/RM	32,038,789
		50.04	Traffic Control and dispatching systems	6.030	RM	65,086.80	/RM	392,473
		50.05	Communications	6.030	RM	788,633.60	/RM	4,755,461
		50.07	Hazard detectors	6.030	RM	162,834.38	/RM	981,891
		60.03	Traction Power distribution: catenary and third rail	6.030	RM	2,719,677.49	/RM	16,399,655
		60.04	Traction power control	6.030	RM	85,204.43	/RM	513,783
		80.00.00	Professional Services	1.000	LS	289,478,780.41	/LS	289,478,780
		90.00.00	Unallocated Contingency	1.000	LS	122,702,051.52	/LS	122,702,052
			SS99-3 Alternative 3 Complete				/RM	1,450,763,112
			3 Alternative 3				/RM	3,142,606,252
			FJ (ALT B3) + Alt 3	57.03	RM	120,251,680	/RM	6,857,953,313

Detail Cost Budget Data (By SCC Major Task)

ALT	Subsection	SCC Major	Description	Grand Total
1			FJ (ALT A)	
		10.00	Track Structure & Track	384,900,862
		20.00	Stations, Terminal, Intermodal	152,989,321
		30.00	Support Facilities, Yards, and Shops	394,533,505
		40.00	Sitework, Right of Way, Land, Existing Conditions	1,378,592,883
		50.00	Communications & Signaling	86,791,385
		60.00	Electric Traction	117,776,359
		80.00	Professional Services	215,449,517
		90.00	Unallocated Contingency	114,445,087
			Total FJ (Alt A)	2,845,478,919
4			Scott-Alma (Alt 4)	
	SS401		Scott Blvd to Diridon Station	
		10.00	Track Structure & Track	20,601,728
		20.00	Stations, Terminals, Intermodal	166,746,009
		40.00	Sitework, Right of Way, Land, Existing Conditions	7,661,390
			SS401 Scott Blvd to Diridon Station	195,009,127
	SS402		Diridon Station to Alma Ave	
		10.00	Track Structure & Track	64,073,051
		20.00	Stations, Terminals, Intermodal	26,712,427
		40.00	Sitework, Right of Way, Land, Existing Conditions	66,086,006
			SS402 Diridon Station to Alma Ave	156,871,483

ALT	Subsection	SCC Major	Description	Grand Total
	SS99-4		Alternative 4 Complete	
		40.00	Sitework, Right of Way, Land, Existing Conditions	576,479,417
		50.00	Communications & Signaling	50,002,837
		60.00	Electric Traction	18,302,973
		80.00	Professional Services	73,408,376
		90.00	Unallocated Contingency	47,582,611
			SS99-4 Alternative 4 Complete	765,776,215
			Total Alternative 4	1,117,656,825
			Total FJ (Alt A) + Alt 4	3,963,135,744
2			FJ (Alt B1)	
		10.00	Track Structure & Track	644,036,960
		20.00	Stations, Terminal, Intermodal	196,738,466
		30.00	Support Facilities, Yards, and Shops	420,992,191
		40.00	Sitework, Right of Way, Land, Existing Conditions	1,689,515,854
		50.00	Communications & Signaling	102,153,404
		60.00	Electric Traction	144,864,922
		80.00	Professional Services	279,717,956
		90.00	Unallocated Contingency	237,327,310
			Total FJ Alt B1	3,715,347,061
1			Scott -Alma (Alt 1)	
	SS1		San Jose Diridon Sta Approach: Viaduct to I-880 (Scott to Diridon Sta)	
		10.00	Track Structure & Track	437,389,960
		20.00	Stations, Terminals, Intermodal	322,584,807

ALT	Subsection	SCC Major	Description	Grand Total
		40.00	Sitework, Right of Way, Land, Existing Conditions	55,370,956
			SS1 San Jose Diridon Sta Approach: Viaduct to I-880 (Scott to Diridon Sta)	815,345,723
	SS3		San Jose to Monterey Corridor:Diridon Sta to Alma Ave Diridon Sta to	
		10.00	Track Structure & Track	358,937,973
		20.00	Stations, Terminals, Intermodal	22,596,871
		40.00	Sitework, Right of Way, Land, Existing Conditions	1,585,462
			SS3 San Jose to Monterey Corridor:Diridon Sta to Alma Ave Diridon Sta to	383,120,305
	SS99-1		Alternative 1 Complete	
		40.00	Sitework, Right of Way, Land, Existing Conditions	856,374,064
		50.00	Communications & Signaling	38,168,614
		60.00	Electric Traction	16,913,438
		80.00	Professional Services	207,752,818
		90.00	Unallocated Contingency	95,378,060
			SS99-1 Alternative 1 Complete	1,214,586,994
			Total Alternative 1	2,413,053,023
			Total FJ (Alt B1) + Alt 1	**6,128,400,084**
2			**FJ (Alt B2)**	
		10.00	Track Structure & Track	644,036,960
		20.00	Stations, Terminal, Intermodal	196,738,466
		30.00	Support Facilities, Yards, and Shops	420,992,191

ALT	Subsection	SCC Major	Description	Grand Total
		40.00	Sitework, Right of Way, Land, Existing Conditions	1,689,515,854
		50.00	Communications & Signaling	102,153,404
		60.00	Electric Traction	144,864,922
		80.00	Professional Services	279,717,956
		90.00	Unallocated Contingency	237,327,310
			Total	**3,715,347,061**
2			**Scott-Alma (Alt2)**	
	SS2		San Jose Diridon Sta Approach: Viaduct to Scott (Scott to Diridon Sta)	
		10.00	Track Structure & Track	852,653,014
		20.00	Stations, Terminals, Intermodal	322,805,749
		40.00	Sitework, Right of Way, Land, Existing Conditions	133,264,070
			SS2 San Jose Diridon Sta Approach: Viaduct to Scott (Scott to Diridon Sta)	1,308,722,834
	SS3		San Jose to Monterey Corridor:Diridon Sta to Alma Ave Diridon Sta to	
		10.00	Track Structure & Track	358,937,973
		20.00	Stations, Terminals, Intermodal	22,596,871
		40.00	Sitework, Right of Way, Land, Existing Conditions	1,585,462
			SS3 San Jose to Monterey Corridor:Diridon Sta to Alma Ave Diridon Sta to	383,120,305
	SS99-2		Alternative 2 Complete	
		40.00	Sitework, Right of Way, Land, Existing Conditions	983,500,228
		50.00	Communications & Signaling	38,168,614
		60.00	Electric Traction	16,913,438

ALT	Subsection	SCC Major	Description	Grand Total
		80.00	Professional Services	289,478,780
		90.00	Unallocated Contingency	122,702,052
			SS99-2 Alternative 2 Complete	1,450,763,112
			2 Alternative 2	**3,142,606,252**
			Total FJ (Alt B2) + Alt 2	**6,857,953,313**
2			**FJ (Alt B3)**	
		10.00	Track Structure & Track	644,036,960
		20.00	Stations, Terminal, Intermodal	196,738,466
		30.00	Support Facilities, Yards, and Shops	420,992,191
		40.00	Sitework, Right of Way, Land, Existing Conditions	1,689,515,854
		50.00	Communications & Signaling	102,153,404
		60.00	Electric Traction	144,864,922
		80.00	Professional Services	279,717,956
		90.00	Unallocated Contingency	237,327,310
			Total	**3,715,347,061**
3			**Scott-Alma(Alt3)**	
	SS2		San Jose Diridon Sta Approach: Viaduct to Scott (Scott to Diridon Sta)	
		10.00	Track Structure & Track	852,653,014
		20.00	Stations, Terminals, Intermodal	322,805,749
		40.00	Sitework, Right of Way, Land, Existing Conditions	133,264,070
			SS2 San Jose Diridon Sta Approach: Viaduct to Scott (Scott to Diridon Sta)	1,308,722,834

ALT	Subsection	SCC Major	Description	Grand Total
	SS3		San Jose to Monterey Corridor:Diridon Sta to Alma Ave Diridon Sta to	
		10.00	Track Structure & Track	358,937,973
		20.00	Stations, Terminals, Intermodal	22,596,871
		40.00	Sitework, Right of Way, Land, Existing Conditions	1,585,462
			SS3 San Jose to Monterey Corridor:Diridon Sta to Alma Ave Diridon Sta to	383,120,305
	SS99-3		Alternative 3 Complete	
		40.00	Sitework, Right of Way, Land, Existing Conditions	983,500,228
		50.00	Communications & Signaling	38,168,614
		60.00	Electric Traction	16,913,438
		80.00	Professional Services	289,478,780
		90.00	Unallocated Contingency	122,702,052
			SS99-3 Alternative 3 Complete	1,450,763,112
			3 Alternative 3	**3,142,606,252**
			Total FJ (Alt B3) + Alt 3	**6,857,953,313**

APPENDIX D LIST OF DOCUMENTS

The following documents were used.

- FJ_Record PEPD_Design Baseline Report_May2019
- FJ_Record_PEPD_AltA_Plans_Red_April_2019_Rev1
- FJ_Record_PEPD_AltB_Plans_Red_April_2019_Rev1
- FJ_Record_PEPD_ROW_Report_April_2019
- FJ_Record_PEPD_Major_and_High_Risk_Utilities_Memo_April_2019
- FJ_Record-PEPD_BasisofQuantitiesEstimate_Report_May2019
- Memorandum - HSR San Francisco to San Jose Segment - Limited Cost Estimate FINAL
- Memorandum - HSR JM Segment - Scott to W Alma Segregation 5.7.19

The following quantity files were provided.

- FJ_Record_PEPD_AppA_Qty_20190517
- JM Draft_PEPD_AppA-Qty-v9_20190515_mod