

CONTRACT FOR CENTRAL SUBWAY

FINAL DESIGN PACKAGE # 2

**MOSCONE, UNION SQUARE & CHINATOWN
STATIONS**



**Agreement between the City and County of San Francisco
and
the Central Subway Design Group
for Architectural and Engineering Services
for the Final Design and Construction of the
the San Francisco Municipal Transportation Agency
Central Subway Project
(Third Street Light Rail Project, Phase 2)**

Contract No. CS-155-2

**Design Package #2
FINAL DESIGN OF THE
MOSCONE STATION,
UNION SQUARE/MARKET STREET STATION
& CHINATOWN STATION**

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Agreement between the City and County of San Francisco
and
the Central Subway Design Group, a Joint Venture between
Parsons Brinckerhoff, Inc. and Michael Willis Architects, Inc. and
Kwan Henmi Architecture and Planning, Inc.
for Architectural and Engineering the Final Design and Construction of
the San Francisco Municipal Transportation Agency
Central Subway Project (Third Street Light Rail Project, Phase 2)
Final Design of the Moscone Station, the Union Square/Market Street Station
and the Chinatown Station

This Agreement, dated for convenience as December 1, 2009, in the City and County of San Francisco, State of California, by and between: Central Subway Design Group ("Consultant"), a joint venture between Parsons Brinckerhoff, Inc., contracting through its subsidiary PB Americas, Inc., a corporation with its principal place of business in New York (hereinafter PB), and Michael Willis Architects, Inc., (hereinafter "MWA") and Kwan Henmi Architecture and Planning, Inc. (hereinafter "KHA"), each with their respective principal place of business in San Francisco, and the City and County of San Francisco, a municipal corporation, acting by and through its Municipal Transportation Agency (hereinafter "SFMTA" or "City").

RECITALS

A. The SFMTA desires that the Consultant render professional architectural and engineering and related services in connection with the design and construction of the Central Subway Project, Phase 2 of the SFMTA Third Street Light Rail Project.

B. A Request for Proposals was issued on March 27, 2009 ("the RFP"), and the SFMTA selected Consultant as the highest qualified proposer pursuant to the RFP.

C. Consultant represents and warrants that it is qualified to perform and that it possesses the requisite experience and resources to render the services required by the SFMTA as set forth under this Contract.

D. The City and Consultant intend that this Agreement comply with the regulations of the Federal Transit Administration of the United States Department of Transportation ("FTA").

E. On December 1, 2009, the SFMTA Board of Directors adopted Resolution No. 09-202 authorizing the SFMTA's Executive Director/CEO to execute this Agreement.

F. On March 2, 2010, the San Francisco Board of Supervisors adopted Resolution No. 68-10 approving this Agreement.

G. Approval for said Agreement was obtained from a Civil Service Commission Notice of Action for Contract Number No. PSC 7074-09/10 on December 21, 2009.

NOW, THEREFORE, THE CITY AND THE CONSULTANT AGREE AS FOLLOWS:

1. THE PROJECT.

1.1. General Description. The City does hereby engage the Consultant to perform, under the terms and conditions in this Agreement, professional services to complete the design of the Moscone Station, the Union Square Station, and the Chinatown Station (hereafter collectively referred to as "the Stations") and to perform related engineering, architectural, and construction support work for the Final Design of and related Construction Support Services for the Central Subway Project (the "Project"), which is Phase Two of the Third Street Light Rail Transit Project. The Project and the work that Consultant may perform under this Agreement are fully described in the Request for Proposals ("RFP") dated March 27, 2009, the documents referenced therein and referenced in Appendix 10 of the RFP, and Addendums 1 through 6 to the RFP, the Consultant's Proposal, and this Agreement. It is the responsibility of the Consultant to request, review and incorporate requirements for the Stations design for the Project that may be established in such referenced documents. As directed by the SFMTA, Consultant shall perform as Basic Services, Optional Services, and Additional Services all work reasonably related and necessary to the final design and support the construction of the Stations for the Project and to support the construction of the Project, as determined by the SFMTA and as that work is described in this Agreement and in the RFP.

1.2. Primary Responsibilities and Design Integration. Consultant's primary responsibilities shall be to perform and provide final design services for construction of the Stations for the Project and to coordinate and integrate with work products created, developed or prepared by City staff and the PM/CM Consultant. Consultant shall also lead the design firm assigned to Design Package # 1 (Tunnels and Utility Relocation) in coordinating design activities and integrating the final design of the Stations to the Tunnels. Consultant shall also assist and follow the lead of the design firm assigned to Design Package #3 (design of controls, communications, traction power, trackway and design integration) in coordinating design activities and integrating the final design of those systems to the Tunnels and the Stations.

1.3. Term. This Agreement shall be in effect upon final approval by the Parties and shall continue for a period of Ten (10)Years from the date that the SFMTA first issues Notice to Proceed ("NTP") to the Consultant. Upon approval by the Consultant and the SFMTA, the Agreement may be extended for up to an additional two (2) years.

2. DEFINITIONS.

For all purposes of this Agreement, the terms listed below shall be given the meaning provided. The terms and abbreviations listed in the RFP are incorporated by reference as if fully out here.

2.1. Additional Services or Additional Work means work or services requested by the SFMTA that are outside the Scope of Services set out in this Agreement.

2.2. Agreement or Contract means this Agreement for Final Design Architectural and Engineering Services and all referenced Appendices to this Agreement and approved modifications to this Agreement.

2.3. Appendix means a document or set of documents incorporated by reference into this Agreement.

2.4. Architectural and Engineering Services means the design services necessary to produce Construction Drawings, Work Product and other design deliverables necessary for the construction of the Project or otherwise deemed necessary by the SFMTA.

2.5. Award means authorization by resolution of the SFMTA Board of Directors for its staff to execute the Contract with the selected proposer, and approval of the Contract by the San Francisco Board of Supervisors.

2.6. Basic Services (Base Services) means the creation, design and provision of Work Product and work and services incidental thereto that are described or listed in this Agreement.

2.7. Bid Alternate means Work that has been designed in two or more alternative ways, which are included in construction bid documents and that call for line-item construction bids for each Bid Alternate, and which the SFMTA will select to bring a construction contract within the Project construction budget for that contract..

2.8. Bid Option means Work that may be incidental or ancillary to the CSP that is packaged in the construction bid documents for which a separate or line-item bid is sought and that would be constructed only if the SFMTA exercises its option to do so.

2.9. Branch Office means a geographically distinct place of business or subsidiary office of a firm that has a key role on the project team.

2.10. City means the City and County of San Francisco.

2.11. Central Subway Project (CSP) or Project means the planning, design and construction of the Central Subway Project, Phase 2 of the SFMTA Third Street Light Rail Project.

2.12. Chinatown Station (CTS) means the subway station to be located at Stockton Street and Washington Street, for which Consultant shall provide architecture, engineering, and construction support services as described in this Agreement.

2.13. Configuration Management System means the system that coordinates, controls, tracks, records, approves, and implements changes to the Project baseline configuration. The Project baseline configuration at any point is documented by drawings, specifications, criteria manuals, procedures, cost estimates, schedules and quality objectives approved by the Configuration Management Board.

2.14. Configuration Management Board (CMB) means the body responsible for reviewing, approving, and disapproving configuration changes for the Project to ensure that those changes meet the criteria and thresholds defined by the Configuration Management System for design changes, construction change orders, cost estimate changes, and schedule changes.

2.15. Construction Support Services means the services described in Section 3.16 of this Agreement and other services commonly provided in the construction industry in the San Francisco Bay Area to assist the owner and construction contractor in interpreting and implementing the design for the construction of the intended project.

2.16. Contract Documents or Construction Documents mean the Work Product produced by the Consultant necessary for the SFMTA to issue a call for competitive bids to construct the CSP, which shall include but is not limited to designs, working drawings, specifications, general conditions and special and/or supplementary general conditions, information for bidders, accepted bid proposals and addenda developed to set forth in detail all aspects of the design, function, and construction of the Project.

2.17. Contract Bid Package (CBP) means a set of Construction Documents for construction of a portion of the Project, as those portions are listed in Section 6.1.1 of this Agreement.

2.18. Construction Management means the daily management of the construction and quality control of the Project, including but not limited to oversight and coordination of contractors to ensure that the Project is constructed in conformance with design specifications and requirements.

2.19. Consultant means the Central Subway Design Group, a joint venture between Parsons Brinckerhoff, Inc., contracting through its subsidiary PB Americas Inc. a New York Corporation with offices located at 303 Second Street, Suite 700 North, San Francisco, CA 94107, and Michael Willis Architects, Inc., located at 301 Howard Street, Third Floor, San Francisco, CA 94105, and Kwan Henmi Architecture and Planning, Inc., located at 456 Montgomery Street, Suite 500, San Francisco, CA 94104.

2.20. Contract Compliance Office (CCO) means the SFMTA office that administers compliance with federal regulations governing Disadvantaged Business Enterprises/Equal Employment and Non-Discrimination Programs, in addition to the Small Business Enterprise Program, and the City's Human Rights Commission's Local Business Enterprise/Non-Discrimination Program. The Contract Compliance reference number for this RFP is CCO No. 08-993.

2.21. Controller means the Controller for the City and County of San Francisco.

2.22. Cost-plus-Fixed-Fee means a method compensating Consultant for Work performed under the Agreement by which the SFMTA reimburses Consultant its costs for performing the Work and also pays a Fixed Fee as compensation for having performed the Work.

2.23. Days means working days of the City and County of San Francisco (unless otherwise indicated). The use of the term “days,” “working days” or “business days” shall be synonymous.

2.24. Design Plan means a plan approved by the Parties for advancing the Work under the Agreement, including a Design Schedule, as described in Section 7 and Appendix M of the Agreement.

2.25. Discipline means the area of primary technical capabilities of Key Personnel, as evidenced by academic degrees, professional registration, certification, and/or extensive experience.

2.26. Engineer’s Estimate means the detail estimate prepared by the City based upon the quantity takeoff prepared by the Consultant. Such cost estimates shall be reviewed and accepted by Consultant.

2.27. Executive Director/CEO means the Executive Director/CEO of the SFMTA, also known as the City’s Director of Transportation.

2.28. Effective Date means the date that the SFMTA informs Consultant in writing that the Agency has received all necessary approvals for this Agreement and the Controller has certified funds for this Agreement.

2.29. Federal Transit Administration (FTA) means an operating agency of the U.S. Department of Transportation, which is a funding agency of the CSP.

2.30. Field Office Overhead Rate means the audited rate of compensation that the City shall pay Consultant as a multiplier of salary costs to compensate Consultant for administrative support of its employees who work out of offices supplied by the SFMTA.

2.31. Final Design means the architectural and engineering services and related Work to be performed by Consultant under this Agreement incorporating design products prepared by City personnel and the Project Management/Construction Management consultant.

2.32. Final Completion (Final Acceptance) means the date that the substantial completion has been declared, punch list items have been completed, and that the SFMTA Board accepts each construction contract.

2.33. Fixed Fee means the fee paid to Consultant that is Consultant’s profit and shall also cover any costs or expenses borne by Consultant that are not otherwise compensable under this Agreement.

2.34. Home Office Overhead Rate means the audited rate of compensation that the City shall pay Consultant as a multiplier of salary costs to compensate Consultant for administrative support of its employees who work out of offices supplied by the Consultant.

2.35. Key Team Members or Key Personnel means those participants on the Project who are instrumental to the success of Project or otherwise contribute in a

substantive, measurable way to the Project's development. Key Team Members may be Consultant personnel or City personnel. Consultant's Key Team Members are listed in Section 12.2.

2.36. KHA means Kwan Henmi Architecture and Planning, Inc.

2.37. Lump Sum means a method of compensating Consultant for Work under the Agreement that is a payment of an all-inclusive prefixed amount of compensation (including reimbursed costs and profit) agreed by the Parties for discrete tasks or other Work specified in a Task Order or Design Plan

2.38. Milestone(s) means a description of Work to be accomplished by date(s) certain, set out in a Task Order or Design Plan.

2.39. Monthly Progress Report means the monthly report submitted by Consultant to the SFMTA addressing Consultant's progress on Design Plans and Task Orders, the status of the CSP, an update of the Project schedule.

2.40. Moscone Station (MOS) means the subway station to be located at Fourth Street and Folsom Street, for which Consultant shall provide architecture, engineering, and construction support services as described in this Agreement.

2.41. MWA means Michael Willis Architects, Inc.

2.42. Notice to Proceed (NTP) means a letter from the SFMTA advising the Consultant of the day when Work is to commence on the Project, a Phase of the Project, or Additional Work for which the City has certified funding.

2.43. OCC means an Operations Control Center.

2.44. Optional Services means services designated to be performed by the City, but which the City at its option may assign to the Consultant.

2.45. Overhead means the costs incurred by Consultant in supporting its Work on the Project, as that term is used in applicable provisions of the FAR, cited in this Agreement, and as commonly used in the construction industry for federally funded public works projects.

2.46. Party means an entity bound by this Agreement.

2.47. Parties mean all entities bound by this Agreement.

2.48. PB means Parsons Brinckerhoff, Inc., contracting through its subsidiary PB Americas, Inc. a corporation with its principal place of business in New York.

2.49. Phase means for purposes of this Agreement one of the following stages of the Project: (1) final design; (2) construction and commissioning.

2.50. PM/CM Consultant means the Project Management/Construction Management consultant, Central Subway Partners, a joint venture of AECOM and EPC Consultants that is responsible for Program Management for the Project

2.51. Program or Project means the Third Street Light Rail Project, Phase 2, Central Subway.

2.52. Project Construction Budget means the construction cost values as described in Section 6.1. of this Agreement.

2.53. Project Design Office or Project Office means the office provided by the SFMTA to Consultant and City personnel where work by Consultant under this Agreement is to be performed.

2.54. Program Management means the daily management of the CSP by the PM/CM Consultant, including but not limited to coordination of design consultants, quality controls, financial management, funding coordination, budget and cost controls, scheduling, safety management, quality assurance management, and interagency coordination, and other related duties as may be assigned by the SFMTA.

2.55. Program Officer (PO) means the SFMTA Director, Capital Programs and Construction or other such executive as may be appointed by the City's Director of Transportation (SFMTA Executive Director/CEO) responsible for the executive oversight of the CSP, the administration of the Contract, and all contractual actions and Contract interpretation.

2.56. Program Manager (PM) means the SFMTA Manager responsible for overseeing daily management of the CSP, administration of this Agreement, and monitoring of the Consultant in its performance of the Agreement, including review and approval of Work Product and invoices, review and approval of all contractual actions and Contract interpretation.

2.57. Progress Payment Form means the form stating Work performed that Consultant shall submit with a request for payment or other invoice.

2.58. Proposal means the Consultant's written response to the RFP submitted to the SFMTA on or about July 21, 2009.

2.59. Reimbursable Expense means an expenditure by the Consultant that the City shall reimburse to the extent that such expenditure is necessary for the Project and meets all applicable requirements of this Agreement.

2.60. Request for Proposals (RFP) means the Request for Proposals for Final Design Architectural and Engineering and Construction Support Services, issued by the SFMTA on or about April 7, 2009 and the RFP Addendums 1 through 6.

2.61. Request for Services means a request from the SFMTA to Consultant to perform Additional Work.

2.62. Salary Burden means the full cost of payroll taxes and employee benefits, such as health and dental care insurance, vacation, leave, retirement and pension that are provided to employees in addition to wages.

2.63. San Francisco Bay Area means the area within the nine Bay Area counties as currently defined by the Association of Bay Area Governments ("ABAG"),

which are Alameda County, Contra Costa County, Marin County, Napa County, City and County of San Francisco, San Mateo County, Santa Clara County, Solano County, and Sonoma County.

2.64. San Francisco Municipal Transportation Agency ("SFMTA") means the agency of the City that is created by Section 8A of the Charter of the City and County of San Francisco that operates the City's public transit service, the Municipal Railway ("Muni").

2.65. Scope of Services or Scope of Work means the services, tasks, and deliverables described in this Agreement and that the Parties may otherwise contract for that the Consultant shall provide to the SFMTA under this Agreement, including Base Services, Optional Services, and Additional Services pursuant to Design Plan(s) and/or Task Order(s).

2.66. Small Business Enterprise or SBE means a for-profit, small business concern with a three (3) year gross revenues average not exceeding Twelve Million Dollars (\$12,000,000) and is certified under any of the following programs: the State of California's Small Business Program ("State Program"), the City and County of San Francisco's LBE Program ("City Program"), or the California Unified Certification Program ("Federal DBE Program").

2.67. Subprime Consultant means a second tier subconsultant firm under contract to the Consultant to provide services to the CSP.

2.68. Subconsultant means a subconsultant firm under contract with a Subprime Consultant (that is, a third tier subcontractor) to provide services to the CSP. When the terms "subconsultant" or "subconsultants" are not capitalized, those terms shall generally refer to a Subprime Consultant and/or a Subconsultant, either individually or collectively, as applicable.

2.69. Substantial Completion means the stage or designated portion of a construction project that is sufficiently complete in accordance with the relevant construction contract for the SFMTA to occupy and/or utilize it for its intended use, without undue interference.

2.70. Subtask means the activities and work necessary to perform an identified portion of the design of the Project that are included within a Task.

2.71. Task means an identified portion of the design of the Project comprised of Subtasks. Tasks are identified as shown in Appendix A "Scope of Services".

2.72. Task Order means a written directive from the SFMTA to perform specified Additional Work or Optional Work.

2.73. Term means the period as described in Section 1.3 in which this Agreement is in effect, during which Consultant shall provide the services required by this Agreement.

2.74. Total Amount means the greatest amount of compensation that may be paid to Consultant under this Agreement without amendment, as set out in Section 13.3.1.

2.75. Tunnel(s) means the twin bore Tunnel to be designed under an Agreement with PB Telamon to service the new Central Subway, as that Tunnel is described in the RFP, the Project EIR documents, and the Project preliminary design documents prepared by PB Wong.

2.76. Union Square/Market Street Station (UMS) means the subway station to be located at Stockton Street and O'Farrell Street for which Consultant shall provide architecture, engineering, and construction support services as described in this Agreement.

2.77. Utilities Relocation means the work necessary to remove and reinstall public and private utilities from the public right of way and other areas that would conflict with or otherwise impede the construction of the Project or any portion of the Project.

2.78. Work (Work Product) means all designs, drawings, schematics, specifications, reports, studies, presentations, data, specifications, design criteria, graphs, schedules, photographs, videos, recordings, pictures, memoranda, letters, computer-generated data, calculations, estimates, summaries and such other information and materials as may have been created, prepared, developed, accumulated, generated or kept by the Consultant, the Subprime Consultants or Subconsultants, in connection with the Work performed under this Agreement, whether approved, completed or in process. Work Product does not include any records or documents pertaining solely to the operation of Consultant's business that are not otherwise subject to audit under this Agreement.

2.79. Year of Expenditure (YOE) means the required budgeting metric in which project costs are estimated based on the year in which the funds will be expended (adjusting for inflation calculated from the date of the estimate to the date of expenditure).

3. SCOPE OF SERVICES.

3.1. Inclusive Services. As described in Appendix A, Consultant shall perform all customary and necessary architectural, engineering and other consulting services necessary to complete the design of the Stations for the Project, produce the Construction Documents for the Stations, and support the construction of those portions of the Project. In addition, Consultant shall perform Additional Services and/or Optional Services as the City may request that are incidental to or are otherwise required for the CSP. Consultant's Work under this Agreement shall include the following final design activities:

3.1.1. All Work required to comply with local, State and federal codes, regulations and standards, as interpreted by local, State or federal agencies, as such codes, regulations and standards may be amended during the Term of this Agreement.

3.1.2. All Work related to addressing review comments and/or incorporating appropriate review comments into deliverable documents.

3.1.3. Consult with authorized employees, agents and/or representatives and consultants of the City relative to the programming, design, bidding, award and construction of the Project.

3.1.4. Provide consultation and advice to the City as to the necessity and manner of providing or obtaining services necessary to complete the design and construction of the Project.

3.1.5. Review program requirements and existing design documents and advise the SFMTA whether such design documents are sufficient for purposes of Final Design and whether additional data is necessary before the Consultant can proceed.

3.1.6. Subcontract for or employ such personnel as necessary or required to perform the Work under this Agreement (as Basic, Optional or Additional Services), in all disciplines, including, but not limited to, mechanical, civil, electrical, plumbing, structural, signal and control systems engineers; elevators and escalators, signage, cost estimator; landscape Consultant, and other special designers and service providers as necessary for the design of fire protection, life safety, acoustical, audio/visual, lighting, specifications, signaling and control, tunneling, dewatering, traction power, security, computer infrastructure, parking and traffic control studies for designated impacted areas, and disabled access; and other disciplines necessary to complete the design of the Project. Consultant's employees and subconsultants shall be appropriately licensed by the State of California if so required. The Consultant shall submit for City approval any changes in the subconsultants listed in Appendix B. The addition of subconsultants to perform unforeseen specialty services shall require a modification of this Agreement.

3.2. Review Conceptual and Preliminary Designs. Consultant shall commence the Basic Services by reviewing the environmental, conceptual and preliminary design documents referenced in Appendix 10 of the RFP. Consultant shall confirm the validity of said design work and shall incorporate and build upon that work in its own Work.

3.3. Subconsultants. Consultant shall engage at its sole expense all engineers, architects, cost estimators, experts and other subconsultants as may be required for the proper performance of the Agreement, as provided in Section 9 (Subcontracting).

3.4. Quality Assurance. The Consultant shall be responsible for Quality Assurance and oversight of Subprime Consultants and Subconsultants..

3.5. Code Compliance.

3.5.1. The Consultant shall comply with requirements of all applicable codes, regulations, and current written interpretation thereof published and in effect during the Term of this Agreement.

3.5.2. The Consultant shall be deemed to have had notice of any applicable law or regulation announced or enacted at the time of the Effective Date, even though such law or regulation did not take effect or become operative until some date after the Effective Date. In the event of changes in such codes, regulations or interpretations during the Term of this Agreement that were not and could not have been reasonably anticipated by the Consultant and which result in a substantive change to the Construction Documents, the Consultant shall not be held responsible for the resulting additional costs, fees or time, and shall be entitled to reasonable additional compensation for the time and expense of responding to such changes. The Consultant shall be responsible, however, to identify, analyze and report to the SFMTA changes to codes and regulations that would reasonably be expected to affect the design of the Project, including changes to the California building codes and San Francisco Building Code and other applicable codes or regulations.

3.5.3. The Consultant shall immediately upon becoming aware of any such imposition or change of applicable codes or regulations, provide the SFMTA with full and detailed particulars of the changes required in the Project design and of costs involved therein, or shall be deemed to have waived any rights under this Section. In the event any governmental requirements are removed, relaxed or changed in any way after the Effective Date so as to make the Consultant's performance of unperformed Work less expensive, or less difficult, then SFMTA shall have the option either to require the Consultant to perform pursuant to the more rigorous requirements or to receive a reduction in the price of the design affected for all savings in direct costs which may be realized by the Consultant by reason of such change and appropriate adjustments in deductions for overhead and profit made so as to reflect actual savings made by the Consultant. SFMTA shall give the Consultant notice of SFMTA's determination, and anticipated savings.

3.6. Coordination of Design Team. The Consultant shall coordinate its Work with the Work of all of its Subprime Consultants and Subconsultants and that of City personnel to produce comprehensive, complete, coordinated, and accurate drawings and specifications for all elements of the Project.

3.7. Reports. Consultant shall submit written reports as requested by the SFMTA. Format for the content of such reports shall be determined by the SFMTA. The timely submission of all reports is a necessary and material term and condition of this Agreement. The reports, including any copies, shall be submitted on recycled paper and printed on double-sided pages to the maximum extent possible.

3.8. Coordination with City Departments and Personnel, Other Public Agencies.

3.8.1. SFMTA and Project Consultants. The Consultant shall coordinate, meet regularly and work with the SFMTA, Program Manager, and other assigned City staff or consultants, to keep the design progressing in accordance with the Design Plan.

3.8.2. City Agencies. As directed by the SFMTA, the Consultant shall coordinate, meet and work with and make presentations to other City agencies

and personnel. Such departments include, but are not limited to the Art Commission, the Department of Planning, the Department of Public Works, the San Francisco Public Utilities Commission, the Department of Building Inspection, the Fire Department, and the Department of Recreation and Parks, and City Administrator's Office (S.F. Convention Facilities) for the purposes of providing said agencies information about the Project and assisting the SFMTA in obtaining permits, licenses and other approvals required for the Project.

3.8.3. Other Agencies. As directed by the SFMTA, the Consultant shall coordinate, meet, work with and make presentations to outside agencies and personnel necessary to determine relevant requirements, develop designs that conform to those requirements, and assist the SFMTA to obtain required review and approvals of the designs. Such agencies include the California Public Utilities Commission, the Bay Area Rapid Transit Authority, the State Fire Marshall, and any other State or federal agency that has regulatory authority over the Project or that has a proprietary interest.

3.8.4. Funding Agencies. As directed by the SFMTA, the Consultant shall cooperate, meet with and assist the SFMTA to make presentations to the FTA, the FTA's Project Management Oversight consultant, the San Francisco County Transportation Authority, and the Metropolitan Transportation Commission ("MTC").

3.8.5. Community Representatives and Property Owners. As directed by the SFMTA, Consultant shall meet with and make presentations to representatives of communities and property owners along the alignment that may be affected by the Project.

3.8.6. Art Commission. The Consultant shall coordinate, meet and work with City departments and personnel necessary to determine relevant City requirements, develop designs, incorporate artwork under the San Francisco Public Art Program, and review and assist the SFMTA to obtain required City approvals of the designs. Artwork commissioned by the City that is to be incorporated in the Project as an integral building or site element may require coordination with the design and structure of the building or site. Involvement by the Consultant to assist in the selection of artwork by the San Francisco Art Commission and services by the Consultant to coordinate the design and structure of the building or site to accommodate the installation of such artwork shall be a part of Basic Services. As directed by the City, the Consultant shall coordinate and work with any representatives the City may designate in the selection of artists for the Project to incorporate requirements for the chosen artwork into the design for the Project. The Consultant shall make presentations to and/or attend meetings as necessary for the Civic Design Committee and the Visual Arts Committee of the San Francisco Art Commission. Substantial changes required of the Consultant to incorporate requirements for the chosen artwork into the Project after the completion and acceptance of the Design Development documents shall be Additional Services under this Agreement.

3.9. Open Design. In the performance of this Agreement, the Consultant shall, to the extent practicable, provide for maximum use of structures, machines, products, materials, construction methods, and equipment that are readily available

through competitive procurement, or through standard or proven production techniques, methods, and processes. Unless Consultant presents evidence justifying the use of a sole source and seeks prior written approval from the SFMTA, Consultant shall not produce a design or specification for the Project that would require the use of structures, forms, machines, products, materials, construction methods, equipment, or processes that the Consultant knows to be patented or that would be restrictive or written in such a manner as to contain proprietary, exclusionary, or discriminatory requirements other than those based upon performance, unless such requirements are necessary to test or demonstrate a specific thing, or to provide for necessary interchangeability of parts and equipment. When one or more brand names or trade names of comparable quality or utility are listed, they must be followed by the words "or approved equal."

3.10. Correction of Errors. Upon notice from SFMTA, the Consultant shall, without additional compensation, correct or revise any errors, omissions, or other deficiencies in such plans, designs, drawings, specifications, reports, and other services; and, in the event of any deficiencies in such plans, designs drawings, specifications, reports, or other services resulting from the Consultant's professional negligence or from the professional negligence of a Subprime Consultant and/or Subconsultant, whether or not said deficiencies have been brought to the attention of SFMTA, the Consultant shall indemnify and reimburse SFMTA for the cost of the corrective remedial work (including, without limitation, design, demolition, and construction) necessary to correct any such deficiencies and the consequences of such deficiencies caused by said professional negligence.

3.11. Furnishings, Furniture, and Equipment Not Affixed. In addition to the design Project elements specifically described herein as included in the Construction Bid Packages, the Consultant shall provide design and coordination services to accommodate furnishings, furniture, and equipment not affixed ("FF+E"), as appropriate to the program. Services associated with the actual procurement and installation of FF+E shall be Additional Services.

3.12. Information and Data. The Consultant shall request in writing any information and data it will require from the Agency for its Work. The Consultant shall identify the timing and priority for which this information and data will be required in its request for that information. Consultant shall plan its Work to allow adequate time for the City to provide the requested information. .

3.13. Use Of Computer Technology for Design and Coordination of Drawings. The Consultant shall use CADD or similar technology in developing the design for the Project. The cost of any clerical work or services related to CADD support shall be included in Basic Services. Additionally, the SFMTA and the Consultant may employ multidimensional design tools compatible with Building Information Modeling ("BIM") system, the scope and extent of which shall be determined jointly by the SFMTA and the Consultant. Consultant shall be responsible for entering applicable preliminary design documents and Consultant's Work Product into the BIM.

3.14. Authorization for Bid and Construction Support Services. The services described below as Bid Support Services in Section 3.15 and Construction Support Services in Section 3.16, below, are to be performed only on the written authorization of the SFMTA Program Manager. While the SFMTA intends to authorize

the Consultant to provide those services, the SFMTA shall do so only when (a) sufficient funds for such services have been appropriated in accordance with the budget and fiscal provisions of the City, and (b) the SFMTA in its sole discretion, without waiving any rights, has found that the Consultant has adequately performed its prior services under this Agreement.

3.15. Bid Support Services. Upon solicitation of bids by the City, the Consultant shall:

3.15.1. Participate in and assist the City with pre-bid conferences.

3.15.2. Prepare responses to bidders' questions, interpret Construction Documents, evaluate requests for substitutions and prepare addenda for approved substitutions and clarifications, and assist the City as required in responding to bidders' questions.

3.15.3. Provide the City with originals of all addenda to be issued.

3.15.4. Assist the City with review and evaluation of bids submitted, and recommendation for award of construction contract.

3.15.5. Perform necessary redesign services as may be required under Section 6 (Program Budget and Cost Controls).

3.15.6. Upon award of a construction contract, consolidate a set of Construction Documents with all addenda, accepted alternates, incorporated into appropriate specification sections or drawing sheets. From this set, provide the City with a conformed "for construction" Drawing Set and Project Manual including specifications.

3.16. Construction Support Services Upon award of a construction contract to a general contractor ("Contractor") by the City for any of the Construction Packages, and upon written NTP from the City to the Consultant to proceed with Construction Support Services, the Consultant shall provide said services as set forth below:

3.16.1. Provide an updated color and materials board, samples of textures and finishes of all materials to be used in the Project for review and approval of the City.

3.16.2. Review checklists of all special inspection and testing, equipment startups, submittals, warranties, guarantees, maintenance and operation manuals, spare parts and all other close-out documents that will be required of the Consultant's Project Manager or Contractor. As requested, advise the SFMTA and the PM/CM Consultant as to the acceptability of constructed products during the course of construction .

3.16.3. Interpret the Contract Documents and furnish original and one copy of all Contract Documents in CADD-produced reproducible form of all clarification drawings and other documentation prepared by the Consultant for issue by the City.

3.16.4. Review requests for information (RFIs), submittals, mock-ups, substitutions, and change requests properly prepared by and received from the Contractor within the time specified in the Contract Documents, and make appropriate recommendations with supporting documentation and data to the City. Any proposed substitutions or revisions shall consider priority of need to keep the construction work on schedule and minimize construction work progress delay. Consultant shall prepare the construction specifications to require the construction Contractor to prepare all necessary design documentation to support its substitutions or value engineering proposals.

3.16.5. If deemed appropriate by the City, the Consultant shall on the City's behalf prepare, reproduce and distribute supplementary drawings and specifications in response to RFIs, or as otherwise required to clarify the design intent of the Construction Documents, or to document construction change directives by the City.

3.16.6. In preparing a response to a RFI, if requested by the SFMTA, Consultant shall obtain the input of Consultant's or subconsultant's personnel who prepared or were responsible for overseeing the preparation of the design document or specification that is the subject of the RFI. Consultant and subconsultant personnel still employed but reassigned to other projects within the United States must be available within 48 hours to respond to a RFI.

3.16.7. The Consultant shall assist the Program Manager with preparation of drawings, specifications and other documents that may be necessary for the Program Manager to prepare change orders and construction change directives for City approval and execution in accordance with the Contract Documents. The City will prepare and effect any required contract modifications and change orders.

3.16.8. The Program Manager will categorize all RFIs and change orders by cause, as follows, of the RFI or change order, and so advise the Consultant. This will assist the City in tracking the amount and percentage of additional costs incurred attributable to, for example, Owner requests, Consultant errors, Consultant omissions, hidden obstructions, unforeseen conditions, Contractor errors, other Contractor-generated conditions, and new regulatory mandates. The Consultant shall indicate in writing its concurrence or objection with the Program Manager's categorization and shall recommend for City consideration any change to the category assigned.

3.16.9. Make all revisions and changes to the Contract Documents and prepare additional appropriate documents as directed by the City to correct the Consultant's errors, design conflicts or omissions at no additional cost to the City.

3.16.10. The Consultant and its subconsultants shall make visits to the Project site as appropriate to the stage of construction or as otherwise agreed by the City to: (a) be generally familiar with the portion of the construction work completed; (b) notify the SFMTA of defects and deficiencies observed in the construction work; and, (c) determine in general if the construction work is being performed in a manner indicating that the construction work when fully completed, will be in accordance with the Contract Documents. These visits are

not to be construed to require the Consultant to perform supervision or inspection of the construction work, and the Consultant shall not be required to make exhaustive or continuous on-site observations of the construction work. The Consultant shall prepare a written report of each and every site visit, and shall advise and report to the City in writing of any deviations from the Contract Documents, non-conforming items or issues of concern observed during such visits.

3.16.11. The Consultant shall attend project meetings throughout the construction phase of the Project as requested by the City. The Consultant shall require that its subconsultants make such visits and attend project meetings when appropriate to observe the progress of construction work designed or specified by them. The City will be responsible for day-to-day field inspection services, and shall cooperate and coordinate with the Consultant in matters pertaining to the Consultant's Work. The Consultant and its subconsultants shall coordinate and cooperate with the Program Manager to time its visits jointly to observe and discuss the Contractor's field work and installation to reduce duplication of work by both the Program Manager and Consultant.

3.16.12. Additionally, the Consultant, as part of Basic Services, will assign at least one senior responsible member of its design team to be available as needed for all the Station sites for the duration of construction until substantial completion, unless otherwise authorized or directed by the City. This staff member shall be authorized to represent and render decisions on behalf of the Consultant in all design and construction coordination matters, and shall be charged with representing the design team in responding to questions and clarifications needed on site to minimize disruption to construction. When assigned member(s) are temporarily unavailable for any reason (such as vacations or extended illness), the Consultant shall advise the City and assign an alternate, similarly capable and authorized individual. If other consultants representing specialty services are required to perform similar on-site services for periods agreed-to between the Consultant and the City, it is the Consultant's responsibility to coordinate the availability of other consultants and schedule such on-site services as necessary for the timely progress of the Project.

3.16.13. The Consultant shall provide Construction Support Services, which includes but is not limited to interpretation of the Contract Documents and advising the City and the PM/CM Consultant of all decisions rendered. Interpretations by the Consultant shall be consistent with the intent of and reasonably inferable from the Contract Documents and shall be in written or graphic form.

3.16.14. The Consultant acknowledges: (a) that the City will award a construction contract based on the lowest responsive bid by a responsible bidder for the construction of each of the Stations; (b) that there is no certainty that selected construction contractor(s) will cooperate willingly with the Consultant ; and, (c) that the level of administrative difficulties faced by the Consultant during the construction phase may vary substantially. Accordingly, the Consultant agrees that it shall not seek additional compensation for administrative difficulties the Consultant may encounter with the Contractor on the Project, unless the parties agree that Contractor refused to communicate with Consultant or

otherwise acted unreasonably, and that the Contractor's action forced the Consultant to expend undue and otherwise unavoidable additional professional labor hours.

3.16.15. The Consultant shall review and advise the City when requested on claims, disputes and other matters in question between Contractor and the City relating to the interpretation of the construction Contract Documents or proposed changes to the same.

3.16.16. Except as may otherwise be provided in the Contract Documents or when direct communications have been specifically authorized, the Consultant shall only communicate with the Contractor through the City. In no event shall the Consultant make any directive or communication to the construction contractor that will affect the means or methods, time, cost or quality of construction. Communications between the City and the Consultant's subconsultants shall be through the Consultant.

3.16.17. Upon request by the SFMTA or where it appears necessary from Consultant's own observations, the Consultant shall consult with the PM/CM Consultant and the Program Manager as to the Contractor's level or percentage of completion of work, quality of work, and Contractor's adherence to the design and specifications.

3.16.18. The Consultant shall advise the City to reject work (which shall include equipment procured by a construction contractor) that the Consultant believes in good faith does not conform to the Contract Documents. Whenever the Consultant considers it necessary or advisable to implement the intent of the Contract Documents, the Consultant will advise the City to require additional inspection or testing of the work in accordance with the provisions of the Contract Documents, whether or not such work is fabricated, installed or completed.

3.16.19. The Consultant shall review proposed procedures and results of testing and special inspection procedures that are required by the construction Contract Documents, and report comments to the City. Review and advise the City on special testing and/or inspection that may be required due to field conditions or as requested by appropriate authorities. It is understood that separate contracts for testing and special inspection consultants, laboratories or agencies will be arranged by the City. Consultant shall attend inspections with appropriate City consultants when requested to do so by the City as a part of Additional Services.

3.16.20. The Consultant shall review and advise the City as to the approval of substitutions proposed by the construction contractor, including advice as to whether or not acceptance of the substitutions will require substantial revision to the Contract Documents. Additional costs incurred by the Consultant for substantial revision, as determined by the City, of documents to accommodate the substitutions or equals shall be compensated under Additional Services, if not due to the Consultant's errors or omissions.

3.16.21. The Consultant shall review and advise the City as to the approval of shop drawings, laboratory reports, samples, wiring and control

diagrams, schedules and lists of materials and equipment, and other descriptive data pertaining to specified materials, equipment and storage thereof.

3.16.22. The Consultant shall review documents and materials that are required by the Contract Documents to be submitted for conformance with the design intent of the Work and with the information given in or inferable from the Contract Documents. Such review shall be made by the Consultant upon receipt of submittals that have been dated, signed and approved by the construction contractor, except where otherwise directed by the City. The Consultant may note the exceptions taken or not taken, the corrections necessary, and the resubmittals required, and will return the documents or materials with such notations to the construction contractor as directed by the City. Review and action on an item that is a component of an assembly or system shall not necessarily apply to the entire assembly or system. In its agreement with the construction contractor, the City shall include a provision (such as clause 4.2.7 for AIA Document A201, 1987 edition) specifying that the Consultant's review of the construction contractor's submittals does not alter the construction contractor's responsibility for errors and omissions in such submittals; it is the Consultant's responsibility to check the Contract Documents prior to advertisement for Bids to ensure that said provision is included. Consultant's review of the Contract Documents for this provision shall not relieve the City of its obligation to include such provision.

3.16.23. After compilation of the final punchlist by the construction contractor, the Consultant will assist the City in verifying the final punchlist, recommending changes to the punchlist, participating in site visits to determine and track the status of the acceptability of all punchlist items, participating in the final review of the Project, and will advise the City as to the approval of work performed by construction contractor.

3.16.24. Consultant shall assist the City, in arranging for building and or facility commissioning, start-up and testing, adjusting and balancing, and coordinating of operational testing and proper functioning of all installed equipment. Consultant shall submit a statement to the City as to the proper functioning of all items of equipment prior to the release of final payment to the construction contractor.

3.16.25. The Consultant shall at all times have access to the construction sites and the work performed thereon.

3.16.26. The Consultant shall have authority to make interpretations and decisions in matters relating to appearance and aesthetic or artistic effects where they do not conflict with any design element previously approved by the City and where such decisions are consistent with the intent of the Contract Documents; provided the City shall retain the authority to make all final interpretations and decisions. Whenever interpreting or making decisions concerning an integrated artwork commissioned by the City, the Consultant must obtain City approval prior to making any such interpretation or decision. The Consultant shall be responsible for any additional construction costs arising out of any aesthetic change initiated by the Consultant after the commencement of construction, unless payment to the construction contractor for and notice to the Consultant to

implement such changes have been specifically approved in writing by the City in advance of the Consultant making the changes to the Contract Documents.

3.16.27. The Consultant shall not have control or charge of and shall not be responsible for construction means, methods, techniques, scheduling, sequences or procedures, for safety precautions and programs in connection with construction of the Project; for the acts or omissions of the construction contractor, its subcontractors or any other persons performing any work on the Project (unless directly employed or retained by the Consultant); or for the failure of any of them to carry out work on the Project in accordance with the Contract Documents.

3.16.28. The Consultant shall coordinate with all artists in the installation of artwork, either by the artists, contractors or separate installers that are to be incorporated in the Project as an integral building or site element as a part of Additional Services.

3.16.29. The Consultant shall not have the authority to stop construction work unless specific authorization has been granted in writing by the City.

3.16.30. All design-build systems recommended by the Consultant and submitted by the construction contractor shall be reviewed and approved by the Consultant in a timely manner for conformance with the intent of the design drawings and specifications.

3.16.31. The Consultant shall prepare record drawings showing changes and relations in the Work made during construction based on marked-up prints, drawings and other data furnished by the construction contractor to the Consultant. The City understands and acknowledges that the Consultant must evaluate and verify the accuracy or completeness of information which will be furnished to the Consultant by other parties and required to be incorporated into the record drawings. The Consultant shall be responsible for any inaccuracies, errors, omissions, ambiguities, or conflicts that may be introduced into the record drawings to the extent due to the fault of the Consultant.

3.16.32. Warranty Services. The Consultant shall assist the SFMTA in conducting warranty inspections during the warranty period. The final warranty inspection shall take place no earlier than the twenty-third (23rd) month following Final Completion and no later than the twenty-fourth (24th) month following completion of construction work and construction punchlist work under this Agreement. In the event that systems, components, equipment, and finishes fail to meet the specified performance criteria or the terms of specific product warranties at any time prior to the Final Warranty Inspection, the Consultant shall observe and review the condition of completed construction work, and provide assistance to the City to develop a list of Corrective Warranty work and a schedule for completion.

3.17. Operations Control Center Design Consultant shall perform as Additional Services feasibility studies, conceptual and preliminary design engineering services, and any required environmental studies for the OCC. If directed by the SFMTA, Consultant shall provide the final design of the OCC as Additional Services.

4. DESIGN RESPONSIBILITY AND STANDARDS.

4.1. Responsibility for Design. In all Work performed under this Agreement by Consultant, Subprime Consultants, and Subconsultants, the Consultant shall be responsible for the professional quality, technical adequacy and accuracy, timely completion and coordination of all Work, including but not limited to plans, designs, drawings, specifications, quantity takeoffs and cost estimate review, reports, and other services prepared or performed by the Consultant, Subprime Consultants and Subconsultants under this Agreement. Consultant shall be responsible for the performance of the Work of all architects, engineers, cost estimators, experts and subconsultants engaged by the Consultant, including maintenance of schedules, correlation and coordination of designs, and resolution of differences between them. As directed by the SFMTA, Consultant shall be responsible for reviewing, responding with comments (where Consultant finds defects or deficiencies), and recommending for construction the design work on the Project performed by engineers and architects employed by the City. Consultant shall be responsible for coordinating and integrating work on the Project performed by engineers and architects employed by the City with Consultant's Work, and incorporating the Work of Consultant and the design work product performed by the City into the applicable Work Product or Construction Documents.

4.2. Standard of Performance. The Consultant shall perform its Work to conform to highest professional standards applicable to the types of services and work provided hereunder as measured by professional engineering standards applicable in the San Francisco Bay Area. The remedies herein are nonexclusive, cumulative and in addition to any other remedy available to SFMTA under this Agreement or otherwise provided by law or in equity.

4.3. No Waiver. SFMTA's approval of any of the Work Product or services shall not in any way relieve the Consultant of responsibility for the technical adequacy or accuracy thereof. Neither SFMTA's review, approval, acceptance of, nor payment for any of the services or Work Product shall be construed to operate as a waiver of any rights under this Agreement.

4.4. Expertise. Consultant represents that it, its employees, and its Subprime Consultants and Subconsultants possess the professional and technical expertise and experience necessary to perform the Work required under this Agreement.

4.5. Qualified Personnel. Work under this Agreement shall be performed only by competent personnel under the supervision of and in the employment of Consultant, Subprime Consultants or Subconsultants. Consultant's personnel and subconsultants shall comply with the licensing requirements of the State of California in their respective Disciplines. Consultant shall comply with City's reasonable requests regarding assignment or reassignment of personnel, but Consultant must supervise all personnel, including those assigned or reassigned at City's request. The Consultant shall submit for SFMTA approval for each employee working on the Project: employee's resume, direct hourly labor rate, overhead rate, task number, and description of employee's proposed work effort with estimated duration of effort.

5. PROGRAM DIRECTION.

5.1. SFMTA Direction. Consultant shall perform all work under this Agreement under the direction of and to the satisfaction of the SFMTA's Program Officer and Program Manager. The work to be performed by Consultant under this Agreement shall be subject to the Program Direction of the SFMTA. As used in this Agreement, the term "Program Direction" shall include but not be limited to the following:

5.1.1. Directions to Consultant, which shift work emphasis between tasks, require pursuit, redirection, modification or termination of certain activities, or otherwise provide information and program guidance to Consultant.

5.1.2. Review and, where required, approve, disapprove, accept or refuse submittals or other product prepared by Consultant in the performance of its services in accordance with the Design Schedule (described at Section 7.1, infra).

5.1.3. Assign or reassign staff to perform particular tasks.

5.1.4. Attend meetings at regular frequencies as determined by the Program Manager or as requested by Consultant to manage the day-to-day progress and requirements of the Project.

5.2. SFMTA Program Manager. Consultant shall direct any request for clarification or other communication concerning Program Direction first to the SFMTA's Central Subway Program Manager. In performing the services provided for in this Agreement, the SFMTA CSP Program Manager identified below shall be the Consultant's liaison with the SFMTA.

John Funghi
Central Subway Program Manager
San Francisco Municipal Transportation Agency
821 Howard Street
San Francisco, CA 94103
tel: 415-701-4299
fax: 415-701-5222

5.3. Evaluation of Consultant's Performance. The Consultant shall meet with SFMTA no less than quarterly to evaluate Consultant's performance under the Contract with respect to the following:

5.3.1. Consultant's adherence to this Agreement;

5.3.2. Quality of performance of Key Team Members and other staff assigned to the Project;

5.3.3. Quality of performance of Subprime Consultants and Subconsultants;

- 5.3.4. Management of authorized budget for each Task;
- 5.3.5. Adherence to agreed schedule;
- 5.3.6. Quality of deliverables;
- 5.3.7. Monitoring, reporting and updating of progress of assigned work;
- 5.3.8. Timeliness in resolving issues, including issues arising from performance evaluations;
- 5.3.9. Working relationship between Consultant's team and other agencies.

Should the SFMTA be dissatisfied with more than two of the above categories of Consultant's performance in the same evaluation, SFMTA will render a negative evaluation on the Consultant's performance for that quarter. In such cases, the Consultant shall be required to formulate and deliver to the SFMTA within five (5) working days a corrective action and schedule plan to be followed by the Consultant with results reported to SFMTA monthly until the problem areas have been resolved or otherwise improved to the SFMTA's satisfaction.

6. PROGRAM BUDGET AND COST CONTROLS.

6.1. Construction Budget. The "Construction Budget", as set out below, represents the budget for bid and award of the construction contracts listed below. The Construction Budget may not be changed unless such changes are documented and effected through the Project's Design Control Procedures as set out in the Project Management Plan.

6.1.1. The 2009 Base Year Cost as of the Effective Date of this Agreement for each Station Construction Bid Package are as follows:

CBP 4 (Union Square/Market Street Station)	\$168,016,000
CBP 5 (Chinatown Station)	\$143,176,000
CBP 6 (Moscone Station)	\$86,629,000

The 2009 Base Year Cost excludes construction contingencies, year of expenditure escalation and alternates, either additive or deductive, the cost of furniture, operating and office equipment, system wide networks, and the cost of artwork that is to be incorporated in the Project as an integral building or site element. The Construction Budget shall be reviewed and amended as set forth herein upon completion of 65 percent, 90 percent, and 100 percent completion for each of for each of the above Construction Bid Packages. The Construction Budget as of the Effective Date is attached hereto as Appendix O.

6.1.2. The 2009 Base Year Costs for the Stations, as listed in the preceding section, includes all construction costs except for the following:

- a. The estimate for UMS and MOS do not include the SFMTA's Public Art Contribution to the Arts Commission, and costs for permanent station utility connection fees, and the cross passage;
- b. The estimate for CTS does not include the SFMTA's Public Art Contribution to the Arts Commission, and costs for permanent station utility connection fees;

6.1.3. Amendments to the Construction Budget shall be determined as follows:

(a) The City shall prepare detailed cost estimates. Consultant shall provide quantity takeoffs for the Project elements covered under this Agreement using the Work Breakdown System ("WBS") provided by the City. Consultant shall review the construction cost estimates provided by the City and shall provide comments.

(b) If the Consultant disagrees with the City's estimate of the Construction Budget and the disagreement cannot be resolved by conferring with the City's Program Manager, the Consultant may request that the City cause to be prepared an independent third party cost estimate by a reputable estimator acceptable to the Consultant and the City. The cost of this third party estimate shall be shared equally by the City and the Consultant. Said third party cost estimate shall not be binding on any party, but will provide a basis and measure for further mediation of the dispute.

(c) The process for reviewing and amending the Construction Budget is summarized in the following table:

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<p>[Construction Budget] =</p> <p>Construction Budget for each Construction Contract Package will be recalculated after each of the submittals leading up to bid.</p>	<p>[Σ2009 or Current Base Year Cost]</p> <p>Base Year Cost will be the sum of the direct capital construction costs in 2009 base year dollars for each of the project elements that make up the Construction Contract Packages. Base year costs as defined by FTA do not include allocated contingency and do not include escalation to year of expenditure. Project elements included in each Construction Contract will be identified using the FTA Standard Cost Classification (SCC) categories to be listed in Appendix N of Terms and Conditions. The reference cost estimate is: "<i>Central Subway Project, 2009 Capital Cost Estimate</i>" Rev 0, August 31, 2009.</p>	<p>+ [ΣAgreed Adjustments]</p> <p>All allowed adjustments to the above base year Construction Budgets require approval of the Central Subway Configuration Management Board (CMB). Adjustments will be requested to reflect:</p> <ul style="list-style-type: none"> o Changes in Project Configuration o Design Development[– i.e., a change in the quantities or quality of materials resulting from refinement/advancement of design) o Adjustments to Year of Expenditure (YOE) o Materials cost escalation as determined using published ENR construction cost indexes o Adjustments due to unforeseen conditions at time of bid (e.g., excessive escalation of indirect costs such as fuel and availability of labor) o Allocated contingencies o Adjustments to cost components shall be documented by originator and reviewed by other contributors (SFMTA and it's Consultants and Stakeholders)
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6.1.4. For each Station, the Consultant is responsible for designing a comprehensive and complete Construction Contract Bid Package that does not exceed 105 percent (105%) of the Construction Budget for that Station.

(a) In the event that cost estimates developed at 100% design completion or changes initiated by Consultant in quantity estimates or construction materials during design development between 90% and 100% completion indicate that the Construction Cost will exceed One Hundred Five Percent (105%) of any Construction Budget for a Station, Consultant shall, at the request of the City and at no additional cost to the City (i.e., for no further reimbursement, Fixed Fee or other compensation), revise the design and Construction Documents, plans and specifications for that Station until the construction cost does not exceed One Hundred Five percent (105%) of the Construction Budget for that Station, subject to the conditions listed in Section 6.1.2.

(b) In the event that the City receives a responsive lowest bid from a responsible bidder that exceeds One Hundred Five Percent (105%) of the Construction Budget for a Station, the Consultant shall, at the request of the City and for only additional compensated costs (but no additional Fixed Fee): (a) revise the design and Construction Documents, plans and specifications for that Station and (b) assist the City with negotiating or re-bidding of the contract for that Station, until the construction cost does not exceed One Hundred Five percent (105%) of the Construction Budget for that Station, subject to the conditions listed in this Section 6.

6.1.5. Bid Alternates:

(a) The intent of the SFMTA is to use Bid Alternates when the anticipated Construction Cost Estimate is expected to exceed the Construction Budget and the Consultant has exhausted all other avenues available to meet the Construction Budget.

(b) Pre-Bid: The Consultant and the City will confer at all phases of design and before the design of any alternates.

(c) The Consultant shall design Bid Alternates to be incorporated into each Construction Contract Package. Bid Alternates shall be clearly identified and set out in the Construction Documents. Bid Alternates will be identified and recommended by the Consultant at 65 Percent Design Submittal. The City shall determine the order in which it would accept such Bid Alternates in the Construction Bid Package. A \$200,000 Allowance in aggregate has been established in Basic Services to be used for designing Bid Alternates. This allowance includes labor, overhead and Fixed Fee.

6.1.6. In the event that redesign services are necessary after the City has received bids for construction of a Station, the City shall cooperate with the Consultant in approving design changes, including, if necessary, changes which reasonably affect the size and quality of the Station. The final decision as to what elements of the Project are redesigned shall rest solely with the City. The

Consultant must complete any redesign within two (2) months of notification by the City of its intent to redesign.

6.1.7. In the event that redesign services are performed after the Consultant has received notification by the City to redesign and modify the Contract Documents, preparation of modified Construction Documents and review and acceptance of the Engineer's Estimate of Construction Cost prepared by the City's consultant, and obtaining City approval of the final Construction Documents, shall be the limit of the Consultant's strict responsibility arising out of the establishment of the Construction Budget. This, however, shall in no way limit the Consultant's responsibility or the City's remedies in the event that the reason that the Construction Budget was exceeded was the result of the Consultant's negligent acts, errors or omissions.

6.1.8. Should the City accept a bid for a Construction Bid Package which exceeds the Construction Budget for that portion of the Project or for the overall Construction Budget for the Project, Consultant shall not receive a proportional increase in the Fixed Fee. A Construction Budget may be adjusted in the SFMTA's sole discretion based on changes in market conditions and rates as documented by changes in relevant indexes published in the Engineering News Record (ENR). Construction Budget Limits also may be adjusted based on changes in Project scope, as quantified by the Central Subway Design Change Control Process.

6.2. Cost Estimating

6.2.1. Within two months of the SFMTA's issuing NTP to Consultant, the Consultant shall review the existing conceptual and preliminary design documents for the Project and shall also review the Construction Budgets for each Contract Bid Package, as listed in Section 6.1.1. Within three months of NTP, Consultant shall then prepare quantity takeoffs to be used by the City's Consultant to prepare an update to the Project Construction Cost ("Cost Estimate") for SFMTA approval. The quantity take-offs and estimating units shall be consistent with the level of design completion and be accompanied with a statement of assumptions regarding design contingencies and exclusions.

6.2.2. The SFMTA will provide or cause to be provided the updated unit pricing, and the Consultant will provide the construction quantities necessary to create the Cost Estimate at the following phases of design: 65 percent, 90 percent completion of Construction Documents; and 100 percent Construction Documents for each Construction Bid Package. The Consultant will be provided a copy of the resulting completed Cost Estimate for review and comment.

6.2.3. With each update to the Cost Estimate, consultant shall consider all changes to estimated costs as cost trends, and the Consultant shall analyze such information to determine the cause of the cost change, reconcile cost estimate variances with the contemporaneous cost estimates by the City and/or another consultant for the Project, and present the reconciled Cost Estimate to the City for approval according to the City Configuration Management Procedure (CMB).

6.2.4. The Consultant shall review and accept the Engineer's Estimate of Construction Cost based on the complete (100 percent) Construction Documents issued for bidding, and considering the Construction Budget for the Project.

6.3. City Cost Change Control Procedure.

6.3.1. The Consultant shall assist and cooperate with the City to control design or scope changes that would affect the cost of the Project during the Project design and construction. The Consultant shall comply with any cost change control procedure as may be established by the City or another consultant for the Project. The purposes of the procedure are:

- (a) To assure that the City requirements for the Project are met;
 - (b) To assure that estimated construction costs are understood as the design is developed, and remain within the Project Construction Budget ;
 - (c) To assure that all proposed changes to the design properly analyze cost effects;
 - (d) To avoid unnecessary re-design of Work by the Consultant;
- and
- (e) To avoid unnecessary additional costs to the City.

6.3.2.

6.3.3. The Consultant shall fully inform the City of any proposed changes to the design recommended by the Consultant, or to the scope of the Project requested by the City or other stakeholders, that would increase or decrease the estimated construction cost for the Project. The Consultant shall support the PMCM in reviewing with the City the benefits and costs of the proposed changes, including the potential impacts to the City's operating costs for the Project. The Consultant shall complete a Change Request Form provided by the City providing a summary of any proposed change, and attach such other analyses as may be appropriate for City consideration. Should the recommended change increase the estimated cost of the Project, the Consultant shall cooperate with the City to identify other changes to the Project that could reduce cost and offset the recommended increased cost, for approval by the City. No change shall be incorporated into the Construction Documents unless it has been first approved by the City by written approval of the Change Request Form.

6.3.4. City approval of any change in the design shall not entitle the Consultant to a change in the Consultant's Fixed Fee, unless the scope of the Project changes and the SFMTA approves additional cost in writing.

6.4. Task Budgets. During performance under this Agreement, the Consultant shall manage its work and that of its Subprime Consultants and Subconsultants so that all services are provided and performed in a cost-

effective and efficient manner. Within each Design Plan, a task budget shall be established for each task. The Consultant shall complete its work and services within said task budgets. The SFMTA will control the budget at the work Sub-Task level. Sub-task budgets may be modified only upon authorization of the SFMTA Program Manager. Sub-task budgets shall not be increased because of any unwarranted delays, conduct or costs attributable to the Consultant, but will be increased by SFMTA in the event of Additional Work within or affecting a task, because of unavoidable delay by any governmental action, or other conditions beyond the control of the Consultant that could not be reasonably anticipated.

6.5. Retention. The SFMTA shall retain Five Percent (5%) of every payment to Consultant as security of the faithful performance by the Consultant of all the conditions, covenants and requirements specified or provided in this Agreement. The City shall release amounts retained to Consultant as follows:

6.5.1. Upon SFMTA Board's award of a Station construction contract, the SFMTA will release 75 percent of amounts retained from payments for the design work of that Station construction contract. The SFMTA will release the remaining amounts held in retention for design work upon the SFMTA's acceptance of work as substantial construction completion of the Stations.

6.5.2. City shall release all remaining amounts held in retention upon the City's acceptance of Consultant's Work.

6.6. Accounting of Retention. Consultant shall track its work and invoices so that retention held for design of each Station, respectively, may be separately accounted. Consultant shall provide back-up documentation showing such accounting with any request for release of retention.

6.7. Letter of Credit in Lieu of Retention. Consultant, in lieu of retention, may submit to the City an irrevocable letter of credit drawn from a bank and on a form acceptable to the City for the value of the retention for which Consultant seeks release.

7. PROGRAM SCHEDULE.

7.1. Schedule of Services. Attached to this Agreement as Appendix M is a preliminary Design Schedule indicating the times and sequences assumed for the completion of all services required under this Agreement. Within fifteen (15) Days after the SFMTA issues NTP to the Consultant, the Consultant shall submit for City approval a final progress Design Schedule. The progress Design Schedule shall be in the form of a progress Gantt (schedule bar) chart indicating phases, tasks, durations and times, and sequences of key activities and tasks, including City and other required reviews and approvals as related to the services in this Agreement, but excluding detailed construction schedules. Upon the SFMTA's approval of the Design Schedule, the Consultant shall adopt the Design Schedule as a baseline schedule, and on a monthly basis submit a progress schedule update to the Design Schedule indicating actual progress compared to the baseline schedule.

7.2. Time is of the Essence. Consultant agrees that time is of the essence with respect to the performance of all provisions of this Agreement and with respect to

all Project schedules in which a definite time for performance by Consultant and Consultant's subconsultants is specified; provided, however, that the foregoing shall not be construed to limit or deprive a Party of the benefits of any grace period provided for in this Agreement. The Parties acknowledge that delay is one of the greatest causes of waste and increased expense in any construction project. Consultant shall act diligently in anticipating and performing its required tasks as identified in Appendix A in a manner so as to not delay the prosecution of any Work.

7.3. Force Majeure. Notwithstanding anything in this Agreement, Consultant, including Consultant's subconsultants, shall not be responsible hereunder for any delay, default or non-performance of this Agreement, if and to the extent that such delay, default or nonperformance is due to an act of God, natural disaster, strike, national emergency, government action or other action or reason rendering Consultant's timely performance beyond its reasonable control. To the extent that Consultant becomes aware of such uncontrollable forces that could or will impact the SFMTA, Consultant shall use all reasonable effort to mitigate the harm or damages that the CSP might incur by such uncontrollable forces.

7.4. Extension of Time. If the Consultant has been delayed through no fault of its own, and as a result will be unable, in the opinion of the SFMTA, to complete its performance fully and satisfactorily within the time provided in the Design Schedule, the Consultant, upon submission of evidence of the causes of the delay and an amended Design Schedule, the SFMTA may in its discretion grant an extension of time for performance equal of the period the Consultant was actually and necessarily delayed.

7.5. Construction Support Services. The Parties estimate that the SFMTA will require and that Consultant shall provide Construction Support Services for Eighty-Four (84) months following completion of the Construction Bid and Award. Should the Consultant be required to perform Construction Support Services for a period beyond a total duration of 84 months following completion of the Construction Bid and Award, due to no fault of the Consultant, the Consultant shall be entitled to additional compensation, conditional upon Consultant's providing to the SFMTA complete and accurate documentation of all actual increased cost of performance of its services for that additional period. In the event that the construction is delayed beyond the scheduled completion date due to the fault of the Consultant, as determined by the City in its sole discretion, then the Consultant shall continue to provide Construction Support Services in accordance with this Agreement for the additional time delay attributed to the Consultant at no additional charge to the City. In such event, the City reserves all rights as against the Consultant. The Consultant may submit any disputed amounts as a claim.

7.6. Commencement of Project Work. After execution of this Agreement by SFMTA and the Consultant and certification of the Agreement by the City Controller's Office, the SFMTA will issue to Consultant a written Notice to Proceed on the Project to the amount of funds certified.

7.7. Design Plans. The Parties will meet no later than 10 days after the SFMTA issues NTP to the Consultant to agree on a Design Plan consistent with the Project milestone dates, which shall include a description of the Work that the Consultant shall complete applicable Milestones and appropriate compensation for said Milestones.

8. CHANGES IN SCOPE.

8.1. Work Revised at SFMTA Request. SFMTA may at any time by written order direct the Consultant to revise portions of the Work Product previously completed in a satisfactory manner, delete portions of the Project, or make other changes within the general scope of the services or work to be performed under this Agreement. If such changes cause an increase or decrease in the Consultant's cost of, or time required for, performance of any services under this Agreement, an equitable cost and/or completion time adjustment shall be made and this Agreement shall be modified or a Task Order issued in writing accordingly. The Consultant must assert any claim for adjustment under this Section in writing within thirty (30) days from the date of receipt by the Consultant of the notification of change or such claim shall be waived. The Consultant shall not perform any work or make any revisions to the Project Services or Scope of Work until SFMTA has provided written direction.

8.2. Proposal for Additional Work. SFMTA may, at any time, request that the Consultant perform Additional Work beyond the scope of the Scope of Work set out in this Agreement. If the SFMTA desires the Consultant to perform Additional Work, the SFMTA will submit to Consultant a request for services, to which the Consultant must respond within 30 days with a proposal for Additional Work, as described below, which the Parties will then negotiate. If the Consultant discovers any work to be otherwise out-of-scope and necessary to the Project, the Consultant shall submit to the SFMTA a proposal for the Additional Work, as described below. A proposal for Additional Work shall include:

8.2.1. A detailed description by task and subtask of the Additional Work to be performed and the means and methods that will be used to perform it;

8.2.2. Milestones for completion for each subtask and deliverables at each milestone for the Additional Work;

8.2.3. Personnel and the subconsultants to be assigned to each part of the Additional Work along with a brief justification as to why such personnel are qualified to perform the Additional Work;

8.2.4. A detailed cost estimate for each subtask of the Additional Work showing:

(a) Breakdown of estimated hours and direct salaries by individual for each activity required to complete all tasks and subtasks;

(b) Overhead, including Salary Burden costs;

(c) Estimated out-of-pocket expenses;

(d) Proposed additional Fixed Fee.

8.3. Proposal Review.

8.3.1. The SFMTA will review the Consultant's proposal for Additional Work and determine whether the proposed work is Additional Work, and if so, then negotiate a final written description of services staff assignments, deliverables, schedule requirements, and budget for all tasks and subtasks included in the Design Plan or Task Order.

8.3.2. Upon completion of negotiation, the City will direct the Consultant in writing to proceed with the Additional Work (after obtaining appropriate City approvals), which shall be memorialized in a Task Order.

8.3.3. In the event that City and Consultant cannot reach agreement on the terms of any Task Order for Additional Work, City may either cancel the Task Order and have the work accomplished through other available sources, or City may direct the Consultant to proceed with the task(s) under such conditions as City may require to assure quality and timeliness of the task performance. Under no circumstances may the Consultant refuse to undertake a City-ordered task that the Consultant is qualified to perform. The City and the Consultant shall continue to negotiate any outstanding terms under provisions of Section 26.12 (Resolution of Disputes) of this Agreement while the additional Task Order is being performed. The City shall not deny the Consultant reasonable compensation for Additional Work performed under an approved Task Order.

8.4. Request for Additional Work. If the Consultant considers any work or services to be outside the Scope of Services as established by this Agreement, the RFP and the Proposal, the Consultant shall notify the SFMTA's Program Manager, with copies to parties identified in Section 26.1(Notices to the Parties), in writing within five (5) working days of discovering such extra work or services to request authorization to perform the Additional Work. Neither Consultant nor any Subprime Consultant or Subconsultant shall be reimbursed for out-of-scope work performed without first obtaining approval of Program Manager in accordance with the procedures set forth below.

8.5. Approvals Required.

8.5.1. No services for which additional compensation will be charged under this Section or any other section of this Agreement by the Consultant shall be furnished without the prior written authorization of SFMTA specifying the changes to be performed and the price to be charged for said services.

8.5.2. Before beginning Work on any Task under a Task Order, the Task Order (which shall include the scope of services, schedule requirements, and budget) must be signed by both Parties' authorized representatives, and the Program Manager must issue authorization to the Consultant to begin work.

8.6. Consultant at Risk. If the Consultant proceeds to do work that it perceives to be Additional Work without first obtaining City's written approval in accordance with the above procedures, regardless of the amount or value of the work, the City shall have no obligation to reimburse Consultant for the work thus performed. Eagerness to respond to the City's comments or concerns, expediency, and schedule constraints will not be acceptable reasons to proceed with Additional Work without City's prior written approval.

8.7. Changes to Design Plan. The SFMTA may direct Consultant to make changes in the Design Plan at any time. The SFMTA, acting through the Program Manager, shall have the authority to direct Consultant to discontinue, perform further, or provide additional resources to the performance of any Task or Subtask included in an Design Plan or Task Order and to direct Consultant to amend a Design Plan to those ends. If the City directs such changes, the Consultant may request additional time and compensation as provided in Section 13.5.

8.8. Decrease in Scope. The SFMTA may reduce the Scope of Work of the Consultant at any time and for any reason upon written notice to the Consultant specifying the nature and extent of such reduction. In such event, the Consultant shall be duly compensated for work already performed, including the payment of all necessary costs due and payable under this Agreement prior to receipt of written notification of such reduction in scope. The SFMTA shall compensate Consultant as Additional Work for the Consultant's Revision of Work Product and other documents necessitated by the SFMTA's reduction of Consultant's Scope of Work shall be Additional Work.

8.9. Change Through Fault Of Consultant.

8.9.1. In the event that any change is required in the Work Product, a Construction Bid Package and any other plans, specifications, drawings or other documents because of a defect of design or non-constructability of design, or non-workability of details, or because of any other fault or error of the Consultant, no additional compensation shall be paid to the Consultant for making such changes.

8.9.2. In the event the SFMTA is required to pay to a construction contractor additional compensation or any compensation for Additional Work as a result of an error or omission by the Consultant that violates the applicable professional standard of care, the SFMTA may charge to the Consultant against any amount owing to Consultant any cost or expense that the SFMTA would not have sustained but for such error or omission. The SFMTA shall provide Consultant notice of a construction contractor's claim for additional compensation arising out of such error or omission and opportunity to respond to those allegations prior to assessing any charge.

9. SUBCONTRACTING.

9.1. Assignment of Work. Consultant is permitted to subcontract portions of the services it shall perform under this Agreement as provided in its Proposal and as approved by the SFMTA. Consultant may reassign work assigned to Subprime Consultants and Subconsultants as provided in its Proposal only with the prior written approval by the SFMTA. Consultant shall itself perform the work of a Subprime Consultant and of a Subconsultant for at least one (1) Construction Bid Package, as provided in the Organization Chart attached to this Agreement as Appendix E. Execution of this Agreement shall constitute the City's approval of the firms and individuals listed in Appendix B (Directory of Subconsultants), to this Agreement as subconsultants on this Project.

9.2. Responsibility. The Consultant shall be responsible for the professional standards, performance, and actions of all persons and firms performing subconsultant work under this Agreement at any and all tiers, including but not limited to the Subprime Consultant and Subconsultant levels.

9.3. Substitutions of Subconsultants. Substitutions may be made for any subconsultants listed in Appendix B, "Directory of Subconsultants," for: (a) failure to perform to a reasonable level of professional competence; (b) inability to provide sufficient staff to meet the Project requirements and schedules; or (c) unwillingness to negotiate reasonable contract terms or compensation. Consultant may only substitute subconsultants with the prior written approval of the SFMTA Program Officer.

9.4. Prompt Payment of Subconsultants. In accordance with SFMTA's SBE Program, no later than three (3) working days from the date of Consultant's receipt of progress payments by the City, the Consultant shall pay any subconsultants for work that has been satisfactorily performed by said subconsultants, unless the Consultant notifies the CCO in writing within (10) working days prior to receiving payment from the City that there is a bona fide dispute between the Consultant and the subconsultant. Within ten (10) working days following receipt of payment from the City, Consultant shall provide City with a declaration under penalty of perjury that it has promptly paid such subconsultants for the work they have performed and stating the amounts paid. Failure to provide such evidence shall be cause for City to suspend future progress payments to Consultants.

9.5. Interest on Unpaid Amounts. If the Consultant does not pay a subconsultant as required under the above paragraphs, it shall pay interest to the subconsultant at the legal rate set forth in subdivision (a) of Section 685.010 of the California Code of Civil Procedure. This Section shall not impair or limit any remedies otherwise available to the Consultant or a subconsultant in the event of a dispute involving late payment or nonpayment by the Consultant or deficient subconsultant performance or nonperformance by the Consultant.

9.6. Retention. Consultant may withhold retention from subconsultants if City withholds retention from Consultant. Should retention be withheld from Consultant, within thirty (30) calendar days of City's payment of retention to Consultant for satisfactory completion of all work required of a subconsultant, Consultant shall release any retention withheld to the subconsultant. Satisfactory completion shall mean when all the tasks called for in the subcontract with subconsultant have been accomplished and documented as required by City.

9.7. Substitutions of SBE Firms. If Consultant wishes to substitute a Subprime Consultant or Subconsultant that is a SBE, the Consultant must make good faith efforts to use another SBE as a substitute. The Consultant shall notify SFMTA in writing of any request to substitute a SBE subconsultant (or supplier) and provide the SFMTA's CCO with any documentation requested to support the substitution. The CCO must approve the request in writing for the substitution to be valid.

9.8. Addition of Subconsultants. The City reserves the right to require Consultant to retain a subconsultant or subconsultants that possess specific expertise to provide services under this Agreement, if the City determines that the Consultant

does not have specific expertise necessary for the timely and successful completion of the Project.

9.9. Subcontracts. Consultant shall fully inform all Subprime Consultants, and shall require each of its Subprime Consultants to warrant that it has fully informed each of its subconsultants, of the terms and conditions of this Agreement. Consultant shall ensure that all services performed and material furnished and the manner by which those services and materials are provided shall conform to the requirements of this Agreement. The terms and conditions of Consultant's subcontracts shall conform to the requirements of this Agreement. Each of Consultant's Subprime Consultant contracts and a cost summary of each of those agreements shall be subject to review by the SFMTA prior to the Subprime Consultant proceeding with the work. Upon request, Consultant shall provide the SFMTA copies of any written agreements between a Subprime Consultant and a Subconsultant.

9.10. Activity Reports. The Consultant shall submit monthly reports with its monthly invoices for payment, describing all Work completed and services provided by Consultant, Subprime Consultants and Subconsultants during the preceding month and copies of all invoices relating thereto.

10. SMALL BUSINESS ENTERPRISE PROGRAM.

10.1. General. The SFMTA is committed to a Small Business Enterprise Program ("SBE Program") for the participation of SBEs in contracting opportunities. In addition, the Consultant must comply with all applicable federal regulations regarding Disadvantaged Business Enterprise (DBE) participation, as set out in Title 49, Part 26 of the Code of Federal Regulations (49 C.F.R. Part 26), with respect to DBEs performing work under this Agreement. More information on federal DBE requirements can be found on the internet at: <http://www.fta.dot.gov/library/admin/BPPM/ch7.html>.

10.2. Compliance with SBE Program. Consultant shall comply with the SBE provisions contained in the attached Appendix G, which are incorporated by reference as though fully set forth herein, including, but not limited to, achieving and maintaining the SBE goal set for the total dollar amount awarded for the services to be performed under this Agreement. Failure of Consultant to comply with any of these requirements shall be deemed a material breach of this Agreement.

10.3. SBE Goal. The goal for SBE participation is Thirty Percent (30%) of the total dollar amount awarded for the services to be performed under this Agreement.

10.4. Non-Discrimination in Hiring. Pursuant to City and SFMTA policy, Consultant is encouraged to recruit actively minorities and women for its workforce and take other steps within the law, such as on-the-job training and education, to ensure non-discrimination in Consultant's employment practices.

11. WORK PRODUCT, DELIVERABLES AND SUBMITTALS.

11.1. Construction Documents Requirements.

Work Product shall be created and maintained as follows:

11.1.1. CADD drawings shall be provided in AutoCAD R2004 or more recent version, and corresponding pen files and image files, or other computer drawing and drafting software approved by the City.

11.1.2. Written documents, spread sheets and cost estimates on Microsoft Office Suite 2003 (Word and Excel) or as otherwise agreed to by the parties.

11.1.3. Critical Path Method Schedules in Primavera Project Planner P6 Scheduling Software.

11.1.4. Audiovisual presentations in Microsoft PowerPoint 2003.

11.1.5. Image files in JPG, GIF, PIC, TIF and BMP formats. These images shall be made available on any storage format selected by the City.

11.1.6. Renderings in Adobe Photoshop 7.0 and 3D Studio VIZ, or other software approved by the City.

11.1.7. Presentation boards, mounted on 3/8-inch or 1/4-inch Gatorboard.

11.1.8. Architectural models shall be composed of painted Plexiglas, wood or other materials as requested as a part of Additional Services and as approved by the City and mounted on wooden base with optically clear Plexiglas panel covering suitable for public display.

11.2. Transmittal of Work Product. As directed by the SFMTA, upon completion of each task and subtask, the Consultant shall transmit to the SFMTA all Work Product, including but not limited to originals, produced or accumulated in the course of its and the Subprime Consultants' and Subconsultants' work under this Agreement. The Consultant's Project Manager and Key Team Members shall thoroughly review and approve all Work Product in writing prior to transmitting the Work Product to the SFMTA. Consultant shall retain a copy of all Work Product for its records. Upon the termination of this Agreement, prior to final payment, or upon demand by the SFMTA, the Consultant shall surrender forthwith to the SFMTA all Work Product prepared, developed or kept by Consultant in connection with or as part of the Project. Any use of the Work Product by a party other than the City and its contractors and consultants is at the sole risk of the user.

11.3. Reproduction of Work Product. The Consultant shall arrange and provide for printing (or other required reproduction) of three master copies of all final designs; Consultant shall also deliver all Work Product in electronic format as determined by SFMTA.

11.4. Agency's Responsibilities Regarding Submittals. The SFMTA will review and comment on Consultant's submittals generally within 15 Days of receipt or such other time as agreed by the SFMTA in the Design Schedule (described in Section 7, supra). The Agency and Consultant will establish a timetable of submittals and reviews during initial Project coordination meetings, which the Consultant shall include

in the Design Plan. The Agency's review and comments of Consultant submittals shall in no way relieve the Consultant of its independent responsibility to perform its own quality checks and review, nor shall any comment or review by the Agency relieve the Consultant of its independent responsibility to provide submittals and deliverables in full compliance with local, State and federal codes, regulations and standards.

12. CONSULTANT PERSONNEL.

12.1. Consultant's Project Manager. The Consultant agrees to commit and assign an Engineer or Architect as the Project Manager to direct Consultant's Work and to serve as the official contact and spokesperson on behalf of the Consultant in matters related to the Project for the Term of this Agreement. The Consultant's Project Manager shall have signature authority to bind Consultant. The Consultant's Project Manager must work in the Project Design Office in San Francisco for the Design Phase of the Agreement. The Consultant has identified Nasri Munfah, as the Consultant's Project Manager during the Design Phase. At the end of the design phase, the Consultant and SFMTA will review the Project Manager position in the interest of reaching a new agreement on the assignment of the Project Manager for the Construction Phase of this contract.

12.2. Key Personnel. The Consultant agrees that Key Team Members shall be committed and assigned to work on the Project to the level required by SFMTA for the Term of the Agreement, and shall work at the Project Design Office in San Francisco during the performance of the Design Phase of the Agreement. Consultant shall assign its Key Personnel to complete the Final Design, provide bid support and construction support services, unless otherwise authorized by the SFMTA. At the end of design phase, the Consultant and SFMTA shall review the list of Key Personnel in the interest of reaching an agreement on assignment of Key Personnel for the Construction Phase of this contract. The SFMTA shall not arbitrarily refuse Consultant's request to reassign a Key Team Member, but such reassignment shall not delay or otherwise harm the Project, which determination shall be in the SFMTA's sole discretion. Consultant's Key Personnel during the design phase are:

<u>PB:</u>	<u>MWA:</u>	<u>KHA</u>
<ul style="list-style-type: none"> • Nasri Munfah (PM) • Dan Yavorsky (UMS Manager – PB) • Fadi Walieddine (Electrical Lead / Interface Manager – PB) • Ken Johnson (Geotechnical Lead for PB) 	<ul style="list-style-type: none"> • Jeff Tusing (MOS Manager – MWA) 	<ul style="list-style-type: none"> • Denis Henmi (CTS Manager for KHA) • Christian Karnar – (CTS Structural Lead for Dr. Sauer Corp)

12.3. Substitution of Key Personnel.

12.3.1. Substitutions of Key Personnel will not be allowed except for extenuating circumstances, such as death, illness or departure from the firm, or with the City's prior approval, which approval will not be arbitrarily withheld as long as such substitution will not delay or otherwise harm the Project, which shall be determined by the SFMTA in its sole discretion. If it is necessary to substitute a Key Team Member, the Consultant shall propose a replacement in writing to the Program Officer for approval.

12.3.2. The Consultant shall replace any Key Team Member departing from the Project or departing from his/her assigned role in the Project with an individual of comparable experience on a non-temporary basis within thirty (30) calendar days of the departure of the Key Team Member, unless the SFMTA's Program Manager grants an extension to that time limit in writing. Consultant's failure to replace a Key Team Member shall be cause for the City to suspend invoice payments. Consultant shall not be relieved of its obligation for full performance of the Scope of Services as a result of any unfilled position. The Consultant shall be held fully responsible for any inefficiencies, schedule delays or cost overruns resulting in whole or in part from any Key Team Member departing from the Project or departing from his/her assigned role in the Project before the end of the committed duration.

12.3.3. Upon completion of the Design Phase, the Consultant may request SFMTA authorization to reassign one or more Key Personnel with persons who have the requisite experience and expertise to provide construction support services to the CSP. The SFMTA shall not unreasonably deny Consultant's requests to substitute Key Personnel from the Design Phase with. No less than 30 calendar days prior to start of construction, the Consultant shall provide for the SFMTA's consideration and review: (a) an updated organization chart (in the same format as the chart set out in the Appendix E); (b) identify the candidates that it seeks to assign as Key Team Members for construction support, and provide those persons' respective qualifications. If the Agency rejects a candidate, within 10 working days the Consultant will propose another qualified candidate for SFMTA review and approval. Once accepted by SFMTA as Key Personnel, the candidate shall be subject to the restrictions on reassignment of Key Personnel set out in this Section 12.

12.4. Construction Support. All Key Personnel who participated in the design of the Project shall be available if possible through completion of construction to respond to RFI's and otherwise provide Construction Support for the Project, as required. Key Personnel who have been reassigned by Consultant must acknowledge receipt of an RFI within 48 hours of transmission, and must respond to the RFI as provided in Section 16 of the Scope of Services.

12.5. Departure Notice and Corrective Action Plan. Consultant shall advise SFMTA immediately any time a Key Team Member severs employment or otherwise deviates from his or her committed role or time on the Project. Consultant shall provide a corrective action plan to replace that Key Team Member within 30 days of said notice. All candidates to replace a departing Key Team Member must have experience and expertise similar to the Key Team Member he or she would replace.

12.6. Reassignment Costs. Consultant shall bear any additional costs incurred in substituting personnel, including Key Personnel. Such costs include relocation expenses, expenses related to recruiting and hiring, training and learning on the job.

12.7. Liquidated Damages. Consultant acknowledges that the SFMTA's selection of Consultant and the negotiated amount of Consultant's Fixed Fee were based, in part, on the expertise and experience Consultant's proposed Key Team Members as submitted in the Proposal. The Consultant acknowledges and agrees that the replacement of Key Team Members during the course of the Project would be extremely disruptive and damaging to the City, the cost of which would be extremely difficult, if not impossible, to calculate. The Consultant, therefore, shall pay to the City a charge of Two Hundred Thousand Dollars (\$200,000) for the first Key Team Member whom the Consultant replaces without written approval by the City. For each additional Key Team Member whom the Consultant replaces without written approval by the City, the Consultant shall pay to the City a charge of Three Hundred Thousand Dollars (\$300,000). Said charges shall not be considered or act as a penalty, but shall compensate the City for the additional costs and inefficiencies to the Central Subway Project that the Parties agree will necessarily arise from the unauthorized departure of a Key Team Member of the Consultant. The SFMTA reserves the right to require Consultant to replace or reassign any personnel assigned by Consultant to the Project, including but not limited to Key Team Members. Should the City require Consultant to replace or reassign any of its personnel so that said persons are no longer working on the Project, the liquidated damages provisions of this Section 12.7 shall not apply. If the SFMTA suspends the Project longer than six months, then Consultant may reassign Key Personnel without payment of liquidated damages.

13. COMPENSATION.

13.1. Certification of Funds; Budget and Fiscal Provisions; Termination in the Event of Non-Appropriation. This Agreement is subject to the budget and fiscal provisions of the City's Charter. Charges will accrue only after prior written authorization certified by the City Controller, and the amount of City's obligation hereunder shall not at any time exceed the amount certified for the purpose and period stated in such advance authorization. Notwithstanding any other provision of this Agreement, this Agreement will terminate without penalty, liability or expense of any kind to City at the end of any fiscal year if funds are not appropriated for the next succeeding fiscal year. If funds are appropriated for a portion of the fiscal year, this Agreement will terminate, without penalty, liability or expense of any kind at the end of the term for which funds are appropriated. City has no obligation to make appropriations for this Agreement in lieu of appropriations for new or other agreements. City budget decisions are subject to the discretion of the Mayor and the Board of Supervisors. Consultant's assumption of risk of possible non-appropriation is part of the consideration for this Agreement.

THIS SECTION 13.1 CONTROLS AGAINST ANY AND ALL OTHER PROVISIONS OF THIS AGREEMENT.

The SFMTA shall promptly inform the Consultant if the SFMTA learns of a threat to Project funding, and shall work with Consultant to minimize financial impacts.

13.2. Guaranteed Maximum Costs

13.2.1. The City's obligation hereunder shall not at any time exceed the amount certified by the City Controller for the purpose and period stated in such certification.

13.2.2. Except as may be provided by laws governing emergency procedures, officers and employees of the City are not authorized to request, and the City is not required to reimburse the Consultant for, Commodities or Services beyond the agreed upon contract scope unless the changed scope is authorized by amendment to the Agreement and approved as required by law.

13.2.3. Officers and employees of the City are not authorized to offer or promise, nor is the City required to honor, any offered or promised additional funding in excess of the maximum amount of funding for which the Agreement is certified without certification of the additional amount by the City Controller.

13.2.4. The City Controller is not authorized to make payments on any contract for which funds have not been certified as available in the budget or by supplemental appropriation.

13.3. Total Amount.

13.3.1. The Total Amount of compensation under this Agreement for all Work performed by Consultant, shall not exceed **Thirty Nine Million Nine Hundred Forty Nine Thousand Nine Hundred Forty Eight Dollars (\$39,949,948)**, of which Thirty Five Million Fifty Nine Thousand Two Hundred and Forty One Dollars (\$35,059,241) is for Basic Services, and Four Million Eight Hundred and Ninety Thousand Seven Hundred and Seven Dollars (\$4,890,707) is for Optional Services. The Total Amount of compensation shall be adjusted annually based on overhead audits performed pursuant to Section 13.11 by each respective consultant of the overhead rate (which shall include the costs of procuring and maintaining the project specific insurance rider or practice rider by KHA and MWA as identified in Section 15.5). This adjustment shall be made through by amendment of the Agreement. The Fixed Fee is not tied to Consultant's overhead rates and shall not increase or decrease based on overhead audit findings.

13.3.2. The amounts listed in Section 13.3.1 above for Basic Services and Optional Services are inclusive of all direct labor costs, other direct costs, indirect costs and Fixed Fee for all Work performed under this Agreement, subject only to authorized adjustments as specifically provided in this Agreement. Said amounts shall include all Work provided on a Cost-plus-Fixed-Fee basis or on a negotiated Lump Sum Price basis. In the event the Consultant incurs costs in excess of the Total Price, adjusted as provided herein, the Consultant shall pay such excess from its own funds and SFMTA shall not be required to pay any part of such excess and the Consultant shall have no claim against SFMTA on account thereof.

13.4. Fixed Fee.

13.4.1. For all of the Consultant's Basic Services, which are all services provided by Consultant except for those tasks and work specifically identified as

Additional Work, the Agency shall pay the Consultant a Fixed Fee, which is Consultant's profit for performing the Basic Services under this Agreement. The Fixed Fee shall not exceed a sum total of **Three Million Three Hundred Eight Thousand Seven Hundred Eighteen Dollars (\$3,308,718)** for Basic Services and an additional **Four Hundred Seventy Four Thousand Eight Hundred Twenty One Dollars (\$474,821)** for Optional Services. The Fixed Fee, which is profit, will be allocated to the Prime and Subconsultants and is included in the Total Price set forth above. The SFMTA will pay Consultant the Fixed Fee proportionate to the completion of the work under the Agreement.

13.4.2. Payment of the full Fixed Fee is not guaranteed; to receive the full Fixed Fee Consultant shall fully perform all Work described in this Agreement in compliance with the standards of performance described herein.

13.4.3. The Fixed Fee is a fixed amount that cannot be exceeded because of any differences between the Total Amount and actual costs of performing the work required by this Agreement, and in no event shall payments to the Consultant exceed said Total Price, adjusted as provided herein. The Fixed Fee is based on earned value to the Project, and bears no relation to value of costs incurred by Consultant or reimbursed by the SFMTA. The SFMTA may approve an increase in Fixed Fee only if such increase is required due to an increase in the Basic Services scope of work or to Additional Work that increases the scope of work. The Fixed Fee shall not be increased for Consultant's additional level of effort to complete Basic Services. It is further understood and agreed that the Fixed Fee is only due and payable for Project work for which SFMTA has given Consultant Notice To Proceed and that the Consultant has satisfactorily completed.

13.4.4. The Fixed Fee will be prorated and paid monthly in proportion to the Project work satisfactorily completed. The proportion of work completed shall be documented by invoices and shall be determined by a ratio of the total costs to date compared to the Total Price, less profit. A payment for an individual month shall include that approved portion of the fixed fee allocable to the Project work satisfactorily completed during said month and not previously paid. Any portion of the fixed fee not previously paid in the monthly payments shall be included in the final payment. The method of proration may be adjusted by SFMTA to reflect deletions or amendments in the Project work that are approved as herein described.

13.5. Change in Scope of Services. If the Scope of Services of any Phase or other portion of the Project is reduced, that reduction shall be memorialized in an amendment to the relevant Task Order(s) or Design Plan, and the Fixed Fee for that Work shall be reduced, as negotiated by the Parties, but such reduction shall not be less than the proportional value of the reduced Work, as measured by the value of that Work set out in Appendix C (Summary of Fees) to this Agreement or other agreed document setting out the relative value of tasks. If the Scope of Services is increased, then the Parties will negotiate an appropriate Fixed Fee for the Additional Services. Any negotiations for changes in the scope of services shall be subject to the agreement of the SFMTA's Program Officer and the Consultant. The Consultant shall do no work in addition to or beyond the Scope of Services set forth and contemplated by this

Agreement unless and until it is authorized to do so by an amendment to the Agreement duly executed and approved.

13.6. Calculation of Compensation. Consultant acknowledges and agrees that the Agency shall compensate Consultant for its Work under the Agreement either by: (a) by Cost-plus-Fixed-Fee, in which the SFMTA shall reimburse Consultant Reimbursable Expenses to compensate Consultant its costs and applicable Overhead and pay a Fixed Fee proportionate to the value of the Work it has performed ("Cost-plus-Fixed-Fee") within a stated amount (amount not to exceed) as set out in Section 13.8; or (b) Lump Sum, negotiated for specific tasks approved as Additional Work, identified in an approved Task Order or Design Plan.

13.7. Redesign Due to Consultant's Error If during the course of construction, the City determines in its sole discretion that modifications to Construction Documents are required due to errors or omissions on the part of the Consultant or its subconsultants, the Consultant shall not be entitled to additional compensation for the cost of developing, preparing or reproducing the necessary revised drawings and specifications to correct said errors or omissions nor shall the Consultant be compensated in its fee for the cost of extra design work made necessary by errors or omissions of the Consultant or its subconsultants.

13.8. Cost Plus Fixed Fee Payment. For all Work that the City does not designate as Lump Sum Additional Work, the City will reimburse Consultant for Reimbursable Expenses (allowable costs) and will pay the Consultant a Fixed Fee proportionate to the value of the Work. The City will reimburse Consultant for only those expenses that are allowed under the principles set out in the Office of Management and Budget Circular A-87, "Cost Principles for State, Local, and Indian Tribal Governments" and as specifically authorized therein and as allowed under the compensability standards set out in 48 C.F.R. parts 31.105, 31.2, 31.6 and the Cost Accounting Standards set out in 48 C.F.R. part 9904 et seq. Compensation for Cost-plus-Fixed-Fee Work will be computed as follows:

13.8.1. Actual direct salaries paid by Consultant and subconsultants as shown in Appendix C; Overhead of Consultant and subconsultants as shown in Appendix C (Summary of Fees), and as described herein.

13.8.2. Actual costs or prices of approved Reimbursable Expenses for the Consultant and subconsultants at any tier, net of any discounts, rebates, refunds, or other items of value received by Consultant or any of its subconsultants that have the effect of reducing the cost or price actually incurred. Compensation for materials and expenses shall be at direct cost, without any mark-ups.

13.8.3. Consultant shall not "mark-up" or request additional compensation for work performed by subconsultants.

13.8.4. Costs for which Consultant seeks compensation must be: (a) necessary in order to accomplish the work under an accepted Design Plan or Task Order; and, (b) be reasonable for the services performed.

13.8.5. A Fixed Fee invoiced as a proportionate share of the total Fixed Fee for the task.

13.8.6. All compensation due to Consultant for all Work performed under this Agreement shall be computed in conformance with Appendix C attached hereto.

13.9. Additional Work. Where the City designates Additional Work to be performed, the Parties shall negotiate a reasonable Cost-plus-Fixed Fee amount or a Lump Sum amount as compensation for the Additional Work. The SFMTA shall in its sole authority determine which pricing method shall be used for specified Additional Work. The City shall make monthly progress payments for Lump Sum Work based on agreed Milestones or proportionate to the percentage of tasks completed, as provided an approved Task Order, where the time to complete all Lump Sum Work under the relevant Task Order exceeds one month.

13.10. Salary Rates. Compensation under this Agreement will be based on the overhead and direct salary rates as shown on the Schedule of Rates attached as Appendix C. The direct salary rates in Appendix C may be adjusted at twelve (12) month intervals, but each increase shall be no more than the Consumer Price Index (CPI). The CPI shall be defined as the Consumer Price Index for San Francisco-Oakland-San Jose, All Items, [1982-84=100] for All Urban Consumers. Consultant shall not make any individual salary adjustments above Consumer Price Index for which the SFMTA would incur additional costs unless approved by the SFMTA's Program Manager in writing and in advance. The Consultant shall not submit requests to the SFMTA asking for salary adjustments for the same individual more than once within any 12-month period. Rate increases requiring SFMTA approval shall apply only to Work performed after the SFMTA's approval of the increased rates.

13.11. Overhead Rates - Provisional Rates and Annual Audit. The overhead rates applicable to Consultant and its subconsultants are listed in Appendix H, which is incorporated by reference as if fully set out here. Field Office Overhead rates are applicable to all Consultant and subconsultant personnel who are working 40 hours a week at the Project Field Office for more than six months annually. Said employees are not working out of their home offices, and are therefore not receiving home office support in their day-to-day activities, so the hours they bill do not qualify for the Home Office Overhead rate. The Field Overhead rate is a reduced rate as consideration for the support those personnel receive from SFMTA. The purpose of the Field Office Overhead Rate is to reimburse the Consultant for the Salary Burden and home office support provided to the field employees. Home Office Overhead rates are applicable to all other personnel who provide non-continuous or part time services to the project.

The rates set out in Appendix H are provisional and shall apply only for one year following NTP. Commencing within three months after the first anniversary of NTP, the City may audit Consultant's and subconsultants' books and records to determine the actual rates of compensation due. The Federal Acquisition Regulations (FAR) shall be used for the purposes of this audit to provide guidance as to the calculations of the Overhead rates and Reimbursable Expenses to the extent the FAR does not conflict with standards set out in this Agreement. Based on the audited rates, the City shall then pay to Consultant or Consultant shall refund to the SFMTA any difference between amounts paid and amounts actually owed. The audited rates shall then be used as

provisional rates for one the following year, until again reset by the City's audit of Consultant's books and records, which will commence each year within three months of the anniversary of NTP. Overhead is included in compensation for Work performed by Contractor that the City pays as a negotiated Lump Sum, and Lump Sum payments are not subject to adjustment by audit.

13.12. Transfer of Unused Funds. Consultant may request City's approval to transfer unused funds from one subtask to another subtask within the same main task to cover the unexpected shortfall of another subtask provided that the need for additional funds to complete the subtask is not due to Consultant's poor management or planning. Consultant may request City's approval to transfer unused funds from one task(s) to other tasks to cover the unexpected shortfall of the other Tasks, provided that if in the opinion of the Program Manager the funds are no longer necessary for the original task(s) for which the funds were allotted and the main reason for the task(s) requiring additional funds is not due to Consultant's poor management or planning. Such request must be made in writing to the Program Manager at least 15 calendar days in advance of the need to transfer funds across subtasks. City's approval of subtask or task amount changes will not be unreasonably withheld. City's approval shall be by the SFMTA Program Manager.

13.13. Non-Reimbursable Expenses. Consultant shall be compensated only for those Reimbursable Expenses authorized in Appendices C and D and that are allowed under Office of Management and Budget Circular A-87, "Cost Principles for State, Local, and Indian Tribal Governments," and under the compensability standards set out in 48 C.F.R. parts 31.105, 31.2, 31.6 and the Cost Accounting Standards set out in 48 C.F.R. part 9904 et seq. If an expense is not a Reimbursable Expense or Overhead, the City shall have no obligation to compensate Consultant for it. Notwithstanding any other provision of this Agreement, computer usage, facsimile and telecommunication expenses shall be considered Overhead and will not be accounted as Reimbursable Expenses. Consultant and subconsultant personnel entertainment or personal expenses of any kind shall not be considered Overhead or a Reimbursable Expense under this Contract. Office and field supplies/equipment expenses are not reimbursable expenses unless said supplies and equipment can be demonstrated to be out of the ordinary and used exclusively for this Project. Vehicle expenses that are beyond those calculated on a cost-per-mile or lease basis as listed in Appendix C are not reimbursable.

13.14. Prepayment. Unless the Program Manager gives specific written authorization, Consultant shall not submit invoices and the City shall not pay or otherwise reimburse Consultant for costs of any kind that the Consultant has not actually incurred and paid prior to date of invoice.

13.15. Refunds, Rebates and Credits. Consultant shall assign to the City any refunds, rebates or credits accruing to the Consultant that are allocable to costs for which the Consultant has paid or has otherwise reimbursed the Consultant or for which the Consultant will submit an invoice to the City for reimbursement.

13.16. Payment of Invoices. Compensation shall be made in monthly payments on or before the last day of each month for Work, as set forth in an Design Plan or Task Order, that the Executive Director/CEO of the SFMTA or his designee, in his sole discretion, concludes has been performed as of the last day of the immediately

preceding month in accordance with the Scope of Services attached to this Agreement as Appendix A and applicable Design Plans and Task Orders. The City shall endeavor to issue payments of undisputed amounts to the Consultant within thirty (30) calendar days following the receipt of complete and accurate invoices. City shall make payment to Consultant at the address specified in Section 26.1 (Notices to the Parties). All amounts paid by City to Consultant shall be subject to audit by City.

13.17. No Interest on Late Payments.. In no event shall City be liable for interest or late charges for any late payments.

13.18. Payment Limitations.

13.18.1. The City shall incur no charges under this Agreement nor shall any payment becomes due to Consultant until the Work Product and other services for which payment is requested and required under this Agreement are received from Consultant and approved by SFMTA as being in accordance with this agreement.

13.18.2. The City may reasonably withhold payment to the Consultant pending resolution, in an amount equal to questioned, disputed, or disapproved amounts, or for work not satisfactorily completed or delivered as required by this Agreement or for amounts incurred by the City in connection with the Consultant's negligent errors or omissions. Payments for undisputed amounts due on the same or other invoice shall not be unreasonably withheld or delayed.

13.18.3. If the evidence of production, the quality of the work, or the costs expended are not consistent with the budget and the schedule for an assigned task, the Consultant shall justify to the SFMTA's Program Manager the costs and Fixed Fee invoiced. The Program Manager will review the justification offered and adjust the monthly payment as deemed necessary. These requirements shall also apply to Work by subconsultants. No invoice shall be rendered if the total Work done under this Agreement since the last invoice amounts to less than Fifteen Hundred Dollars (\$1,500), except that an invoice may be submitted if three (3) months have elapsed since the last invoice was submitted. No more than one invoice shall be submitted in a month.

13.19. Invoices.

Invoices furnished by Consultant under this Agreement must be in a form acceptable to the City Controller. The Consultant shall submit invoices in quadruplicate for all allowable charges incurred in the performance of the Agreement. Each invoice must contain the following information:

1. Contract Number
2. Design Plan or Task Order Number
3. Name, position, hourly rate and hours worked of employee(s) whose labor is invoiced
4. Description of the work performed or services rendered

5. Cost by employee (per hour or other agreed increment of measure) and other direct costs
6. Subconsultant costs supported by invoice itemization in the same format as described here
7. Fixed-Fee for current invoice period and amount of Fixed Fee paid as of date of invoice
8. Total costs
9. SBE utilization report (MTA Form 6)
10. Certified payroll records substantiating all labor charges for Consultant and all subconsultants shown on the invoice

13.20. Progress Payment Form. The Controller is not authorized to pay invoices submitted by Consultant prior to Consultant's submission of the SFMTA Progress Payment Form. If the Progress Payment Form is not submitted with Consultant's invoice, the Controller will notify the SFMTA and Consultant of the omission. If Consultant's failure to provide the SFMTA Progress Payment Form is not explained to the Controller's satisfaction, the Controller will withhold twenty percent (20%) of the payment due pursuant to that invoice until the SFMTA Progress Payment Form is provided.

13.21. Documentation for Payment. Invoices shall be submitted together with the Monthly Progress Reports, Monthly Cost Control Report and Monthly Update Schedule, the contents of which are defined herein, and shall be submitted by the 21st day of each month for work performed in the preceding month. The Monthly Cost Control Report shall include the current completed percentages for each task and subtask, the current estimated labor hours and cost for each Discipline to complete each of the tasks, an itemized breakdown of dollars and hours by employee and by subtask for all Consultant and subconsultant charges for the month being invoiced (accounting for a minimum of 28 calendar days of the month), and an itemized breakdown of out-of-pocket expenses by task incurred since the previous billing, along with copies of bills of materials and expenses incurred, and certified payroll records. Consultant shall submit weekly time sheets for its staff for approval by the Program Manager or his/her designee. Failure to submit a complete Monthly Cost Control Report, Monthly Updated Schedule and Monthly Progress Report by the due date shall constitute cause for suspension of invoice payments. In addition to the above, the SFMTA's Program Manager may, prior to authorization for payment of invoices, require delivery of either a complete or partial set of current work products as evidence of the status of the Consultant's work.

13.22. Submitting False Claims; Monetary Penalties. Pursuant to San Francisco Administrative Code Sections 6.80 to 6.83 and Section 21.35, and pursuant to applicable federal law, any Consultant or subconsultant who submits a false claim shall be liable to the City for three times the amount of damages which the City sustains because of the false claim. A Consultant or subconsultant who submits a false claim shall also be liable to the City for the costs, including attorneys' fees, of a civil action brought to recover any of those penalties or damages, and may be liable to the City for

a civil penalty of up to \$10,000 for each false claim. A Consultant or subconsultant will be deemed to have submitted a false claim to the City if the Consultant or subconsultant: (a) knowingly presents or causes to be presented to an officer or employee of the City a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by the City; (c) conspires to defraud the City by getting a false claim allowed or paid by the City; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to pay or transmit money or property to the City; or (e) is a beneficiary of an inadvertent submission of a false claim to the City, subsequently discovers the falsity of the claim, and fails to disclose the false claim to the City within a reasonable time after discovery of the false claim. Consultant agrees that said remedies are cumulative and in addition to the remedies and penalties provided for false claims under federal law.

13.23. Disallowance and Disputed Amounts. If Consultant claims or receives payment from City for a service, reimbursement for which is later disallowed by the City, the State of California or United States Government, Consultant shall promptly refund the disallowed amount to City upon City's request. At its option, City may offset the amount disallowed from any payment due or to become due to Consultant under this Agreement or any other Agreement. Any Compensation or reimbursement received by Consultant under this Agreement does not constitute a final decision or waiver of decision by the City as to whether said payment meets the terms and requirements of this Agreement. If following audit or other review, the City determines that the Consultant and/or subconsultants are not entitled to certain compensation requested or received, the City shall notify the Consultant stating the reasons therefore. Completion of the CSP or any portion of Consultant's Work will not alter Consultant's or a subconsultant's obligations to return any funds due the SFMTA as a result of later refunds, corrections, or other transactions, nor alter the SFMTA or its funding agencies' rights to disallow or otherwise not recognize costs on the basis a later audit or other review. The City may reasonably withhold payment to the Consultant pending resolution, in an amount equal to questioned, disputed or disapproved amounts, or for work not satisfactorily completed or delivered as required by this Agreement or for amounts incurred by the City in connection with the Consultant's negligent errors or omissions. Payments for other amounts due on the same or other invoice shall not be unreasonably withheld or delayed.

13.24. Payment Does Not Imply Acceptance of Work. The issuance of any progress payment or final payment by the City or the receipt thereof by the Consultant shall in no way lessen the liability of the Consultant to correct unsatisfactory work although the unsatisfactory nature of such work may or may not have been apparent or detected at the time such payment was made. Work that does not conform to the requirements of this Agreement may be rejected by City and in such case must be replaced or performed again by Consultant without delay.

13.25. Project Suspension or Termination

13.25.1. If the Project is suspended for more than six months or abandoned in whole or in part, the Consultant shall be compensated for services satisfactorily performed prior to receipt of written notice from the City of such suspension or abandonment. If the Project is resumed after being suspended for more than six months, the Consultant's documented and reasonable

remobilization costs and compensation for the remainder of the services to be provided for the Project shall be equitably adjusted based on the Consultant's demonstrated increased costs.

13.25.2. In the event that the City terminates the Agreement for fault, the City may reduce any amount earned or otherwise due the Consultant by the sum of any additional costs the City has or will incur as a result of the Consultant's default.

13.26. Final Payment. Final payment of any balance earned by the Consultant for Project work will be made within two months after all of the following:

1. Satisfactory completion of all work required by this Agreement;
2. Receipt by SFMTA of the Work Product not previously delivered;
3. Delivery of all equipment/materials purchased specifically for the Project ;
4. Receipt by SFMTA of a fully executed final statement of amounts paid to and owed to each SBE under this Agreement;
5. Such audit and verification as SFMTA may deem necessary, provided such audit is not unreasonably delayed beyond the completion of the Project; and,
6. Execution and delivery by the Consultant of a release of all claims against SFMTA arising under or by virtue of this Agreement, other than such claims, if any, as may be specifically exempted by the Consultant from the operation of the release in stated amounts to be set forth therein.

14. TAXES; INDEPENDENT CONTRACTOR.

14.1. Obligation of Consultant. Payment of any taxes, including possessory interest taxes and California sales and use taxes, levied upon or as a result of this Agreement, or the services delivered pursuant hereto, shall be the obligation of Consultant.

14.2. Possessory Interest. Consultant recognizes and understands that this Agreement may create a "possessory interest" for property tax purposes. Generally, such a possessory interest is not created unless the Agreement entitles the Consultant to possession, occupancy, or use of City property for private gain. If such a possessory interest is created, then the following shall apply:

14.2.1. Consultant, on behalf of itself and any permitted successors and assigns, recognizes and understands that Consultant, and any permitted successors and assigns, may be subject to real property tax assessments on the possessory interest;

14.2.2. Consultant, on behalf of itself and any permitted successors and assigns, recognizes and understands that the creation, extension, renewal, or assignment of this Agreement may result in a "change in ownership" for purposes of real property taxes, and therefore may result in a revaluation of any possessory interest created by this Agreement. Consultant accordingly agrees on behalf of itself and its permitted successors and assigns to report on behalf of the City to the County Assessor the information required by Revenue and Taxation Code Section 480.5, as amended from time to time, and any successor provision.

14.2.3. Consultant, on behalf of itself and any permitted successors and assigns, recognizes and understands that other events also may cause a change of ownership of the possessory interest and result in the revaluation of the possessory interest. (see, e.g., Rev. & Tax. Code Section 64, as amended from time to time). Consultant accordingly agrees on behalf of it and its permitted successors and assigns to report any change in ownership to the County Assessor, the State Board of Equalization or other public agency as required by law.

14.2.4. Consultant further agrees to provide such other information as may be requested by the City to enable the City to comply with any reporting requirements for possessory interests that are imposed by applicable law.

14.2.5. Consultant shall provide a San Francisco Business Tax Registration to the SFMTA for the City to certify this Agreement.

14.3. Independent Contractor.

14.3.1. Consultant or any agent or employee of Consultant shall be deemed at all times to be an independent contractor and is wholly responsible for the manner in which it performs the services and work requested by City under this Agreement. Consultant or any agent or employee of Consultant shall not have employee status with City, nor be entitled to participate in any plans,

arrangements, or distributions by City pertaining to or in connection with any retirement, health or other benefits that City may offer its employees. Consultant or any agent or employee of Consultant is liable for the acts and omissions of itself, its employees and its agents. Consultant shall be responsible for all obligations and payments, whether imposed by federal, state or local law, including, but not limited to, FICA, income tax withholdings, unemployment compensation, insurance, and other similar responsibilities related to Consultant's performing services and work, or any agent or employee of Consultant providing same. Nothing in this Agreement shall be construed as creating an employment or agency relationship between City and Consultant or any agent or employee of Consultant.

14.3.2. Any terms in this Agreement referring to direction from City shall be construed as providing for direction as to policy and the result of Consultant's Work only, and not as to the means by which such a result is obtained. City does not retain the right to control the means or the method by which Consultant performs Work under this Agreement.

14.3.3. Any claim by any agent, Subconsultant or employee of Consultant, Subprime Consultant or Subconsultant that alleges or seeks to establish employment status with the City shall come under the defense and indemnification provisions of this Agreement.

14.4. Payment of Employment Taxes and Other Expenses.

14.4.1. Should City, in its discretion, or a relevant taxing authority such as the Internal Revenue Service or the State Employment Development Division, or both, determine that Consultant is an employee for purposes of collection of any employment taxes, the amounts payable under this Agreement shall be reduced by amounts equal to both the employee and employer portions of the tax due (and offsetting any credits for amounts already paid by Consultant which can be applied against this liability). City shall then forward those amounts to the relevant taxing authority.

14.4.2. Should a relevant taxing authority determine a liability for past services performed by Consultant for City, upon notification of such fact by City, Consultant shall promptly remit such amount due or arrange with City to have the amount due withheld from future payments to Consultant under this Agreement (again, offsetting any amounts already paid by Consultant which can be applied as a credit against such liability).

14.4.3. A determination of employment status pursuant to the preceding two paragraphs shall be solely for the purposes of the particular tax in question. For all other purposes, Consultant shall not be considered an employee of City. Notwithstanding the foregoing, should any court, arbitrator, or administrative authority determine that Consultant is an employee for any other purpose, then Consultant agrees to a reduction in City's financial liability so that City's total expenses under this Agreement are not greater than they would have been had the court, arbitrator, or administrative authority determined that Consultant was not an employee.

15. INSURANCE REQUIREMENTS.

PB, KHA, and MWA shall each separately maintain in force for as long as the City faces exposure to liability from Consultant's activities performed pursuant to this Agreement, insurance in the following amounts and coverages set out below.

15.1. Workers Compensation. Workers' Compensation Insurance, in statutory amounts, with Employers' Liability Limits not less than \$1,000,000 each accident injury or illness; and

15.2. General Liability. Commercial General Liability Insurance with limits not less than \$2,000,000 each occurrence Combined Single Limit for Bodily Injury and Property Damage, including Contractual Liability, Personal Injury, Products and Completed Operations; and

15.3. Automobile. Commercial Automobile Liability Insurance with limits not less than \$1,000,000 each occurrence Combined Single Limit for Bodily Injury and Property Damage, including Owned, Non-Owned and Hired auto coverage, as applicable.

15.4. Valuable Papers. PB shall maintain "All Risk" general insurance on Valuable Papers and Records for cost to repair or replace with like kind and quality including the costs of gathering and/or assembling information, subject to a minimum limit of Five Million Dollars (\$5,000,000). KHA and MWA shall each maintain "All Risk" general insurance on Valuable Papers and Records for cost to repair or replace with like kind and quality including the costs of gathering and/or assembling information, subject to a minimum limit of One Million Dollars (\$1,000,000).

15.5. Professional Liability.

15.5.1. PB. From the effective date of this Agreement, PB shall maintain professional liability insurance practice coverage with limits of Twenty Million Dollars (\$20,000,000) each claim/annual aggregate with respect to negligent acts, errors or omissions in connection with professional services to be provided under this Agreement. Any deductible for said policy shall not exceed Two Hundred Fifty Thousand Dollars (\$250,000). PB shall be responsible for the payment of all claim expenses and loss payments within the deductible. Said professional liability practice policy shall also apply to the services provided by PB for the design of the Tunnels under Design Package #1 (SFMTA Contract No. CS-155-1). But at no time shall PB allow the aggregate value of professional liability insurance available to the City from PB for the Project to drop below Twenty Million Dollars (\$20,000,000). If said policy limits are eroded by claims not arising from the Project, then PB shall immediately obtain additional insurance coverage to meet the requirements of this Agreement. The costs of said insurance shall be reimbursed as part of PB's overhead.

15.5.2. KHA. From the effective date of this Agreement, KHA shall maintain professional liability insurance coverage with limits of Five Million Dollars (\$5,000,000) each claim/annual aggregate with respect to negligent acts, errors or omissions in connection with professional services to be provided under this Agreement. To meet that professional liability insurance requirement, KHA

shall provide not less than One Million Dollars (\$1,000,000) of practice professional liability insurance, with the remaining coverage provided under a project specific rider or a practice rider. At no time shall KHA allow the aggregate value of professional liability insurance available to the City for this Project to drop below Five Million Dollars (\$5,000,000). If said policy limits are eroded by claims not arising from the Project, then KHA shall immediately obtain additional insurance coverage to meet the requirements of this Agreement. Any deductible for said policy shall not exceed Seventy Five Thousand Dollars (\$75,000). KHA shall be responsible for the payment of all claim expenses and loss payments within the deductible. The costs of said insurance shall be reimbursed as part of KHA's overhead.

15.5.3. MWA. From the effective date of this Agreement, MWA shall maintain professional liability insurance coverage with limits of Five Million Dollars (\$5,000,000) each claim/annual aggregate with respect to negligent acts, errors or omissions in connection with professional services to be provided under this Agreement. To meet that professional liability insurance requirement, MWA shall provide not less than One Million Dollars (\$1,000,000) of practice professional liability insurance, with the remaining coverage provided under a project specific rider or a practice rider. At no time shall MWA allow the aggregate value of professional liability insurance available to the City for this Project to drop below Five Million Dollars (\$5,000,000). If said policy limits are eroded by claims not arising from the Project, then MWA shall immediately obtain additional insurance coverage to meet the requirements of this Agreement. Any deductible for said policy shall not exceed Seventy Five Thousand Dollars (\$75,000). MWA shall be responsible for the payment of all claim expenses and loss payments within the deductible. The costs of said insurance shall be reimbursed as part of MWA's overhead.

15.5.4. Excess Professional Liability Insurance. The City will in good faith endeavor to obtain excess professional liability insurance coverage on behalf of Consultant (to protect against Consultant's errors and omissions in excess of Professional Liability Insurance) for commercially reasonable terms and cost that conform to the terms and conditions of this Agreement. If the City is successful in obtaining that coverage, the City will: (a) limit each of the joint venture partners' respective joint and several liabilities for errors and omissions in design to the other joint venture partner(s) to Five Million Dollars (\$5,000,000); and, (b) waive subrogation of claims by the City's excess insurance against Consultant. If the City is unable to obtain said excess professional liability insurance, the SFMTA and Consultant shall meet to revisit and renegotiate the professional liability provisions of this Agreement to provide adequate insurance coverage to the City at reasonable cost to the City in light of the risks of the Project.

15.5.5. Consultant shall maintain all professional liability policies for a claim reporting period not less than four (4) years following completion of services under this agreement.

15.5.6. All professional liability policies shall protect against any negligent act, error or omission arising out of the Consultant's design or engineering activities or with respect to the Project, including coverage for acts by Subprime

Consultants and Subconsultants for whose work the Consultant is responsible under this Agreement. Professional liability policies shall be endorsed to require the insurer to provide the City with no less than 30 calendar days notice of policy expiration or cancellation.

15.5.7. Consultant shall notify the SFMTA of any claims against its professional liability policy or policies that are not specific to the Project under this Agreement. If the SFMTA determines, in its sole discretion, that said claims jeopardize the protection against errors and omissions required by this Section 15, Contractor shall at its expense procure additional professional liability insurance in an amount sufficient to replenish coverage lost by said claim(s) to meet the requirements set out in Sections 15.5.1 and 15.5.2, above.

15.5.8. Each partner of the Central Subway Design Group joint venture partnership shall ensure and does warrant for itself that its Professional Liability (Errors and Omissions) Insurance policy does not contain any provision that excludes coverage for its services performed as part of the joint venture partnership. All insurance policies and certificates shall carry such endorsements, which shall be provided to the City. Consultant may be relieved of the obligations of this Section 15.5.8 only if the City is able to obtain excess professional liability insurance (see Section 15.5.3, above).

15.6. Requirements of Insurance Policies.

15.6.1. Valuable Papers, Commercial General Liability and Commercial Automobile Liability Insurance policies must provide the following:

(a) Name as Additional Insured the City and County of San Francisco, its Officers and Employees.

(b) That such policies are primary insurance to any other insurance available to the Additional Insureds, with respect to any claims arising out of this Agreement, and that insurance applies separately to each insured against whom claim is made or suit is brought.

(c) All rights of subrogation against the City shall be waived.

15.6.2. Workers Compensation insurance policies must provide the following:

(a) That such policies are primary insurance to any other insurance available to the Additional Insureds, with respect to any claims arising out of this Agreement, and that insurance applies separately to each insured against whom claim is made or suit is brought.

(b) All rights of subrogation against the City shall be waived.

15.7. Notice. All insurance policies shall be endorsed to provide thirty (30) calendar days' advance written notice to City of reduction or nonrenewal of coverages or cancellation of coverages for any reason. Notices shall be sent via courier or U.S. Mail, first class, to the following persons:

Carter R. Rohan, R.A.
Central Subway Program Officer
Director, Capital Programs and Construction
San Francisco Municipal Transportation Agency
1 South Van Ness, 7th floor
San Francisco, CA 94103

Shahnam Farhangi
Division Deputy, Construction Administration and Quality
Management
San Francisco Municipal Transportation Agency
1 South Van Ness, 3rd floor
San Francisco, CA 94103

15.8. Claims-Made Form. Should any of the required insurance be provided under a claims-made form, Consultant shall maintain such coverage continuously throughout the term of this Agreement and, without lapse, for a period of four years beyond the expiration of this Agreement, to the effect that, should occurrences during the contract term give rise to claims made after expiration of the Agreement, such claims shall be covered by such claims-made policies.

15.9. General Annual Aggregate Limit. Should any of the required insurance other than professional liability insurance be provided under a form of coverage that includes a general annual aggregate limit or provides that claims investigation or legal defense costs are included in such general annual aggregate limit, such general annual aggregate limit shall be double the occurrence or claims limits specified above.

15.10. Lapse of Insurance. Should any required insurance lapse during the term of this Agreement, requests for payments originating after such lapse shall not be processed until the City receives satisfactory evidence of reinstated coverage as required by this Agreement, effective as of the lapse date. If insurance is not reinstated, the City may, at its sole option, terminate this Agreement effective on the date of such lapse of insurance.

15.11. Proof of Insurance. Before commencing any operations under this Agreement, Consultant shall furnish to City certificates of insurance and additional insured policy endorsements with insurers with ratings comparable to A-, VIII or higher, that are authorized or approved to do business in the State of California, and that are satisfactory to City, in form evidencing all coverages set forth above. Failure to maintain insurance shall constitute a material breach of this Agreement.

15.12. No Decrease of Liability. Approval of the insurance by City shall not relieve or decrease the liability of Consultant hereunder.

15.13. Subconsultant Insurance. If a subconsultant will be used to complete any portion of this agreement, the Consultant shall ensure that the subconsultant shall provide all necessary insurance (as determined by Consultant) and shall name the City and County of San Francisco, its officers, and employees and the Consultant listed as additional insureds.

16. INDEMNITY, LIABILITY, AND REMEDIES,

16.1. Indemnification. To the fullest extent permitted by law, the Consultant shall assume the defense of (with legal counsel subject to approval of the City), indemnify and save harmless the City, its boards, commissions, officers, and employees (collectively "Indemnitees"), from and against any and all claim, loss, cost, damage, injury (including, without limitation, injury to or death of an employee of the Consultant or its subconsultants), expense and liability of every kind, nature, and description (including, without limitation, court costs, attorneys' fees, litigation expenses, fees of expert consultants or witnesses in litigation, and costs of investigation), that arise out of, pertain to, or relate to, directly or indirectly, in whole or in part, the negligence, recklessness, or willful misconduct of the Consultant, any subconsultant, anyone directly or indirectly employed by them, or anyone that they control (collectively, "Liabilities").

16.2. Limitations.

16.2.1. No insurance policy covering the Consultant's performance under this Agreement shall operate to limit the Consultant's Liabilities under this provision. Nor shall the amount of insurance coverage operate to limit the extent of such Liabilities.

16.2.2. The Consultant assumes no liability for the sole negligence, active negligence, or willful misconduct of any Indemnitee.

16.3. Intellectual Property Infringement. Notwithstanding any other provision of this Agreement, Consultant shall also indemnify, defend and hold harmless all Indemnitees from all suits or claims for infringement of the patent rights, copyright, trade secret, trade name, trademark, service mark, or any other proprietary rights of any person or persons in consequence of the use by the City, or any of its boards, commissions, officers, or employees of articles or services to be supplied in the performance of Consultant's services under this Agreement. Infringement of patent rights, copyrights, or other proprietary rights in the performance of this Agreement, shall be considered a material breach of contract, if not the basis for indemnification under the law.

16.4. Joint Venture Partners.

16.4.1. Notwithstanding the joint venture status of Consultant or other separate legal status of the Consultant from its owner partners, each of the joint venture partners, PB , MWA, and KHA, as the owners of the Consultant, shall remain jointly and severally liable for the performance, errors and omissions of Consultant, as limited by Section 15.5.3 of this Agreement.

16.4.2. Any notice, order, direction, request or any communication required to be or that may be given by the SFMTA to the Consultant as set forth in Section 26.1 (Notices to the Parties) of this Agreement, shall be deemed to have been well and sufficiently given to and shall bind the Consultant, its individual joint venture members, and all persons acting on behalf of the Consultant. Any notice, request or other communications given by the Consultant to the SFMTA as indicated in Section 26.1 (Notices to the Parties) of

this Agreement, shall be deemed to have been given by and shall bind the Consultant, its individual joint venture members, and all persons acting on behalf of the Consultant.

16.4.3. In the event of a dissolution of the joint venture, the SFMTA shall have the unqualified right to select which joint venture member, if any, shall continue the work under this Agreement and such selected member shall assume all liabilities, obligations, rights, and benefits of the Consultant under this Agreement. Such dissolution of the joint venture shall not be effected without prior consultation with the SFMTA. In the event of failure or inability of any one of the joint venture members to continue performance under this Agreement, the other joint venture member(s) shall perform all services and work and assume all liabilities, obligations, rights and benefits of the Consultant under this Agreement. Such determination of failure or inability to continue performance shall not be effected without prior consultation with SFMTA. Nothing in this Section shall be construed or interpreted to limit SFMTA's rights under this Agreement or bylaw to determine whether the Consultant or any one of the joint venture members has performed within the terms of this Agreement.

16.5. Liability of City. City's payment obligations under this Agreement shall be limited to the payment of the compensation for Work actually performed for the City in accordance with the compensation provisions set out in Section 13 of this Agreement and the Appendices to this Agreement referenced therein. Notwithstanding any other provision of this Agreement, in no event shall City be liable to any individual or business entity, regardless of whether any claim is based on contract or tort, for any special, consequential, indirect or incidental damages, including, but not limited to, lost profits, arising out of or in connection with this Agreement or the services performed in connection with this Agreement.

16.6. Default; Remedies. Each of the following shall constitute an event of default ("Event of Default") under this Agreement:

16.6.1. Consultant fails or refuses to perform or observe any term, covenant or condition contained in any of the following Subsections of this Agreement:

(a) Consultant (a) is generally not paying its debts as they become due, (b) files, or consents by answer or otherwise to the filing against it of, a petition for relief or reorganization or arrangement or any other petition in bankruptcy or for liquidation or to take advantage of any bankruptcy, insolvency or other debtors' relief law of any jurisdiction, (c) makes an assignment for the benefit of its creditors, (d) consents to the appointment of a custodian, receiver, trustee or other officer with similar powers of Consultant or of any substantial part of Consultant's property, or (e) takes action for the purpose of any of the foregoing.

(b) A court or government authority enters an order (a) appointing a custodian, receiver, trustee or other officer with similar powers with respect to Consultant or with respect to any substantial part of Consultant's property, (b) constituting an order for relief or approving a petition for relief or reorganization or arrangement or any other petition in

bankruptcy or for liquidation or to take advantage of any bankruptcy, insolvency or other debtors' relief law of any jurisdiction, or (c) ordering the dissolution, winding-up or liquidation of Consultant.

16.6.2. Consultant fails or refuses to perform or observe any other term, covenant or condition contained in this Agreement, and such default continues for a period of ten working days after written notice thereof from City to Consultant.

16.7. Remedies. On and after any Event of Default, City shall have the right to exercise its legal and equitable remedies, including, without limitation, the right to terminate this Agreement or to seek specific performance of all or any part of this Agreement. In addition, City shall have the right (but no obligation) to cure (or cause to be cured) on behalf of Consultant any Event of Default; Consultant shall pay to City on demand all costs and expenses incurred by City in effecting such cure, with interest thereon from the date of incurrence at the maximum rate then permitted by law. City shall have the right to offset from any amounts due to Consultant under this Agreement or any other agreement between City and Consultant all damages, losses, costs or expenses incurred by City as a result of such Event of Default and any liquidated damages due from Consultant pursuant to the terms of this Agreement or any other agreement.

16.8. No Preclusion of Remedies. All remedies provided for in this Agreement may be exercised individually or in combination with any other remedy available hereunder or under applicable laws, rules and regulations. The exercise of any remedy shall not preclude or in any way be deemed to waive any other remedy.

17. EQUIPMENT

17.1. Responsibility for Equipment. City shall not be responsible for any damage to persons or property as a result of the use, misuse or failure of any equipment used by Consultant, or by any of its employees, even though such equipment be furnished, rented or loaned to Consultant by City. The acceptance or use of such equipment by Consultant or any of its employees shall be construed to mean that Consultant accepts full responsibility for and agrees to exonerate, indemnify, defend and save harmless the City from and against any and all claims for any damage or injury of any type arising from the use, misuse or failure of such equipment, whether such damage be to Consultant, its employees, the City's employees, or third parties, or to property belonging to any of the above.

17.2. Ownership of Equipment. Any equipment, vehicles, computer programs (software licenses and media), and the like, purchased by the Consultant or its subconsultants in connection with services to be performed under this Agreement shall become property of and will be transmitted to the SFMTA at the conclusion of the Consultant's services under the Agreement.

18. CITY'S RESPONSIBILITIES

The City's responsibilities for design of the Project are expressly set out in this Agreement and the RFP. The Consultant shall be responsible for all aspects of the Project's design except for those tasks, duties, or areas of design that are expressly assigned or reserved to the City in this Agreement. In addition to those tasks, duties, or areas of design that are expressly assigned to the City elsewhere in the Agreement or RFP, the City shall perform the following:

18.1. Approvals. Obtain approvals from Appropriate Authorities, as defined herein, with the assistance of the Consultant, and promptly render decisions, when within its power to do so, pertaining thereto to avoid unreasonable delays in the progress of the Project.

18.2. Deficiencies. Promptly notify the Consultant in writing of apparent deficiencies in Consultant's designs.

18.3. Fees. Pay all fees required to secure building permits.

18.4. Hazardous Substances. Acknowledge that the discovery, presence, handling or removal of asbestos, asbestos products, polychlorinated biphenyl (PCB) or other hazardous substances, which may presently exist at the job site, is outside of the Consultant's expertise and is not included in the scope of work the Consultant is to perform nor included in the Consultant's insurance. The City therefore agrees to hire one or more expert consultants in this field to deal with these problems if the Project involves such materials. Even though the Contract Documents may incorporate the work of such other consultants, the Consultant shall not be responsible for the discovery, presence, handling or removal of such materials.

18.5. Nonaffixed Furniture and Equipment. Be responsible for purchase and coordination with successful vendors for delivery, assembly, storage and placement of loose furniture, furnishings and equipment not included within the Construction Documents prepared by the Consultant.

18.6. Project Data. Furnish the documents and data developed for the Project under conceptual and preliminary design, which are listed in the RFP in Appendix 10.

18.7. Program Manager. Designate a Program Manager who shall coordinate his or her duties with the Consultant as provided herein.

18.8. Respond to Submittals. Review and respond in writing as provided herein or in the Design Schedule to submittals from the Consultant to all aspects of the documents.

18.9. Tests and Inspections. Furnish tests and inspections as required during the construction phase for structural, mechanical, chemical and other laboratory tests, inspections, special inspections and reports specified by the Consultant in the Construction Documents.

18.10. Construction Cost Estimates. SFMTA shall cooperate with Consultant to bring construction cost estimates within agreed acceptable limits of Construction Budget.

18.11. Project Office. The SFMTA will pay for and provide Consultant a Project Office furnished with furniture, computers, software, IT support, facsimile and telecommunication equipment. The Consultant shall use this Project Office for administrative and professional activities related to the performance of the Project and for the SFMTA and other City personnel assigned to perform work on the Project. The City will endeavor to make the Project Office available to Consultant within forty five (45) calendar days but not later than three months from the Notice to Proceed.

19. TERMINATION OF CONTRACT.

19.1. Termination for Cause. Either party may terminate this Agreement, in whole or in part, in writing, if the other party substantially fails to fulfill its obligations under this Agreement through no fault of the terminating party. However, such termination may not be effected unless the other party is given (a) not fewer than ten (10) working days written notice (delivery by certified mail) of its intent to terminate; and (b) an opportunity for consultation and to rectify failures of obligations (to cure the alleged breach or default of Agreement) within thirty (30) calendar days of consultation with the terminating party before termination becomes effective.

19.2. Termination for Convenience.

19.2.1. Exercise of Option to Terminate for Convenience.

Notwithstanding any other provision of this Agreement, the City shall have the option, in its sole discretion, to terminate this Agreement, at any time during the term hereof, for convenience and without cause. City shall exercise this option by giving Consultant no less than fourteen (14) calendar days written notice of termination. The notice shall specify the date on which termination shall become effective. Consultant shall not have the right to terminate this Agreement for convenience. Consultant does not have the right to terminate for convenience,

19.2.2. Duties of Consultant Upon Notice of Termination. Upon receipt of the notice, Consultant shall commence and perform, with diligence, all actions necessary on the part of Consultant to effect the termination of this Agreement on the date specified by City and to minimize the liability of Consultant and City to third parties as a result of termination. All such actions shall be subject to the prior approval of City. Such actions shall include, without limitation:

19.2.3. Halting the performance of all services and other work under this Agreement on the date(s) and in the manner specified by City.

(a) Not placing any further orders or subcontracts for materials, services, equipment or other items.

(b) Terminating all existing orders and subcontracts.

(c) At City's direction, assigning to City any or all of Consultant's right, title, and interest under the orders and subcontracts terminated. Upon such assignment, City shall have the right, in its sole

discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts.

(d) Subject to City's approval, settling all outstanding liabilities and all claims arising out of the termination of orders and subcontracts, as allowed under the principals set out in 48 CFR Subparts 49.2 and 49.3 to the extent that those principles are in accord with the cost principles for local governments set out in the Office of Management and Budget Circular A-97.

(e) Completing performance of any services or work that City designates to be completed prior to the date of termination specified by City.

(f) Taking such action as may be necessary, or as the City may direct, for the protection and preservation of any property related to this Agreement which is in the possession of Consultant and in which City has or may acquire an interest.

19.2.4. Final Invoice for Services Performed. Within 30 calendar days after the specified termination date, Consultant shall submit to City an invoice, which shall set forth each of the following as a separate line item:

(a) A reasonable allowance for profit on the cost of the services and other work described necessary to effect termination.

(b) The reasonable cost to Consultant of handling work products, material or equipment returned to the vendor, delivered to the City or otherwise disposed of as directed by the City.

(c) A deduction for the cost of materials to be retained by Consultant, amounts realized from the sale of materials and not otherwise recovered by or credited to City, and any other appropriate credits to City against the cost of the services or other work.

(d) Expenses directly attributable to termination which the Consultant is not otherwise compensated, such as the cost to dispose of, or buy out commitments for, trailers, office space, computers, motor vehicles, cell phones and blackberry-like devices.

19.2.5. Non-Recoverable Costs. In no event shall City be liable for costs incurred by Consultant or any of its subconsultants after the termination date specified by City, except for those costs specifically enumerated and described in the immediately preceding Subsection 19.2.3. Such non-recoverable costs include, but are not limited to, anticipated profits on this Agreement, post-termination employee salaries, post-termination administrative expenses, post-termination overhead or unabsorbed overhead except overhead cost due to procuring project specific insurance rider or practice rider by KHA and MWA, attorneys' fees, or other costs relating to the prosecution of a claim or lawsuit, prejudgment interest, or any other expense which is not reasonable or authorized under such Subsection 19.2.3.

19.2.6. Deductions. In arriving at the amount due to Consultant under this Section 19, City may deduct: (a) all payments previously made by City for work or other services covered by Consultant's final invoice; (b) any claim which City may have against Consultant in connection with this Agreement; (c) any invoiced costs or expenses excluded pursuant to the immediately preceding Subsection 19.2.4; and (d) the reasonable costs to the City to remedy or replace defective or rejected services or other work that does not comply with the requirements of this Agreement.

19.2.7. Survival of Payment Obligation. City's payment obligation for Work performed in accordance with this Agreement shall survive termination of this Agreement.

19.3. Rights and Duties Upon Termination or Expiration.

19.3.1. Survival of Provisions. This Section and the following Sections of this Agreement shall survive termination or expiration of this Agreement: 13.22 (Submitting False Claims; Monetary Penalties), 13.23 (Disallowance and Disputed Amounts), 13.24 (Payment Does Not Imply Acceptance of Work), 14 (Taxes, Independent Contractor), 15 (Insurance Requirements), 16.1-16.4 (Indemnification), , 16.5 (Liability of City), 17 (Equipment), 21 (Confidentiality, Privacy, and Security of Information), 22 (Work Product and Works for Hire), 23 (Audit and Inspection of Records), 26 (Contract Administration and Construction), and any other provision of the Agreement that by its express terms must survive termination or expiration of the Agreement.

19.3.2. Duties Upon Termination. Subject to the immediately preceding Subsection 19.3.1, upon termination of this Agreement prior to expiration of the term of this Agreement specified in Section 1.3, this Agreement shall terminate and be of no further force or effect. Consultant shall transfer title to City, and deliver in the manner, at the times, and to the extent, if any, directed by City, any work in progress, completed work, supplies, equipment, and other materials produced as a part of, or acquired in connection with the performance of this Agreement, and any completed or partially completed work which, if this Agreement had been completed, would have been required to be furnished to City. This Subsection shall survive termination of this Agreement.

20. CONFLICT OF INTEREST.

20.1. Applicable Authority. Through its execution of this Agreement, Consultant acknowledges that it is familiar with Article I, Chapter I and Article III, Chapter 2 of City's Campaign and Governmental Conduct Code, and Section 87100 et seq. and Section 1090 et seq. of the California Government Code, and certifies that it does not know of any facts which constitute a violation of said provisions and agrees that it will immediately notify the City if it becomes aware of any such fact during the term of this Agreement. Consultant further acknowledges that it is aware of the requirements concerning the filing of Statements of Economic Interest, California Fair Political Practices Commission Form 700, under the requirements of California Government Code Section 87300 et seq. and the San Francisco Campaign and

Governmental Code Section 3.1-102, and that Consultant shall ensure that its employees and subconsultants are aware of those requirements and comply with them.

20.2. Other Bids Prohibited. Consultant agrees that neither it nor any corporation, joint venture or partnership in which it has a financial interest shall submit a proposal for Program Controls System RFP or bid for construction work on the Central Subway Project. Consultant further agrees that except as may be specifically authorized by the SFMTA, Consultant shall not consult with or otherwise provide advice or information concerning the Central Subway Project to any potential proposers for the Program Controls System RFP or to potential bidders for construction contracts for the Central Subway Project.

20.3. No Financial Interest in the Project. By submission of its Proposal, the Consultant covenants that it has no direct or indirect financial interest and that it shall not acquire any financial interest that creates or would create a conflict of interest with respect to any of the work, services, Work Product or other materials required to be performed or provided under this Agreement. Furthermore, the Consultant shall not employ any person or agent having any such conflict of interest. In the event that the Consultant or its agents, employees or representatives hereafter acquires such a conflict of interest, it shall immediately disclose such interest to SFMTA and take action immediately to eliminate the conflict or to withdraw from this Agreement, as SFMTA requests.

20.4. Conflicts of Interest. By submission of its Proposal, the Consultant covenants that it has no direct or indirect pecuniary or proprietary interest and that it shall not acquire any interest that conflicts in any manner or degree with the work, services or materials required to be performed or provided under this Agreement. Furthermore, the Consultant shall not employ any person or agent having any such conflict of interest. In the event that the Consultant or its agents, employees or representatives hereafter acquires such a conflict of interest, it shall immediately disclose such interest to SFMTA and take action immediately to eliminate the conflict or to withdraw from this Agreement, as SFMTA requests. The Consultant shall not employ any consultant who is concurrently employed by SFMTA or by another consultant to the SFMTA (including, but not limited to, surveyors, engineers, Consultants, and testing laboratories), without first obtaining SFMTA's approval in writing.

20.5. Other Agreements between the City and the Consultant. Through its execution of this Agreement, the Consultant certifies that neither it nor any of its employees has any undisclosed financial interest, however remote, in any other Agreement with the City, whether or not such Agreement is with Consultant's respective firms, affiliate firms or through separate employment, except as expressly itemized below. The Consultant understands and agrees that failure to disclose such information may result in termination of this Agreement for cause.

20.6. Lobbyists and Gratuities.

20.6.1. Contingency Fees Prohibited. The Consultant warrants and covenants that it has not employed or retained any person or persons to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees. For breach of violation of this warranty SFMTA shall have the right to annul this

Agreement without liability or in its discretion to deduct from the Total Price or otherwise recover the full amount of such commission, percentage, brokerage, or contingent fee

20.6.2. No Gratuities to City Employees. The Consultant warrants and covenants that no gratuities, in the form of entertainment, gifts, or otherwise, have been or will be offered or given by the Consultant or any of its agents, employees, or representatives to any official or employee of the City and County of San Francisco in an attempt to secure a contract or favorable treatment in awarding, amending, or making any determination related to the performance of this Agreement. Consultant acknowledges that it is familiar with San Francisco Campaign and Governmental Conduct Code Section 3.216 and the regulations adopted thereunder, and understands that Consultant is a "restricted source" for all SFMTA employees and officers, as the term is defined in that Section. Contractor agrees that it will make no gifts to any SFMTA employee or officer the acceptance of which would violate Section 3.216. (See also federal lobbying restrictions discussed at Section 28.6, below.)

20.7. Collusion in Contracting. Consultant warrants and covenants that it has not imposed on any Subprime Consultant or Subconsultant as a condition for receiving a subcontract under this Agreement a requirement that said subconsultant not participate in or be listed on in any other Proposal for this Contract. This restriction provision shall not apply between a Proposer and a Subprime Consultant listed in the Proposal to whom the Consultant provided proprietary or confidential financial information such that the participation of the Subprime Consultant in another Proposer's Proposal would provide an unfair advantage to a Proposer. Consultant further warrants that it informed its Subprime Consultants that Subconsultants cannot be restricted from being listed or otherwise participating in a Proposal from another consultant for this Contract, and that to Consultant's knowledge its Subprime Consultants have complied with these requirements.

20.8. Remedies. If the Executive Director/CEO has reason to believe that the Consultant has breached the covenants set forth in this Section 20, he shall so notify the Consultant in writing. The Consultant shall respond to said notice within ten (10) working days of receipt with a detailed written explanation or answer to any facts, allegations, or questions contained or referenced in said notice. The Consultant may request a hearing on the matter by Executive Director/CEO or his designee that shall be conducted within fifteen (15) days of the receipt by the Executive Director/CEO of the request unless a later date is concurred in by SFMTA and the Consultant. The decision of the Executive Director/CEO shall be a prerequisite to appeal thereof to SFMTA Board of Directors or to Superior Court in the County of San Francisco, State of California. If, after consideration of the Consultant's response and any hearing, the Executive Director/CEO determines that the covenants have been breached, the Executive Director/CEO shall have the discretion to exercise those remedies provided by any applicable federal or state laws or regulations or by this Agreement in the event of said breach and/or prohibited conflicts of interest.

21. CONFIDENTIALITY, PRIVACY AND SECURITY OF INFORMATION.

21.1. Proprietary, Confidential and Security Sensitive Information.

Consultant understands and agrees that, in the performance of the work or services under this Agreement or in contemplation thereof, Consultant may have access to private or confidential information which may be owned, controlled by, or licensed to the City and that such information may contain proprietary or confidential details, or it may constitute Sensitive Security Information, the disclosure of which to third parties may be contrary to law, harmful to public safety, and/or damaging to City. Consultant agrees that all information disclosed by City to Consultant shall be held in the strictest confidence and used only in performance of the Agreement. Consultant agrees that all Work Product, reports, studies, analyses, specifications, work schedules and recommendations prepared by the Consultant for use in connection with the work under this Agreement or furnished to the Consultant by the City are confidential, and that Consultant will not publish, circulate or use any of the foregoing except in the performance of this Agreement without first obtaining the SFMTA's written approval to do so.

21.2. Project Security. Consultant shall consider and treat all Work Product as Sensitive Security Information as defined by FTA Circular 42.20.1(f) and other applicable regulation and authority. Consultant shall at all times guard and keep secure and confidential all such information and documents. Consultant's failure to guard and keep safe and confidential said documents shall be a material breach of this Agreement. In such an event, in addition to any other remedies available to it under equity or law, the City may terminate the Contract, bring a false claim action against the Consultant pursuant to Chapter 6 or Chapter 21 of the Administrative Code, or debar the Consultant.

21.3. Protection of Private Information. Consultant has read and agrees to the terms set forth in San Francisco Administrative Code Sections 12M.2, "Nondisclosure of Private Information," and 12M.3, "Enforcement" of Administrative Code Chapter 12M, "Protection of Private Information," which are incorporated herein as if fully set forth. Consultant agrees that any failure of Contractor to comply with the requirements of Section 12M.2 of this Chapter shall be a material breach of the Contract. In such an event, in addition to any other remedies available to it under equity or law, the City may terminate the Contract, bring a false claim action against the Consultant pursuant to Chapter 6 or Chapter 21 of the San Francisco Administrative Code, or debar the Consultant.

22. WORK PRODUCT AND WORKS FOR HIRE.

22.1. Ownership. All Work Product, including but not limited to documents, electronic, written, graphic, or three dimensional models, including drawing sets, CADD files, BIM files, schematics, system designs, blue prints, specifications, presentation drawings, models, films and videos, simulations or other presentation materials and other documents, models or computer files prepared by the Consultant are works for hire as defined under Title 17 of the United States Code commissioned by the SFMTA, and all such works shall be made and remain the property of the City, including all intellectual property rights to all documents; provided, however, that the Consultant shall be entitled to retain one reproducible copy thereof and CADD files, made at the Consultant's expense. As part of its Basic Services, the Consultant shall provide the City with one licensed copy of software that will allow the City to view the electronic

CADD files prepared by the Consultant and its Subprime Consultants and Subconsultants. Additionally, the Consultant shall provide technical specifications for any computer hardware required to use the provided software and files.

22.2. Assignment. To the extent that the Work Product does not qualify as a work made for hire under applicable law, and to the extent that the Work Product includes material subject to copyright, patent, trade secret, mask work, or other proprietary right protection, the Consultant hereby assigns to SFMTA, its successors and assigns, all right, title and interest in and to the Work Product, including but not limited to (1) all copyrights in the same, and in all renewals and extensions of the copyrights that may be secured under applicable laws; and (2) all rights in and to any inventions and designs embodied in the Work Product or developed in the course of the Consultant's creation of the Work Product. The foregoing assignment includes a license under any current and future patents owned, patents applied for or licensable by the Consultant to the extent necessary to exercise any rights of ownership in the Work Product. Any reuse of the Work Product except for the specific purpose intended will be at the users' sole risk without liability or legal exposure to the Consultant.

22.3. Moral Rights. To the extent that the Consultant may have any moral rights to the Work Product, the Consultant hereby forever waives any and all such rights. Neither the Work Product nor anything constructed from the plans, designs, drawings and specifications in the Work Product shall be considered art or a work of art. To the extent that the Work Product, any part of the Work Product, or anything constructed from the plans, designs, drawings and specifications in the Work Product are considered art or works of art, any rights of the Consultant or obligations of the City under applicable law, including but not limited to Visual Artists Rights Act of 1990, 17 U.S.C. §§ 101 et seq., and the California Art Preservation Act, Civil Code sec. 987, are hereby forever waived.

22.4. Assistance. At SFMTA's expense, the Consultant shall execute and deliver such instruments and take such other action as may be requested by SFMTA to perfect or protect SFMTA's rights in the Work Product and to perfect the assignments contemplated by this Section.

22.5. Delivery of Work Product. The Consultant agrees to deliver all aspects of the Work Product, including without limitation all plans, drawings, designs, specifications, technical reports, operating manuals, notes, data, documentation, and computer software (in source code and object code form), in accordance with the delivery schedule set forth in this Agreement. In the event of early termination of this Agreement, the Consultant shall deliver all aspects of the Work Product immediately upon such early termination at the then-existing stage of completion, and all aspects of the Work Product shall become the property of SFMTA.

22.6. Representations and Warranties. The Consultant hereby represents and warrants that:

22.6.1. It has full power to enter into this Agreement and make the assignments set forth herein;

22.6.2. It has not previously and will not grant any rights in the Work Product to any third party that are inconsistent with the rights granted to SFMTA herein;

22.6.3. The Work Product does not infringe or violate any copyright, trade secret, trademark, patent or other proprietary or personal right held by any third party; and

22.6.4. The Work Product has been or will be created solely by the Consultant or employees of the Consultant within the scope of their employment and under obligation to assign all rights in the Work Product to SFMTA, or by independent subconsultants, approved by SFMTA in advance, under written obligations to (a) assign all rights in the Work Product to SFMTA and (b) maintain the confidentiality of any SFMTA confidential information disclosed to the subconsultant.

22.7. Indemnity for Copyright or Patent Infringement. The indemnity and defense requirements set out in Section 16.3 of this Agreement shall apply to Consultant's Work Product and the tools used by Consultant to product it, without limitation.

22.8. Notations. All Work Product furnished by the Consultant, other than documents exclusively for the internal use by SFMTA, shall carry such notations on the front cover or a title page (or in the case of maps, in the name block) as may be determined by SFMTA. The Consultant shall also place its endorsement on all Work Products. All such notations and endorsements shall be subject to prior approval by SFMTA prior to delivery. All such notations and/or endorsements placed on the Work Product(s) by the Consultant shall be for intellectual property purposes only and shall not be for professional engineering services.

22.9. Reuse. Should the City or any other person, firm or legal entity under the authority and control of the City, without the Consultant's participation, use, re-use, or modify the Consultant's drawings, specifications or other documents prepared under this Agreement, the City agrees to notify the Consultant of said intended use. The Consultant shall not be responsible for any loss, costs or expenses incurred by any party arising out of such use, re-use or modification of the Consultant's drawings, specifications, and other documents.

22.10. Artists Rights. If Consultant contracts for any art or work of art to be included in the Project, prior to executing such contract, Consultant shall obtain from the artist(s) who produced or will produce the art a written and signed agreement stipulating that such works are works for hire for commercial use and forever waiving any and all rights of the artist(s) and any and all obligations of the City under applicable law requiring preservation of said art or works of art, including but not limited to Visual Artists Rights Act of 1990, 17 U.S.C. §§ 101 et seq., and the California Art Preservation Act, Civil Code § 987 et sec.

22.11. Subcontracts. Consultant shall include the provisions of this Section in all contracts with Subprime Consultants and shall further require that Subprime Consultants include said provision in their respective contracts with Subconsultants.

23. AUDIT AND INSPECTION OF RECORDS.

23.1. Access to Records. Consultant agrees to maintain and make available to the City accurate books and accounting records relative to its activities under this Agreement, irrespective of whether such services were funded in whole or in part by this Agreement. Consultant will permit the City to audit, examine, reproduce, and make excerpts and transcripts from such books and records and to make audits of all invoices, materials, payrolls, records or personnel and other data necessary to determine or audit allowable expenses, overhead, including costs and overhead incurred as work performed as Additional Services,.

23.2. Maintenance of Records. Consultant shall maintain such data and records in an accessible location and condition for a period of not less than five (5) years after final payment under this Agreement or until after final audit has been resolved, whichever is later. The period of access and examination for records that relate to (1) litigation or the settlement of claims arising out of the performance of this Agreement, or (2) costs and expenses of this Agreement as to which exception has been taken by the Comptroller General of the United States or the U.S. Department of Transportation, or any of their duly authorized representatives, shall continue until such litigation, claims, or exceptions have been finally resolved. Consultant shall require its subconsultants to also comply with the provisions of this Section, and shall include the provisions of the Section in each of its subcontracts.

23.3. Audit of Subconsultants. Consultant shall include the provisions of this Section in all agreements between Consultant and its Subprime Consultants and subconsultants of every tier giving the City the same rights against the Subprime Consultants. Consultant shall require that the Subprime Consultants include the provisions of this Section in their respective contracts with Subconsultants. Cancelled checks of payments to Subprime Consultants and Subconsultants must be maintained by Consultant and Subprime Consultants, respectively, and made available to the City upon request.

23.4. Audit. The City may initiate an audit under this Agreement by written notice, upon not fewer than seven (7) calendar days.

23.5. Rights of State or Federal Agencies. Consultant shall comply with reporting requirements of the U.S. Department of Transportation grant management rules, and any other reports required by the Federal Government. The State of California or any federal agency having an interest in the subject matter of this Agreement shall at a minimum have the same rights conferred upon City by this Section 23.

24. NONDISCRIMINATION; PENALTIES.

24.1. Consultant Shall Not Discriminate. In the performance of this Agreement, Consultant agrees not to discriminate against any employee, City and County employee working with such Consultant or subconsultant, applicant for

employment with such Consultant or subconsultant, or against any person seeking accommodations, advantages, facilities, privileges, services, or membership in all business, social, or other establishments or organizations, on the basis of the fact or perception of a person's race, color, creed, religion, national origin, ancestry, age, height, weight, sex, sexual orientation, gender identity, domestic partner status, marital status, disability or Acquired Immune Deficiency Syndrome or HIV status (AIDS/HIV status), or association with members of such protected classes, or in retaliation for opposition to discrimination against such classes. The Consultant shall carry out applicable requirements of 49 C.F.R. Part 26 in the award and administration of DOT-assisted contracts. Failure by the Consultant to carry out these requirements is a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as the City deems appropriate.

24.2. Subcontracts. Consultant shall incorporate by reference in all subcontracts the provisions of §§12B.2(a), 12B.2(c)-(k), and 12C.3 of the San Francisco Administrative Code (copies of which are available from the SFMTA) and shall require all subconsultants to comply with such provisions. Consultant's failure to comply with the obligations in this Subsection shall constitute a material breach of this Agreement.

24.3. Nondiscrimination in Benefits. Consultant does not as of the date of this Agreement and will not during the term of this Agreement, in any of its operations in San Francisco, on real property owned by San Francisco, or where work is being performed for the City elsewhere in the United States, discriminate in the provision of bereavement leave, family medical leave, health benefits, membership or membership discounts, moving expenses, pension and retirement benefits or travel benefits, as well as any benefits other than the benefits specified above, between employees with domestic partners and employees with spouses, and/or between the domestic partners and spouses of such employees, where the domestic partnership has been registered with a governmental entity pursuant to state or local law authorizing such registration, subject to the conditions set forth in §12B.2(b) of the San Francisco Administrative Code.

24.4. Condition to Contract. As a condition to this Agreement, Consultant shall execute the "Chapter 12B Declaration: Nondiscrimination in Contracts and Benefits" form (form HRC-12B-101) with supporting documentation and secure the approval of the form by the San Francisco Human Rights Commission.

24.5. Incorporation of Administrative Code Provisions by Reference. The provisions of Chapters 12B and 12C of the San Francisco Administrative Code are incorporated in this Section by reference and made a part of this Agreement as though fully set forth herein. Consultant shall comply fully with and be bound by all of the provisions that apply to this Agreement under such Chapters, including but not limited to the remedies provided in such Chapters. Without limiting the foregoing, Consultant understands that pursuant to §12B.2(h) of the San Francisco Administrative Code, a penalty of \$50 for each person for each calendar day during which such person was discriminated against in violation of the provisions of this Agreement may be assessed against Consultant and/or deducted from any payments due Consultant.

24.6. Compliance with Americans with Disabilities Act. Consultant acknowledges that, pursuant to the Americans with Disabilities Act (ADA), programs, services and other activities provided by a public entity to the public, whether directly or

through a Consultant, must be accessible to the disabled public. Consultant's design of the Project under this Agreement shall comply with the AD and any and all other applicable federal, state and local disability rights and/or access legislation. Said requirements shall apply both to the manner and process by which the Consultant provides the services, and the content of all deliverables under this Agreement. Consultant agrees not to discriminate against disabled persons in the provision of services, benefits or activities provided under this Agreement and further agrees that any violation of this prohibition on the part of Consultant, its employees, agents or assigns will constitute a material breach of this Agreement.

25. GENERAL CONTRACT REQUIREMENTS.

25.1. Compliance with All Laws and Regulations.

25.1.1. The Consultant shall keep itself fully informed of the City's Charter, codes, ordinances and regulations of the City and of all state and federal laws in any manner affecting the performance of this Agreement, and must at all times comply with such local codes, ordinances, and regulations and all applicable laws as they may be amended from time to time

25.1.2. The Consultant shall comply with all federal, state, and local licensing, registration, filing and/or certifications standards, all applicable accrediting standards, and any other standards or criteria established by any agency of the State of California or of the federal government applicable to the Consultant's operation.

25.2. MacBride Principles - Northern Ireland. Pursuant to San Francisco Administrative Code §12F.5, the City and County of San Francisco urges companies doing business in Northern Ireland to move towards resolving employment inequities, and encourages such companies to abide by the MacBride Principles. The City and County of San Francisco urges San Francisco companies to do business with corporations that abide by the MacBride Principles. By signing below, the person executing this agreement on behalf of Consultant acknowledges and agrees that he or she has read and understood this Section.

25.3. Use of Public Transportation. San Francisco is a transit-first city, and the SFMTA encourages Consultant and subconsultants to use public transit in the performance of its services to the maximum extent possible. The SFMTA will closely review the Consultant's requests for reimbursement of travel expenses. Travel from and to airports must be by public transit to the maximum extent possible. Taxicabs, and hired vans and cars are not considered public transit. The City reserves the right to refuse to reimburse travel expenses that are not in accord with these policies.

25.4. Earned Income Credit (EIC) Forms. Administrative Code Section 12O requires that employers provide their employees with IRS Form W-5 (The Earned Income Credit Advance Payment Certificate) and the IRS EIC Schedule, as set forth below. Employers can locate these forms at the IRS Office, on the Internet, or anywhere that Federal Tax Forms can be found.

25.4.1. Provision of Forms to Eligible Employees. Consultant shall provide EIC Forms to each Eligible Employee at each of the following times: (a) within thirty calendar days following the date on which this Agreement becomes effective (unless Consultant has already provided such EIC Forms at least once during the calendar year in which such effective date falls); (b) promptly after any Eligible Employee is hired by Consultant; and (c) annually between January 1 and January 31 of each calendar year during the term of this Agreement.

25.4.2. Failure to Comply. Failure to comply with any requirement contained in this Section shall constitute a material breach by Consultant of the terms of this Agreement. If, within 30 calendar days after Consultant receives written notice of such a breach, Consultant fails to cure such breach or, if such breach cannot reasonably be cured within such period of 30 calendar days, Consultant fails to commence efforts to cure within such period or thereafter fails to diligently pursue such cure to completion, the City may pursue any rights or remedies available under this Agreement or under applicable law.

25.4.3. Application to Subconsultants. Any subcontract entered into by Consultant shall require the subconsultant to comply, as to the subconsultant's Eligible Employees, with each of the terms of this Section.

25.4.4. Terms. Capitalized terms used in this Section and not defined in this Agreement shall have the meanings assigned to such terms in Section 12O of the San Francisco Administrative Code.

25.5. Sunshine Ordinance. In accordance with San Francisco Administrative Code §67.24(e), contracts, Consultants' bids, responses to solicitations and all other records of communications between City and persons or firms seeking contracts, shall be open to inspection immediately after a contract has been awarded. Nothing in this provision requires the disclosure of a private person or organization's net worth or other proprietary financial data submitted for qualification for a contract or other benefit until and unless that person or organization is awarded the contract or benefit. Information provided which is covered by Section 67.24(e) will be made available to the public upon request.

25.6. Public Access to Meetings and Records. If the Consultant receives a cumulative total per year of at least \$250,000 in City funds or City-administered funds and is a non-profit organization as defined in Chapter 12L of the San Francisco Administrative Code, Consultant shall comply with and be bound by all the applicable provisions of that Chapter. By executing this Agreement, the Consultant agrees to open its meetings and records to the public in the manner set forth in §§12L.4 and 12L.5 of the Administrative Code. Consultant further agrees to make-good faith efforts to promote community membership on its Board of Directors in the manner set forth in §12L.6 of the Administrative Code. The Consultant acknowledges that its material failure to comply with any of the provisions of this paragraph shall constitute a material breach of this Agreement. The Consultant further acknowledges that such material breach of the Agreement shall be grounds for the City to terminate and/or not renew the Agreement, partially or in its entirety.

25.7. Limitations on Contributions. Through execution of this Agreement, Consultant acknowledges that it is familiar with Section 1.126 of the City's Campaign

and Governmental Conduct Code, which prohibits any person who contracts with the City for the rendition of personal services, for the furnishing of any material, supplies or equipment, for the sale or lease of any land or building, or for a grant, loan or loan guarantee, from making any campaign contribution to (A) an individual holding a City elective office if the contract must be approved by the individual, a board on which that individual serves, or a board on which an appointee of that individual serves, (B) a candidate for the office held by such individual, or (C) a committee controlled by such individual, at any time from the commencement of negotiations for the contract until the later of either the termination of negotiations for such contract or six months after the date the contract is approved. Consultant acknowledges that the foregoing restriction applies only if the contract or a combination or series of contracts approved by the same individual or board in a fiscal year have a total anticipated or actual value of \$50,000 or more. Consultant further acknowledges that the prohibition on contributions applies to each prospective party to the contract; each member of Consultant's board of directors; Consultant's chairperson, chief executive officer, chief financial officer and chief operating officer; any person with an ownership interest of more than 20 percent in Consultant; any Subprime Consultant or Subconsultant listed in the bid or contract; and any committee that is sponsored or controlled by Consultant. Additionally, Consultant acknowledges that Consultant must inform each of the persons described in the preceding sentence of the prohibitions contained in Section 1.126.

25.8. Requiring Minimum Compensation for Covered Employees.

25.8.1. Consultant agrees to comply fully with and be bound by all of the provisions of the Minimum Compensation Ordinance (MCO), as set forth in San Francisco Administrative Code Chapter 12P (Chapter 12P), including the remedies provided, and implementing guidelines and rules. The provisions of Chapter 12P are incorporated herein by reference and made a part of this Agreement as though fully set forth. The text of the MCO is available on the web at www.sfgov.org/olse/mco. A partial listing of some of Consultant's obligations under the MCO is set forth in this Section. Consultant is required to comply with all the provisions of the MCO, irrespective of the listing of obligations in this Section.

25.8.2. The MCO requires Consultant to pay Consultant's employees a minimum hourly gross compensation wage rate and to provide minimum compensated and uncompensated time off. The minimum wage rate may change from year to year and Consultant is obligated to keep informed of the then-current requirements. Any subcontract entered into by Consultant shall require the subconsultant to comply with the requirements of the MCO and shall contain contractual obligations substantially the same as those set forth in this Section. It is Consultant's obligation to ensure that any subconsultants of any tier under this Agreement comply with the requirements of the MCO. If any subconsultant under this Agreement fails to comply, City may pursue any of the remedies set forth in this Section against Consultant.

25.8.3. Consultant shall not take adverse action or otherwise discriminate against an employee or other person for the exercise or attempted exercise of rights under the MCO. Such actions, if taken within three months of the exercise or attempted exercise of such rights, will be rebuttably presumed to be retaliation prohibited by the MCO.

25.8.4. Consultant shall maintain employee and payroll records as required by the MCO. If Consultant fails to do so, it shall be presumed that the Consultant paid no more than the minimum wage required under State law.

25.8.5. The City is authorized to inspect Consultant's job sites and conduct interviews with employees and conduct audits of Consultant

25.8.6. Consultant's commitment to provide the Minimum Compensation is a material element of the City's consideration for this Agreement. The City in its sole discretion shall determine whether such a breach has occurred. The City and the public will suffer actual damage that will be impractical or extremely difficult to determine if the Consultant fails to comply with these requirements. Consultant agrees that the sums set forth in Section 12P.6.1 of the MCO as liquidated damages are not a penalty, but are reasonable estimates of the loss that the City and the public will incur for Consultant's noncompliance. The procedures governing the assessment of liquidated damages shall be those set forth in Section 12P.6.2 of Chapter 12P.

25.8.7. Consultant understands and agrees that if it fails to comply with the requirements of the MCO, the City shall have the right to pursue any rights or remedies available under Chapter 12P (including liquidated damages), under the terms of the contract, and under applicable law. If, within 30 calendar days after receiving written notice of a breach of this Agreement for violating the MCO, Consultant fails to cure such breach or, if such breach cannot reasonably be cured within such period of 30 calendar days, Consultant fails to commence efforts to cure within such period, or thereafter fails diligently to pursue such cure to completion, the City shall have the right to pursue any rights or remedies available under applicable law, including those set forth in Section 12P.6(c) of Chapter 12P. Each of these remedies shall be exercisable individually or in combination with any other rights or remedies available to the City.

25.8.8. Consultant represents and warrants that it is not an entity that was set up, or is being used, for the purpose of evading the intent of the MCO.

25.8.9. If Consultant is exempt from the MCO when this Agreement is executed because the cumulative amount of agreements with this department for the fiscal year is less than \$25,000, but Consultant later enters into an agreement or agreements that cause Consultant to exceed that amount in a fiscal year, Consultant shall thereafter be required to comply with the MCO under this Agreement. This obligation arises on the effective date of the agreement that causes the cumulative amount of agreements between the Consultant and this department to exceed \$25,000 in the fiscal year.

25.9. Requiring Health Benefits for Covered Employees. Consultant agrees to comply fully with and be bound by all of the provisions of the Health Care Accountability Ordinance (HCAO), as set forth in San Francisco Administrative Code Chapter 12Q, including the remedies provided, and implementing regulations, as the same may be amended from time to time. The provisions of Chapter 12Q are incorporated by reference and made a part of this Agreement as though fully set forth herein. The text of the HCAO is available on the web at www.sfgov.org/olse.

Capitalized terms used in this Section and not defined in this Agreement shall have the meanings assigned to such terms in Chapter 12Q.

25.9.1. For each Covered Employee, Consultant shall provide the appropriate health benefit set forth in Section 12Q.3 of the HCAO. If Consultant chooses to offer the health plan option, such health plan shall meet the minimum standards set forth by the San Francisco Health Commission.

25.9.2. Notwithstanding the above, if the Consultant is a small business as defined in Section 12Q.3(e) of the HCAO, it shall have no obligation to comply with Subsection 25.9.1 above.

25.9.3. Consultant's failure to comply with the HCAO shall constitute a material breach of this agreement. City shall notify Consultant if such a breach has occurred. If, within 30 calendar days after receiving City's written notice of a breach of this Agreement for violating the HCAO, Consultant fails to cure such breach or, if such breach cannot reasonably be cured within such period of 30 calendar days, Consultant fails to commence efforts to cure within such period, or thereafter fails diligently to pursue such cure to completion, City shall have the right to pursue the remedies set forth in 12Q.5.1 and 12Q.5(f)(1-6). Each of these remedies shall be exercisable individually or in combination with any other rights or remedies available to City.

25.9.4. Any Subcontract entered into by Consultant shall require the Subconsultant to comply with the requirements of the HCAO and shall contain contractual obligations substantially the same as those set forth in this Section. Consultant shall notify City's Office of Contract Administration when it enters into such a Subcontract and shall certify to the Office of Contract Administration that it has notified the Subconsultant of the obligations under the HCAO and has imposed the requirements of the HCAO on Subconsultant through the Subcontract. Each Consultant shall be responsible for its Subconsultants' compliance with this Chapter. If a Subconsultant fails to comply, the City may pursue the remedies set forth in this Section against Consultant based on the Subconsultant's failure to comply, provided that City has first provided Consultant with notice and an opportunity to obtain a cure of the violation.

25.9.5. Consultant shall not discharge, reduce in compensation, or otherwise discriminate against any employee for notifying City with regard to Consultant's noncompliance or anticipated noncompliance with the requirements of the HCAO, for opposing any practice proscribed by the HCAO, for participating in proceedings related to the HCAO, or for seeking to assert or enforce any rights under the HCAO by any lawful means.

25.9.6. Consultant represents and warrants that it is not an entity that was set up, or is being used, for the purpose of evading the intent of the HCAO.

25.9.7. Consultant shall maintain employee and payroll records in compliance with the California Labor Code and Industrial Welfare Commission orders, including the number of hours each employee has worked on the City Contract.

25.9.8. Consultant shall keep itself informed of the current requirements of the HCAO.

25.9.9. Consultant shall provide reports to the City in accordance with any reporting standards promulgated by the City under the HCAO, including reports on Subconsultants and Subtenants, as applicable.

25.9.10. Consultant shall provide City with access to records pertaining to compliance with HCAO after receiving a written request from City to do so and being provided at least ten business days to respond.

25.9.11. Consultant shall allow City to inspect Consultant's job sites and have access to Consultant's employees in order to monitor and determine compliance with HCAO.

25.9.12. City may conduct random audits of Consultant to ascertain its compliance with HCAO. Consultant agrees to cooperate with City when it conducts such audits.

25.9.13. If Consultant is exempt from the HCAO when this Agreement is executed because its amount is less than \$25,000 (\$50,000 for nonprofits), but Consultant later enters into an agreement or agreements that cause Consultant's aggregate amount of all agreements with City to reach \$75,000, all the agreements shall be thereafter subject to the HCAO. This obligation arises on the effective date of the agreement that causes the cumulative amount of agreements between Consultant and the City to be equal to or greater than \$75,000 in the fiscal year.

25.10. First Source Hiring Program.

25.10.1. Incorporation of Administrative Code Provisions by Reference. The provisions of Chapter 83 of the San Francisco Administrative Code are incorporated in this Section by reference and made a part of this Agreement as though fully set forth herein. Consultant shall comply fully with, and be bound by, all of the provisions that apply to this Agreement under such Chapter, including but not limited to the remedies provided therein. Capitalized terms used in this Section and not defined in this Agreement shall have the meanings assigned to such terms in Chapter 83.

25.10.2. First Source Hiring Agreement. As an essential term of, and consideration for, any contract or property contract with the City, not exempted by the FSHA, the Consultant shall enter into a first source hiring agreement ("agreement") with the City, on or before the effective date of the contract or property contract. Consultants shall also enter into an agreement with the City for any other work that it performs in the City. Such agreement shall:

(a) Set appropriate hiring and retention goals for entry level positions. The employer shall agree to achieve these hiring and retention goals, or, if unable to achieve these goals, to establish good faith efforts as to its attempts to do so, as set forth in the agreement. The agreement shall take into consideration the employer's participation in existing job

training, referral and/or brokerage programs. Within the discretion of the FSHA, subject to appropriate modifications, participation in such programs maybe certified as meeting the requirements of this Chapter. Failure either to achieve the specified goal, or to establish good faith efforts will constitute noncompliance and will subject the employer to the provisions of Section 83.10 of this Chapter.

(b) Set first source interviewing, recruitment and hiring requirements, which will provide the San Francisco Workforce Development System with the first opportunity to provide qualified economically disadvantaged individuals for consideration for employment for entry level positions. Employers shall consider all applications of qualified economically disadvantaged individuals referred by the System for employment; provided however, if the employer utilizes nondiscriminatory screening criteria, the employer shall have the sole discretion to interview and/or hire individuals referred or certified by the San Francisco Workforce Development System as being qualified economically disadvantaged individuals. The duration of the first source interviewing requirement shall be determined by the FSHA and shall be set forth in each agreement, but shall not exceed 10 working days. During that period, the employer may publicize the entry level positions in accordance with the agreement. A need for urgent or temporary hires must be evaluated, and appropriate provisions for such a situation must be made in the agreement.

(c) Set appropriate requirements for providing notification of available entry level positions to the San Francisco Workforce Development System so that the System may train and refer an adequate pool of qualified economically disadvantaged individuals to participating employers. Notification should include such information as employment needs by occupational title, skills, and/or experience required, the hours required, wage scale and duration of employment, identification of entry level and training positions, identification of English language proficiency requirements, or absence thereof, and the projected schedule and procedures for hiring for each occupation. Employers should provide both long-term job need projections and notice before initiating the interviewing and hiring process. These notification requirements will take into consideration any need to protect the employer's proprietary information.

(d) Set appropriate record keeping and monitoring requirements. The First Source Hiring Administration shall develop easy-to-use forms and record keeping requirements for documenting compliance with the agreement. To the greatest extent possible, these requirements shall utilize the employer's existing record keeping systems, be nonduplicative, and facilitate a coordinated flow of information and referrals.

(e) Establish guidelines for employer good faith efforts to comply with the first source hiring requirements of this Chapter. The FSHA will work with City departments to develop employer good faith effort requirements appropriate to the types of contracts and property contracts

handled by each department. Employers shall appoint a liaison for dealing with the development and implementation of the employer's agreement. In the event that the FSHA finds that the employer under a City contract or property contract has taken actions primarily for the purpose of circumventing the requirements of this Chapter, that employer shall be subject to the sanctions set forth in Section 83.10 of this Chapter.

(f) Set the term of the requirements.

(g) Set appropriate enforcement and sanctioning standards consistent with this Chapter.

(h) Set forth the City's obligations to develop training programs, job applicant referrals, technical assistance, and information systems that assist the employer in complying with this Chapter.

(i) Require the developer to include notice of the requirements of this Chapter in leases, subleases, and other occupancy contracts.

25.10.3. Hiring Decisions. Consultant shall make the final determination of whether an Economically Disadvantaged Individual referred by the System is "qualified" for the position.

25.10.4. Exceptions. Upon application by Employer, the First Source Hiring Administration may grant an exception to any or all of the requirements of Chapter 83 in any situation where it concludes that compliance with this Chapter would cause economic hardship.

25.10.5. Liquidated Damages. Violation of the requirements of Chapter 83 is subject to an assessment of liquidated damages in the amount of \$5,000 for every new hire for an Entry Level Position improperly withheld from the first source hiring process. The assessment of liquidated damages and the evaluation of any defenses or mitigating factors shall be made by the FSHA. Consultant agrees:

(a) To be liable to the City for liquidated damages as provided in this Section;

(b) To be subject to the procedures governing enforcement of breaches of contracts based on violations of contract provisions required by this Chapter as set forth in this Section;

(c) That the Consultant's commitment to comply with this Chapter is a material element of the City's consideration for this contract; that the failure of the Consultant to comply with the contract provisions required by this Chapter will cause harm to the City and the public which is significant and substantial but extremely difficult to quantify; that the harm to the City includes not only the financial cost of funding public assistance programs but also the insidious but impossible to quantify harm that this community and its families suffer as a result of unemployment; and that the assessment of liquidated damages of up to \$5,000 for every notice of

a new hire for an entry level position improperly withheld by the Consultant from the first source hiring process, as determined by the FSHA during its first investigation of a Consultant, does not exceed a fair estimate of the financial and other damages that the City suffers as a result of the Consultant's failure to comply with its first source referral contractual obligations.

(d) That the continued failure by a Consultant to comply with its first source referral contractual obligations will cause further significant and substantial harm to the City and the public, and that a second assessment of liquidated damages of up to \$10,000 for each entry level position improperly withheld from the FSHA, from the time of the conclusion of the first investigation forward, does not exceed the financial and other damages that the City suffers as a result of the Consultant's continued failure to comply with its first source referral contractual obligations;

(e) That in addition to the cost of investigating alleged violations under this Section, the computation of liquidated damages for purposes of this Section is based on the following data:

- The average length of stay on public assistance in San Francisco's County Adult Assistance Program is approximately 41 months at an average monthly grant of \$348 per month, totaling approximately \$14,379; and
- In 2004, the retention rate of adults placed in employment programs funded under the Workforce Investment Act for at least the first six months of employment was 84.4%. Since qualified individuals under the First Source program face far fewer barriers to employment than their counterparts in programs funded by the Workforce Investment Act, it is reasonable to conclude that the average length of employment for an individual whom the First Source Program refers to an employer and who is hired in an entry level position is at least one year;

(f) That the failure of Consultants to comply with this Chapter, except property Consultants, may be subject to the debarment and monetary penalties set forth in Sections 6.80 et seq. of the San Francisco Administrative Code, as well as any other remedies available under the contract or at law; and

(g) That in the event the City is the prevailing party in a civil action to recover liquidated damages for breach of a contract provision required by this Chapter, the Consultant will be liable for the City's costs and reasonable attorneys fees.

25.10.6. Subcontracts. Any subcontract entered into by Consultant shall require the subconsultant to comply with the requirements of Chapter 83 and

shall contain contractual obligations substantially the same as those set forth in this Section.

25.11. Prohibition of Political Activity with City Funds. No funds appropriated by the City for any contract, grant agreement or loan agreement may be expended for participating in, supporting, or attempting to influence a political campaign for any candidate or measure. Recipients of City funds will cooperate in audits conducted by the Chief Financial Officer to verify that no City funds were used for political purposes.

In accordance with San Francisco Administrative Code Chapter 12.G, Consultant may not participate in, support, or attempt to influence any political campaign for a candidate or for a ballot measure (collectively, "Political Activity") in the performance of the services provided under this Agreement. Consultant agrees to comply with San Francisco Administrative Code Chapter 12.G and any implementing rules and regulations promulgated by the City's Controller. The terms and provisions of Chapter 12.G are incorporated herein by this reference. In the event Consultant violates the provisions of this Section, the City may, in addition to any other rights or remedies available hereunder, (A) terminate this Agreement, and (B) prohibit Consultant from bidding on or receiving any new City contract for a period of two (2) years. The Controller will not consider Consultant's use of profit as a violation of this Section.

25.12. Services Provided by Attorneys. Any services to be provided as part of Consultant's services under this Agreement that are provided by a law firm or attorney retained by the Consultant must be reviewed and approved in writing in advance by the San Francisco City Attorney. No invoices for services provided by law firms or attorneys, including, without limitation, as subconsultants of Consultant, will be paid unless the provider received advance written approval from the City Attorney.

26. CONTRACT ADMINISTRATION AND CONSTRUCTION.

26.1. Notices to the Parties. Unless otherwise indicated elsewhere in this Agreement, all written communications sent by the parties may be by U.S. mail, e-mail or by fax, and shall be addressed as follows:

To SFMTA: Carter R. Rohan, R.A.
Central Subway Program Officer
Director, Capital Programs and Construction
San Francisco Municipal Transportation Agency
1 South Van Ness, 7th floor
San Francisco, CA 94103
Tel: 415-701-4282
Fax: 415-701-4300
carter.rohan@SFMTA.com

Shahnam Farhangi
Division Deputy, Contract Administration
and Quality Management
San Francisco Municipal Transportation Agency
1 South Van Ness, 3rd floor
San Francisco, CA 94103

Tel: 415-701-4284
Fax:415-701-4300
shahnam.farhangi@SFMTA.com

To Consultant: Nasri Munfah
Project Manager
PB Americas, Inc.
303 Second Street, Suite 700 North
San Francisco, CA 94107
Tel:646-245-2167
Fax: N/A
munfah@pbworld.com

Michael Willis
Michael Willis Architects, Inc.
301 Howard Street, Suite 500
San Francisco CA 94105
Tel: 415-489-1240
Fax: 415-957-2780
mwillis@mwaarchitects.com

Denis Henmi
Kwan Henmi Architecture and Planning, Inc.
456 Montgomery Street, 3rd floor
San Francisco, CA 94104
Tel: 415-901-7202
Fax: 415-777-5102
Denis.henmi@kwanhenmi.com

Any notice of default must be sent by registered mail.

26.2. Assignment. The services to be performed by Consultant are personal in character and neither this Agreement nor any duties or obligations hereunder may be assigned or delegated by the Consultant unless first approved by City by written instrument executed and approved as required by SFMTA policy and City law. Consultant and the partners of any joint venture or association that constitute the Consultant or any of the Consultant's subconsultants may incorporate or change their business names, and such actions shall not be considered an assignment for purposes of this Agreement provided such incorporation or name change does not decrease that entity's obligation or liability under this Agreement.

26.3. Successors and Assigns. This Agreement shall be binding upon the City and the Consultant and their respective successors and assigns. Neither the performance of this Agreement nor any part thereof, nor any funds due or to become due there under may be assigned by the Consultant without the prior written consent and approval of the City.

26.4. Non-Waiver of Rights. The omission by either party at any time to enforce any default or right reserved to it, or to require performance of any of the terms,

covenants, or provisions hereof by the other party at the time designated, shall not be a waiver of any such default or right to which the party is entitled, nor shall it in any way affect the right of the party to enforce such provisions thereafter.

26.5. Modification of Agreement. This Agreement may not be modified, nor may compliance with any of its terms be waived, except by written instrument executed and approved as required by the terms of this Agreement or as otherwise required by law.

26.6. Successors and Assigns. This Agreement shall be binding upon the City and the Consultant and their respective successors and assigns.

26.7. Agreement Made in California; Venue. The formation, interpretation and performance of this Agreement shall be governed by the laws of the State of California. Venue for all litigation relative to the formation, interpretation and performance of this Agreement shall be in San Francisco or as provided by Code of Civil Procedure Section 394; the venue for litigation in a county other than San Francisco pursuant to Section 394 will be Alameda County.

26.8. Negotiated Scope of Work. The Final Design services Consultant shall provide to the City for the Project are described in this Agreement. Tasks and subtasks that are reasonably related to the tasks included within the work described in Appendix A are Basic Services.

26.9. Construction of Agreement. All article or section titles and paragraph captions are for reference only and shall not be considered in construing this Agreement. This Agreement is the result of and memorializes a negotiated contract between the Parties, each of which is experienced and knowledgeable in professional services contracting for public works architectural and engineering design, construction support and related services, and each of which was represented by and had the assistance of legal counsel of its choosing. No rule of construction in which an ambiguity in a contract is construed against the drafter shall be applied to interpret this Agreement or the Parties' intentions thereto.

26.10. Entire Agreement. This Agreement and its listed Attachments and other documents incorporated by reference constitute an integrated document that sets forth the entire agreement between the parties as to the matters addressed therein, and the provisions of this Agreement and its listed Attachments supersede all other oral or written provisions, drafts of the Agreement. This Agreement may be modified only as provided in Section 26.5.

26.11. Compliance with Laws. Consultant shall keep itself fully informed of the City's Charter, codes, ordinances and regulations of the City and of all state, and federal laws in any manner affecting the performance of this Agreement, and must at all times comply with such local codes, ordinances, and regulations and all applicable laws as they may be amended from time to time.

26.12. Disputes and Resolution.

26.12.1. Notice of Dispute. For any dispute involving a question of fact that does not involve a claim for additional compensation, the aggrieved Party

shall furnish the other Party with a notice of dispute within fifteen (15) days of the determination of the dispute. The Party receiving a notice of dispute shall submit a written reply with fourteen (14) calendar days of delivery of the notice. The notice and response shall contain the following: (a) a statement of the Party's position and a summary of the arguments supporting that position, and (b) any evidence supporting the Party's position.

26.12.2. Resolution of Disputes. Disputes arising in the performance of this Agreement that are not resolved by negotiation between the SFMTA Program Manager and Consultant's Project Manager shall be decided in writing by the SFMTA Senior Manager of Contract and Quality Management. The decision shall be administratively final and conclusive unless within ten (10) working days from the date of such decision, the Consultant mails or otherwise furnishes a written appeal to the SFMTA Program Officer, or his/her designee. In connection with such an appeal, the Consultant shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of the SFMTA Program Officer shall be administratively final and conclusive. This Section applies to all disputes unless a specific provision of this Agreement provides that the SFMTA Program Manager's decision as to a particular dispute is final.

26.12.3. No Cessation of Work. Pending final resolution of a dispute hereunder, the Consultant shall proceed diligently with the performance of its obligations under this Agreement in accordance with the written directions of the SFMTA Program Manager.

26.12.4. Alternative Dispute Resolution. If agreed to by both Parties, disputes may be resolved by a mutually agreed to alternative dispute resolution process.

26.12.5. Claims for Additional Compensation. For disputes involving a claim for additional compensation, parties involved shall attempt to resolve such disputes expediently and in good faith so as not to impact the performance or schedule of the Project. Under no circumstances shall the Consultant or its sub-consultants stop work due to an unresolved dispute.

26.12.6. Disputes among Consultant Partners. If Consultant is a joint venture partnership, the resolution of any contractual disputes related to Consultant's joint venture or association partners (if any) shall be the sole responsibility of the Consultant and . not to impact Consultant's performance of the Contract or otherwise delay the Project. Any such disputes that impact the Project shall be cause for the City to withhold and/or reduce invoice payments to the Consultant's Joint Venture or Association firms until the dispute is resolved.

26.13. Mutual Agreement. This Agreement is the product of negotiations between the Parties. Each Party represents that it is a sophisticated and experienced participant in contracting for public works. Each Party has been represented by legal counsel of their choosing. Each Party represents that it has read and understands this Agreement, and enters into this Agreement of its own free-will and without coercion of any kind. The Parties agree that this Agreement shall not be subject to any rule of

contract construction that may hold or would result in any ambiguity of any provision of this Agreement being held against the drafter of said provision.

26.14. Severability. Should the application of any provision of this Agreement to any particular facts or circumstances be found by a court of competent jurisdiction to be invalid or unenforceable, then (a) the validity of other provisions of this Agreement shall not be affected or impaired thereby, and (b) such provision shall be enforced to the maximum extent possible so as to effect the intent of the parties and shall be reformed without further action by the parties to the extent necessary to make such provision valid and enforceable.

26.15. No Third Party Beneficiary. This Agreement is intended for the sole benefit of the City and the Consultant, and is not intended to create any third-party rights or benefits.

26.16. Signatories Authorized. By signing below, each signatory warrants that he or she is authorized to execute this Agreement and thereby bind the Party he or she represents.

27. ENVIRONMENTAL REQUIREMENTS.

27.1. Resource Efficiency and Conservation. Consultant shall adhere to the extent practicable to all requirements of Chapter 82 Resource Efficiency Requirements for City-owned Facilities (Green Building Ordinance), attached hereto as Appendix J. Chapter 5 of the San Francisco Environment Code ("Resource Conservation") is incorporated herein by reference. Failure by Consultant to comply with any of the applicable requirements of Chapter 5 specifically required by the SFMTA may be deemed a material breach of contract.

27.2. Preservative-Treated Wood Containing Arsenic. Consultant shall not purchase preservative-treated wood products containing arsenic in the performance of this Agreement unless an exemption from the requirements of Chapter 13 of the San Francisco Environment Code is obtained from the Department of the Environment under Section 1304 of the Code. The term "preservative-treated wood containing arsenic" shall mean wood treated with a preservative that contains arsenic, elemental arsenic, or an arsenic copper combination, including, but not limited to, chromated copper arsenate preservative, ammoniacal copper zinc arsenate preservative, or ammoniacal copper arsenate preservative. Consultant may purchase preservative-treated wood products on the list of environmentally preferable alternatives prepared and adopted by the Department of the Environment. This provision does not preclude Consultant from purchasing preservative-treated wood containing arsenic for saltwater immersion. The term "saltwater immersion" shall mean a pressure-treated wood that is used for construction purposes or facilities that are partially or totally immersed in saltwater.

27.3. Graffiti Removal. Graffiti is detrimental to the health, safety and welfare of the community in that it promotes a perception in the community that the laws protecting public and private property can be disregarded with impunity. This perception fosters a sense of disrespect of the law that results in an increase in crime; degrades the community and leads to urban blight; is detrimental to property values, business opportunities and the enjoyment of life; is inconsistent with the City's property

maintenance goals and aesthetic standards; and results in additional graffiti and in other properties becoming the target of graffiti unless it is quickly removed from public and private property. Graffiti results in visual pollution and is a public nuisance. Graffiti must be abated as quickly as possible to avoid detrimental impacts on the City and County and its residents, and to prevent the further spread of graffiti.

Consultant shall remove all graffiti from any real property owned or leased by Consultant in the City and County of San Francisco within forty eight (48) hours of the earlier of Consultant's (a) discovery or notification of the graffiti or (b) receipt of notification of the graffiti from the Department of Public Works. This Section is not intended to require a Consultant to breach any lease or other agreement that it may have concerning its use of the real property. The term "graffiti" means any inscription, word, figure, marking or design that is affixed, marked, etched, scratched, drawn or painted on any building, structure, fixture or other improvement, whether permanent or temporary, including by way of example only and without limitation, signs, banners, billboards and fencing surrounding construction sites, whether public or private, without the consent of the owner of the property or the owner's authorized agent, and which is visible from the public right-of-way. "Graffiti" shall not include: (1) any sign or banner that is authorized by, and in compliance with, the applicable requirements of the San Francisco Public Works Code, the San Francisco Planning Code or the San Francisco Building Code; or (2) any mural or other painting or marking on the property that is protected as a work of fine art under the California Art Preservation Act (California Civil Code Sections 987 et seq.) or as a work of visual art under the Federal Visual Artists Rights Act of 1990 (17 U.S.C. §§ 101 et seq.).

Any failure of Consultant to comply with this Section of this Agreement shall constitute an Event of Default of this Agreement.

27.4. Food Service Waste Reduction Requirements. Consultant agrees to comply fully with and be bound by all of the provisions of the Food Service Waste Reduction Ordinance, as set forth in San Francisco Environment Code Chapter 16, including the remedies provided, and implementing guidelines and rules. The provisions of Chapter 16 are incorporated herein by reference and made a part of this Agreement as though fully set forth. This provision is a material term of this Agreement. By entering into this Agreement, Consultant agrees that if it breaches this provision, City will suffer actual damages that will be impractical or extremely difficult to determine; further, Consultant agrees that the sum of one hundred dollars (\$100) liquidated damages for the first breach, two hundred dollars (\$200) liquidated damages for the second breach in the same year, and five hundred dollars (\$500) liquidated damages for subsequent breaches in the same year is reasonable estimate of the damage that City will incur based on the violation, established in light of the circumstances existing at the time this Agreement was made. Such amount shall not be considered a penalty, but rather agreed monetary damages sustained by City because of Consultant's failure to comply with this provision.

27.5. Tropical Hardwood and Virgin Redwood Ban. Pursuant to §804(b) of the San Francisco Environment Code, the City and County of San Francisco urges its contractors and consultants not to import, purchase, obtain, or use for any purpose, any tropical hardwood, tropical hardwood wood product, virgin redwood or virgin redwood wood product.

27.6. Recycled Products. Consultant shall use recycled products, as set out in Sections 28.10 and 28.20, below.

28. FEDERAL REQUIREMENTS.

28.1. Federal Contract Requirements and Applicable Law. The provisions set out this Section 28 are required by federal law. If there is any conflict between said provisions or any federal law, regulation or requirement, including such limitations and requirements as the FTA may impose, such federal requirements, terms and conditions shall take precedence over any terms and conditions set out in this Agreement. The City and County of San Francisco is a chartered City and County with home rule powers under the Constitution of the State of California. The terms of this Agreement are governed by California Law and the ordinances and Charter of the City and County of San Francisco. Except as expressly provided for in this Agreement, the Federal Acquisition Regulations (FAR) shall not apply to this Agreement, except as to provide guidance as to accounting and auditing standards, including but not limited to calculation of compensable costs and overhead.

28.2. Incorporation of Federal Transit Administration (FTA) Terms.

28.2.1. All contractual provisions required by DOT, as set forth in FTA Circular 4220.1F, (http://www.fta.dot.gov/laws/circulars/leg_reg_8641.html), as amended and the Master Grant Agreement (<http://www.fta.dot.gov/documents/15-Master.pdf>), are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Consultant shall not perform any act, fail to perform any act, or refuse to comply with any SFMTA request that would cause SFMTA to be in violation of the FTA terms and conditions.

28.2.2. The FTA Master Agreement obligates SFMTA to incorporate certain provisions into this Agreement and any lower tier subcontracts at any level and to take appropriate measures to ensure that Consultant and its lower tier subconsultants at any level comply with certain applicable requirements set forth in the Master Agreement. The FTA Master Agreement is hereby incorporated by reference into this Agreement, and Consultant shall comply with all such requirements.

28.2.3. Copies of the FTA Master Agreement are available from SFMTA.

28.3. Applicability of Federal Grant Contract.

28.3.1. This procurement may be subject to one or more financial assistance contracts between SFMTA and the U.S. Department of Transportation, which incorporate the current FTA Master Agreement and Circular 4220.1F as amended. U.S. Department of Transportation's level of financial assistance may be between zero and eighty percent (0-80%). The Consultant is required to comply with all terms and conditions prescribed for third party contracts in these documents.

28.3.2. Federal laws, regulations, policies and administrative practices may be modified or codified after the date this Agreement is established and may apply to this Agreement. To assure compliance with changing federal requirements, Contract Award indicates that the Consultant agrees to accept all changed requirements that apply to this Agreement.

28.4. Federal Funding Limitation. Consultant understands that funds to pay for Consultant's performance under this Agreement are anticipated to be made available from the United States Department of Transportation through the Federal Transit Administration (FTA). All funds must be approved and administered by FTA. SFMTA's obligation hereunder is payable from funds that are appropriated and allocated by FTA for the performance of this Agreement. If funds are not allocated, or ultimately are disapproved by FTA, SFMTA may terminate or suspend Consultant's services without penalty or obligation other than those specifically provided for in Section 19.2 of this Agreement as a termination for convenience. SFMTA shall notify Consultant promptly in writing of the non-allocation, delay, or disapproval of funding.

28.5. No Federal Government Obligation to Third Parties. Consultant agrees that, absent the Federal Government's express written consent, the Federal Government shall not be subject to any obligations or liabilities to any sub-recipient, any third party contractor, or any other person not a party to the Grant Agreement in connection with this Project. Notwithstanding any concurrence provided by the Federal Government in or approval of any solicitation, subagreement, or third party contract, the Federal Government continues to have no obligations or liabilities to any party, including a sub-recipient or third party contractor.

28.6. Federal Lobbying Restrictions.

28.6.1. This Agreement is subject to Section 319, Public Law 101-121 (31 U.S.C. §1352) and U.S. DOT regulations "New Restrictions on Lobbying," 49 C.F.R. Part 20, which prohibits Federal funds from being expended to influence or to attempt to influence an officer or employee of any agency, members of Congress, an office or employee of Congress or an employee of any Member of Congress in connection with the awarding of any federally funded contract, the making of any Federal grant or loan, or entering into any cooperative agreement and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement. Consultants and Subconsultants at any time who apply or bid for an award of \$100,000 or more shall file the certification required by 49 C.F.R. Part 20, "New Restrictions on Lobbying." Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or any employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-Federal funds with respect to that Federal contract, grant or award covered by 31 U.S.C. 1352. Such disclosures are forwarded from tier to tier up to the recipient. The Consultant shall submit the "Certification Regarding Lobbying" included in this document. The Consultant's signature on this certification shall certify that: a) it has not engaged in the

prohibited activity and b) the language of the certification shall be included in all lower tier subcontracts, which exceed \$100,000, and that all such subconsultants shall certify and disclose accordingly. SFMTA is responsible for keeping the certification form of the Consultant, who is in turn responsible for keeping the certification forms of subconsultants. Further, by executing the Agreement, the Consultant agrees to comply with these laws and regulations.

28.6.2. If the Consultant has engaged in any lobbying activities to influence or attempt to influence the awarding of this Agreement, the Consultant must disclose these activities. In such a case, the Consultant shall complete Standard Form SF-LLL, "Disclosure of Lobbying Activities". SFMTA must also receive all disclosure forms.

28.6.3. The Consultant and any subconsultants shall file a disclosure form at the end of each calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of a previously filed disclosure form. An event that materially affects the accuracy of the information reported includes:

(a) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence this federally funded Agreement; or

(b) A change in the person(s) influencing or attempting to influence this federally funded Agreement; or

(c) A change in the officer(s), employee(s) or member contracted to influence or attempt to influence this federally funded Agreement.

28.7. Lobbying Certification and Disclosure. Pursuant to 49 C.F.R. Part 20 (which is by this reference incorporated herein), the Consultant shall execute and return the Certification Regarding Lobbying by Consultant form set forth in Appendix H with the execution of this agreement.

28.8. Certification Regarding Debarment, Suspension And Other Responsibility Matters.

28.8.1. Pursuant to Executive Order 12549 and 12689, "Debarment and Suspension," 31 USC § 6101 and federal regulations in 49 C.F.R. 29, entities and individuals who are debarred or suspended by the federal government are excluded from obtaining federal assistance funds under this Contract. To assure that such entities and individuals are not involved as participants on this FTA-financed contract, if the contract exceeds \$25,000 each Consultant shall complete and submit, as part of its Proposal, the certification form, contained in these documents. The inability of a Consultant to provide a certification will not necessarily result in denial of consideration for contract award. A Consultant that is unable to provide a certification must submit a complete explanation attached to the certification form. Failure to submit a certification or explanation may disqualify the Consultant from participation under this Contract. SFMTA, in conjunction with FTA, will consider the certification or explanation in determining

contract award. No contract will be awarded to a potential third-party contractor submitting a conditioned debarment or suspension certification, unless approved by the FTA.

28.8.2. The certification is a material representation of fact upon which reliance is placed in determination of award of contract. If at any time the Consultant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances, it shall immediately provide written notice to SFMTA. If it is later determined that the Consultant knowingly rendered an erroneous certification, or failed to notify SFMTA immediately of circumstances which made the original certification no longer valid, SFMTA may disqualify the Consultant. If it is later determined that the Consultant knowingly rendered an erroneous certification, or failed to notify SFMTA immediately of circumstances which made the original certification no longer valid, SFMTA may terminate the contract, in addition to other remedies available including FTA suspension and/or debarment.

28.8.3. Further, the Consultant shall not knowingly enter into any subcontract with an entity or person who is proposed for debarment under 48 C.F.R. Part 9, Subpart 9.4, debarred, suspended, or who has been declared ineligible from obtaining federal assistance funds. As such, the Consultant shall require all subconsultants seeking subcontracts to complete and submit the same certification form contained in these documents before entering into any agreement with said subconsultant.

28.9. Exclusionary Or Discriminatory Specifications. Apart from inconsistent requirements imposed by Federal statute or regulations, the Consultant agrees that it will comply with the requirement of 49 U.S.C. § 5323(h)(2) by refraining from using any Federal assistance awarded by FTA to support procurements using exclusionary or discriminatory specifications.

28.10. Conservation. The Consultant shall recognize mandatory standards and policies relating to energy efficiency that are contained in the State Energy Action plan issued in compliance with the Energy Policy and Conservation Act (42 USC Section 6321 et seq.).

28.11. Clean Water. The Consultant agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. The Consultant agrees to report each violation to the Purchaser and understands and agrees that the Purchaser will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office. The Consultant also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

28.12. Clean Air. The Consultant agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. The Consultant agrees to report each violation to the Purchaser and understands and agrees that the Purchaser will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office. The

Consultant also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

28.13. Fly America. International air transportation of any persons involved in or property acquired for the Project must be provided by U.S. flag air carriers to the extent service by these carriers is available, as required by the International Air Transportation Fair Competitive Practices Act of 1974, as amended, 49 U.S.C. 40118, in accordance with U.S. GAO regulations, "Uniform Standards and Procedures for Transportation Transactions," 4 C.F.R. Part 52, and U.S. GAO Guidelines for Implementation of the "Fly America Act" B-138942, 1981 U.S. Comp. Gen. LEXIS 2166. March 31, 1981.

28.14. Seismic Safety. The Consultant agrees that any new building or addition to an existing building will be designed and constructed in accordance with the standards for Seismic Safety required in Department of Transportation Seismic Safety Regulations 49 C.F.R. Part 41 and will certify to compliance to the extent required by the regulation. The Consultant also agrees to ensure that all work performed under this Contract including work performed by a subcontractor is in compliance with the standards required by the Seismic Safety Regulations and the certification of compliance issued on the project.

28.15. National Intelligent Transportation Systems Consultanture and Standards. The Consultant agrees to conform, to the extent applicable, to the National Intelligent Transportation Systems (ITS) Consultanture and Standards as required by Section 5206(e) of TEA-21, 23 U.S.C. § 502-, and with FTA Notice, "Federal Transit Administration National ITS Consultanture Policy on Transit Projects" 66 Fed. Reg. 1455 et seq., January 8, 2001, and other subsequent Federal directives that may be issued.

28.16. Electronic and Information Technology. When providing reports or other information to the SFMTA, or to the Federal Transit Administration (FTA), among others, on behalf of the SFMTA, the Consultant agrees to prepare such reports or information using electronic or information technology capable of assuring that the reports or information delivered will meet the applicable accessibility standards of Section 508 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794d, and U.S. ATBCB regulations, "Electronic and Information Technology Accessibility Standards," 36 C.F.R. Part 1194.

28.17. Nondiscrimination. In addition to the provisions prohibiting discrimination set out in Sections 10.4 and 24.1, above, the Consultant shall ensure compliance by it and its subconsultants with all requirements imposed by Title VI of the Civil Rights Act of 1964 (42 USC 2000d), federal Executive Order No. 11246, regulations of the U. S. Department of Labor issued thereunder, the regulations of the federal Department of Transportation issued thereunder, and the Americans with Disabilities Act, as they may be amended from time to time. Accordingly, during the performance of this Agreement, the Consultant, for itself, its assignees, and successors in interest (hereinafter referred to as the "Consultant"), agrees as follows:

28.17.1. The Consultant shall comply with the Regulations relative to nondiscrimination in federally-assisted programs of the Department of Transportation (hereinafter "DOT"), Title 49, Code of Federal Regulations, Part 21 ("Nondiscrimination in Federally-Assisted Programs of the Dept. of

Transportation"), as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this Agreement.

28.17.2. In all solicitations either by competitive bidding or negotiation made by the Consultant for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subconsultant or supplier shall be notified by the Consultant of the Consultant's obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, religion, creed, sex, sexual orientation, disability, age, or nationality.

28.17.3. The Consultant shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by SFMTA or FTA to be pertinent to ascertain compliance with such regulations, orders, and instructions. Where any information is required of a contractor or subconsultant that is in the exclusive possession of another who fails or refuses to furnish this information, the Consultant shall so certify to SFMTA, or FTA, as appropriate, and shall set forth what efforts it has made to obtain the information.

28.17.4. In the event of the Consultant's noncompliance with the nondiscrimination provisions of this Agreement, SFMTA shall impose such contract sanctions as it or FTA may determine to be appropriate, including, but not limited to:

(a) Requiring the Consultant to take remedial action to bring the Consultant into compliance;

(b) Withholding of payments to the Consultant under the Agreement until the Consultant complies; and/or

(c) Cancellation, termination, or suspension of the Agreement, in whole or in part.

28.17.5. The Consultant shall include the provisions of these Subsections 28.17.1 to 28.17.4 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The Consultant shall take such action with respect to any subcontract or procurement as SFMTA or FTA may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that, in the event the Consultant becomes involved in, or is threatened with, litigation with a subconsultant or supplier as a result of such direction, the Consultant may request SFMTA to enter into such litigation to protect the interests of SFMTA and, in addition, the Consultant may request the United States to enter into such litigation to protect the interest of the United States.

28.18. Title VI Compliance. During the performance of this Agreement, Consultant, for itself, its assignees, and its successors in interest agrees as follows:

28.18.1. Compliance with Regulations: Consultant shall comply with the Regulations relative to nondiscrimination in federally-assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this Agreement.

28.18.2. Nondiscrimination: Consultant, with regard to the work performed by it during the Agreement, shall not discriminate on the grounds of race, religion, color, sex, age, or national origin in the selection and retention of subconsultants, including procurement of materials and leases of equipment. Consultant shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the Agreement covers a program set forth in Appendix B of the Regulations.

28.18.3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by Consultant for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subconsultant or supplier shall be notified by Consultant of Consultant's obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, religion, color, sex, age, or national origin.

28.18.4. Information and Reports: Consultant shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by SFMTA or the FTA to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of Consultant is in the exclusive possession of another who fails or refuses to furnish this information, Consultant shall so certify to SFMTA, or the FTA as appropriate, and shall set forth what efforts it has made to obtain the information.

28.18.5. Sanctions for Noncompliance: In the event of Consultant's noncompliance with the nondiscrimination provisions of this Agreement, SFMTA shall impose such contract sanctions as it or the FTA may determine to be appropriate, including, but not limited to:

(a) Withholding of payments to Consultant under the Agreement until Consultant complies, and/or,

(b) Cancellation, termination or suspension of the Agreement, in whole or in part.

28.18.6. Incorporation of Provisions: Consultant shall include the provisions of Subsection 28.18.1 through 28.18.5 of this Section in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. Consultant shall take such action with respect to any subcontract or procurement

as SFMTA or the FTA may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that, in the event Consultant becomes involved in, or is threatened with, litigation with a subconsultant or supplier as a result of such direction, Consultant may request SFMTA to enter into such litigation to protect the interests of SFMTA, and, in addition, Consultant may request the United States to enter into such litigation to protect the interests of the United States.

28.19. Requirements of Americans with Disabilities Act. The Consultant is required to comply with all applicable requirements of the Americans with Disabilities Act of 1990 (ADA), 42 USC §§ 12101, et seq.; Section 504 of the Rehabilitation Act of 1973, as amended, 29 USC § 794; and 49 USC § 5301(d), and the following regulations and any amendments thereto:

28.19.1. U.S. Department of Transportation regulations, "Transportation Services for Individuals with Disabilities (ADA)," 49 C.F.R. Part 37;

28.19.2. U.S. Department of Transportation regulations, "Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance," 49 C.F.R. Part 27;

28.19.3. U.S. Department of Justice (DOJ) regulations, "Nondiscrimination on the Basis of Disability in State and Local Government Services," 28 C.F.R. Part 35;

28.19.4. DOJ regulations, "Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities," 28 C.F.R. Part 36;

28.19.5. U.S. General Services Administration regulations, "Accommodations for the Physically Handicapped," 41 C.F.R. Subpart 101-19;

28.19.6. U.S. Equal Employment Opportunity Commission (EEOC) "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630;

28.19.7. U.S. Federal Communications Commission regulations, "Telecommunications Relay Services and Related Customer Premises Equipment for Persons with Disabilities," 47 C.F.R. Part 64, Subpart F; and

28.19.8. FTA regulations, "Transportation for Elderly and Handicapped Persons," 49 C.F.R. Part 609.

28.19.9. Any implementing requirements that the FTA may issue.

28.20. Recycled Products. To the extent practicable and economically feasible, the Consultant agrees to provide a competitive preference for recycled products to be used in the Project pursuant to the U.S. Environmental Protection Agency Guidelines at 40 C.F.R. Parts 247, implementing Section 6002 of the Resource Conservation and Recovery Act, as amended, 42 USC § 6962. If possible, the Consultant shall use both sides of paper sheets for copying and printing and shall use recycled/recyclable products wherever practical at the fulfillment of this Agreement.

28.21. Privacy.

28.21.1. Should the Consultant, or any of its subconsultants, or their employees administer any system of records on behalf of the federal government, the Privacy Act of 1974, 5 USC § 552a, imposes restrictions on the party administering the system of records.

28.21.2. For purposes of the Privacy Act, when the Agreement involves the operation of a system of records on individuals to accomplish a government function, SFMTA and any Consultants, third-party contractors, subcontractors, and their employees involved therein are considered to be government employees with respect to the government function. The requirements of the Act, including the civil and criminal penalties for violations of the Act, apply to those individuals involved. Failure to comply with the terms of the Act or this provision of this Agreement will make this Agreement subject to termination.

28.21.3. The Consultant agrees to include this clause in all subcontracts awarded under this Agreement that require the design, development, or operation of a system of records on individuals subject to the Act.

28.22. False or Fraudulent Statements and Claims.

28.22.1. The Consultant recognizes that the requirements of the Program Fraud Civil Remedies Act of 1986, as amended, 49 U.S.C. §§ 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its actions pertaining to this Project. Accordingly, by signing this Agreement, the Consultant certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, or it may make pertaining to the covered Grant Agreement, Cooperative agreement, Contract or Project. In addition to other penalties that may be applicable, the Consultant acknowledges that if it makes a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986, as amended, on the Consultant, to the extent the Federal Government deems appropriate.

28.22.2. The Consultant also acknowledges that if it makes a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government in connection with an urbanized area formula project financed with Federal assistance authorized by 49 U.S.C. § 5307, the Government reserves the right to impose on the Consultant the penalties of 18 U.S.C. § 1001, 31 USC §§ 3801, et seq., and 49 U.S.C. § 5307(n)(1), to the extent the Federal Government deems appropriate.

28.22.3. The Consultant agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subconsultant who will be subject to the provisions.

28.23. Drug-Free Workplace Policy. Consultant acknowledges that pursuant to the Federal Drug-Free Workplace Act of 1989, 41 U.S.C. 702, the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is

prohibited on City premises. Consultant agrees that any violation of this prohibition by Consultant, its employees, agents or assigns will be deemed a material breach of this Agreement.

28.24. Approval by Counterparts. This Agreement may be approved by counterparts signed by the parties' respective authorized representatives, which counterparts shall be considered a single document. Signed counterparts may be delivered by facsimile, PDF email, or courier.


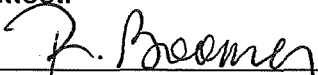
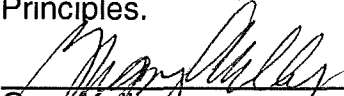

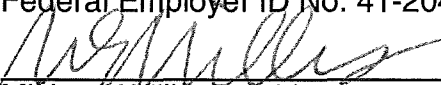

29. INCLUDED APPENDICES.

The following documents included as appendices to this Agreement are incorporated by reference as if fully set out herein.

- A. Signed Scope of Services/Scope of Work
- B. Directory of Subconsultants
- C. Summary of Fees - Cost Breakdown/Schedule of Charges
- D. Other Direct Costs
- E. Organization Chart
- F. SBE Forms 4 & 5
- G. Small Business Enterprise (SBE) Program
- H. Overhead Rates for Field and Home Office Personnel
- I. Not Used
- J. Not Used
- K. Not Used
- L. Central Subway Design Control Procedures
- M. Design Schedule
- N. Construction Contract Package Definitions
- O. Construction Cost Budget

The remainder of this page is intentionally left blank.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement on the day first mentioned above.

CITY	CONSULTANT
City and County of San Francisco Municipal Transportation Agency	By signing this Agreement, Consultants each certifies that it complies with the requirements of the Minimum Compensation Ordinance, which entitle Covered Employees to certain minimum hourly wages and compensated and uncompensated time off.
By  NATHANIEL P. FORD SR. Executive Director/CEO	Each Consultant has read and understands paragraph 35, the City's statement urging companies doing business in Northern Ireland to move towards resolving employment inequities, encouraging compliance with the MacBride Principles, and urging San Francisco companies to do business with corporations that abide by the MacBride Principles.
SFMTA Board of Directors Resolution No. <u>01-202</u> Adopted: <u>Dec. 1, 2009</u> Attest:  Roberta Boomer, Secretary SFMTA Board of Directors	
Approved as to Form:	Greg Kelly
Dennis J. Herrera City Attorney	President, Transportation Division PB Americas, Inc., a subsidiary of Parsons Brinckerhoff, Inc.
By 	One Penn Plaza New York, NY 10119
Robert K. Stone Deputy City Attorney	Federal Employer ID No. 41-2045366
	
	Michael Willis, President License No. C-15140
	Michael Willis Architects, Inc.. 301 Howard Street, Suite 500 San Francisco, CA 94105
	Federal Employer ID No. 94-3070035
	
	Denis Henmi, President License No. C-11009
	Kwan Henmi Architects and Planning, Inc.. 456 Montgomery St., 3 rd floor San Francisco, CA 94104
	Federal Employer ID No. 94-3082274



APPENDIX A
SIGNED SCOPE OF SERVICES/SCOPE OF WORK

Central Subway Project - Design Package #2

Contract No. CS-155-2

Appendix A

Scope of Services

Design Package 2 (DP2)

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FINAL DESIGN PHASE

General

With challenging engineering and architectural issues at hand, successful delivery of Design Package 2 will be based on advancing the design concepts developed to date during the Preliminary Engineering Phase, capture the desires of the community, and develop designs that are efficient, economical, sustainable, and constructible.

The basis of the final design will be the preliminary design developed to date. It is anticipated that the present design will be reviewed and accepted in the Early Work (EW) milestone and the design will be adopted and advanced to the 65%, 90% and 100% milestones. Under the Basic Services scope of work, it is not anticipated to re-evaluate layouts, configurations, or planning aspects of the stations, nor significant modifications to the station designs or addition of new elements or connections to existing facilities, or major modifications to the layout and the station configurations.

Consultant's approach to the delivery of final design contract packages for Contract Packages CP-4 Union Market Street Station (UMS), CP-5 Chinatown Station (CTS) and CP-6 Moscone Station (MOS) begins with a clear understanding of the station concepts, design reference materials, and building blocks that was established in the PE phase. Consultant will incorporate sustainable design elements. As an early action item, Consultant will work closely with SFMTA and the Design Package 3 Consultant to establish the project's sustainability policies, goals, and procedures in line with SFMTA's and the City's sustainable design guidelines. Developments of the sustainability guidelines are by others. DP2 Consultant role will be to implement these guidelines in its design provided that no significant alteration to the concepts, layouts, and designs developed during the Preliminary Engineering Phase will be required. Consultant will endorse SFMTA pursuing LEED V3 certification for the stations. However, it is not planned at this stage to have any the facilities designed under the Base Services to achieve LEED V3 certification.

Consultant will provide for opportunities for transit oriented development (TOD) at MOS and CTS Stations to bring value added to the Central Subway project. Design of the station headhouses will consider potential air rights developments by preserving spaces and provisions for utilities not to preclude future developments assuming present zoning requirements.

It is imperative that key interfaces and interface milestones within Design Package 2 and with Design Packages 1 and 3 be understood and agreed to by all project participants, regardless of design or construction package. There are numerous fixed facility, operational, functional and performance requirements common to all elements of the project, including ventilation, power, signals, communications, and emergency services, among others. These common design elements have to be identified, coordinated among the various design and construction packages, verified that they were addressed and monitored throughout design of the project. Project and system integration between the three design packages is the

responsibility of DP3 Consultant. DP2 Consultant will lead the integration between DP1 and DP2 on common elements and will incorporate in its design project integration elements identified by DP3. Revit 3D (BIM) modeling and VDC applications are potential tools to support interfaces activities and clash detection. Each of consultant's three station architects is familiar with and can utilize Revit software to standardize construction drawings and to facilitate identification of integration/interface conflicts among construction contracts/design packages and implementation of measures to resolve them early in the design process. However, the use of BIM under Basic Services will be limited in extent to the overall configuration developments due to the limited ability of the remaining project staff, who will be designing the plumbing, fire protection, electrical, and ventilation systems, to use BIM. Training of City staff or subconsultants' staff in BIM is not planned as part of the Basic Services. BIM will be used by the station architects to develop the general plans and layouts.

The following sections describe the approach to completing the Basic and Optional Services for Design Package 2 as delineated in the RFP and negotiated during the period of August 28, 2009 to November 12, 2009. The tasks are further elaborated in the Work Breakdown Structure. Days within this Scope of Work means calendar days unless otherwise noted. The cost proposal is based on the Basic and Optional scope of services and the deliverables as outlined herein.

Submittals

Early Work (EW): Upon notice to proceed, the Consultant shall familiarize itself with and review the design developed during the Preliminary Engineering (PE) Phase. The Consultant shall prepare review comments and shall provide a matrix of proposed changes from the PE concepts. Within 90 days of Notice to Proceed (NTP) Consultant shall prepare a quantity take off estimate by organizing the PE design quantities take off into the appropriate WBS.

65% Submittal: 65% complete shall be defined as being sufficiently complete to illustrate the entire scope of the work under design so that reviewers can comment on the overall scope of the project, by contract package. The intent is to avoid new, never before seen items of significance appearing for the first time in the pre-final submittal. The work also needs to be sufficiently complete to support the 65% submittal cost estimate. Items of significance shall also have been independently checked at this point, in accordance with the provisions for the QC Plan, including items on drawings, in the specifications or figures in the estimate.

Submittal shall include reports, drawings, and technical specifications sections to include the general description and products requirements, and quantity estimates at the 65% complete design level by contract package, for project design review. The submittal shall include in the transmittal letter a summary discussion of the design, by discipline, to give the reviewer an understanding of why the design

progressed in the particular manner it did. It shall reference documentation of design decisions made in the course of the work. Include outstanding issues and/or conflicts that need resolution and recommendations to resolve such issues. Provide a matrix of changes from the Preliminary Engineering documents. An electronic copy and one hard copy of the submittal materials will be provided. Additional reproduction cost will be part of the Optional Services.

For the 65% and 90% submittals Consultant will receive formal design review comments on Review Comment Forms within four weeks of each submittal from SFMTA reviewers and within eight weeks of each submittal from outside agencies or third party stakeholders. Program Manager shall compile all comments and resolve conflicting comments prior to submittal to Consultant. The Consultant is responsible for addressing previous comments (as answered or agreed upon) prior to each subsequent review.

Pre-Final Submittal (90%): All design work shall be essentially complete with only minor (insignificant) items needing detailing or checking. All calculations shall be completed; major items shall be independently checked. Drawings shall be nearly complete for bidding purposes; approximately 90% complete, and shall have incorporated or resolved comments made during the 65% design review, and other informal reviews. Unresolved comments shall be identified and addressed. Reports and studies shall be submitted as final, unless otherwise agreed. Consultant's final list of proposed contract bid items and quantities shall be submitted.

Submittal shall include final reports, drawings, special provisions and supplemental technical specifications, and updated quantity estimates. The submittal letter shall include a summary updated discussion of the design, by discipline, to give the reviewer an understanding of why the design progressed in the particular manner it did since the 65% submittal. It shall reference documentation of design decisions made in the course of the work since the 65% submittal. Include outstanding issues and/or conflicts that need resolution, if any remain, and recommendations to resolve such issues. Provide a matrix of review comments received for the 65% submittal with comment resolution. An electronic copy and one hard copy of the submittal materials will be provided. Additional reproduction cost is provided as part of the Optional Services.

Final Submittal/Contract Document (100%): Consultant's Final design submittal shall include original and electronic files of the complete drawings, special provisions; supplemental technical specifications, bid item list and final engineer's quantity take off ready for bidding of the work. Drawings shall be sealed and signed by the Consultant's appropriate architect, engineer or professional licensed by the State of California. Final drawing check prints (performed in accordance with established QC procedures) shall be submitted for review and will be returned to the

Consultant for safekeeping. Final sealed original calculations (properly indexed) and quantity estimating back up shall be submitted.

1.0 Project Management and Control

Project Management is the daily management by Consultant of its scope, staff, and work product. It includes coordination of the design effort among disciplines and among construction packages. It also includes management of the contract schedule and budget, and implementation of cost and schedule control measures and corrective actions.

Each station package will have its own dedicated manager, design budget and schedule and be monitored on a regular basis. Interfacing and coordination among the teams will be done through weekly progress meetings. Similarly coordination and interfacing with other design packages (DP-1 ad DP-3) will be done on a regular (weekly or bi-weekly) basis. Furthermore Consultant will provide support for open dialogue with building owners, utility companies, and project stakeholders as indicated hereinafter.

Changes to the Basic Services will be negotiated and implemented expeditiously in order to meet the overall Project schedule.

Task Leader

Nasri Munfah (Project Manager)

1.10 Final Design Strategic Execution Plan / Baseline Schedule

Services

The Consultant shall become thoroughly familiar with preliminary engineering design documents. The Consultant shall visit the project site to observe and determine general site conditions, utility locations, existing facilities, existing surface geologic conditions, and other pertinent information.

Verify/Validate the existing Preliminary Engineering designs, including Design Criteria, Code & ADA compliance, and other relevant requirements. The Consultant shall identify remaining outstanding issues with the Preliminary Engineering work products and shall identify steps and timeline towards resolution..

Within 21 days, the Consultant shall prepare an overall Final Design Strategic Execution Plan to cover all Final Design, irrespective of whether the Consultant or the City will perform the design. The Plan shall include: Final Design Work Plan, Design Schedule, Management and Coordination Plan of Consultant and City personnel, Communication Protocols, Design Budget and Schedule Control Plan, Drawing standards, and Quality Control.

The Final Design Strategic Execution Plan will drive the entire station design process. The plan will be the blueprint for performing the project and will develop a framework for:

- Resolution of issues remaining from Preliminary Engineering

- Monitoring project performance
- Disseminating information to all project participants
- Ensuring consistency across construction contract packages
- Controlling Quality, Schedule and Cost
- Identifying interfacing milestones both within Design Package 2 and with the other Design Packages as shown on the CSP Master Project Schedule (MPS).
- Identifying responsibilities and relationships within the Consultant Team and with SFMTA and other project participants and stakeholders

The Strategic Execution Plan shall include a baseline Task Control spreadsheet covering all subtasks. Subtasks shall be defined by construction package, discipline and deliverables (3rd or 4th level) to identify work products in accordance with the attached Work Breakdown structure (WBS). The Task Control Log shall be a spreadsheet showing subtask number, subtask title, construction package, discipline, budgeted hours and cost, and number of sheets or drawings (if appropriate). This spreadsheet shall be used for monthly reporting.

Consultant will proactively monitor its activities to anticipate problems and devise ways to avoid them before they turn into issues. Consultant shall respond to changing conditions while maintaining focus on ‘schedule busters’.

Consultant will develop a detailed Critical Path Method (CPM) schedule for its work, including cost information for each activity. The schedule will be based on the milestones contained in the CSP Master Project Schedule. The Baseline Schedule will include the activities based on the tasks and subtasks. The schedule will show the activity, description, duration, start, finish and logical relationships between activities, sub-activities and milestones. Deliverables, design reviews, incorporation of review comments, interfaces with other designers, and interfaces with third parties will be shown.

Deliverables

1.10 DP2 Final Design Strategic Execution Plan	Draft 21 days after NTP, Final 60 days after NTP
1.15 DP2 Final Design CPM schedule	21 days after NTP
Issues / Concerns with PE documents	30 days after NTP

Task Leader

Nasri Munfah (Project Manager)

Assumptions and Exceptions –

The MPS will be provided upon NTP

The design schedule will be a section of the MPS and will be uploaded into the MPS by others.

1. The Design Schedule will be cost loaded at the task and subtask levels only.

1.20 Project Control Reporting

Services

- Project Control Reports – to be submitted by the 10th of each month. The report shall include:
- Task Control Update– Update the Task Control spreadsheet to reflect hours and cost expended to date, estimated remaining hours and cost to complete, and progress as an estimate of the percent complete. Current issues relating to the budget, proposed mitigations to address issues, and proposed and pending changes to the budget.
- Update the DP2 schedule monthly to indicate progress, actual start and finish dates, remaining duration, percent complete, and estimated dates to complete. Submit the schedule update to the CPS Project Controls Manager electronically. The Consultant shall describe changes in logic, current issues relating to the schedule, proposed mitigations to address issues, and proposed and pending changes to the schedule.

Deliverables

1.20 a	Project Control Report 1. Updated Task control spreadsheet. Description of Task Control issues and resolution. 2. DP2 schedule status. Description of schedule issues and resolution.	Monthly (10 th)
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Task Leader

Greg Jones (Project Control Manager)

Assumptions and Exceptions –

1. In order to provide the project control reports on the 10th of the next month, portions will be assumed. Corrections to the assumed portions will be made in the following month's report.

1.30 Invoicing

Services

Services include contract administration and contract compliance support to ensure compliance with City and County of San Francisco requirements, FTA procurement and contracting policies and procedures (including compliance with SBE requirements), and Employment and Labor provisions.

An Invoice for Payment will be submitted with the monthly progress reports on the 25th day of the month in a format provided by SFMTA and will contain up to date information for the following items:

- Monthly progress on the work. Current issues relating to interfaces, change control and other project management issues, and proposed resolutions to mitigate the issues.
- Labor information. Tables showing 1) the budgeted and actual average labor rates to date and for the month for each firm and 2) the budgeted and actual labor cost to date and for the month for each firm, 3) cumulative cost incurred to date, 4) percent complete, and 5) earned value and fee. The percent complete will be determined by the Consultant Project Manager with the concurrence of the Central Subway Design Oversight Project Manager. Earned values are calculated by multiplying percent complete against the task budget. Budget variance is calculated by subtracting estimated hours at completion from budgeted hours.
- Employee name, rate and firm for whom reimbursement is being requested.
- Time sheets, approved by employee supervisor of actual time earned by the employee, and employees of any subconsultants for each employee who worked on tasks for which a payment is requested.
- Receipts, logs and invoices for other direct costs for which reimbursement is being requested by firm.
- SBE, EEO and First Source Hiring participation, utilization and goal attainment.

Deliverables

1.30	Invoicing 1. Monthly Report and invoice 2. Labor information 3. Expenditure details by firm 4. Earned value and fee 5. Monthly SBE and EEO and First Source Hiring compliance reports	Monthly (25 th)
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Task Leader

Greg Jones (Project Control Manager)

Assumptions and Exceptions –

SFMTA will provide the invoice format upon NTP

Costs are assessed at the Sub-task level, by task, construction package and discipline (3rd level)

Subtask budgets shall not be exceeded without the prior approval of the Program Manager. If subtask budgets are exceeded without the approval of the Program

Manager, the Consultant bears full responsibility and risk for such expenditures. Changes to subtask budgets must be approved prior to billing any amount that exceeds the subtask budget.

1.40 Compliance Support

Assumptions and Exceptions –

This work has been included to subtask 1.30

1.50 Project Management

Services

- Project Management means the daily management by Consultant to coordinate design and support of construction, control quality, budget, cost, schedule, scope, safety and security, and other related duties as required.
- Hold internal coordination meetings on a weekly basis with internal DP#2 staff. The primary purpose of these meetings is to interface the work between the various construction contract packages and various design disciplines and subconsultants. Central Subway Program Management Staff will attend relevant coordination meetings.
- After each weekly internal coordination meeting, prepare an Action Item Log that identifies required actions, due dates, and responsible parties.
- Participate in Central Subway Senior Management Weekly Meeting.
- In addition, participate in coordination, interface and other meetings as needed. The primary purpose of these meetings is to progress, manage and control the CSP and interface the work among the various contract packages and for project integration. It is assumed that for meetings not requested by the DP2 Consultant that others will lead the meetings and prepare the minutes of these meetings.
- Perform other agreement and design management activities of DP2

Deliverables

1.50	Project coordination meetings 1. Action item log 2. Brief progress reports(as needed) 3. Meeting minutes (as required)	As needed
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Task Leader

Nasri Munfah (Project Manager)

Assumptions and Exceptions

1. Project management activities for DP2 will be performed under this task
2. Project Integration/Interfacing meetings will be led and documented by DP3 Consultant

3. Senior Management Weekly Meeting will be led and documented by others.
4. Program management, CSP overall financial management, ROW acquisition support, risk management, CSP overall project administration, and CSP overall document control will be done by others. Consultant's role will be to implement CSP procedures and to participate in risk management workshops and other meetings and implement measures to manage risks, scope, schedule, and budget.
5. Overall Project Document Control will be prepared and managed by others; Consultant shall adhere to and implement CSP document control procedures.

2.0 Design and Project Integration

The success of the Central Subway project will be largely determined by the degree to which the consultants responsible for each of the three design packages implement the integration and coordination roles defined under Task 2. Design Package 3 (DP3) is responsible for integration between DP1, DP2 & DP3. Consultant will coordinate/integrate design among its Subprime Consultants and its Subconsultants, across disciplines and within the Integrated Team; and integrate DP2 interfaces with DP1 & DP2. It is critical that the station design packages be fully coordinated, consistent, and integrated. Furthermore, interfacing between the station contracts and the tunnel and systems contracts is of critical importance. Consultant will implement the CSP overall Interfacing and Integration Management Plan which will be developed by Design Package 3.

Task Leader

Tony Murphy (DP 2 Integration Manager)

2.10 Design Interfacing and Integration Management

Services

- Implement a comprehensive, systematic, documented, verifiable, and continuous integration plan to be developed by others..
- Produce a DP2 Interfacing and coordination Plan to identify the interfaces between design elements, construction contract packages, and design team members including sub-primes, subconsultants and City staff. It also will identify the individual responsible for ensuring that the requirements at each interface boundary are met in the design.
- Once interfaces among various design packages and contract packages are identified, work with Design Package 3 Consultant to manage each interface throughout the project.
- Comply with the Central Subway Project (CSP) Project Integration Plan to be developed by others.
- Use the overall project Interfacing Management System developed by others to organize information, track progress, and to provide a permanent record of integration activities.

- Perform Interdisciplinary coordination check of DP2 construction contract packages to identify and address conflicts and clash detection.

Deliverables

2.10	Design Interfacing and Integration Plan for DP2 Interdisciplinary coordination check prints	21 days after NTP within 21 days after each 65% and Pre-Final design submittal
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Task Leader

Tony Murphy

Assumptions and Exceptions

1. Design Package 3 Consultant will be the lead consultant in the preparation of the project wide integration plan and will manage interfacing among DP1, DP2 & DP3.
2. Consultant will coordinate within DP2 and with DP1 and DP3 and implement design requirements of DP1 and DP3 as applicable to DP2.
3. DP2 will perform early coordination with DP1 and DP3 to review and verify station layout / room configuration and other such requirements. DP2 and DP3 will present the results of their coordination to obtain concurrence from SFMTA.
4. All major design input and interfacing requirements from DP1 and DP3 will be available and finalized upon receipt of comments from the reviewers of the last DP2 65% submittal.

2.20 Third Party Coordination

Services

- Assisting SFMTA with coordination with and obtaining concurrence from third parties and approving agencies (FTA, SFCTA, BART, CPUC, Building owners and other involved stakeholders) including providing necessary documents, drawings, and information.

Task Leaders

These activities will be managed by each construction package manager.

Dan Yavorsky (CP-4)

Denis Henmi (CP-5)

Jeff Tusing (CP-6)

Deliverables

2.20	Participation and providing supporting documentation for Third party coordination and approvals <ol style="list-style-type: none"> 1. CPUC 2. BART 3. Building Owners 4. City & County entities (BSM, SFFD, MCAC, SFCTA, MAAC, Mayor's Office, Civic Design Committee, BCM, DBI, etc.) 5. FTA 	Periodic, as required
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Assumptions and Exceptions

- Utilities coordination is under subtask 6.10
- Community Outreach is under subtask 2.60
- Permit applications is under task 8.0.
- Graphics support will be under task 14.
- Design work is Task 12.
- Level of effort is assumed for this task based on assumptions of a number of meetings and a number of supporting documentation. Additional funding will be provided if needed.
- Work done by others to be incorporated in DP2 will adhere to the CSP MPS and will follow CSP design and CADD standards.
- DP2 will perform early coordination with DP1 and DP3 to review and verify station layout / room configuration and other such requirements. DP2 and DP3 will present the results of their coordination to obtain concurrence from SFMTA.
- All major design input and interfacing requirements from DP1 and DP3 will be available and finalized upon receipt of comments from the reviewers of the last DP2 65% submittal.

2.30 Coordination of Design Performed by City Staff

Services

Within the first two weeks of NTP, the specific scope of work to be performed by the City staff will be defined. Consultant will coordinate, integrate and incorporate as applicable City staff and the design work performed by City and SFMTA in DP2 team.

Scope of the work assumed to be performed by City and SFMTA staff in general is as follows. This work is identified as part of Optional Services in Consultant Contract.

1. Roadways, sidewalks, ADA ramps, and all civil work required within the public right of way.
2. All traffic engineering, truck routes, and maintenance and protection of traffic. All temporary and permanent relocation and restoration of traffic signals, signs, streetlights, OCS, etc.
3. All drainage work on surface and within stations.
4. All plumbing and fire protection work in all three stations including domestic water, waste water, sanitary sewer, fire lines, and sprinkler systems and all associated mechanical equipment.
5. CCTV, telephones, and LANs in all stations.
6. Traction power substations including duct banks, manholes, etc .
7. Sewer and Cistern relocation/protection in Chinatown station area

Deliverables

2.30	Coordination/ integration of City staff and their work product in DP2	Continuous
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Task Leader

These activities will be managed by each construction package manager.

- Dan Yavorsky (CP-4)
- Denis Henmi (CP-5)
- Jeff Tusing (CP-6)

Assumptions and Exceptions

- It is assumed that the City staff working on the project will collocate in the project office and the work will be done in the project office to have full interfacing and integration with the project staff.
- City staff will be integrated in the project team and will adhere to the project work plan and design schedule.
- The City staff will follow all CSP procedures, guidelines, criteria, etc as the rest of the project team.
- As part of the Integrated DP2 Team, the design work identified above will be provided by City staff.

2.40 Systems Design Coordination

This subtask consists of the coordination of DP2 design work with the work of the DP3 team and the integration of work products prepared by the DP3 team into CP4, CP5 & CP6.

Deliverables

2.40	Systems Design Coordination 1. Implementation of decisions made and approved by SFMTA	As required
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Assumptions and Exceptions

1. Consultant will coordinate and integrate the design of systems to be designed by the DP2 team as part of other tasks and/or subtasks. Consultant will coordinate and integrate the design of systems to be designed by the DP3 team as part of other tasks and/or subtasks.
2. DP2 will perform early coordination with DP1 and DP3 to review and verify station layout / room configuration and other such requirements. DP2 and DP3 will present the results of their coordination to obtain concurrence from SFMTA.
3. All major design input and interfacing requirements from DP1 and DP3 will be available and finalized upon receipt of comments from the reviewers of the last DP2 65% submittal.
4. Tunnel Overhead Contact System (OCS), OCS support, and ductbanks will be designed and integrated by others
5. Consultant will design and incorporate in CP4, CP5 & CP6 infrastructure to support equipment to be installed in CP7, and will provide space, conduit, power, ventilation and other support facilities for this equipment. Since AC power and distribution system in UMS will be done by City/SFMTA staff coordination, power supply, conduit runs, etc to equipment to be installed in CP7 contract in UMS station will be done by City/SFMTA staff.
6. DP3 Consultant will review and comment on DP2's design of facilities to support CP7 installations.
7. TVM design will be done by others. Consultant will coordinate conduit runs and will design the support for TVMs.
8. DP3 team will be responsible for the design of train control, SCADA, radio, passenger information, and system-wide communication systems. DP2 team will incorporate in CP4, CP5 & CP6 drawings, conduit runs and termination points, including mountings, cabinets, boxes, speakers and others assemblies within the stations.
9. Train control system, SCADA, radio, passenger information, and system-wide communication systems are by others. DP2 team will show on CP4, CP5 & CP6 drawings conduit runs and termination points, including mountings, cabinets, boxes, speakers and others assemblies within the stations.
10. Stray current and cathodic protection design is by others.
11. DP3 will lead coordination of DP3 work with DP2 consultant.

12. Work done by others to be incorporated in DP2 will adhere to the CSP MPS and will follow CSP design and CADD standards

2.50 Coordination with Art for Transit (Optional Service)

Services

- Coordinate with San Francisco Arts Commission and make presentations to the Art Commission with regard to the incorporation of Art into each station. Consultant will include the Arts Commissions staff and selected artists in design team meetings as applicable and provide architectural and engineering advice of feasibility and constructability of artist proposals.

Deliverables

2.50	Arts Commission and Artist Coordination 1. Meeting minutes with Art Commission staff and with selected artists 2. Coordination and integration of Public Art in design documents.	As required
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Task Leader

Mona Tamari

Assumptions and Exceptions

- Surface and subsurface preparatory work and utilities needed for the art work are reasonable, within the parameters of the existing design, and will not significantly impact the design concepts, elements, or progress of DP2 after the 65% documents and before 90%.
- It is assumed that artists will be selected in a timely manner and that the art concepts will be developed prior to the 65% submittal of DP2 packages. Concepts will be locked down at the receipt of comments on the 65% submittals of DP2 packages.
- Design work to support installation of Art work is in Subtask 12.07.
- Civic Design Approvals are in Subtask 2.20.
- Level of effort is assumed. Additional funding will be made available is needed.

2.60 Community Outreach

Services

Services to support Public Outreach that is managed by others and will include the following:

- Participate in meetings with the public and respond to questions and issues from the public to foster good communications and general understanding and support of the design. Includes providing necessary documents, drawings, and information.

- Assist with public meetings, provide coordination and follow up on issues raised by the public related to the design elements of DP2.

Deliverables

2.60	Community/Public Outreach Support	[As requested]
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Task Leader

TBD

Assumptions and Exceptions

- Public Outreach master plan/schedule is by others
- Provision of public outreach staff is by others
- Conduction and recording of public meetings will be done by others.
- Retaining of community advocacy organizations and their management will be done by others
- Graphics support will be under task 14.
- Level of effort is assumed. Additional funding will be made available is needed.

2.70 Other Coordination Activities

Consultant’s management, architecture, and engineering staff shall participate in formal and informal review meetings as directed by the SFMTA..

Services

- Support constructability reviews.
- Support Peer Reviews
- Support Stakeholder Reviews.
- Support TOD planning
- Review, log, address, and respond to review comments on each review

Deliverables

2.70	Other Coordination records (minutes/action items/issue resolution) 1 Coordination with TOD planning (65%) 2. Stakeholder Reviews (65% and 90%) 3. Peer Reviews (65% and 90%) 4. Constructability Reviews (65% and 90%) 5. FTA Workshops 6. Provide a matrix of review comments received for each submittal showing how the comments have been resolved.	[As required]
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Task Leader

These activities will be managed by each construction package manager.

- Dan Yavorsky (CP-4)
- Denis Henmi (CP-5)
- Jeff Tusing (CP-6)

Assumptions and Exceptions

- Program management, financial management, ROW acquisition support, risk management, contract administration, and document control will be done by others.
- Consultant’s role will be to implement CSP procedures and to participate in risk management workshops and implement measures in the design to manage risks provided such measures will not significantly alter the design concepts of DP2.
- Constructability, VE and peer reviews, will be conducted and led by others. Implementation of recommendations by these reviews will not significantly alter design concepts of DP2. Design will be locked down after receipt of the comments of the 65% submittal.
- TOD consultants are to be retained by others. Does not include design coordination for a potential developer.
- Implementation of TOD consultant requirements in the design is not included as part of Basic Services nor Optional Services.
- Drawings and graphics support are under task 12 and 14, respectively.
- A level of effort is assumed. Additional funding will be made available as needed.

2.80 Safety and Security

Services

- Implement safety and security design criteria and measures in the station designs, including incorporate the principles of Crime Prevention through Environmental Design (CPTED). (In task 12).
- Complete Safety and Security Certification checklist for each station. Safety and Security checklist items will be identified by others.

Deliverables

2.80	Completed Safety and Security Certification checklist for each package	within 21 days of 65%, 90% and 100% submittals
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Task Leader

Gulzer Ahmed (PB)

Assumptions and Exceptions

1. CSP Safety and Security Design Criteria will be provided at NTP.
2. Implementation of safety and security measures developed by others after 65% submittals will not significantly alter the design concepts of DP2 as established in the PE phase.
3. Additional Threat and Vulnerability Analysis (TVA) will be done by others.
4. Blast analyses and structural hardening design are not included as part of the Basic Services or Optional Services.

3.0 Geotechnical Investigations

Geotechnical investigations were performed during preliminary engineering to characterize the preferred tunnel alignment. However, due to the criticality of the construction of the three stations, especially UMS and Chinatown stations additional geotechnical investigation is warranted. For Design Package 2 supplemental borings, laboratory testing and ground water monitoring will be performed as needed.

Geotechnical services for DP1 and DP2 will be performed concurrently.

3.10 Supplemental Investigations

Services

Perform additional borings, laboratory analyses, and a pump test as needed to assess the anticipated ground and ground water conditions and behavior during excavation.

It is anticipated that up to two additional borings will be taken at Moscone station area, and three borings will be taken at each of UMS and Chinatown Stations. Also a pump test will be performed at UMS Station location. This will enable the project to better assess the anticipated ground behavior and ground water condition during excavation and impact of construction of UMS station on the ground water regime in the vicinity of BART Powell Street Station.

Prepare geotechnical data report to provide as information to bidders.

A single geotechnical data report (including data from the PE phase and Design Package 1) will be prepared and included in the three construction bid packages (CP4, CP5, and CP6).

Deliverables

3.10	Supplemental Investigations Plan	[NTP + 30 days]
3.20	Geotechnical Data Report (draft and final)	[Draft at 3.5 months + NTP, Final at the first 65% station deliverable]

Task Leader

Ramin Geolesorkhi

Assumptions and Exceptions

- Data from PE and the supplemental geotechnical investigation program from DP-1 will be made available.
- A single data report will be prepared for the three stations and will include data from the PE and DP1 geotechnical investigations.
- Environmental and hazardous materials investigations are by others
- DP1 and DP2 will combine this work.
- Includes 3.20 Geotechnical Characterization report.

3.20 Geotechnical Data Report

Assumptions and Exceptions –

This work has been moved to subtask 3.10

3.30 Geotechnical Characterization Report

Services

Preparation of geotechnical characterization reports. Geotechnical and ground water analyses will be performed to support the civil and structural designs. The analyses will address support of excavation; ground water control; geo-hydrology issues and ground water movement; and potential settlement and its impact on buildings, structures, and utilities. Geotechnical analyses for the sequential excavation of Chinatown Station will also be done under this task.

Work with DP1 to determine allowable settlement and monitoring trigger points for utilities, tunnel, and station construction contracts for settlement monitors to be installed in CP3. The work will include assessment of the effects of construction

induced settlements on overlying structures and services (within the expected settlement trough) due to station construction. Consultant will establish estimated ground displacements and Consultant will identify public and private structures and services affected by construction induced settlements. Consultant will design develop instrumentation and monitoring program to monitor existing structures performance.

Deliverables

3.30	Coordination of allowable settlements and monitoring trigger points and settlement monitoring program for CP3, CP4, CP5, & CP6. Geotechnical Characterization Reports (draft and final)	[Within 15 days of DP1 Pre-final documents] [Draft at Seven Months after NTP, Final four weeks upon receipt of comments]
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Task Leader

Mitch Fong

Assumptions and Exceptions

Data and analyses and geotechnical reports from the PE phase and DP-1 additional investigations and data reports will be made available.

3.40 Geotechnical Baseline Reports (GBR)

Services

Preparation of geotechnical baseline reports specific for each station. The reports will provide potential contractors the geotechnical baseline for each station.

Deliverables

3.40	Geotechnical Baseline Report for each station <i>3.40.C4 GBR: Const .Cont .Pkg 4 (UMS Station)</i> <i>3.40.C5 GBR: Const .Cont .Pkg 5 (Chinatown Station)</i> <i>3.40.C6 GBR: Const. Cont. Pkg 6 (Moscone Station)</i>	[Seven months after NTP and 90% and 100% submittal]
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Task Leader

Mitch Fong

Assumptions and Exceptions

- Data from the PE phase and DP-1 additional investigations and data reports will be made available in a timely manner.
- Geotechnical Characterization report from PE and DP-1 will be made available in a timely manner.
- GBR for DP-1 will be made available in a timely manner.

4.0 Surveying and Right-Of-Way

The survey work will be done by the Consultant or others as defined below.

4.10 Surveying

This task will be performed by PM/CM. Signed and sealed survey maps will be provided within two months from NTP. Consultant will use these drawings as the basis of its design.

Assumptions and Exceptions

- Survey maps will be provided in hard copy and CADD Files using the project coordinate system. Survey maps and drawings will be provided signed and sealed in a timely manner to enable the advancement of the stations design.
- ROW survey and mapping is by others.

4.30 BART Powell St. Station (Survey and Condition Assessment)

Services

Perform additional surveys and a condition assessment of the BART Powell St. Station concourse level in the impacted area of the UMS Station passageway into the Powell St. Station concourse. Attention will focus on establishing the existing elevation and plan alignment of passageways and impacted entrances. The second area of attention will be the condition and integrity of the existing structures that will be modified to accommodate the connection between the two stations. Photographs will be used to document existing conditions.

Deliverables

4.20	BART station survey and condition assessment 1. BART survey work plan 2. BART Station condition survey and assessment	[65%]
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Task Leaders

John Martin and Dan Yavorsky

Assumptions and Exceptions

- Access to BART Powell St. Station (including non public spaces) will be made available by BART in a timely manner through SFMTA.
- As built drawings of BART Powell St Station will be provided by BART in a timely manner through SFMTA.

5.0 Traffic Engineering (Optional Services)

This task will be done by City/SFMTA staff. It is under the Consultant’s Optional Services.

The focus of this task is, working with the San Francisco Department of Parking and Traffic, to provide a traffic engineering report that addresses construction impacts on street traffic and identifies necessary mitigation actions.

5.10 Traffic Engineering Report

Services

The report will include analysis of staging area and construction site access, truck haul routes and maintenance of traffic for the three stations. The analysis will also include a determination of allowable hours of operation and restrictions to construction traffic activities during special events. The report will also identify the level of impact and necessary temporary or permanent traffic signal and signing modifications associated with the project.

Deliverables

5.10	A Construction Traffic Report covering all three stations	[65%, 90% and 100%]
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Task Leader

TBD (City staff)

Assumptions and Exceptions -

- It is assumed that traffic counts have been done during the PE phase and will be made available.

5.20 Traffic Plans

Services

Maintenance and protection of traffic plans for each station location will be prepared. CP-4 will require maintenance and protection of traffic (MPT) plans for cut-and-cover and top-down construction of UMS Station. This includes maintaining at least one lane of traffic on Geary Street during daytime hours, while providing detours around the construction site during nighttime and weekend hours. CP-5 will require plans to fully maintain traffic at Chinatown Station since the station will be mined. CP-6 will require traffic plans to maintain access to Moscone Convention Center loading ramp during construction of MOS Station.

MPT plans and detour plans will be prepared for each station location. Muck removal and material delivery to each construction site will be addressed. Suggested truck routes and any limitations and requirements will be provided.

Deliverables

5.20	Maintenance and Protection of Traffic Plans <i>5.20.C4 Traffic Plan: Const. Cont. Pkg 4 (UMS Station)</i> <i>5.20.C5 Traffic Plan: Const. Cont. Pkg 5 (Chinatown Station)</i> <i>5.20.C6 Traffic Plan: Const. Cont. Pkg 6 (Moscone Station)</i>	[65%, 90% and 100%]
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Task Leader

TBD (City Staff)

Assumptions and Exceptions –

- Support and corporation with San Francisco Department of Parking and Traffic will be provided in a timely manner.
- MPT concepts as developed during the PE phase will not be rejected by San Francisco Department of Parking and Traffic or significantly altered.
- MPT construction contract documents will be prepared by City staff and will be included in Task 12.

6.0 Utility Design Coordination

Supplemental utility investigations will be undertaken at each station location. It is assumed that CP1 and CP2 will relocate most utilities along Union Square / Market Street and Moscone Stations. This task will supplement the work performed under DP1 and will provide the required services for supporting utilities that will cross the excavation and will provide utility relocation/support at the Chinatown Station location. Existing sewer and cistern will be done by City staff. The implementation of a joint utility trench approach that brings together buried utilities from multiple owners and agencies requires thorough documentation of existing utility locations and conditions and early and frequent coordination with utility owners to establish acceptable layout, configurations, connections schedules and cost sharing formulas.

6.10 Utility Location and Owner Coordination

Services

- Provide updated composite utility drawings showing type of utility, size, material, owner and other pertinent information along with preliminary utility relocation plans (For Chinatown Station).

- Provide additional utility research for any utilities or utility service lines not shown on the composite utility drawings in the preliminary engineering package. (For Chinatown Station)
- Prepare Utility Technical Memorandum (UTM) for Chinatown Station. UTM will identify impacted utilities and will develop a strategy to protect, support, or relocate them.
- Coordinate with utility owners and building owners (utility users) to address how to protect or relocate utilities

Deliverables

6.10	Utility Technical Memorandum 1. Utility Composite Drawings & Technical Memorandum for CP4 2. Utility Composite Drawings & Technical Memorandum for CP5 3. Utility Composite Drawings & Technical Memorandum for CP6	[65%, 90% and 100%]
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Task Leader

Fred Reynolds

Assumptions and Exceptions

- Existing composite utility drawings prepared during the PE phase will be provided.
- No allowance was made for potholing.
- Relocation or protection plans for the impacted utilities at the station locations will be provided as part of Task 12.

6.20 Settlement Impacts on Utilities

Services

- Consultant will assess the effects of potential settlements caused by the station excavation on buried utilities.
- Using the evaluations and recommendations made in the PE phase, Consultant will analyze potential settlement caused by excavation or deflection of the excavation support system on existing utilities.
- Consultant will identify remedial measures and a monitoring program.
- This effort will be a combined with DP-1 for overall settlement report with DP-2 finalizing the report.

Of particular concern are the utilities in the streets at Chinatown Station where SEM construction will be employed. Detailed monitoring and remedial measures will be developed and provided in the design documents.

Deliverables

6.20	<p>Settlement impacts on Utilities Report</p> <p>Coordination of allowable settlements and monitoring trigger points and settlement monitoring program for CP3, CP4, CP5, & CP6.</p> <p>6.20.C4 Utility Settlement Impacts and Protection -- Const. Cont. Pkg 4 (UMS Station)</p> <p>6.20.C5 Utility Settlement Impacts and Protection -- Const. Cont. Pkg 5 (Chinatown Station)</p> <p>6.20.C6 Utility Settlement Impacts and Protection -- Const. Cont. Pkg 6 (Moscone Station)</p>	<p>[Within 15 days of DP1 Pre-final documents] [65%, 90%]</p>
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Task Leader

Mitch Fong

Assumptions and Exceptions –

- Settlement analysis will be done in conjunction with Task 3 Geotechnical Investigations. Protection of utilities will be done under this task.
- Protection, support, or relocation of utilities design documents will be prepared under Task 12. Drawings.

7.0 Drainage (Optional Services)

Drainage and handling of water for the Central Subway project will take two forms: On the surface, as the proper handling and treatment of pumped groundwater and surface runoff. In stations, the work will address the required drainage provisions – catch basins, settlement tanks, oil separators etc.

7.10 Drainage Design Report

Services

- For each station, design a drainage system to handle potential seepage, firefighting flow, and runoff water that might enter the station areas.
- Produce a Drainage Design Report to identify and quantify all anticipated sources of and disposal discharge points for waters collected at the surface work sites and in the stations.

Deliverables

7.10	<p>Drainage Report</p> <p>7.10.C4 Drainage Design Report -- Const. Cont. Pkg 4 (UMS Station)</p> <p>2. 7.10.C5 Drainage Design Report-- Const. Cont. Pkg 5 (Chinatown Station)</p> <p>7.10.C6 Drainage Design Report-- Const. Cont. Pkg 6 (Moscone Station)</p>	<p>[65 , 90 and 100%]</p>
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Task Leader

TBD (City staff)

Assumptions and Exceptions –

- Track drainage is done by others and will be integrated by DP3. It will not be included in these reports
- The preparation of drainage drawings will be done in Task 12.

8.0 Permits

Consultant will work with and support SFMTA and PM/CM staff in preparing applications and obtaining permits for each construction package for Design Package 2. Required permits envisioned for the work in CP-4, CP-5 and CP-6 include: surface mounted facilities, tree permits, encroachment and street space permits for temporary construction elements; street improvement permits for the entrances, and potentially legislative review procedures for sidewalk changes as may be required around the station entrances.

8.10 Code Analyses and Permit Compliance

Services

- Support SFMTA and PM/CM Consultant in obtaining permits (Building Permit, Demolition Permit, sidewalk encroachment, and Tree Removal Permit).
- Consultant will be responsible for providing specific design information on or attached to permit applications and assuring that the design(s) presented are in conformance with permit requirements.
- Consultant will prepare code compliance summaries and will be submitted with each of the milestone submittals (65%, 90% and 100%) for each station. They will serve as the formal screening tool.
- Consultant will prepare permit drawings and specifications for CP-4, CP-5, and CP-6 for SFMTA to include in the permit applications.

Deliverables

8.10	Support of Permit Applications 8.10.C4 Support of Permit Applications and Permit Compliance -- Const. Cont. Pkg 4 (UMS Station) 8.10.C5 Support of Permit Applications and Permit Compliance -- Const. Cont Pkg 5 (Chinatown Station) 8.10.C6 Support of Permit Applications and Permit Compliance -- Const. Cont. Pkg 6 (Moscone Station)	[65% and 90%]
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8.20	Code compliance checklist 1. Code Compliance checklist for CP4 2. Code Compliance checklist for CP5 3. Code Compliance checklist for CP6	[65, 90 and 100%]
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Task Leader

Tony Sanchez-Corea

Assumptions and Exceptions

- The permitting process and obtaining permits will be done by others. Consultant's role will be limited to providing supporting documentations, reports, drawings, etc.
- Integration of permit conditions and provisions will be done by others.
- Level of effort is assumed. Additional funding will be made available is needed.

9.0 Contract Specifications

The Central Subway project requires a unified approach to the preparation of general conditions, special provisions and technical specifications for use with each of the seven planned construction contract packages

9.10 Special Provision and General Requirements Specification Reviews

Services

Consultant understands that SFMTA will lead the preparation of Special Provisions and

General Requirements. Consultant will review the Special Provisions and provide comments and will review and provide suggested changes / information for incorporation by others into the General Requirements, minimum qualifications, Advertisement, and Information to Bidders and as related to CP-4, CP-5, and CP-6.

Deliverables

9.10	Review of Special Provisions and input to General Requirements, minimum qualifications, Advertisement, and Information to Bidders. Provide Bid Items Descriptions and Bid Schedule	90% and 100%
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Task Leader

Victor Eckland

Assumptions and Exceptions

General Provisions and Special Provisions will be prepared and provided by SFMTA in a timely manner to allow Consultant's input by the Final submittal date.

9.20 Technical Specifications

Services

Development of a complete set of technical specifications for each station – each section receiving a fully documented chain of reviews.

Consultant will provide specification specialist to integrate the various technical specifications with each other and with the General and Special Provisions. The specialist will be responsible on the production of the specifications, verification of the reference documents, compiling product data and materials and equipment spec sheets, file management, and cross checking and final production of the specifications.

Specify advanced commissioning and startup requirements for each contract. Specify testing and training programs, requirements for O&M manuals and spare parts, including material, component, subsystem, system, and system integration testing of stations contracts.

Deliverables

9.20	Technical Specifications 9.20.C4 Technical Specifications – Const. Cont. Pkg 4 (UMS) 9.20.C5 Technical Specifications – Const. Cont. Pkg 5 (Chinatown Station) 9.20.C6 Technical Specifications – Const. Cont. Pkg 6 (Moscone Station)	[65, 90 and 100%]
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Task Leader

Victor Eckland

Assumptions and Exceptions - None

10.0 Cost Estimate and Scheduling

Consultant's understanding of Task 10 as defined in the RFP is that others will prepare the cost and schedule estimate for each construction contract based on the consultant provided work products. SFMTA will prepare the budget estimate for each construction contract using the approach outlined in the Terms and Conditions. Consultant will provide quantity takeoffs 90 days after NTP and with the 65%, Pre-Final and Final submittal of the construction documents and review and comment on construction cost estimates and schedules prior to submittal of the FTA request for a FFGA. SFMTA will support cost estimating during design development by providing estimates of options and alternates.

10.10 Cost Estimate & Schedule Review During Design

Services

- Consultant will provide written observations/comments regarding cost estimates to SFMTA within 21 days of receipt of the cost estimate.
- Consultant will provide written observations/comments regarding project schedule to SFMTA within 21 days of receipt of the schedule. Services include review and provide comments of the detailed construction schedules for CP-4, CP-5 and CP-6. Consultant role will be to support and advise SFMTA of issues concerns, and strategies related to construction schedule of CP-4, CP-5, and CP-6 construction packages.

Deliverables

10.10	10.10.C4 Cost Estimates Review Comments– Const. Cont. Pkg 4 (UMS Station) 10.10.C5 Cost Estimates Review Comments – Const. Cont. Pkg 5 (Chinatown station) 10.10.C6 Cost Estimates Review Comments – Const. Cont. Pkg 6 (Moscone Station)	Three weeks after receipt of each Cost Estimate
	10.10.C4 Schedule Review Comments– Const. Cont. Pkg 4 (UMS Station) 10.10.C5 Schedule Review Comments – Const. Cont. Pkg 5 (Chinatown station) 10.10.C6 Schedule Review Comments – Const. Cont. Pkg 6 (Moscone Station)	Three weeks after receipt of MPS at the 65 and 90

Task Leader

Keith Caro (Cost Estimate)
 Lisa Avestedt (Schedule)

Assumptions and Exceptions

- Consultant’s responsibility with respect to cost estimates, construction budgets and schedules is limited to review and comments on the estimates and schedules.
- An allocated design contingency will be assigned at each submittal level suitable to the level of design at each stage. An allocated design contingency of at least 5% will be assigned at the 100% submittal.
- Quantities take off and construction cost estimate reviews of work designed by others will be done by the respective party responsible of its work.
- Integrated project schedule will be done and maintained by others.

10.20 Design Change Estimates

Services

Deviations between construction budgets and the construction estimate (prepared by SFMTA) will be addressed and resolved and modifications to the design to address any differences will be implemented. Quantity changes and other documentation for design changes will be provided as required to evaluate Change Proposals in accordance with Design Control Procedures.

- Development of quantity takeoff during the design process for
 - (a) SFMTA proposed changes to the Project Configuration
 - (b) Value Engineering Proposals
- List of potential cost reduction measures will be provided 90 days after NTP and with 65%, and 90% submittals.

Deliverables

10.20	Information for Engineering Change Proposals Cost Saving Elements List 1. Cost Saving List for CP4 2. Cost Saving List for CP5 3. Cost Saving List for CP6	[As Needed] [90 days after NTP, and with 65% and 90% design submittals]
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Task Leader

Keith Caro

Assumptions and Exceptions –

- Configuration management plan will done by PM/CM. Consultant's role in the configuration management is to provide input and data.
- Discretionary design changes that will impact the baseline estimates, budgets, and schedules require approval in accordance with Design Control Procedures prior to implementation.
- Implementation of discretionary design changes is not part of this task and could be considered Additional Services.

10.30 Construction Quantity Estimates

Services

- Submittal of construction quantity takeoff
 - (a) 90 days after NTP
 - (b) 65% design submittal
 - (c) Pre-Final (90%) design submittal
 - (d) Final Contract Document (100%) submittal
- Quantity takeoff by Consultant and Cost Estimates by others will be developed in a timely manner to support decision making during the design process.

- o Quantity takeoff submittal will contain reconciliation with the previous submittal.

Deliverables

10.30	Construction Quantity Takeoff 10.30.C4– Const. Cont. Pkg 4 (UMS) 10.30.C5– Const. Cont. Pkg 5 (Chinatown Station) 10.30.C6– Const. Cont. Pkg 6 (Moscone Station)	[(90 days after NTP) (65%, 90% and 100% with design submittal)]
10.40	Quantity Reconciliation Reconciliation for CP4, CP5 and CP6	[65%, 90%, and 100% with design submittals]

Task Leader

Keith Caro

Assumptions and Exceptions

- o Cost estimates will be prepared by others.
- o Construction Contracting Strategy Plan will be developed by SFMTA.
- o Cost estimates and budgets will be based on the Construction Contracting Strategy Plan and the construction schedules identified in the RFP. Changes to the Construction schedule or the Construction Contracting Strategy Plan will impact the cost estimates and budgets.

11.0 Quality Control

Quality control and quality assurance are essential elements to the success of the Central Subway project. Consultant’s team is committed to SFMTA to deliver Design Package 2 documents in full compliance with the review and documentation standards and procedures contained in the CSP Design Control Procedures.

Services

- o CSP will provide training of the Quality control plan for DP-2 Staff.
- o A DP2 Quality Control and Implementation Plan in compliance with CSP Quality Control Plan will be submitted within 30 days of NTP and will clearly spell out Consultant’s approach for implementing the CSP Design Control Procedures.
- o CSP Quality Control Plan will be provided to the consultant for review and comment.
- o Quality Control of DP2 team work.

Deliverables

11.10	Review and Comment on CSP QC Plan	[30 days after NTP]
11.30	QC review documentation including verifications of resolution and incorporation for each package	[65, 90 and 100%]

Task Leader

Aileen Reed

Assumptions and Exceptions

- o Quality Control Procedures and training will be provided upon NTP.
- o Project Quality Assurance will be by others, but consultant will assure the quality of the work of the DP2 Consultant.
- o Consultant will use established CSP quality procedures
- o Person performing Quality Control of Design work product shall be in the direct employ of the Consultant.

12.0 Drawings and Documents

Development and production of the contract drawings, reports, and supporting calculations and documentation for Design Package 2 will take place under Task 12. All CADD drawings will be produced using agreed versions of AutoDesk products or other software.

Deliverable

12.00	Verification/Validation report of PE design Phase	[30 days after NTP]
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12.01 Civil Plans

Services

Prepare civil drawings. The drawings will cover work items identified here as Basic or Optional:

- o Demolition plans and facilities to be protected in place (Base)
- o Staging areas, site access, temporary fencing and noise barrier.(Base)
- o truck routes,(Option)
- o Site drainage and storm water management plans (Option)
- o Station drainage and connections to sewers plans (Option)
- o Site plans (Base)
- o Street and sidewalk restoration at station entrances / exits and headhouses (Option)

Deliverables

12.01	12.01.C4 Civil – Const. Cont. Pkg 4 (UMS Station) 12.01.C5 Civil – Const. Cont. Pkg 5 (Chinatown Station) 12.01.C6 Civil – Const. Cont. Pkg 6 (Moscone Station)	65, 90 and 100%
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Task Leader

- Khoi Le (CHS –UMS)
- Paul Bouman (C&D –CTS)
- Ray Leung (FJA – MOS)

Assumptions and Exceptions

- Roadway reconstruction drawings including sidewalks and ADA curb cuts, pavement, grading, and drainage will be done by City staff
- Track drawings and track alignment will be done by others.
- Presentation modeling and simulation is done under other tasks.

12.02 Utility Plans

Services

Prepare utility relocation and support and protection drawings. These drawings will cover the work that is not part of Design Package DP1 (construction packages 1 and 2) and will mainly focus on Chinatown Station area and support of utilities crossing the station excavations. The drawings will cover identification and locating existing public and private utilities, relocation and or protection of utilities during construction. House connections will be protected during construction or new connections will be made.

Chinatown Station (CTS) Utility (Base – protect and relocate existing utilities, Option – Sewer and Cistern protection/reconstruction)

Union Square / Market Street Station (UMS) Utility (Base – to protect and support existing utilities)

Moscone Station (MOS) Utility (Base – to protect and support utility crossings of the excavation and a potential sewer relocation)

Deliverables

12.02	12.02.C4 Utilities – Const. Cont. Pkg 4 (UMS Station) 12.02.C5 Utilities – Const. Cont. Pkg 5 (Chinatown Station) 12.02.C6 Traffic -- Const. Cont. Pkg 6 (Moscone Station)	65, 90 and 100%
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Task Leader

Fred Reynolds

Assumptions and Exceptions –

- It is assumed that utility drawings from DP1 for Construction contracts CP1 and CP2 will be made available.
- Support from SFMTA for the coordination and approvals by public and private utilities, and building owners will be provided

12.03 Traffic Plans (Optional Services)

Services

Preparation of maintenance and protection of traffic plans for each station.

Deliverables

12.03	12.03.C4 Traffic Drawings -- Const. Cont. Pkg 4 (UMS Station) 12.03.C5 Traffic Drawings -- Const. Cont. Pkg 5 (Chinatown Station) 12.03.C6 Traffic Drawings -- Const. Cont. Pkg 6 (Moscone Station)	[, 65, 90 and 100%
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Task Leader

TBD (City staff)

Assumptions and Exceptions

- It is anticipated that City staff will design temporary and permanent traffic signal, signing, and pavement striping and will be provided in accordance with the Project CADD standards.

12.04 Structural / Geotechnical Plans

Services

The work includes the preparation of structural plans for the three underground stations including the station structures, the head houses and entrances, ventilation ducts and shafts, and modifications to existing structures and facilities including BART's Powell St. Station and Union Square Garage. In addition, the work also includes temporary support of excavation structures which are capable of retaining and protecting adjacent structures and utilities. The design of the temporary structures will be in accordance with the geotechnical analysis for loads and ground water control, and with the requirements and agreements with affected businesses and agencies. The support of excavation will also be designed to allow efficient construction of the permanent concrete structures.

A waterproofing membrane will be provided from the ground surface to provide a fully tanked facility at the stations and shafts.

The structures will be designed in accordance with the project seismic design criteria.

Consultant will design protective measures and develop instrumentation and monitoring program to monitor existing structures performance and take corrective actions if needed.

The work will include the preparation of the following plans:

- Support of excavation
- Excavation sequencing and initial and final support
- Foundations
- Station structures
- Headhouse structures
- Design of Instrumentation and monitoring program
- Building protection of structures due to potential impacts caused by construction
- Waterproofing
- Modifications to existing structures as required at UMS
- Support structures for the art work
- Support structures for the mechanical and electrical equipment in the stations
- Temporary decking
- Building settlement protection
- Geotechnical drawings

Deliverables

12.04	12.04.C4 Structural / Geotechnical -- Const. Cont. Pkg 4 (UMS Station) 12.04.C5 Structural / Geotechnical -- Const. Cont. Pkg 5 (Chinatown Station) 12.04.C6 Structural / Geotechnical -- Const. Cont. Pkg 6 (Moscone Station)	65, 90 and 100%
12.04b	Building Settlement Protection Report / plans	
12.04c	Geotechnical Plans	
12.04d	Instrumentation and monitoring plans	

Task Leaders

- George Inverso (CP-4)
- Christian Karner / Marco Scanu (CP-5)
- Murat Yucekul (CP-6)

Assumptions and Exceptions

- It is assumed that the PE drawings, reports and design documents will be made available upon NTP.
- Mandarin Tower will be underpinned if required.
- Consultant will determine if underpinning of additional existing structures is required, If design of underpinning of such structures is required, it will be provided as an Additional Service.
- Cross-section of CTS north and south of crosscut will be similar.

12.05 Architectural Plans

Services

Consultant will advance the design done to date and will continue to meet with stakeholders and strive to achieve consensus on the station design. Consultant will continue with the development of the PE design using system wide elements of continuity such as: Station configuration, platform paving, ticket vending machines, tactile warnings, system signing, systemwide station entry marker, platform edge lighting, station seating / benches, etc. Consultant will provide unique elements of differentiation for each station such as: station shape/aesthetic, windscreens/headhouses, integrated art, finishes, attachments to OCS, landscaping, fences and railing, and headhouses.

Design connection between the UMS and Powell Street Stations and revise existing Powell Street station facilities as necessary to maintain patron safety and a level of service of D or better including, but not limited to, reconfiguring/adding faregates and paths of travel. UMS station emergency exiting shall not require the Powell Street Station to be open. Provide means to enable the Powell Street Station to be locked down independently of the UMS Station. Perform pedestrian circulation analysis/simulation to verify that during peak hours the level of service is maintained.

Additional simulations (renderings) and models may be requested under task 14.

The scope will consist of the preparation of architectural plans for the stations including layouts, finishes, vertical circulation, etc.

Deliverables

12.05	12.05.C4 Architectural -- Const. Cont. Pkg 4 (UMS Station) 12.05.C5 Architectural -- Const. Cont. Pkg 5 (Chinatown Station) 12.05.C6 Architectural -- Const. Cont. Pkg 6 (Moscone Station)	65, 90 and 100%
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Task Leader

Robin Chiang (CP-4)

Mona Tamari (CP-5)

Jeff Tusing (CP-6)

Assumptions and Exceptions –

- It is anticipated that the PE design drawings will be made available upon NTP in CADD format
- Consultant is expected to provide a sustainable design but not obtain LEED certification.
- Does not include accessibility wayfinding beyond code requirements.

12.06 Urban Design

Services

- Develop the urban design for each station within its local setting.
- Prepare the landscaping and finishes at the surface of the station entrances and head houses.

Deliverables

12.06	12.06.C4 Urban Design -- UMS Station 12.06.C5 Urban Design – Chinatown Station 12.06.C6 Urban Design – Moscone Station	65, 90 and 100%
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Task Leader

Charu Sharma

Assumptions and Exceptions –

- Coordination with City Departments, Agencies and private businesses and owners will be led by SFMTA and will be performed as part of subtask 2.20 and 2.60.

12.07 Public Art (Optional Services)

Services

Prepare drawings showing the preparation and infrastructure required for the art work, including structural and electrical support. It is anticipated that most of the artwork will be integrated in the facilities design drawings.

Deliverables

12.07	12.07.C4 Public Art -- UMS Station 12.07.C5 Public Art – Chinatown Station 12.07.C6 Public Art – Moscone Station	65, 90 and 100%
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Task Leader

Mona Tamari

Assumptions and Exceptions –

- See assumptions in Task 2.50 “Coordination with Art for Transit” above.

12.08 Signage

Services

- Implementation of system-wide SFMTA signage standards.
- Integration (includes coordination of the overall extent and information contained on signs and the detailed placement and attachment to facilities or foundations)
- Signage attachment details and utilities will be designed and provided.
- Coordinate with Urban Designer on signage outside stations

Deliverables

12.08	12.08.C4 Signage Drawings-- UMS Station 12.08.C5 Signage Drawings – Chinatown Station 12.08.C6 Signage Drawings – Moscone Station	65, 90 and 100%
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Task Leader

Robin Chiang (CP-4)
 Mona Tamari (CP-5)
 Jeff Tusing (CP-6)

Assumptions and Exceptions –

- Electrical connections for signs and code signage will be provided under other subtasks (electrical, mechanical, architecture, elevator, etc.)
- Does not include accessibility wayfinding beyond code requirements.

12.09 Elevators and Escalators

Services

- Consultant will design the vertical circulations elements (elevators and escalators) in accordance with SFMTA standards.
- Consultant will use qualified special consultants to confirm applicability and identify special criteria or considerations due to specific station conditions.
- Produce drawings and details as necessary, including elevator cab finishes, to integrate with the station designs and fully define elevator and escalator requirements to the Contractors.

Deliverables

12.09	12.09.C4 Elevators and Escalators -- UMS Station	
	12.09.C5 Elevators and Escalators – Chinatown Station	65, 90 and 100%
	12.09.C6 Elevators and Escalators – Moscone Station	

Task Leader

- Robin Chiang (CP-4)
- Mona Tamari (CP-5)
- Jeff Tusing (CP-6)

Assumptions and Exceptions –

- Consultant will make staff available to assist SFMTA in defining design criteria.
- Escalators and elevators shall assume sleep mode unless patrons are detected.

12.10 Acoustics, Noise and Vibration

Services

- Conduct noise surveys at surface facility locations as necessary.
- Provide acoustical analysis and design for public areas within the stations.
- Work with station architects and electrical designers to select finishes and assist in design of PA system to reduce reverberation and to enable announcements to be clearly heard within station spaces.
- Identify acoustic treatment of ventilation plenums and equipment.
- Provide technical specifications, criteria, and analysis, as necessary, to define construction noise restrictions to which the Contractor will be required to adhere and any minimum noise abatement measures such as temporary construction site noise walls.
- Prepare noise and acoustical report and prepare contract documents of provisions for noise and vibration protective measures including drawings and specifications.

Deliverables

12.10	12.10.C4 Noise and Vibration -- Const. Cont. Pkg 4 (UMS Station) 12.10.C5 Noise and Vibration -- Const. Cont. Pkg 5 (Chinatown Station) 12.10.C6 Noise and Vibration -- Const. Cont. Pkg 6 (Moscone Station)	65, 90 and 100%
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Task Leader

Steve Wolf

Assumptions and Exceptions –

- Coordination is under subtasks 2.20, 2.30, 2.40, & 2.60.

12.11 Mechanical (Optional Services for Plumbing and Fire Protection)

Services

- Coordination of the design among various elements including plumbing, fire protection, HVAC and emergency ventilation for the project.
- Design of sump pumps with mechanical control at the stations. (Optional service).
- Sanitary facilities in the stations and connections to the sewer system including ejectors, pumps and mechanical control (Optional Services).
- Consultant will design the station ventilation and HVAC systems for normal and emergency ventilation. The emergency ventilation system shall provide a tenable environment for emergency evacuations and tunnel ventilation as required by result of the Subway Environmental Simulation. HVAC shall maintain environmental conditions of DP2 and DP3 equipment within normal operating parameters. AC shall be provided in Agent Booths for comfort.
- Fire suppression system design (Optional Services)
- Consultant will design fire detection system for the stations in all occupied rooms and the public areas.

Deliverables

12.11	12.11.C4.10 Mechanical Plumbing-- Const. Cont. Pkg 4 (UMS Station) (Optional Services) 12.11.C4.20 Mechanical -- Fire Safety and Suppression (UMS) (Optional Services) 12.11.C4.30 Mechanical -- Mechanical – Ventilation and HVAC (UMS) (Basic Services) 12.11.C5.10 Mechanical – Plumbing (CTS) (Optional Services) 12.11.C5.20 Mechanical -- Fire Safety and Suppression (CTS) (Optional Services) 12.11.C5.30 Mechanical – Ventilation - HVAC (CTS) (Basic Services) 12.11.C6.10 Mechanical – Plumbing (MOS) (Optional Services) 12.11.C6.20 Mechanical -- Fire Safety and Suppression (MOS) (Optional Services) 12.11.C6.30 Mechanical – Ventilation – HVAC (MOS) (Basis Services)	65, 90 and 100%
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Task Leader

Gerry Cruz (CP-4)
Jose Herrera (CP-5)
Ray Keane (CP-6)

Assumptions and Exceptions –

- Plumbing and Fire Protection system design is by City staff and will be coordinated and incorporated by Consultant. It is anticipated that the design will follow the CSP design criteria and the drawings will be prepared in accordance with the CSP CADD standards.
- UMS Station emergency ventilation, fire dampers, doors, etc. shall be designed so that smoke from a fire in UMS Station will not enter the Powell Street Station.
- Fire testing and analysis of materials used in a typical SFMTA LRV and the establishment of the fire heat release and growth rates will be done by others
- SES and CFD analyses will be done by DP3 Consultant and the results will be provided in a timely manner to meet Consultant's design schedule.
- SCADA will be done by DP3 team. Consultant's role is to support and provide interfacing connections for the SCADA designer.
- Coordination with DP3 will be per subtask 2.40

12.12 Electrical (See below for Basic and Optional Services)

Services

The electrical design for each station will include:

- Station lighting for all three stations including location, type of luminaries and lighting fixture schedules.
- Design AC power and electrical distribution systems for all three stations.
- Consultant will design fire detection system for the stations in all occupied rooms and the public areas. Fire alarm indications shall be provided at the Emergency Command Panel and Post. The fire detection system will interface with SCADA system. Consultant will coordinate with DP3 Design team on SCADA interfacing. Design of SCADA System is by others.
- Emergency ventilation fans shall have local control panels and be designed for both emergency and maintenance modes. Emergency ventilation fan Programmable Logic Controllers shall be remotely monitored / controlled from the Emergency Command Panel and through the SCADA system. Annunciate emergency ventilation fan activity and alarms in agent booths.
- Fire detection, elevator, escalator, intrusion, Agent's emergency and sump pump alarms shall be annunciated in agent booths and provided to

SCADA systems. Consultant will coordinate with DP3 Design team on SCADA interfacing. Design of SCADA System is by others.

- Communications systems, including two-way intercom for Patron / Agent communication, CCTV, PA, ACS, and Courtesy, Fire, Emergency and other station phones and LANs.

All systems that are monitored / controlled remotely shall have indications and controls wired to interface terminals in the room designated by DP3.

Deliverables

12.12	12.12.C4.10 Power and Lighting – UMS 12.12.C4.20 ACS \ CCTV (Optional Services) \ IDS \ PA \ Telephone (Optional Services) -- UMS 12.12.C4.30 Fire Detection – UMS (Basic Services) 12.12.C4.40 Grounding and Bonding (UMS) (Basic Services) 12.12.C5.10 Power and Lighting – CTS (Basic Services) 12.12.C5.20 ACS \ CCTV (Optional Services) \ IDS \ PA \ Telephone (Optional Services) -- CTS 12.12.C5.30 Fire Detection – CTS (Basic Services) 12.12.C5.40 Grounding and Bonding – CTS (Basic Services) 12.12.C6.10 Power and Lighting – MOS (Basic Services) 12.12.C6.20 ACS \ CCTV (Optional Services) \ IDS \ PA \ Telephone (Optional Services) -- MOS 12.12.C6.30 Fire Detection – MOS (Basic Services) 12.12.C6.40 Grounding and Bonding MOS (Basic Services)	65, 90 and 100%
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Task Leader

- Ed Wong (CP-4)
- Dennis Dias (CP-5)
- Ben Judilla (CP-6)

Assumptions and Exceptions

- Excluded from this work is any system-wide electrical work such as traction power, communication, signal, etc
- All communications systems connected to tunnel systems shall be connected to interface terminals in panels located in collaboration with the DP3 team.
- Emergency ventilation fan and fire alarm status indications for UMS Station shall be brought to a location in Powell Street Station designated by BART for monitoring.
- SCADA design will be done by DP3 team. Consultant's role will be to support and provide interfacing connections for the SCADA designer.
- Coordination with DP3 will be per subtask 2.40.
- ACS is Access Control System.
- IDS is Intrusion Detection System.

12.13 Systems

Services

This task is part of consultant of DP3 scope of work.

12.14 Operations Control Center (OCC) Facilities - 131 Lenox

Services

This task is part of DP3 Consultant scope of work.

12.15 Verification / Validation Report

Services

Assumptions and Exceptions

- This work is included in other subtasks above.

12.16 Design Reports

Services

Consultant will prepare as part of the transmittal a design letter report accompanying the 65% and the 90% submittals for each contract package. The report describes the level of completion, decisions made, incorporation of comments, and changes from previous submittal.

Deliverables

12.16	12.16.C4 Design Report UMS 12.16.C5 Design Report CTS 12.16.C6 Design Report MOS	65, and 90%
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Task Leader

Dan Yavorsky (CP-4)
 Denis Henmi (CP-5)
 Michael Willis (CP-6)

Assumptions and Exceptions - None

12.17 Historic Architectural Services

Services

Consultant will provide Historic Building Survey documentation of the existing building on the Chinatown Station site in accordance with the project Mitigation Monitoring and Reporting Program. Consultant shall identify significant architectural elements and specify that they be disassembled in a manner that minimizes damage.

The architectural historian will assist in the development of a design of the above ground portion of the Chinatown Station that is culturally appropriate to the setting and the Chinatown community.

Consultant shall prepare plans to incorporate salvaged architectural features from the demolished building in an education exhibit. (Optional Services)

Deliverables

12.17	12.17.C5 Historic Building Survey -- Const. Cont. Pkg 5 (Chinatown Station) Specification for preservation of significant architectural elements Plans for Educational Exhibit (Optional Services)	65% 65%, 90% & 100%
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Task Leader

Alice Carey

Assumptions and Exceptions

Historic surveys at other station locations are not anticipated.

12.18 Safety and Security

Services

This work is included in other tasks above.

12.19 Other Tasks (Optional Services)

Additional Services and deliverables requested by SFMTA needed to obtain approval or complete construction documents and not included in other subtasks.

Deliverables

13.0 Construction Packaging and Schedules

The current contract packaging strategy is the result of prior studies and scheduling efforts conducted by SFMTA and documented in the Construction Contracting Strategy Plan documented in the RFP.

13.10 Construction Contracting Strategy Review and Comment

Services

During the Early Work phase, Consultant will review the Project schedule and contracting strategy plan considering the proposed construction methods, staging and sequencing plans, contract interfaces, market conditions, and risk management issues and prepare a report documenting its observations and recommendations.

Deliverables

13.10	Construction Contracting Strategy Plan Observations and Recommendations Report	2 Months after NTP
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Task Leader

Lisa Avestedt

Assumptions and Exceptions –

- It is assumed that Contract packaging, Project Master Schedule, and contract interfacing will be done by the others. Consultant role is limited to review and provide comments.
- This work will be combined in Subtasks 1.10

13.20 Construction Schedule Review

Services

Assumptions and Exceptions-

- This work has been combined with subtask_10.10

14.0 Outreach Support

Managing stakeholder expectations requires clear explanations of planned construction methods, equipment and sequence. Consultant will support stakeholder outreach program that will be led by others. Consultant will be available when requested on a work order basis to prepare models, figures, simulations, renderings etc.

14.10 Graphics Support for Outreach

Services

To support stakeholder outreach, Consultant will use state-of-the-art software to develop graphics and simulations to help inform stakeholders and elicit input and obtain concurrence as final design progresses.

Deliverables

14.10	14.10.C4 Graphics Support – Const. Cont. Pkg 4 (UMS) 14.10.C5 Graphics Support – Const. Cont. Pkg 5 (Chinatown) 14.10.C6 Graphics Support – Const. Cont. Pkg 6 (Moscone station)	At SFMTA Discretion
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Task Leader

Mona Tamari

Assumptions and Exceptions

- Effort is limited to providing presentation materials for stakeholder outreach.
- Limited budget was assumed for this effort and will be used on a work order basis.
- Participation in meetings and responding to questions, etc. is included in Subtasks 2.60 and 2.70.
- Budget does not assume physical modeling or animations (Fly through or walk through).

15.0 Bid Support Services

15.10 Bid Support

Services

After public advertising for bidding, support services will be provided to SFMTA during the pre-bid period and during bid evaluation and award. These services may include preparation of addenda, responding to questions from bidders, providing engineering support including modifications to drawings and specifications, participating in pre-award conferences, and conforming contract documents to reflect pre-award changes.

Deliverables

15.10	15.10.C4 Bid Support – Const. Cont. Pkg 4 (UMS) 15.10.C5 Bid Support – Const. Cont. Pkg 5 (Chinatown) 15.10.C6 Bid Support – Const. Cont. Pkg 6 (Moscone)	[As needed]
15.20	Conformed Contract drawings and specs 15.20.C4 Conformed Contract drawings and specs – Const. Cont. Pkg 4 (UMS) 15.20.C5 Conformed Contract drawings and specs – Const. Cont. Pkg 5 (CTS) 15.20.C6 Conformed Contract drawings and specs – Const. Cont. Pkg 6 (Moscone)	[As needed]

Task Leader

- Dan Yavorsky (CP4)
- Denis Henmi (CP5)
- Jeff Tusing (CP6)

Assumptions and Exceptions –

- A level of effort was assumed for this service.
- Consultant will participate in the review of the bids on the Construction Packages .

16.0 Design Services During Construction

Consultant will support SFMTA throughout construction on as needed basis. A level of effort is assumed for these services. Services provided for each of the three construction packages include:

- Prepare and submit for approval a Construction Support Strategic Execution Plan that details Consultant’s roles and procedures in supporting SFMTA and the PM/CM.

- Review shop drawings, contractor working drawings, catalog cuts, etc.
- Respond to RFIs, technical submittals and contractor-proposed changes.
- Maintain logs and track progress of received RFIs, submittals and proposed changes
- Post site visit reports to document design discipline leads involvement in design verification or issue resolution.
- Prepare conformed drawings and specifications
- Prepare O&M manuals for systems included in respective construction contracts.
- Revise and reissue contract drawings and specifications to reflect contract changes
- Provide quantity estimates for proposed changes in the work.
- Return reviewed product data and catalog cut submittals within 5 working days of availability of the submittal to the Consultant. Additional time will be provided if the submittal package is large.
- Return reviewed Requests for Information (RFI) within 5 working days of availability of the RFI to the Consultant. Additional time may be required if the RFI warrants.
- Return reviewed submitted shop drawings, calculations, and samples within 10 working days of availability of the submittal to the Consultant. Additional time will be provided if the submittal package is large..
- Return reviewed substitutions and contractor requested changes within 15 working days of availability of the substitution or change to the Consultant. Additional time will be provided if the substitutions and contractor requested changes are complex.

16.10 Construction Support Strategic Execution Plan

Services

Prepare a strategic execution plan for each station to delineate the roles and responsibilities, procedures, and management approach for the Consultant's services during construction

Deliverables

16.10	Const. Support Strategic Exec. Plan for each package	
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Task Leader

- Dan Yavorsky (CP4)
- Denis Henmi (CP5)
- Jeff Tusing (CP6)

Assumptions and Exceptions –

Consultant will be provided with Contractor’s schedule of submittals for review.

16.20 Design Team Support

Services

Consultant will provide a single full time design team representative in the field during construction of all three stations. The representative will act as a liaison between the Consultant design staff, the CM, and SFMTA.

For Chinatown Station, Consultant will provide two full time field engineers experienced in sequential excavation to provide services during the station excavation. For UMS Station an experienced sequential excavation person will be made available on as needed basis during the sequential excavation of the bulb in the station invert.

Deliverables

16.20	16.20.C4 Design Team Representative – Const.Cont.Pkg 4 (UMS) 16.20.C5 Design Team Representative – Const.Cont.Pkg 5 (Chinatown) 16.20.C6 Design Team Representative – Const.Cont.Pkg 6 (Moscone station)	
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Task Leader

(TBD)

Assumptions and Exceptions

- It is assumed that three construction contracts will be issued (one for each station)
- The SEM field engineering representatives’ time budgeted for Chinatown Station excavation is assumed to be 30 months, two shifts per day, and 6 days a week.

16.30 Shop Drawings Review and Consultation during construction

Services

- Review shop drawings, Contractor working drawings, catalog cuts, etc.
- Respond to RFIs, technical submittals and contractor-proposed changes.
- Maintain logs and track progress of received RFIs, submittals and proposed changes
- Provide geotechnical support as needed during construction of the three stations

Deliverables

16.30	16.30.C4 Shop Drawings Reviews and RFI – Const. Cont. Pkg 4 (UMS) 16.30.C5 Shop Drawings Reviews and RFI – Const. Cont. Pkg 5 (Chinatown) 16.30.C6 Shop Drawings Reviews and RFI – Const. Cont. Pkg 6 (Moscone)	
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Task Leader

Dan Yavorsky (CP4)
 Denis Henmi (CP5)
 Jeff Tusing (CP6)

Assumptions and Exceptions –

- None

16.40 Field Visits / Meetings

Services

Conduct site visits by Consultant staff and prepare site visit reports to document observations and verification of or issue resolution.

Deliverables

16.40	16.40.C4 Field Visits / Meetings – Const. Cont. Pkg 4 (UMS) 16.40.C5 Field Visits / Meetings – Const. Cont. Pkg 5 (Chinatown) 16.40.C6 Field Visits / Meetings – Const. Cont. Pkg 6 (Moscone station)	
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Task Leader

Dan Yavorsky (CP4)
 Denis Henmi (CP5)
 Jeff Tusing (CP6)

Assumptions and Exceptions –

- A level of effort budget was assumed for this task.
- All site visits will be coordinated with the Resident Engineer.

16.50 Change Proposals / Value Engineering

Services

Prepare revised drawings, specifications, and/or quantity estimates for SFMTA and other requested changes. Support SFMTA in reviewing change proposals.

Deliverables

16.50	16.50.C4 Change Proposals / Value Engineering – Const. Cont. Pkg 4 (UMS) 16.50.C5 Change Proposals / Value Engineering – Const. Cont. Pkg 5 (Chinatown) 16.50.C6 Change Proposals / Value Engineering – Const. Cont. Pkg 6 (Moscone Station)	
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Task Leader

Dan Yavorsky (CP4)
 Denis Henmi (CP5)
 Jeff Tusing (CP6)

Assumptions and Exceptions

- A level of effort budget was assumed for this task.

16.60 Conformed Contract Documents

Services

Prepare conformed drawings and specifications based on contractor (or CM) prepared redlined drawings. Identify contractor provided drawings to be retained by SFMTA for O&M.

Deliverables

16.60	16.60.C4 Conformed Contract Documents – Const. Cont. Pkg 4 16.60.C5 Conformed Contract Documents – Const. Cont. Pkg 5 16.60.C6 Conformed Contract Documents – Const. Cont. Pkg 6	
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Task Leader

Dan Yavorsky (CP4)
 Denis Henmi (CP5)
 Jeff Tusing (CP6)

Assumptions and Exceptions

- It is assumed that SMTA will provide the redlined drawings and the conformed drawings will be prepared based on these redlined drawings. No field verification to their accuracy will be made.

16.70 Operations and Maintenance Manuals

Services

Provide integrated O&M manuals to enable SFMTA to maintain the sustainability of each station. Include advanced commissioning data and results of testing and startup.

Deliverables

16.70	16.70.C4 O&M Manuals: UMS Station 16.70.C5 O&M Manuals: Chinatown Station 16.70.C6 O&M Manuals: Moscone Station	
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Task Leader

- Dan Yavorsky (CP4)
- Denis Henmi (CP5)
- Jeff Tusing (CP6)

Assumptions and Exceptions

- Contractor provided O&M manuals will form the core of the integrated O&M manuals.
- O&M Manuals will cover all DP2 scope including architectural finishes and fixtures and mechanical and electrical systems. O&M manuals for systemwide communications, train control, OCS, will be done by others.

16.80 Warranty Services (Optional Services)

Services

- In the event that systems, components, equipment, or finishes fail to meet the specified performance criteria prior to the Final Warranty Inspection, the Consultant may be requested to review the condition of work, and provide recommendations to the City for Corrective Warranty work.
- The Consultant shall assist the City personnel in conducting the Final Warranty. Inspections at the end of the two year warranty period following Final Completion of each construction contract.
- A level of effort budget was assumed for this task.

ATTACHMENTS

Attachment 1 -- Deliverable Matrix

Attachment 2 -- Design Schedule

APPENDIX B
DIRECTORY OF SUBCONSULTANTS

Central Subway Project - Design Package #2
Contract No. CS-155-2

**APPENDIX B – DIRECTORY OF SUBCONSULTANTS
CENTRAL SUBWAY PROJECT– DESIGN PACKAGE 2
CONTRACT NO. CS-155-2 (BASE AND OPTIONAL SERVICES)**

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Tony Sanchez-Corea, President

Carey & Co.
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Tel: 415 773 0773
Alice Carey, President

CB Engineers, Inc.
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Paul O'Neill, Principal

CHS Consulting Group
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Chi-Hsin Shao, Principal

Cornerstone Transportation Consulting, Inc.
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Wayne Perry, Chairman & CEO

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Frederick Jordan, President

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William Fong

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Irene Lauren, Sr. Assoc./Dir. of Business Dev.

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Ben Ron, President

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Alexander Krimotat, Vice President

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Neil Joson, Principal

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Stephen Lau, President

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Myles Stevens, Principal

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Mennor Chan, P.E., Principal

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Sean Timmons

Trans Pacific Geotechnical Consultants, Inc.

639 Clay Street, 2nd Floor
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Eddy Lau, P.E.

Treadwell & Rollo

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Ramin Golesorkhi

YEI Engineers, Inc.

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Dennis Yung

Independent Consultants

Ed Cording
Vojtech Gall
John McDonald
Dennis McCarry
Don Hilton

APPENDIX C
SUMMARY OF FEES –
COST BREAKDOWN/SCHEDULE OF CHARGES

Central Subway Project - Design Package #2
Contract No. CS-155-2

APPENDIX C - COST BREAKDOWN / SCHEDULE OF CHARGES
CENTRAL SUBWAY PROJECT DESIGN PACKAGE 2 (BASE SERVICES)
Contract No. CS-155-2

Task #	Task Description	Total Hours	Total Direct Labor	Total Indirect Labor (OH)	Fees	Non-Travel Expenses	Travel Expenses	Total Other Direct Costs (ODCs)	Task Amount (Total Burdened Labor + Total Expenses)
Total:		251,547	\$12,957,624	\$17,891,610	\$3,308,718	\$341,800	\$559,500	\$901,300	\$35,059,252
1	Project Management and Control	27,180	\$1,572,098	\$2,120,475	\$392,290	\$4,000	\$150,000	\$154,000	\$4,238,863
2	Design and Project Integration	4,160	\$276,196	\$372,745	\$71,384	\$3,000	\$0	\$3,000	\$723,325
3	Geotechnical Investigations	10,140	\$572,336	\$838,141	\$155,153	\$225,000	\$47,000	\$272,000	\$1,837,630
4	Surveying and Right-Of-Way	1,280	\$52,667	\$86,447	\$15,302	\$11,000	\$5,000	\$16,000	\$170,416
5	Traffic Engineering	240	\$12,360	\$20,600	\$3,626	\$0	\$0	\$0	\$36,586
6	Utility Design Coordination	1,716	\$75,388	\$125,815	\$22,132	\$1,500	\$0	\$1,500	\$224,835
7	Drainage	240	\$11,638	\$22,705	\$3,778	\$0	\$0	\$0	\$38,120
8	Permits	1,200	\$113,712	\$79,875	\$21,295	\$0	\$0	\$0	\$214,882
9	Contract Specifications	2,560	\$168,552	\$212,366	\$41,901	\$3,000	\$6,000	\$9,000	\$431,819
10	Cost Estimate and Scheduling	3,160	\$202,185	\$245,430	\$49,238	\$0	\$14,000	\$14,000	\$510,853
11	Quality Control	2,140	\$119,823	\$165,056	\$31,337	\$1,500	\$0	\$1,500	\$317,716
12	Drawings and Documents	139,680	\$6,833,695	\$8,938,216	\$1,734,910	\$70,300	\$254,000	\$324,300	\$17,831,121
13	Construction Packaging and Schedules	1,320	\$71,226	\$83,738	\$17,046	\$0	\$4,500	\$4,500	\$176,510
14	Outreach Support	1,000	\$46,676	\$68,015	\$12,616	\$0	\$0	\$0	\$127,307
15	Bid Support Services	1,800	\$109,187	\$151,374	\$28,662	\$0	\$0	\$0	\$289,223
16	Design Services During Construction	53,731	\$2,719,886	\$4,360,611	\$708,050	\$22,500	\$79,000	\$101,500	\$7,890,046

**APPENDIX C - COST BREAKDOWN / SCHEDULE OF CHARGES
CENTRAL SUBWAY PROJECT - DESIGN PACKAGE 2 (OPTIONAL SERVICES)
Contract No. CS-155-2**

Task #	Task Description	Total Hours	Total Direct Labor	Total Indirect Labor (OH)	Fees	Non-Travel Expenses	Travel Expenses	Total Other Direct Costs (ODCs)	Task Amount (Total Burdened Labor + Total Expenses)
Total:		35,782	\$1,722,754	\$2,656,632	\$474,821	\$36,500	\$0	\$36,500	\$4,890,707
1	Project Management and Control	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	Design and Project Integration	1,080	\$56,370	\$91,722	\$16,290	\$0	\$0	\$0	\$164,383
3	Geotechnical Investigations	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	Surveying and Right-Of-Way	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Traffic Engineering	2,880	\$146,083	\$242,379	\$42,731	\$6,000	\$0	\$6,000	\$437,193
6	Utility Design Coordination	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	Drainage	940	\$48,564	\$93,381	\$15,614	\$1,500	\$0	\$1,500	\$159,059
8	Permits	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	Contract Specifications	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	Cost Estimate and Scheduling	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11	Quality Control	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
12	Drawings and Documents	25,784	\$1,202,649	\$1,807,107	\$331,073	\$26,000	\$0	\$26,000	\$3,366,830
13	Construction Packaging and Schedules	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
14	Outreach Support	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
15	Bid Support Services	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
16	Design Services During Construction	5,098	\$269,088	\$422,042	\$69,113	\$3,000	\$0	\$3,000	\$763,243

APPENDIX D
OTHER DIRECT COSTS

Central Subway Project - Design Package #2

Contract No. CS-155-2

APPENDIX D - OTHER DIRECT COSTS
CENTRAL SUBWAY PROJECT - DESIGN PACKAGE 2 (BASE SERVICES)
Contract No. CS-155-2

Task #	Task Description	Non-Travel Expenses	Travel Expenses	Total Other Direct Costs (ODCs)
Total:		\$341,800	\$559,500	\$901,300
1	Project Management and Control	\$4,000	\$150,000	\$154,000
2	Design and Project Integration	\$3,000	\$0	\$3,000
3	Geotechnical Investigations	\$225,000	\$47,000	\$272,000
4	Surveying and Right-Of-Way	\$11,000	\$5,000	\$16,000
5	Traffic Engineering	\$0	\$0	\$0
6	Utility Design Coordination	\$1,500	\$0	\$1,500
7	Drainage	\$0	\$0	\$0
8	Permits	\$0	\$0	\$0
9	Contract Specifications	\$3,000	\$6,000	\$9,000
10	Cost Estimate and Scheduling	\$0	\$14,000	\$14,000
11	Quality Control	\$1,500	\$0	\$1,500
12	Drawings and Documents	\$70,300	\$254,000	\$324,300
13	Construction Packaging and Schedules	\$0	\$4,500	\$4,500
14	Outreach Support	\$0	\$0	\$0
15	Bid Support Services	\$0	\$0	\$0
16	Design Services During Construction	\$22,500	\$79,000	\$101,500

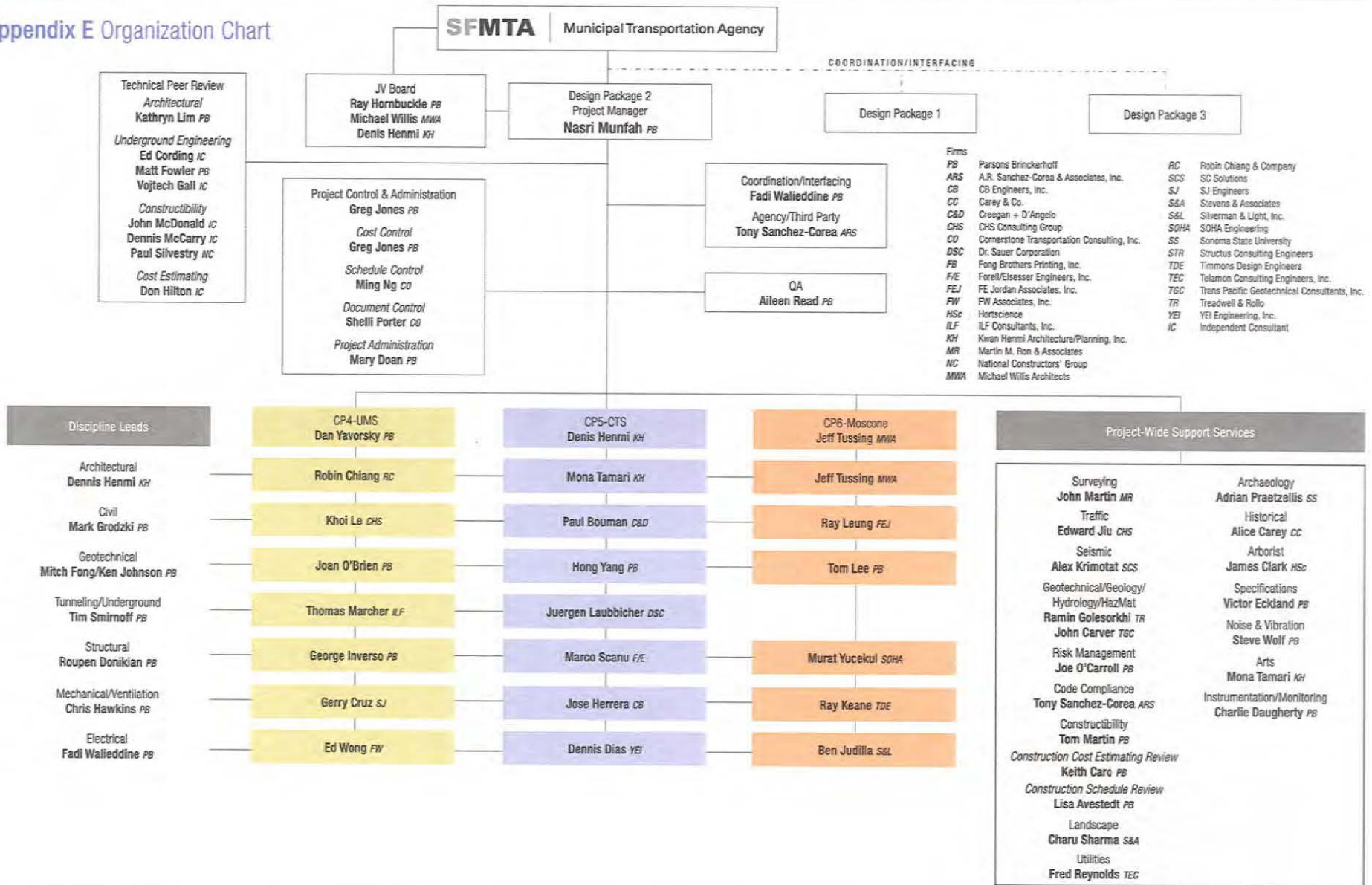
APPENDIX D - OTHER DIRECT COSTS
CENTRAL SUBWAY PROJECT - DESIGN PACKAGE 2 (OPTIONAL SERVICES)
Contract No. CS-155-2

Task #	Task Description	Non-Travel Expenses	Travel Expenses	Total Other Direct Costs (ODCs)
Total:		\$36,500	\$0	\$36,500
1	Project Management and Control	\$0	\$0	\$0
2	Design and Project Integration	\$0	\$0	\$0
3	Geotechnical Investigations	\$0	\$0	\$0
4	Surveying and Right-Of-Way	\$0	\$0	\$0
5	Traffic Engineering	\$6,000	\$0	\$6,000
6	Utility Design Coordination	\$0	\$0	\$0
7	Drainage	\$1,500	\$0	\$1,500
8	Permits	\$0	\$0	\$0
9	Contract Specifications	\$0	\$0	\$0
10	Cost Estimate and Scheduling	\$0	\$0	\$0
11	Quality Control	\$0	\$0	\$0
12	Drawings and Documents	\$26,000	\$0	\$26,000
13	Construction Packaging and Schedules	\$0	\$0	\$0
14	Outreach Support	\$0	\$0	\$0
15	Bid Support Services	\$0	\$0	\$0
16	Design Services During Construction	\$3,000	\$0	\$3,000

APPENDIX E
ORGANIZATION CHART

Central Subway Project - Design Package #2
Contract No. CS-155-2

Appendix E Organization Chart



APPENDIX F
SBE FORMS 4 AND 5

Central Subway Project - Design Package #2
Contract No. CS-155-2

PROPOSER Central Subway Design Group

SFMTA SBE FORM No. 4

SBE SUBCONSULTANT PARTICIPATION DECLARATION

(To be submitted by the prospective prime consultant or subconsultant, as appropriate, to the Contract Compliance Office with its proposal, unless an extension of time is requested and granted.)

Ray Hornbuckle, Senior Vice President, PB Americas, Inc.,
(Name and Title)

declares as follows: That contingent upon award of Architectural and Engineering Services for the Final Design and Construction of the Central Subway Project (Third Street Light Rail Transit Project Phase 2) CS-155 (CCO 08-1017) Design Package 2 – Stations Design
(Name of Project)

Central Subway Design Group will award subcontracts or pursue
(Name of Prime Consultant)

orders to the following Small Business firms:(If the firm is a joint venture, you must attach a copy of the joint venture agreement.)

Name and Address of SBE	Type of SBE Certification	Lic.#	Gender		Ethnicity	Type of Work (Describe)	% and/or \$ Amount of Contract
			M	F			
Kwan Henmi Architecture Planning Inc. - JV Partner 456 Montgomery St. #300 San Francisco, CA 94104	DBE 13320	195373		X	A/PI	Architecture	\$3,812,957
A.R. Sanchez-Corea & Associates, Inc. 301 Junipero Serra Blvd. Suite 270 San Francisco, CA 94127	HRC 111111964	—	X		H	Building Code & Permitting	\$70,070
Carey & Co., Inc. Old Engine No. 2 460 Bush Street San Francisco, CA 94108	HRC 051011071	—		X	W	Historical / Building	\$66,978
CHS Consulting 130 Sutter St., Suite 468 San Francisco, CA 94104	HRC 081113510	TR 2150	X		A/PI	Traffic Engineering	\$237,569
Cornerstone Transportation Consulting Inc. 44 Montgomery St., #3360 San Francisco, CA 94104	HRC 071113549	—	X		B	CADD & Project Schedule/ Admin	\$674,167
Creegan + D'Angelo Engineers 170 Columbus Ave., #240 San Francisco, CA 94133	SBE 34439	34439	X		W	Civil/ Structural	\$99,699

SUBMIT WITH PROPOSAL

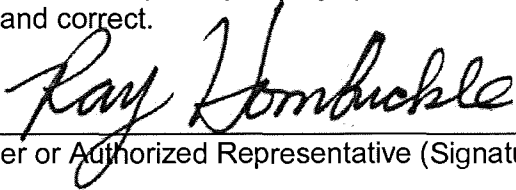
Name and Address of SBE	Type of SBE Certification	Lic.#	Gender		Ethnicity	Type of Work (Describe)	% and/or \$ Amount of Contract
			M	F			
F.E. Jordan Associates, Inc. 490 Post St., Suite 1607 San Francisco, CA 94102	HRC 081015106	C17468	X		B	Civil Engineer, Utility Design	\$162,170
F.W. Associates, Inc. 68 – 12th St., Suite 300 San Francisco, CA 94103	HRC 051110220	139881	X		A/PI	Electrical	\$664,740
Fong Brothers Printing, Inc. 775 Sacramento Street San Francisco, CA 94108		—	X		A/PI	Reprographics	\$107,800
Forell/Elsesser Engineers, Inc. 160 Pine St., Suite 600 San Francisco, CA 94111	SBE 23929	CA 063591	X		W	Structural	\$1,367,058
HortScience, Inc. 836 Bonita Avenue Pleasanton CA 94566	SBE 6166	6166		X	W	Archaeology	\$66,648
Martin M. Ron Associates 859 Harrison St., Suite. 200 San Francisco, CA 94107	SBE 20075	128314	X		W	Land Surveying	\$103,653
Robin Chiang & Company 381 Tehama Street San Francisco, CA 94103	HRC 121110859	C10152	X		A/PI	Architecture	\$973,096
SC Solutions, Inc. 1261 Oakmead Pkwy. Sunnyvale, CA 94085	SBE 13495	—	X		W	Structural/ Seismic	\$256,504
Silverman & Light, Inc. 1201 Park Ave., Suite 100 Emeryville, CA 94608	SBE 43834	161803	X		W	Electrical	\$668,194
S.J. Engineers 233 Sansome St., Suite 705 San Francisco, CA 94104	HRC 091013298	—	X		A/PI	Mechanical/ Plumbing/ Fire Protection	\$348,366
SOHA Engineers 48 Colin P. Kelly Street, San Francisco, CA 94107	HRC 021014896	025833	X		A/PI	Structural	\$1,316,928
Stevens & Associates 855 Sansom St., Suite 200 San Francisco, CA 94104	SBE 183098	183098	X		B	Landscape Architecture	\$191,339
Telamon Engineering Consultants, Inc. 855 Folsom Street, Unit 142 San Francisco, CA 94107	HRC 021013281	C04384 2		X	A/PI	Civil / Utilities	\$549,267
Timmons Design Engineers 901 Market St., Suite 480 San Francisco, CA 94103	HRC 081014693	376445	X		W	Mechanical/ Electrical	\$315,900
Trans Pacific Geotechnical Consultants, Inc. 639 Clay St., 2nd Floor San Francisco, CA 94111	SBE 10812440	—	X		A/PI	Geotechnical	\$24,087

SUBMIT WITH PROPOSAL

Name and Address of SBE	Type of SBE Certification	Lic.#	Gender		Ethnicity	Type of Work (Describe)	% and/or \$ Amount of Contract
			M	F			
YEI Engineers, Inc. 307 5th Street, Suite B San Francisco, CA 94107	DBE 1807	130521 2	X		A/PI	Electrical	\$772,407

Total dollar value of SBE work: \$12,849,597 = 36.6 % of SBE Participation
 Total dollar value of Proposal Price \$35,059,252 100 %

I declare under penalty of perjury under the laws of the State of California, that the above information is true and correct.



Owner or Authorized Representative (Signature)

Dated: July 21, 2009

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc.

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award (Name of Prime Consultant)

\$ 70,070 [(%) percent and/or (\$) amount], of subcontract or [(%) percent and/or (\$) amount] of a purchase order of the total value of the prime contract to A.R. Sanchez-Corea & Associates, Inc (Name of your firm).

License No. Type of SBE Certification: MBE- LBE # HRC 111111964

Nature of work to be performed by SBE: Building code consulting and permit expediting

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship Partnership Joint Venture Corporation X

Limited Liability Partnership Limited Liability Corporation

LIST OWNERS

Name Antonio Sanchez-Corea Ethnicity* H Gender M % of Ownership 51%

Name Lucille Sanchez-Corea Ethnicity* W Gender F % of Ownership 24%

Name Tony Sanchez-Corea III Ethnicity* W Gender M % of Ownership 25%

Name Ethnicity* Gender % of Ownership

Percentage of SBE Stockholders: 100%

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy General Liability Party Insured Golden Eagle Insurance

Name of Policy Professional Liability Party Insured Galen Hayes Insurance Agency

Name of Policy Workers Comp Party Insured Employers Compensation Insurance Co.

For Prime Consultants and Subconsultants Only: N/A

List the firm's annual gross receipts for the last three fiscal years:

20_____ \$ _____, 20_____ \$ _____, 20_____ \$ _____

For Suppliers or Manufacturers Only: N/A

List the number of employees for the last three fiscal years:

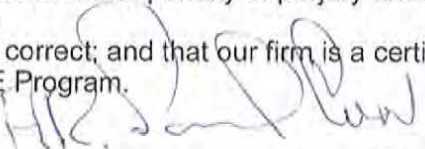
20_____ Number _____, 20_____ Number _____, 20_____ Number _____

ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS: N/A

- a. _____ We will not subcontract any portion of work to another subconsultant.
- b. _____ We will subcontract _____ [% and/or \$ amount] of our work to _____
(Name of Subconsultant)

Indicate owners' ethnicity and gender Hispanic Male

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.



Owner/Authorized Representative (Signature)

A.R. Sanchez-Corea, CEO
Name & Title (Please Print)

301 Junipero Serra Blvd. Suite 270 San Francisco, CA 94127
Address

415-333-8080
Telephone No.

END OF SFMTA SBE FORM NO. 5

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc.

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award
(Name of Prime Consultant)

\$ 66,978 [(%) percent and/or (\$) amount], of subcontract or
[(%) percent and/or (\$) amount] of a purchase order of the total value of the
prime contract to Carey & Co. (Name of your firm).

License No. _____ Type of SBE Certification: LBE, SBE, WBE

Nature of work to be performed by SBE: Historic Preservation

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship _____ Partnership _____ Joint Venture _____ Corporation _____

Limited Liability Partnership _____ Limited Liability Corporation x

LIST OWNERS

Name Alice Carey Ethnicity* W Gender F % of Ownership 80.01

Name Nancy Goldenberg Ethnicity* W Gender F % of Ownership 10.00

Name Hisashi Sugaya Ethnicity* A/PI Gender M % of Ownership 9.99

Name _____ Ethnicity* _____ Gender _____ % of Ownership _____

Percentage of SBE Stockholders: _____

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy General & Auto Liability Party Insured Carey & Co.

Name of Policy Professional Liability Party Insured Carey & Co.

Name of Policy Workers Compensation Party Insured Carey & Co.

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

2008 \$2,927,000, 2007 \$4,056,000, 2006 \$ 2,373,000

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

20 Number, 20 Number, 20 Number

ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

a.x We will not subcontract any portion of work to another subconsultant.

b. We will subcontract [% and/or \$ amount] of our work to (Name of Subconsultant)

Indicate owners' ethnicity and gender White, female

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.


Owner/Authorized Representative (Signature)

Alice Carey, President
Name & Title (Please Print)

460 Bush Street, San Francisco, CA 94121
Address

415-773-0773
Telephone No.

END OF SFMTA SBE FORM NO. 5

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc. _____

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award (Name of Prime Consultant)

\$ 237,569 [(%) percent and/or (\$) amount], of subcontract or [(%) percent and/or (\$) amount] of a purchase order of the total value of the prime contract to CHS Consulting Group (Name of your firm).

License No. TR 2150. Type of SBE Certification: SF HRC, California Unified Certification Program

Nature of work to be performed by SBE: Traffic and Civil Engineering

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship Partnership Joint Venture Corporation X Limited Liability Partnership Limited Liability Corporation

LIST OWNERS

Name Chi-Hsin Shao Ethnicity* A/PI Gender M % of Ownership 100 Name Ethnicity* Gender % of Ownership Name Ethnicity* Gender % of Ownership Name Ethnicity* Gender % of Ownership

Percentage of SBE Stockholders:

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy Worker's Compensation Party Insured Travelers Indemnity Company of CT
Name of Policy Commercial General Liability Party Insured Travelers Property Casualty Co of AM
Name of Policy Commercial Automobile Liability Party Insured Travelers Property Casualty Co of AM
Name of Policy Professional Liability Party Insured Continental Casualty Company

For Prime Consultants and Subconsultants Only:
List the firm's annual gross receipts for the last three fiscal years:

2006_ - \$ 1,181,819 2007 - \$ 1,352,242 2008_ - \$ 1,606,615

For Suppliers or Manufacturers Only:
List the number of employees for the last three fiscal years:

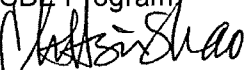
20 _____ Number _____, 20 _____ Number _____, 20 _____ Number _____

ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

- a. _____ We will not subcontract any portion of work to another subconsultant.
- b. _____ We will subcontract _____ [% and/or \$ amount] of our work to _____
(Name of Subconsultant)

Indicate owners' ethnicity and gender Asian Male

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program



Owner/Authorized Representative (Signature)

Chi-Hsin Shao, Principal
Name & Title (Please Print)

130 Sutter Street, Suite 468, San Francisco, CA 94104
Address

(415) 392-9688
Telephone No.

END OF SFMTA SBE FORM NO. 5

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc.

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award (Name of Prime Consultant)

\$ 674,167 [(%) percent and/or (\$) amount], of subcontract or

[(%) percent and/or (\$) amount] of a purchase order of the total value of the

prime contract to Cornerstone Transportation Consulting Inc. (Name of your firm).

License No. HRC071113549 Type of SBE Certification: HRC Minority Owned LBE

Nature of work to be performed by SBE: Administrative, CADD, and other Technical Services

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship Partnership Joint Venture Corporation x

Limited Liability Partnership Limited Liability Corporation

LIST OWNERS

Name Wayne H. Perry Ethnicity* B Gender M % of Ownership 90%

Name Charles E. Jones Ethnicity* B Gender M % of Ownership 10%

Name Ethnicity* Gender % of Ownership

Name Ethnicity* Gender % of Ownership

Percentage of SBE Stockholders: 100%

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy <u>Lexington Insurance Co.</u>	Party Insured <u>Cornerstone Concilium Inc & Cornerstone Transportation Consulting Inc.</u>
Name of Policy <u>Inland marine Coverage</u>	Party Insured <u>Cornerstone Concilium Inc & Cornerstone Transportation Consulting Inc.</u>
Name of Policy <u>Admiral Insurance Co.</u>	Party Insured <u>Cornerstone Concilium Inc & Cornerstone Transportation Consulting Inc.</u>

For Prime Consultants and Subconsultants Only:
 List the firm's annual gross receipts for the last three fiscal years:

20___ \$685,5732.82, 2006_____ \$796,834.97, 2007_____ \$869,308.91, 2008_____

For Suppliers or Manufacturers Only:
 List the number of employees for the last three fiscal years:

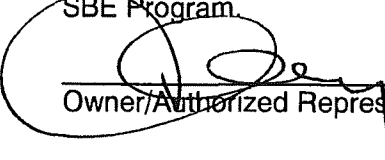
20_____ Number_____, 20_____ Number_____, 20_____ Number_____

ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

- a. We will not subcontract any portion of work to another subconsultant.
- b. _____ We will subcontract _____ [% and/or \$ amount] of our work to _____
 (Name of Subconsultant)

Indicate owners' ethnicity and gender _____

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.



 Owner/Authorized Representative (Signature)

Wayne H. Perry
 Name & Title (Please Print)

44 Montgomery Street, Suite 3360, San Francisco, CA 94104
 Address

415-705-7800
 Telephone No.

END OF SFMTA SBE FORM NO. 5

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc.

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award (Name of Prime Consultant)

\$ 99,699 [(%) percent and/or (\$) amount], of subcontract or [(%) percent and/or (\$) amount] of a purchase order of the total value of the prime contract to Cregan + D'Angelo Engineers (Name of your firm).

License No. Type of SBE Certification: Small Business, #34439, exp. 5/10

Nature of work to be performed by SBE: Civil engineering services

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship Partnership Joint Venture Corporation X

Limited Liability Partnership Limited Liability Corporation

LIST OWNERS

- Name Robert Jones Ethnicity* B Gender M % of Ownership 47
Name Reinhard Ludke Ethnicity* W Gender M % of Ownership 13
Name Ken Swenson Ethnicity* W Gender M % of Ownership 11
Name Richard Simonitch Ethnicity* W Gender M % of Ownership 10
Name David Wilson Ethnicity* W Gender M % of Ownership 9
Name Trevor Greco Ethnicity* W Gender M % of Ownership 10

Percentage of SBE Stockholders: 100%

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy General Liability Party Insured Creegan + D'Angelo Engineers

Name of Policy Automobile Policy Party Insured Creegan + D'Angelo Engineers

Name of Policy Workers Compensation Party Insured Creegan + D'Angelo Engineers

Name of Policy Professional Liability Party Insured Creegan + D'Angelo Engineers

Name of Policy Excess Liability Party Insured Creegan + D'Angelo Engineers

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

2006 - \$8,535,269; 2007 - \$8,193,942; 2008 - \$7,857,349

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

20____ Number____, 20____ Number____, 20____ Number____

ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

- a. We will not subcontract any portion of work to another subconsultant.
- b. ____ We will subcontract ____ [% and/or \$ amount] of our work to _____
(Name of Subconsultant)

Indicate owners' ethnicity and gender _____

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.



Representative (Signature)

Reinhard Ludke, Sr. Vice President
Name & Title (Please Print)

170 Columbus Avenue, Suite 240, San Francisco CA 94133
Address

415-834-2010
Telephone No.

END OF SFMTA SBE FORM NO. 5

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc.

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award (Name of Prime Consultant)

\$ 162,170 [(%) percent and/or (\$) amount], of subcontract or

[(%) percent and/or (\$) amount] of a purchase order of the total value of the prime contract to F.E. Jordan Associates, Inc. (Name of your firm).

License No. C17468. Type of SBE Certification: LBE

Nature of work to be performed by SBE: Lead Civil Engineer for the civil and utility design on the Moscone Station.

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship Partnership Joint Venture Corporation X

Limited Liability Partnership Limited Liability Corporation

LIST OWNERS

Name Frederick E. Jordan, P.E. Ethnicity* B Gender Male % of Ownership 100

Name Ethnicity* Gender % of Ownership

Name Ethnicity* Gender % of Ownership

Name Ethnicity* Gender % of Ownership

Percentage of SBE Stockholders:

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

SUBMIT WITH PROPOSAL

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy Professional Liability Party Insured F.E. Jordan Associates, Inc
Name of Policy Construction General Liability Party Insured F.E. Jordan Associates, Inc
Name of Policy Automobile Liability Party Insured F.E. Jordan Associates, Inc

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

2008 \$500,000, 2007 \$700,000, 2006 \$800,000
\$700,000 Branch \$600,000 Branch \$500,000 Branch

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

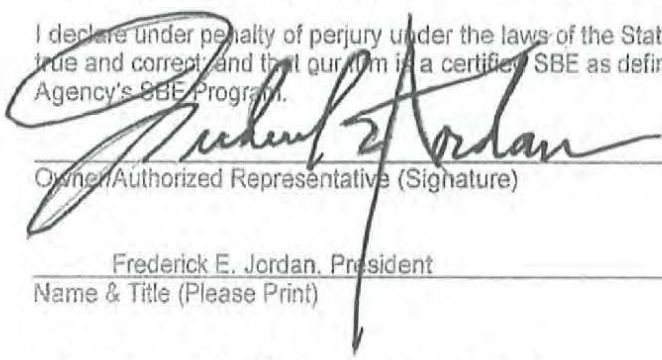
20 Number , 20 Number , 20 Number

ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

- a. We will not subcontract any portion of work to another subconsultant.
b. We will subcontract [% and/or \$ amount] of our work to
(Name of Subconsultant)

Indicate owners' ethnicity and gender Black -Male (African American)

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.


Owner/Authorized Representative (Signature)

Frederick E. Jordan, President
Name & Title (Please Print)

490 Post Street, Suite 1607, San Francisco, CA 94102
Address

415-394-5900
Telephone No.

END OF SFMTA SBE FORM NO. 5

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc.

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award (Name of Prime Consultant)

\$ 664,740 [(%) percent and/or (\$) amount], of subcontract or [(%) percent and/or (\$) amount] of a purchase order of the total value of the prime contract to F.W. Associates, Inc. (Name of your firm).

License No. 139881. Type of SBE Certification: SBE (State of California)

Nature of work to be performed by SBE: Electrical Engineering

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship Partnership Joint Venture Corporation X Limited Liability Partnership Limited Liability Corporation

LIST OWNERS

Name Munson Fong Ethnicity* A/PI Gender M % of Ownership 50 Name Edward Wong Ethnicity* A/PI Gender M % of Ownership 50 Name Ethnicity* Gender % of Ownership Name Ethnicity* Gender % of Ownership

Percentage of SBE Stockholders: 100%

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy General Liability Party Insured F.W. Associates, Inc.

Name of Policy Professional Liability Party Insured F.W. Associates, Inc.

Name of Policy Worker's Compensation Party Insured F.W. Associates, Inc.

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

2006 \$2,097,425, 2007 \$2,336,850, 2008 \$2,290,501

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

20 Number, 20 Number, 20 Number


ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

a. We will not subcontract any portion of work to another subconsultant.

b. We will subcontract [% and/or \$ amount] of our work to
(Name of Subconsultant)

Indicate owners' ethnicity and gender

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program

 _____
Representative (Signature)

Edward Wong, Principal
Name & Title (Please Print)

68-12th Street, Suite 300, San Francisco, CA 94103
Address

415-861-0286
Telephone No.

END OF SFMTA SBE FORM NO. 5

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc.

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award
(Name of Prime Consultant)

\$ 1,367,058
[(% percent and/or (\$) TBD amount], of subcontract or

[(% percent and/or (\$) TBD amount] of a purchase order of the total value of the
prime contract to Forell/Elsesser Engineers, Inc. (Name of your firm).

License No. CA063591. Type of SBE Certification: State of California

Nature of work to be performed by SBE: Structural Engineering services

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship _____ Partnership _____ Joint Venture _____ Corporation X

LIST OWNERS

- Name Simin Naaseh Ethnicity* W Gender F % of Ownership 21%
- Name Paul Rodler Ethnicity* W Gender M % of Ownership 19%
- Name David Friedman Ethnicity* W Gender M % of Ownership 17%
- Name Mason Walters Ethnicity* W Gender M % of Ownership 17%
- Name Grace Kang Ethnicity* A Gender F % of Ownership 13%
- Name Elizabeth Halton Ethnicity* W Gender F % of Ownership 8%
- Name Allen Nudel Ethnicity* W Gender M % of Ownership 2%
- Name Rene Vignos Ethnicity* W Gender M % of Ownership 2%

Percentage of SBE Stockholders: 38%

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy Commercial General Insurance Party Insured Forell/Elsesser Engineers, Inc.

Name of Policy Professional Liability Party Insured Forell/Elsesser Engineers, Inc.

Name of Policy Worker's Compensation Party Insured Forell/Elsesser Engineers, Inc.

Name of Policy Auto Insurance Party Insured Forell/Elsesser Engineers, Inc.

Name of Policy Excess Liability Party Insured Forell/Elsesser Engineers, Inc.

For Prime Consultants and Subconsultants Only:
 List the firm's annual gross receipts for the last three fiscal years:

2008 \$7,652,000 2007 \$6,192,528 2006 \$5,480,466

For Suppliers or Manufacturers Only:
 List the number of employees for the last three fiscal years:

20____ Number____, 20____ Number____, 20____ Number____

ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

- a. We will not subcontract any portion of work to another subconsultant.
- b. ____ We will subcontract ____ [% and/or \$ amount] of our work to _____
 (Name of Subconsultant)

Indicate owners' ethnicity and gender _____

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation



 Owner/Authorized Representative (Signature)

Mason Walters, Principal
 Name & Title (Please Print)

160 Pine Street, Suite 600 San Francisco, CA 94111
 Address

(415) 837-0700
 Telephone No.

END OF SFMTA SBE FORM NO. 5

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc.

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award (Name of Prime Consultant)

\$ 66,648 [(%) percent and/or (\$) amount], of subcontract or

[(%) percent and/or (\$) amount] of a purchase order of the total value of the prime contract to HortScience, Inc. (Name of your firm).

License No. 6166. Type of SBE Certification: SB (Micro)

Nature of work to be performed by SBE: Arboriculture, horticulture, urban forestry, tree preservation

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship Partnership Joint Venture Corporation XXX Limited Liability Partnership Limited Liability Corporation

LIST OWNERS

Name Nelda Matheny Ethnicity* W Gender F % of Ownership 51

Name James Clark Ethnicity* W Gender M % of Ownership 49

Name Ethnicity* Gender % of Ownership

Name Ethnicity* Gender % of Ownership

Percentage of SBE Stockholders:

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy General liability Party Insured HortScience, Inc.

Name of Policy Professional liability Party Insured HortScience, Inc.

Name of Policy _____ Party Insured _____

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

2007 \$874,317, 2006 \$931,810, 2005 \$1,006,574

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

20 _____ Number _____, 20 _____ Number _____, 20 _____ Number _____

ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

a. We will not subcontract any portion of work to another subconsultant.

b. _____ We will subcontract _____ [% and/or \$ amount] of our work to _____
(Name of Subconsultant)

Indicate owners' ethnicity and gender _____

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.



Owner/Authorized Representative (Signature)

James R. Clark, Vice President
Name & Title (Please Print)

836 Bonita Avenue Pleasanton CA 94566
Address

925-484-0211
Telephone No.

END OF SFMTA SBE FORM NO. 5

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc.

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award (Name of Prime Consultant)

\$ 3,812,957 [(%) percent and/or (\$) amount], of subcontract or [(%) percent and/or (\$) amount] of a purchase order of the total value of the prime contract to Kwan Henmi Architecture/Planning (Name of your firm).

License No. 195373. Type of SBE Certification: CUCP DBE, STATE SBE

Nature of work to be performed by SBE: Architecture

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship Partnership Joint Venture Corporation X

Limited Liability Partnership Limited Liability Corporation

LIST OWNERS

Name Denis Henmi Ethnicity* A/PI Gender M % of Ownership 40

Name Sylvia Kwan Ethnicity* A/PI Gender F % of Ownership 60

Name Ethnicity* Gender % of Ownership

Name Ethnicity* Gender % of Ownership

Percentage of SBE Stockholders:

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Policy Travelers Indemnity Co. Of Connecticut Party Insured Kwan Henmi Architecture/Planning

Policy Transportation Insurance Co./Valley Forge Insurance Co. Party Insured Kwan Henmi Architecture/Planning

Policy Zurich American Insurance Co. Party Insured Kwan Henmi Architecture/Planning

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

2008 - \$ 6.8M, 2007 - \$ 6.4M, 2006 - \$ 5.6M

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

27 _____ Number _____, 27 _____ Number _____, 26 _____ Number _____

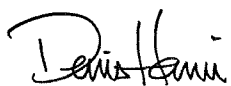
ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

a. We will not subcontract any portion of work to another subconsultant.

b. _____ We will subcontract _____ [% and/or \$ amount] of our work to _____
(Name of Subconsultant)

Indicate owners' ethnicity and gender Pacific Islander – Male

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.



Owner/Authorized Representative (Signature)

Denis Henmi, CEO
Name & Title (Please Print)

456 Montgomery St., Suite 300 San Francisco, CA 94109
Address

415.901.7202
Telephone No.

END OF SFMTA SBE FORM NO. 5

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

[Ray Hornbuckle, Senior Vice President of PB Americas, Inc. _____
(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award _____

(Name of Prime Consultant)

\$ 103,653 [(%) percent and/or (\$) amount], of subcontract or _____ [(%) percent and/or (\$) amount] of a purchase order of the total value of the

prime contract to Martin M. Ron Associates (Name of your firm).

License No. 128314.

Type of SBE Certification: State of California, Service Business type, 811516 Cartography

Nature of work to be performed by SBE: Land Surveying

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship _____ Partnership _____ Joint Venture _____ Corporation X

Limited Liability Partnership _____ Limited Liability Corporation _____

LIST OWNERS

Name Benjamin B. Ron Ethnicity* W Gender M % of Ownership 85

Name David Ron Ethnicity* W Gender M % of Ownership 5

Name Dana Ron Ethnicity* W Gender F % of Ownership 5

Name Ann Ron Ethnicity* W Gender F % of Ownership 5

Percentage of SBE Stockholders: 100%

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy: Liability & Vehicle Party Insured: Firm & pertinent additional

Name of Policy: Workman's Comp. Party Insured: Firm & pertinent additional

Name of Policy: Errors & Omissions Party Insured: Firm & pertinent additional

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

2007 \$_4,000,000_, 2006 \$3,000,000, 2005 \$3,000,000

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

20 _____ Number _____, 20 _____ Number _____, 20 _____ Number _____

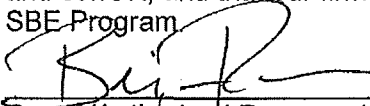
ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

a. _____ We will not subcontract any portion of work to another subconsultant.

b. _____ We will subcontract _____ [% and/or \$ amount] of our work to _____
(Name of Subconsultant)

Indicate owners' ethnicity and gender European-American Male

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.



Owner/Authorized Representative (Signature)

Ben Ron, President
Name & Title (Please Print)

859 Harrison Street, Suite 200, San Francisco, CA 94107
Address

415.543.4500
Telephone No.

END OF SFMTA SBE FORM NO. 5

Central Subway Design Group

PROPOSER: _____

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc. _____

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group _____ will award
(Name of Prime Consultant)

\$ 973,096 [(%) percent and/or (\$) amount], of subcontract or
[(%) percent and/or (\$) amount] of a purchase order of the total value of the
prime contract to Robin Chiang & Company _____ Name of your firm).

License No. Architectural C10152 . Type of SBE Certification: CPUC

Nature of work to be performed by SBE: Architectural Design Services for Union Square Station

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship _____ Partnership _____ Joint Venture _____ Corporation x

Limited Liability Partnership _____ Limited Liability Corporation _____

LIST OWNERS

Name Robin Chiang Ethnicity* A/PI Gender M % of Ownership 100%

Name _____ Ethnicity* _____ Gender _____ % of Ownership _____

Name _____ Ethnicity* _____ Gender _____ % of Ownership _____

Name _____ Ethnicity* _____ Gender _____ % of Ownership _____

Percentage of SBE Stockholders: 100%

*Ethnic Codes: A/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy Professional Liability-US Specialty Party Insured Robin Chiang & Company

Name of Policy Workers Comp-The Hartford Party Insured Robin Chiang & Company

Name of Policy Package/GL - The Hartford Party Insured Robin Chiang & Company

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

2008 \$1,105,360.00, 2007 \$532,176.00, 2006 \$699,531.00

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

20____ Number____, 20____ Number____, 20____ Number____

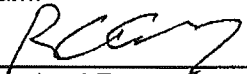
ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

a. We will not subcontract any portion of work to another subconsultant.

b. ____ We will subcontract ____ [% and/or \$ amount] of our work to _____
(Name of Subconsultant)

Indicate owners' ethnicity and gender A/PI Male

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.


Owner/Authorized Representative (Signature)

Robin Chiang, Principal
Name & Title (Please Print)

381 Tehama Street, San Francisco, CA 94103
Address

415.995.9870
Telephone No.

END OF SFMTA SBE FORM NO. 5

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc.

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award (Name of Prime Consultant)

\$ 256,504 [(%) percent and/or (\$) amount], of subcontract or

[(%) percent and/or (\$) amount] of a purchase order of the total value of the

prime contract to SC Solutions, Inc. (Name of your firm).

License No. Type of SBE Certification: State of CA

Nature of work to be performed by SBE: Structural and Soil-Structure Interaction Analysis

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship Partnership Joint Venture Corporation

Limited Liability Partnership Limited Liability Corporation

LIST OWNERS

Name Greg Loy Ethnicity* Cauc Gender Male % of Ownership 19

Name John "Eric" Denham Ethnicity* Cauc Gender Male % of Ownership 18

Name Alex Krimotat Ethnicity* Cauc Gender Male % of Ownership 18

Name Abbas Emami-Naeini Ethnicity* Cauc Gender Male % of Ownership 15

Name Jon Ebert Ethnicity* Cauc Gender Male % of Ownership 15

Name Robert Kosut Ethnicity* Cauc Gender Male % of Ownership 11

Percentage of SBE Stockholders:

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy _____ Party Insured _____

Name of Policy _____ Party Insured _____

Name of Policy _____ Party Insured _____

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

2006 _____ \$7.7M, 2007 _____ \$6.8M 2008 _____ \$4.3M

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

20 _____ Number _____, 20 _____ Number _____, 20 _____ Number _____

ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

a. We will not subcontract any portion of work to another subconsultant.

b. _____ We will subcontract _____ [% and/or \$ amount] of our work to _____
(Name of Subconsultant)

Indicate owners' ethnicity and gender _____

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.

Owner/Authorized Representative (Signature)

Greg Loy, President

Name & Title (Please Print)

1261 Oakmead Pkwy, Sunnyvale, CA 94085

Address

408-617-4550

Telephone No.

END OF SFMTA SBE FORM NO. 5

Central Subway Design Group

PROPOSER: _____

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc.

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award (Name of Prime Consultant)

\$ 668,194 [(%) percent and/or (\$) amount], of subcontract or

[(%) percent and/or (\$) amount] of a purchase order of the total value of the prime contract to Silverman & Light, Inc.

License No. 161803 Type of SBE Certification: ACTIA, DGS, Port of Oakland, State SBE

Nature of work to be performed by SBE: Electrical Engineering Consulting

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship Partnership Joint Venture Corporation X

Limited Liability Partnership Limited Liability Corporation

LIST OWNERS

Name Charles Silverman Ethnicity* W Gender M % of Ownership 33.33

Name Carol Light Ethnicity* W Gender F % of Ownership 33.33

Name Joseph Bazzell Ethnicity* W Gender M % of Ownership 33.33

Name Ethnicity* Gender % of Ownership

Percentage of SBE Stockholders: 100

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy New York Life Party Insured Charles Silverman

Name of Policy Travelers Party Insured Silverman & Light, Inc

Name of Policy Markel Party Insured Silverman & Light, Inc

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

2007 \$ 3,693,683, 2006 \$ 3,040,505, 2005 \$ 3,342,259

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

20____ Number____, 20____ Number____, 20____ Number____

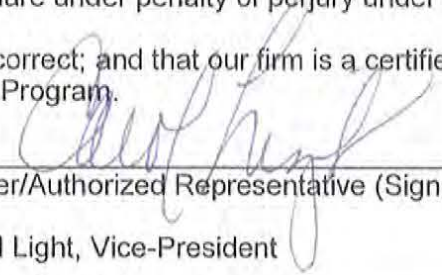
ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

a. We will not subcontract any portion of work to another subconsultant.

b. _____ We will subcontract _____ [% and/or \$ amount] of our work to _____
(Name of Subconsultant)

Indicate owners' ethnicity and gender _____

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.



Owner/Authorized Representative (Signature)

Carol Light, Vice-President

Name & Title (Please Print)

1201 Park Ave. Suite 100. Emeryville, CA 94608

Address

510-655-1200

Telephone No.

END OF SFMTA SBE FORM NO. 5

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc.

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award (Name of Prime Consultant)

\$ 348,366 [(%) percent and/or (\$) amount], of subcontract or [(%) percent and/or (\$) amount] of a purchase order of the total value of the prime contract to SJ Engineers (Name of your firm).

License No. Type of SBE Certification: LBE, MBE, SBE

Nature of work to be performed by SBE: Mechanical, Plumbing and Fire Protection

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship Partnership Joint Venture Corporation Limited Liability Partnership Limited Liability Corporation

LIST OWNERS

Name Kreyne T. Sato Ethnicity* A Gender M % of Ownership 50%
Name Neil H. Joson Ethnicity* F Gender M % of Ownership 50%
Name Ethnicity* Gender % of Ownership
Name Ethnicity* Gender % of Ownership

Percentage of SBE Stockholders:

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy General Liability Party Insured Harford Casualty Insurance

Name of Policy Automobile Liability Party Insured Travelers Casualty Ins. of America

Name of Policy Professional Liability Party Insured XL Specialty Insurance Co.

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

2008 \$ 2,302,457, 2007 \$ 1,603,177, 2006 \$ 1,431,763

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

20 Number , 20 Number , 20 Number

ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

a. We will not subcontract any portion of work to another subconsultant.

b. We will subcontract [% and/or \$ amount] of our work to
(Name of Subconsultant)

Indicate owners' ethnicity and gender

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.



Owner/Authorized Representative (Signature)

Neil H. Joson, Principal
Name & Title (Please Print)

233 Sansome Street, Suite 705, San Francisco, CA 94104
Address

(415)837-1500
Telephone No.

END OF SFMTA SBE FORM NO. 5

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc. _____

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award (Name of Prime Consultant)

\$ 1,316,928 [(%) percent and/or (\$) amount], of subcontract or [(%) percent and/or (\$) amount] of a purchase order of the total value of the prime contract to SOHA Engineers (Name of your firm).

License No. Business #025833 Type of SBE Certification: LBE, SBE, DBE

Nature of work to be performed by SBE: Structural Engineering Services

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship Partnership Joint Venture Corporation X

Limited Liability Partnership Limited Liability Corporation

LIST OWNERS

Name Stephen Lau Ethnicity* A/PI Gender Male % of Ownership 51

Name Frankie Lee Ethnicity* A/PI Gender Male % of Ownership 39

Name Farshad Khodayari Ethnicity* A/PI Gender Male % of Ownership 10

Name Ethnicity* Gender % of Ownership

Percentage of SBE Stockholders: 100

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy Professional Liability Party Insured SOHA Engineers

Name of Policy Commercial General Liability Party Insured SOHA Engineers

Name of Policy Workers Compensation Party Insured SOHA Engineers

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

2008 \$ 3,577,125.00, 2007 \$ 2,710,035.00, 2006 \$ 2,575,783.00

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

20____ Number____, 20____ Number____, 20____ Number____

ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

a. We will not subcontract any portion of work to another subconsultant.

b. ____ We will subcontract ____ [% and/or \$ amount] of our work to _____
(Name of Subconsultant)

Indicate owners' ethnicity and gender Asian/Male

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program



Owner/Authorized Representative (Signature)

Stephen Lau, President
Name & Title (Please Print)

48 Colin P. Kelly Jr. Street, San Francisco, CA 94107
Address

415-989-9900
Telephone No.

END OF SFMTA SBE FORM NO. 5

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc.

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award (Name of Prime Consultant)

\$ 191,339 [(%) percent and/or (\$) amount], of subcontract or [(%) percent and/or (\$) amount] of a purchase order of the total value of the prime contract to Stevens & Associates (Name of your firm).

License No. 183098. Type of SBE Certification: SBE, MBE, DBE, LBE

Nature of work to be performed by SBE: Landscape Architecture, Urban Design, Signage

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship X Partnership Joint Venture Corporation Limited Liability Partnership Limited Liability Corporation

LIST OWNERS

Name Myles C. Stevens Ethnicity* B Gender M % of Ownership 100% Name Ethnicity* Gender % of Ownership Name Ethnicity* Gender % of Ownership Name Ethnicity* Gender % of Ownership

Percentage of SBE Stockholders: N/A

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy General Liability Party Insured Stevens & Associates

Name of Policy Professional Liability Party Insured Stevens & Associates

Name of Policy Workers Compensation Party Insured Stevens & Associates

Name of Policy Auto Liability Party Insured Stevens & Associates

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

2008 \$ 1,150,000.00, 2007 \$ 592,735.00, 2006 \$ 382,214.00

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

20_____ Number _____, 20_____ Number _____, 20_____ Number _____

ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

a. We will not subcontract any portion of work to another subconsultant.

b. _____ We will subcontract _____ [% and/or \$ amount] of our work to _____
(Name of Subconsultant)

Indicate owners' ethnicity and gender Black, Male

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.

Myles C. Stevens
Owner/Authorized Representative (Signature)

Myles C. Stevens, Principal
Name & Title (Please Print)

855 Sansome Street, Suite 200, San Francisco, CA 94111
Address

(415) 397-6500
Telephone No.

END OF SFMTA SBE FORM NO. 5

SUBMIT WITH PORPOSAL

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc.

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award
(Name of Prime Consultant)

\$ 549,267 [(%) percent and/or (\$) amount], of subcontract or
[(%) percent and/or (\$) amount] of a purchase order of the total value of the
prime contract to Telamon Engineering Consultants, Inc. (Name of your firm).

CA Professional Civil
License No. Engineering No. C043842. Type of SBE Certification: WBE, MBE, DBE, LBE, SBE

Nature of work to be performed by SBE: Civil Engineering / Land Surveying

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship _____ Partnership _____ Joint Venture _____ Corporation X

Limited Liability Partnership _____ Limited Liability Corporation _____

LIST OWNERS

Name Mennor Chan, P.E. Ethnicity* A/PI Gender F % of Ownership 100%

Name _____ Ethnicity* _____ Gender _____ % of Ownership _____

Name _____ Ethnicity* _____ Gender _____ % of Ownership _____

Name _____ Ethnicity* _____ Gender _____ % of Ownership _____

Percentage of SBE Stockholders: _____

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy _____ Party Insured _____

Name of Policy _____ Party Insured _____

Name of Policy _____ Party Insured _____

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

20⁰⁶ \$ 533,555.55 , 20⁰⁷ \$ 930,510.81 , 20⁰⁸ \$ 1,229,466.85

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

20____ Number____, 20____ Number____, 20____ Number____

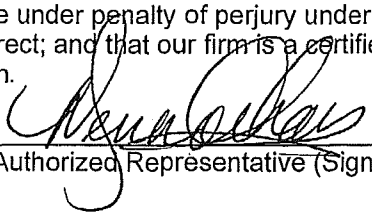
ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

a. _____ We will not subcontract any portion of work to another subconsultant.

b. _____ We will subcontract _____ [% and/or \$ amount] of our work to _____
(Name of Subconsultant)

Indicate owners' ethnicity and gender Asian, Female

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.



Owner/Authorized Representative (Signature)

Mennor Chan, P. E. - Principal

Name & Title (Please Print)

855 Folsom Street Suite 142 San Francisco, CA 94107

Address

(415) 837 - 1336

Telephone No.

END OF SFMTA SBE FORM No. 5

Central Subway Design Group

PROPOSER: _____

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc.

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award (Name of Prime Consultant)

\$ 315,900 [(%) percent and/or (\$) amount], of subcontract or [(%) percent and/or (\$) amount] of a purchase order of the total value of the prime contract to Timmons Design Engineers (Name of your firm).

License No. 376445. Type of SBE Certification: State of California, San Francisco Human Rights Commission, San Francisco Redevelopment Agency, SBA

Nature of work to be performed by SBE: Mechanical, Electrical and Plumbing Engineering Design

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship Partnership Joint Venture Corporation Limited Liability Partnership Limited Liability Corporation

LIST OWNERS

Name Sean Timmons Ethnicity*W Gender Male % of Ownership 99%

Name Linus Chen Ethnicity*A/PI Gender Male % of Ownership 1%

Name Ethnicity* Gender % of Ownership

Name Ethnicity* Gender % of Ownership

Percentage of SBE Stockholders: 100

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy Everest Insurance Co. Party Insured Timmons Design Engineers Inc.

Name of Policy _____ Party Insured _____

Name of Policy _____ Party Insured _____

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

2006 \$1,871,961 , 2007 \$2,744,111 , 2008 \$3,937,540

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

20 Number , 20 Number , 20 Number

ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

a. We will not subcontract any portion of work to another subconsultant.

b. We will subcontract [% and/or \$ amount] of our work to _____
(Name of Subconsultant)

Indicate owners' ethnicity and gender : Male/ Caucasian

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.

Nicoletta B. Gilmore
Owner/Authorized Representative (Signature)

Nicoletta B. Gilmore, Director of Operations
Name & Title (Please Print)

901 Market St., Suite 480, San Francisco, CA 94103
Address

415.957.8788
Telephone No.

END OF SFMTA SBE FORM NO. 5

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc.

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award (Name of Prime Consultant)

\$ 24,087 [(%) percent and/or (\$) amount], of subcontract or

[(%) percent and/or (\$) amount] of a purchase order of the total value of the prime contract to TRANS PACIFIC GEOTECHNICAL (Name of your firm).

License No. Type of SBE Certification: State (DGS) SBE

Nature of work to be performed by SBE: CONSULTING ENGINEERS IN GEOTECHNICAL ENGINEERING

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship Partnership Joint Venture Corporation Limited Liability Partnership Limited Liability Corporation

LIST OWNERS

Name EDDY T. LAU Ethnicity* A/PI Gender M % of Ownership 100

Percentage of SBE Stockholders: 100

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy GENERAL LIABILITY Party Insured TRAVELERS PROPERTY CASUALTY

Name of Policy AUTOMOBILE LIABILITY Party Insured HARTFORD FIRE INSURANCE

Name of Policy PROFESSIONAL LIABILITY Party Insured XL SPECIALTY INSURANCE

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

2007-APRIL \$ 250,000 , 2008-APR \$ 250,000 , 2009-APR \$ 300,000

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

20_____ Number _____, 20_____ Number _____, 20_____ Number _____

ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

a. _____ We will not subcontract any portion of work to another subconsultant.

b. We will subcontract ? [% and/or \$ amount] of our work to APPROPRIATE DRILLING CONTRACTORS
(Name of Subconsultant)

Indicate owners' ethnicity and gender DON'T KNOW YET

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.

Eddy T. Lau

Owner/Authorized Representative (Signature)

EDDY T. LAU

Name & Title (Please Print)

639 CLAY STREET, SAN FRANCISCO, CA 94111

Address

(415) 788-8627

Telephone No.

END OF SFMTA SBE FORM NO. 5

PROPOSER: Central Subway Design Group

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

Ray Hornbuckle, Senior Vice President of PB Americas, Inc.

(Owner or Authorized Representative and Title)

declares that Central Subway Design Group will award (Name of Prime Consultant)

\$ 772, 407 [(%) percent and/or (\$) amount], of subcontract or

[(%) percent and/or (\$) amount] of a purchase order of the total value of the

prime contract to YEI Engineers, Inc. (Name of your firm).

License No. 1305212 Type of SBE Certification: U.S. Small Business

Administration, SDBE Certified

Nature of work to be performed by SBE: Electrical Consulting Engineering

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship Partnership Joint Venture Corporation X

Limited Liability Partnership Limited Liability Corporation

LIST OWNERS

Name Douglas Yung Ethnicity* A/PI Gender M % of Ownership 35.95%

Name Joel T. Jang Ethnicity* A/PI Gender M % of Ownership 2.76%

Name Lawrence L. Lam Ethnicity* A/PI Gender M % of Ownership 8.93%

Name Patrick J.R. Mallillin Ethnicity* F Gender M % of Ownership 15.04%

Name George W. Cheung Ethnicity* A/PI Gender M % of Ownership 12.12%

Name Hubert A. Hidalgo Ethnicity* F Gender M % of Ownership 1.65%

Name Dennis D. Dias Ethnicity* W Gender M % of Ownership 23.55%

Percentage of SBE Stockholders: 76.45%

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy Errors & Omissions Party Insured YEI Engineers, Inc.

Name of Policy Workers Comp/Employers Liability Party Insured YEI Engineers, Inc.

Name of Policy Commercial General Liability Party Insured YEI Engineers, Inc.

Name of Policy Automobile Liability Party Insured YEI Engineers, Inc.

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

2008: \$3.2 million, 2007: \$2.9 million, 2006: \$3.1 million

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

20____ Number____, 20____ Number____, 20____ Number____

ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

a. We will not subcontract any portion of work to another subconsultant.

b. ____ We will subcontract ____ [% and/or \$ amount] of our work to _____
(Name of Subconsultant)

Indicate owners' ethnicity and gender _____

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.

Owner/Authorized Representative (Signature)

Douglas Yung, President

Name & Title (Please Print)

7700 Edgewater Drive, Suite 128, Oakland, CA 94621

Address

(510) 383-1050

Telephone No.

END OF SFMTA SBE FORM NO. 5

APPENDIX G
SMALL BUSINESS ENTERPRISE (SBE) PROGRAM

Central Subway Project - Design Package #2
Contract No. CS-155-2



Appendix 2

Small Business Enterprise (SBE) Program for Professional and Technical Services for Federally Funded Projects

**CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
SMALL BUSINESS ENTERPRISE PROGRAM
FOR PROFESSIONAL AND TECHNICAL SERVICES**

REQUEST FOR PROPOSALS (RFP)

FOR

**CS-155: Architectural and Engineering Services
For the Final Design and Construction
of the Central Subway Project
CCO NO. 08-1017**

FTA FUNDED

SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY

Appendix 2

**SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY
SMALL BUSINESS ENTERPRISE PROGRAM REQUIREMENTS**

**ARCHITECTS, ENGINEERS, PLANNERS, ENVIRONMENTAL SCIENTISTS AND OTHER
PROFESSIONAL SERVICES**

FOR FEDERALLY-FUNDED PROJECTS

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	B.	Objectives	SBE - 1
	C.	Administration of Program	SBE - 2
	D.	Prohibited Discrimination	SBE - 2
	E.	Non-Discrimination in Employment	SBE - 2
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	B.	Contractor	SBE - 3
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**SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY
SMALL BUSINESS ENTERPRISE PROGRAM REQUIREMENTS**

**ARCHITECTS, ENGINEERS, PLANNERS, ENVIRONMENTAL SCIENTISTS AND OTHER
PROFESSIONAL SERVICES**

FOR FEDERALLY-FUNDED PROJECTS

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	• SFMTA SBE Form No. 1 – Consultant/Joint Venture Partner and Subconsultant Participation Report (See Page SBE-18)	

**SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY
SMALL BUSINESS ENTERPRISE PROGRAM REQUIREMENTS**

**ARCHITECTS, ENGINEERS, PLANNERS, ENVIRONMENTAL SCIENTISTS AND OTHER
PROFESSIONAL SERVICES**

FOR FEDERALLY-FUNDED PROJECTS

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**SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY
Small Business Enterprise Program Requirements**

Architects, Engineers, Planners, Environmental Scientists and Other Professional Services

I. POLICY

The San Francisco Municipal Transportation Agency (SFMTA) is committed to a Small Business Enterprise (SBE) Program ("Program") for the participation of SBEs in contracting opportunities in accordance with the federal regulations in 49 CFR Part 26, issued March 4, 1999, as amended from time to time (the "Regulations"). The Regulations are incorporated into this Program as though fully set forth herein. It is the intention of the SFMTA to create a level playing field on which SBEs can compete fairly for contracts and subcontracts relating to the procurement and professional services activities of the SFMTA.

A. Applicability

Under 49 CFR Sections 26.3 and 26.51, and in response to the Federal Transit Administration's ("FTA") March 23, 2006, publication of the Department of Transportation's ("DOT") guidance concerning the federal Disadvantaged Business Enterprise ("DBE") program that applies to grant recipients within the Ninth Circuit, the SFMTA, a recipient of federal financial assistance from the FTA, is required to implement race-neutral means of facilitating DBE participation. The SFMTA's SBE Program is in accordance with DOT's guidance that, absent a disparity study, the SFMTA must meet its overall annual DBE goal using race-neutral means. This Program applies to the following types of SFMTA contracts that are funded, in whole or in part, by DOT financial assistance: Construction – Building, Heavy; Construction – Dredging and Surface Cleanup; Construction (specialty trades); General Freight Trucking; Hazardous Waste Collection, Trucking; Remediation; Testing Labs; Computer Programming and Design; Architecture & Engineering Services; Surveying and Mapping; Drafting (design services); Landscape Architecture; Building Inspection; Machinery and Equipment Rental (construction); Merchant Wholesalers, Durable Goods; Public Relations; and Telecommunications.

B. Objectives

The objectives of this program are to:

1. Remove barriers to SBE participation in the bidding, award and administration of SFMTA contracts;
2. Assist SBEs to develop and compete successfully outside of the Program;
3. Ensure that the Program is narrowly tailored in accordance with 49 CFR Part 26;
4. Ensure that only SBEs meeting the eligibility requirements are allowed to participate as SBEs;
5. Identify business enterprises that are qualified as SBEs and are qualified to provide SFMTA with required materials, equipment, supplies and services; and to develop a good rapport with the owners, managers and sales representatives of those enterprises;

6. Develop communications programs and procedures which will acquaint prospective SBEs with SFMTA's contract procedures, activities and requirements and allow SBEs to provide SFMTA with feedback on existing barriers to participation and effective procedures to eliminate those barriers; and
7. Administer the Program in close coordination with the various divisions within SFMTA so as to facilitate the successful implementation of this Program.

C. Administration of Program

The Executive Director/CEO of the SFMTA is responsible for adherence to this policy. The Contract Compliance Office (CCO) shall be responsible for the development, implementation and monitoring of this program. All SFMTA personnel shall adhere to the provisions and the spirit of the program.

D. Prohibited Discrimination

SFMTA does not exclude persons from participation in, deny benefits to, or otherwise discriminate against any persons in connection with the award and performance of any contract governed by the Regulations on the basis of race, color, sex or national origin. The City and County of San Francisco also prohibits discrimination on the fact or perception of a person's race, color, creed, religion, national origin, ancestry, age, sex, sexual orientation, gender identity, domestic partner status, marital status, disability or Acquired Immune Deficiency Syndrome or HIV status (AIDS/HIV status).

SFMTA does not directly or through contractual or other arrangements, use criteria or methods of administration that have the effect of defeating or substantially impairing accomplishment of the objectives of this program with respect to individuals in the groups or categories or having the characteristics listed above.

SFMTA has signed the federal assurances regarding non-discrimination required under 49 CFR Section 26.13.

E. Non-Discrimination in Employment

SFMTA will evaluate the proposer's response to the Questionnaire on Recruitment, Hiring, And Training Practices (SFMTA SBE Form No. 3) to determine whether the proposer is in compliance with the Nondiscrimination Requirements.

Should SFMTA deem it necessary, the SFMTA will seek a written commitment from the proposer to use good faith efforts to provide equal employment opportunities during the term of the contract. One measure of such a commitment would be comparing utilization of women and minorities with the relevant labor market in order to improve parity between the composition of the proposer's workforce and the available labor market. The proposer may be required to provide the SFMTA with the relevant data regarding its labor market.

II. DEFINITIONS

Any terms used in this Program shall have the meaning set forth below:

A. Small Business Enterprise (SBE)

An SBE is a for-profit, small business concern with a three (3) year average gross revenue not exceeding \$12 million dollars and is certified under any of the following programs: the State of California's Small Business Program with the Department of General Services ("State Program"), the City and County of San Francisco's LBE Program ("City Program"), or the California Unified Certification Program ("Federal DBE program").

B. Contractor

The term "Contractor" includes consultants.

III. SBE PARTICIPATION AND SUBCONTRACTING REQUIREMENTS

A. SBE Participation Goal

The Contract Compliance Office has established a thirty percent (30%) Small Business Enterprise participation goal for this contract. Small business firms may qualify for this program by enrollment in either the State of California's Small Business Program with the Department of General Services ("State Program"), the California Unified Certification Program with a U.S. Department of Transportation recipient ("Federal DBE program"), or the City and County of San Francisco's LBE program with the Human Rights Commission ("City Program"). This SBE goal will apply to the following types of contracts or scope of work in the contract: Architecture & Engineering Services (to include professional and technical services), Computer Programming and Design, Drafting (design services); Landscape Architecture; Building Inspection; Public Relations; Telecommunications; Merchant Wholesalers, Durable Goods, and Machinery and Equipment Rental (construction) ("SBE Work".)

To be determined responsive, a proposer must demonstrate in its submittal that it will meet this goal in the performance of this contract; or if it is unable to meet the goal, the proposer must submit documentation (SFMTA SBE Form No. 2 – SBE Consultant/Subconsultant – Good Faith Efforts) with its proposal that it performed good faith efforts, prior to submission of the bid or proposal, to meet this goal. A proposer that is not responsive shall be ineligible for award of the contract.

If no goal has been set for this contract, SFMTA encourages proposer to use good faith efforts to solicit SBEs for this contract if available.

NOTE: Website links for finding Certified DBEs/SBEs/LBE :

- Certified Disadvantaged Businesses Enterprises ("Federal DBE Program")
<http://www.dot.ca.gov/ucp/GetLicenseForm.do> (or
http://www.dot.ca.gov/hq/bep/dbe_query.htm)
- Certified Small Businesses Enterprises ("State Program")
<http://www.bidsync.com/DPXBisCASB>
- For Certified HRC Local Business Enterprises ("City Program")
http://sfgov.org/site/uploadedfiles/sfhumanrights/directory/vlistS_1.htm

Contact Sheila Evans-Peguese at (415) 701-4436 should you need assistance with accessing the databases.

B. SBE Income Thresholds For Certain Types of Contracts

The total average gross revenue thresholds for the past three years for the types of SBE work listed in Section III.A. above is \$12 million.

For these categories, the proposer needs to collect and submit to SFMTA with its proposal the SBE Consultant/Joint Venture Partner/ Subconsultant Gross Revenue Declaration(s) (SFMTA SBE Form No. 2B) from all potential SBE participants listed on its SFMTA SBE Form No. 1. Each SBE must declare that its total average gross revenues for the past three years are equal to or below the income threshold stated above.

C. SBE Participation

The SFMTA requires the prime contractor to make every good faith effort to include SBEs to perform meaningful work in all aspects of the project. To accomplish these efforts, the following guidance is provided:

1. Nature of SBE Participation

SBE participation includes contracts (other than employee contracts) with SBEs for any goods or services specifically required for the completion of the SBE Work. An SBE may participate as a prime contractor, subcontractor, joint venture partner with a prime contractor, or a supplier of other services, e.g., machinery/equipment rental, to fulfill the SBE goal for the SBE Work.

2. Function

An SBE must perform a commercially useful function, i.e., must be responsible for the execution of a distinct element of work and must carry out its responsibility by actually performing, managing and supervising the work. However, an SBE may contract out a portion of the work if it is considered to be a normal industry practice. If an SBE consultant subcontracts a significantly greater portion of the work of the contract than would be expected on the basis of normal industry practices, the SBE shall be presumed not to be performing a commercially useful function.

3. Determining the Amount of SBE Participation.

The Contractor shall determine the amount of SBE participation for each SBE performing work on the contract in terms of both the total value of the individual SBE work in dollars and the percentage of the total contract bid price for the SBE Work. The Contractor shall achieve the SBE participation goal specified for the entire SBE Work, including any amendments to the SBE Work.

a. SBE Prime Consultant

Count the entire dollar amount of the work performed or services provided by the SBE's own forces, including the cost of materials and supplies obtained for the work and the reasonable fees and commissions charged for the services. Do not count any work subcontracted to another firm as SBE participation by the SBE Prime Consultant.

b. SBE Subconsultant

Count the entire amount of the work performed or services provided by the SBE's own forces, including the cost of materials and supplies obtained for the work (except for materials and supplies purchased or leased from the Prime Consultant or supplier) and reasonable fees and commissions charged for the services. Do not count any work subcontracted by an SBE subconsultant to another firm as SBE participation by said SBE subconsultant. If the work has been subcontracted to another SBE, it will be counted as SBE participation by that other SBE.

c. SBE Joint Venture Partner

Count the portion of the work that is performed solely by the SBE's forces or if the work is not clearly delineated between the SBE and the joint venture partner, count the portion of the work equal to the SBE's percentage of ownership interest in the joint venture.

d. SBE Regular Dealer

Count 60% of the costs of materials and supplies obtained from an SBE regular dealer that owns, operates or maintains a store or warehouse in which the materials and supplies are regularly bought, kept in stock and sold or leased to the public in the usual course of business. This applies whether an SBE is a prime contractor or subcontractor.

e. Other SBEs

Count the entire amount of fees or commissions charged for assistance in procuring or delivering materials and supplies when purchased from an SBE that is not a manufacturer or regular dealer. Do not count the cost of the materials and supplies.

f. Materials or Supplies

Count expenditures with SBEs for materials or supplies toward SBE goals as provided in the following:

- (1) If the materials or supplies are obtained from an SBE manufacturer, count 100 percent of the cost of the materials or supplies toward SBE goals
- (2) For purposes of this paragraph (f)(1), a manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications.
- (3) If the materials or supplies are purchased from an SBE regular dealer, count 60 percent of the cost of the materials or supplies toward SBE goals.
- (4) For purposes of this section, a regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the material, supplies, articles or equipment of the general

character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.

D. Meeting the SBE Participation Goal

By submitting **SFMTA SBE FORM No. 1 – CONSULTANT/JOINT VENTURE PARTNER AND SUBCONSULTANT PARTICIPATION REPORT**, a proposer certifies that it is committed to using the identified SBEs in the performance of the contract. Detailed instructions for completing this and other required forms are found in Part VI.

E. Submission of Certification for SBEs

1. Prime Contractors and subcontractors must be certified under the State Program, City Program, or the Federal DBE Program on the **proposal/bid due date** to qualify to meet the SBE subconsulting/subcontracting goal(s). Firms may obtain information on how to become certified as SBEs from either SFMTA or from the State or City at the following addresses:

Federal DBE Program, or general information about the other programs and assistance with accessing the databases:

San Francisco Municipal Transportation Agency (SFMTA)
Contract Compliance Office
One South Van Ness Avenue, 3rd Floor
San Francisco, California 94103
(415) 701-4436
Attn: Sheila Evans-Peguese, CCO Certification Unit

Firms that wish to be certified as DBEs can obtain DBE certification applications from SFMTA at the above address. Completed DBE certification applications can be returned to SFMTA or another certifying agency. Certification applications can be obtained by downloading from website http://www.dot.ca.gov/hq/bep/business_forms.htm or by calling (415) 701-4436. A list of certifying agencies is provided on the DBE certification application.

State Program:

California Department of General Services
Office of Small Business and DVBE Services, Room 1-400
P.O. Box 989052
West Sacramento, CA 95798-9052
(916) 375-4940
<http://www.pd.dgs.ca.gov/smbus/certapps.htm#RenReq>

City Program:

Human Rights Commission
25 Van Ness Ave. #800
San Francisco, CA 94102
Attn: Certification Unit
(415) 252-2500
http://www.sfgov.org/site/sfhumanrights_page.asp?id=45141

2. Project by project certification will not be required; however, if the status of the SBE changes during the certification period, the certification may no longer be valid. In such cases, a newly completed certification application should be submitted.

IV. TRAINEES – San Francisco Municipal Transportation Agency (SFMTA) Employment Training Program

- A. SFMTA requires all consultants to comply with the SFMTA Employment Training Program which fosters employment opportunities for economically disadvantaged individuals. Consultants are required to notify the SFMTA of all open, entry-level positions and consider all program referrals fairly and equally. In addition, the City requires consultants to hire a minimum number of professional service trainees in the area of the consultant’s expertise. Trainees shall be obtained through the City’s First Source Hiring Program ‘One Stop Employment Center’, which works with various employment and job training agencies/organizations or other employment referral sources.

Number of Trainees

Project Fees	To Be Hired
\$0 – \$499,999	0
\$500,000 – \$899,999	1
\$900,000 – \$1,999,999	2
\$2,000,000 – \$4,999,999	3
\$5,000,000 – \$7,999,999	4
\$8,000,000 – \$10,999,999	5
\$11,000,000 – \$13,999,999	6
(> = \$14M, for each additional \$3 million in consultant fees, add one additional trainee)	

- B. The intent of this Architectural and Engineering Trainee Program is to provide technical training and job opportunities in a professional office environment for economically disadvantaged individuals as on-the-job trainees. These training opportunities will be executed through the duration of this contract. In hiring prospective trainee, the Consultant shall comply with the non-discrimination provisions pursuant to local, state and federal laws.
- C. Trainees shall be obtained through First Source Hiring Program. Outreach should be done to include individuals from the communities that have experienced high rates of unemployment. A list of the designated resources may be obtained from SFMTA.
- D. The Architectural and Engineering Trainee Program consists of participation of individuals as on-the-job trainees based on the project cost. The trainee program will be implemented by the Consultant for this project. The individuals will be hired as regular employees of the firms(s) and shall receive any benefits that they may be entitled to under State labor laws.
 1. The trainee must be hired in a discipline related to Architectural and Engineering services or meaningful support or technical position by the Consultant.
 2. No existing employee may be counted towards meeting the trainee goal. However, the new trainees can be part of the pool of new employees that the Consultant may have to hire anyway for a new project of this magnitude and therefore need not be an “extra” cost to the Consultant or to the City.

3. The Consultant may utilize trainees on other projects it has within San Francisco Bay Area, where trainees can execute work for other projects after the effective date of the Notice to Proceed.
 4. The Consultant is responsible for providing On-The-Job Training (OJT). The Consultant shall hire the trainee on a full-time basis for at least 12 months or on part-time basis for 24 months, offering him/her OJT, which allows the trainee to progress on a career path. The Consultant may hire the trainee(s) for the duration of the project.
 5. The Consultant should submit to SFMTA for approval a job description and summary of the training program for each trainee, with the proposed rate of pay (commensurate with the job requirements).
 6. A trainee qualified in this program is defined as a socially and economically disadvantaged individual who:
 - a. Is unemployed, has a history of unemployment, or who is currently in a job training program; and
 - b. Will receive training in a non-trade discipline associated with the Architectural and Engineering industry.
 7. The term "socially and economically disadvantaged individual" shall have the meaning, as the term is defined in 49 CFR Section 26.5, and shall also include persons with disabilities.
 8. The Consultant shall provide the necessary tools and/or office equipment (i.e., computers, desks and chairs) for trainees to perform the assigned duties. The Consultant shall provide travel costs if the individual has to travel 50 miles or more from his/her assigned work site for the purpose of getting the job done.
 9. The Consultant shall design a training program specifically for the trainee. The program shall include, but not be limited to company's personnel policy procedures manual, benefit package and OJT duties and responsibilities. The trainees are not permitted to work in trade positions performing covered work.
 10. The Consultant can replace a trainee if there is documentation to demonstrate that the trainee did not perform satisfactorily the key requirements as identified in the job descriptions. The Consultant can apply the time accumulated by the original trainee toward satisfying the contract requirement.
 11. The Consultant shall provide SFMTA within thirty (30) working days of Notice to Proceed, the following information in order to expedite time in securing the appropriate person to participate during the project.
 - a. Indicate number of trainees to be hired. The hiring of trainees can be phased in over a period of time.
 - b. Provide the name and telephone number of Consultant's contact person.
 - c. The Consultant shall provide a job description used to recruit the trainee(s). Indicate the specific skills/disciplines for the job.
 - d. A college degree is not a requirement for a trainee and the job description should so indicate.
- E. The Consultant shall submit to SFMTA on a monthly basis a Workforce information report on the status of the trainees.

- F. The SFMTA Contract Compliance Office will monitor the contract trainee requirements for compliance.
- G. The Consultant agrees that the City may withhold pending and future progress payments should the Consultant not demonstrate good faith efforts toward satisfying the required number of trainee hours.
- H. The Consultant Team is responsible for sponsoring the trainee(s). Each team member's contribution toward the cost of a trainee should be based on the contract percentage amount received.

V. EVALUATION OF PROPOSALS

A. CCO Evaluation

As stated in Section III. A., above, a proposer that fails to demonstrate that it achieved the contract-specific SBE participation goal or fails to demonstrate that it made good faith efforts prior to submission of the proposal to meet the goal shall be deemed non-responsive. A proposer found to be non-responsive shall be ineligible for award of the contract.

1. Evaluation of Proposals

After the receipt of proposals, the CCO shall evaluate all proposals with regard to the SBE requirements. Should the CCO determine that additional information is needed to evaluate a proposer's submission, the CCO shall request said proposer or listed SBE to submit the required information, which shall be due within five (5) days of the request.

2. Determination of Amount of SBE Participation

The CCO shall review the total dollar value of the work and the percentage of the total contract bid price reported on the proposer's Consultant/Joint Venture and Subconsultant Participation Report (SFMTA SBE FORM No. 1) for accuracy and shall compare it to the contract-specific goal, if any, established for the contract.

3. Evaluation of SBE Certification Status

SFMTA requires that any SBEs listed by proposers for participation in the contract be certified by proposal due date. The CCO shall review the proposer's Consultant/Joint Venture and Subconsultant Participation Report (SFMTA SBE FORM No. 1) to confirm the certification status of each SBE. SFMTA will accept current certifications by (a) SFMTA and other DOT recipients in California authorized under the federal DBE regulations; (b) the State Program, or (c) the City Program.

The SBE threshold for consultants and subconsultants is \$12 million. The SBE consultant and listed SBE subconsultants or suppliers must declare under penalty of perjury under the laws of the State of California that its total average gross revenues for the past three years are equal to or below the \$12 million threshold (see SFMTA SBE FORM 2B).

4. Good Faith Efforts

If the amount of SBE participation does not meet the SBE goal, the CCO shall review the good faith efforts report (SFMTA SBE Form No. 2) submitted by the proposer with its proposal. A proposer must submit a report explaining the steps taken and the reasons the efforts were not successful to obtain SBE participation. The CCO shall determine whether, prior to submission of the proposal, the proposer has performed the quality, quantity and intensity of efforts that demonstrate a reasonably active and aggressive attempt to meet the established SBE goal.

Proposers must submit the SBE Consultant/Subconsultant Participation – Good Faith Efforts Form (SFMTA SBE Form No. 2) with its proposal. Even if proposers' SFMTA SBE Form No. 1 indicates the SBE goal has been met, proposers should still submit SFMTA SBE Form No. 2 to protect their eligibility for the contract. This is because SFMTA's Contract Compliance Office may determine that proposers have not met the goal for various reasons, e.g., if an SBE subconsultant submitted by the prime consultant was not properly certified on the proposal due date. In these cases, SFMTA's SBE Form No. 1 will not normally provide sufficient information to demonstrate that the proposer made good faith efforts.

The following is a list of types of actions that the proposer should consider as part of its good faith efforts to obtain SBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

- a. Soliciting through all reasonable and available means (e.g. attendance at pre-proposal meetings, advertising and/or written notices) the interest of all certified SBEs who have the capability to perform the work of the contract. The proposer must solicit this interest within sufficient time to allow the SBEs to respond to the solicitation. The proposer must determine with certainty if the SBEs are interested by taking appropriate steps to follow up initial solicitations.
- b. Selecting portions of the work to be performed by SBEs in order to increase the likelihood that the SBE goal(s) will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate SBE participation, even when the prime consultant might otherwise prefer to perform these work items with its own forces.
- c. Providing interested SBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- d. (i) Negotiating in good faith with interested SBEs. It is the proposer's responsibility to make a portion of the work available to SBE subconsultants and suppliers and to select those portions of the work of material needs consistent with the available SBE subconsultants and suppliers, so as to facilitate SBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of SBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for SBEs to perform the work.

- (ii) A proposer using good business judgment would consider a number of factors in negotiating with subconsultants, including SBE subconsultants, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using SBEs is not in itself sufficient reason for a proposer's failure to meet the contract SBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime consultant to perform the work of a contract with its own organization does not relieve the proposer of the responsibility to make good faith efforts. Prime consultants are not, however, required to accept higher quotes from SBEs if the price difference is excessive or unreasonable.
- e. Not rejecting SBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The consultant's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the consultant's efforts to meet the project goal.
- f. Making efforts to assist interested SBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
- g. Effectively using the services of available small business community organizations; small business consultants' groups; local, state, and Federal small business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of SBEs.

B. Recommendation for Award of Contract

1. SFMTA CCO's Recommendation for Award

The CCO shall review all of the information submitted by proposers to determine a recommendation to the Executive Director/CEO for award of the contract to the highest-ranked proposer. The proposer shall cooperate with the CCO if a request for additional information is made during this evaluation process.

Following the determination of the highest-ranked proposer, the CCO will prepare a report on the proposer's compliance with the SBE Program requirements for submission to the SFMTA Board of Directors or other awarding authority. SFMTA will follow the award of contract and protest procedures described in the Request for Proposals.

C. Successful Proposer

1. Substitution of Subconsultants and Suppliers

The Consultant shall not terminate an SBE subconsultant or supplier for convenience and then perform the work with its own forces. The Consultant must make good faith efforts to substitute another SBE for an original SBE subconsultant or supplier when the original SBE subconsultant or supplier is terminated or fails to complete the work on the contract. The Consultant shall notify SFMTA in writing of any request to substitute an SBE subconsultant or supplier and provide the CCO with any documentation requested to support the

substitution. The CCO must approve the request in writing in order for the substitution to be valid. The substitution may also have to be approved by the SFMTA Board of Directors.

2. Addition of Subconsultants and Suppliers

The Consultant shall notify the CCO prior to any addition of an SBE or non-SBE subconsultant or supplier to the project and submit SBE SFMTA Form No. 4 from each new subconsultant or supplier. Any new SBE subconsultant or supplier approved by the CCO also must submit a SFMTA SBE Form No. 5.

3. Prompt Payment to Subconsultants

In accordance with SFMTA's SBE Program, no later than three (3) working days from the date of Consultant's receipt of progress payments by the City, the Consultant shall pay any subconsultants for work that has been satisfactorily performed by said subconsultants, unless the prime consultant notifies the CCO Director in writing within (10) working days prior to receiving payment from the City that there is a bona fide dispute between the prime consultant and the subconsultant. Within five (5) working days of such payment, Consultant shall provide City with a declaration under penalty of perjury that it has promptly paid such subconsultants for the work they have performed. Failure to provide such evidence shall be cause for City to suspend future progress payments to Consultants.

Consultant may withhold retention from subconsultants if City withholds retention from Consultant. Should retention be withheld from Consultant, within thirty (30) days of City's payment of retention to Consultant for satisfactory completion of all work required of a subconsultant, Contractor shall release any retention withheld to the subconsultant. Satisfactory completion shall mean when all the tasks called for in the subcontract with subconsultant have been accomplished and documented as required by City.

If the Consultant does not pay its subconsultant as required under the above paragraph, it shall pay interest to the subconsultant at the legal rate set forth in subdivision (a) of Section 685.010 of the California Code of Civil Procedure.

4. Reporting Requirements

The Consultant shall maintain records of all SBE participation in the performance of the contract, including subcontracts entered into with certified SBEs and all materials purchased from certified SBEs. The Consultant shall submit SBE participation reports to SFMTA on a monthly basis, or as otherwise directed by the CCO. The reports shall identify the name and address of each SBE performing work on the project, and show the total dollar amount requested for payment and the total dollar amount actually paid to each SBE. Within thirty (30) days of completion of the contract, or as otherwise directed by the CCO, the Consultant shall submit a final summary SBE report to the CCO.

D. Administrative Remedies

1. Monitoring SBE Participation

The CCO will monitor and track the actual SBE participation through consultant and subconsultant reports of payments, site visits and other appropriate monitoring. The CCO will ensure that SBE participation is counted towards contract goal(s) and the overall annual goal in accordance with the Regulations.

The CCO will require prime consultants to maintain records and documents of payments to SBEs for three years following the performance of the contract. These records will be made available for inspection upon request by any authorized representative of SFMTA or DOT. This reporting requirement also extends to any certified SBE subconsultant.

The CCO will keep a running tally of actual payments to SBE firms for work committed to them at the time of contract award.

The CCO will perform interim audits of contract payments to SBEs. The audit will review payments to SBE subconsultants to ensure that the actual amount paid to SBE subconsultants equals or exceeds the dollar amount stated in the schedule of SBE participation.

2. Enforcement Mechanisms

a. Reporting to DOT

SFMTA will bring to the attention of the Department of Transportation any false, fraudulent, or dishonest conduct in connection with the Program, so that DOT can take the steps (e.g., referral to the Department of Justice for criminal prosecution, referral to the DOT Inspector General, action under suspension and debarment or Program Fraud and Civil Penalties rules) provided in Section 26.109. Consultant may also be subject to penalties and/or a debarment action under the San Francisco Administrative Code. Failure to comply with the requirements of the SBE Program constitutes a material breach of contract and will be grounds for termination of the contract. Funds may also be withheld under the Contract pending investigation of a complaint of violation of the SBE Program.

E. CONFIDENTIALITY

SFMTA will safeguard from disclosure from third parties information that may reasonably be regarded as trade secrets, consistent with federal, state, and local laws. Notwithstanding any contrary provisions of state or local law, SFMTA will not release personal financial information submitted in response to the personal net worth requirement to a third party other than DOT without the written consent of the person submitting the information.

VI. SUBMISSION OF FORMS AND INSTRUCTIONS**A. Required Forms**

PROPOSERS ARE WARNED that failure to comply with the requirements for submission of forms, within the times prescribed, may RESULT IN REJECTION OF THE PROPOSAL, unless a later time is authorized by the CCO. The following forms are included in the RFP:

	FORMS SUBMITTED WITH PROPOSAL	
SFMTA SBE Form No. 1	Consultant/Joint Venture Partner and Subconsultant Participation Report	SBE – 18
SFMTA SBE Form No. 2	SBE Consultant/Subconsultant – Good Faith Efforts	SBE – 19
SFMTA SBE Form No. 2A	Bidders List	SBE – 21
SFMTA SBE Form No. 2B	SBE Consultant/Joint Venture Partner/Subconsultant Gross Revenue Declaration	SBE – 22
SFMTA SBE Form No. 3	Questionnaire on Recruitment, Hiring, and Training Practices for Consultants	SBE – 23
SFMTA SBE Form No. 4	Subconsultant Participation Declaration	SBE – 29
SFMTA SBE Form No. 5	Small Business Enterprise Acknowledgment Declaration	SBE – 30
SCHEDULE B	Joint Venture Participation Form	From CCO, if needed.
	FORMS SUBMITTED POST AWARD	
SFMTA SBE Form No. 6	Progress Payment Report	SBE – 32
SFMTA SBE Form No. 7	Subconsultant Payment Declaration	SBE - 34
SFMTA SBE Form No. 8	Declaration – Modification of Professional Service Contracts	SBE - 36
SFMTA SBE Form No. 9	Consultant Exit Report and Declaration	SBE - 38

Note: The following instructions are included for the convenience of proposers in preparing their proposals and for consultants to monitor SBE participation appropriately. If there are any conflicts between these instructions and the provisions elsewhere in the specifications or with federal, state, or city statutory requirements, the latter will prevail.

B. FORMS SUBMITTED WITH PROPOSAL:

The following forms must be executed in full and submitted with the proposal package, or as otherwise specified; if not, the proposal may be rejected.

SFMTA SBE FORM No. 1 - CONSULTANT/JOINT VENTURE AND SUBCONSULTANT PARTICIPATION REPORT

All proposers are required to complete this form and include the names of the SBEs being used, as well as lower tier SBEs, a description of the work they will perform, the services or supplies which will be provided by each and the dollar value of each SBE transaction.

This completed form must be submitted with the proposal or the proposal shall be rejected.

SFMTA SBE FORM No. 2 - SBE CONSULTANT/SUBCONSULTANT PARTICIPATION – GOOD FAITH EFFORTS

Each Proposer shall submit two (2) copies with its proposal a written report (SFMTA SBE Form No. 2) with supporting documentation covering all actions taken by the proposer to meet the SBE goal prior to the submittal of the proposal. This form must be submitted regardless whether or not the proposer's Consultant/Joint Venture and Subconsultant Participation Report (SFMTA SBE Form No. 1) indicates that the SBE goal has been met. If the CCO requires further information following its review of the report, the proposer shall submit such information within five days of the request.

SFMTA SBE FORM No. 2A - BIDDERS LIST

Pursuant to 49 CFR Section 26.11, SFMTA will create and maintain a "Bidders List" consisting of all firms bidding or quoting on prime contracts and bidding, or quoting on subcontracts on DOT-assisted projects. For every firm, the following information will be included: firm name, firm address, firm status as a DBE or non-DBE, the age of the firm, and the annual gross receipts of the firm.

All proposers shall complete the "Bidders List" to the maximum extent feasible, supplying the requested information on **all firms** quoting on this contract (including the proposer submitting the form).

SFMTA SBE FORM No. 2B - SBE CONSULTANT/JOINT VENTURE PARTNER/SUBCONSULTANT – GROSS REVENUE DECLARATION

An SBE consultant/joint venture partner and listed SBE subconsultants or suppliers, including lower tier subconsultants or suppliers, must complete this form. The prime shall collect the completed forms and submit them with its proposal on the proposal due date. The SBE consultant and listed SBE subconsultants or suppliers will need to submit this form declaring, under penalty of perjury, that their total average gross revenues for the past three years are equal to or below the \$12-million income threshold for the specific category of the contract.

SFMTA SBE FORM No. 3 - QUESTIONNAIRE ON RECRUITMENT, HIRING, AND TRAINING PRACTICES FOR CONSULTANTS

To be completed by proposers, joint venture partners and subconsultants.

SFMTA SBE FORM No. 4 - SUBCONSULTANT PARTICIPATION DECLARATION (to be submitted by the prospective prime consultant and subconsultant, as appropriate):

To confirm and identify the use of SBEs, all proposers shall submit a completed SFMTA SBE FORM No. 4, with the proposal, unless a request for an extension of time is granted by CCO.

Subconsultants using SBEs as lower tier subconsultants, suppliers or service agents shall also submit SFMTA SBE FORM No. 4. The form shall be submitted with the proposal unless an extension of time is granted by CCO.

SFMTA SBE FORM No. 5 - SMALL BUSINESS ENTERPRISE ACKNOWLEDGEMENT DECLARATION (to be submitted by each listed SBE consultant)

Every listed SBE subconsultant or supplier, including lower tier subconsultants, must submit the completed declarations to the proposers. The proposers shall submit the completed declarations to CCO with the proposal unless an extension of time is granted by CCO.

Schedule B - Joint Venture Participation Form (If applicable)

Joint Ventures formed at either the prime consultant level or subconsultant level must submit a Joint Venture Participation Form (Schedule B) plus a joint venture agreement. To obtain this form, please contact the CCO.

C. FROMS SUBMITTED POST AWARD

SFMTA SBE FORM NO. 6 - PROGRESS PAYMENT REPORT

This form shall be completed by Consultant, including each joint venture partner, if applicable, and submitted to the Project Manager (copy to CCO) with its monthly progress payment applications after award of Contract. Consultants must provide complete information and documentation on SFMTA SBE FORM No. 6 for the immediately preceding period for SBE joint venture partners and all subconsultants that are utilized on the Contract.

SFMTA SBE FORM No. 7 - SUBCONSULTANT PAYMENT DECLARATION
Consultant shall complete SFMTA SBE FORM No. 7 and submit it to CCO (copy to Project Manager) within five (5) working days following each payment to subconsultants in compliance with prompt payment requirements: This form shall provide evidence that the Consultant has complied with the prompt payment provisions of the Contract.

SFMTA SBE FORM No. 8 - DECLARATION – AMENDMENTS OF PROFESSIONAL SERVICES CONTRACTS

This form shall be completed when processing all modifications, supplements or change orders that cumulatively increase the original amount of the contract. All prime consultants, individual joint venture partners, subconsultants and any other vendors participating in the modification must be listed.

SFMTA SBE FORM No. 9 - CONSULTANT EXIT REPORT AND DECLARATION

Consultant, including all joint venture partners, if any, shall complete SFMTA SBE FORM No. 9 and submit it to the Project Manager (copy to CCO) with its final progress payment application. Consultant must provide complete and accurate information on SFMTA SBE FORM No. 9 and have it executed by all SBE joint venture partners and all subconsultants.

SUBMIT WITH PROPOSAL

SFMTA SBE FORM No. 1 – CONSULTANT/JOINT VENTURE PARTNER AND SUBCONSULTANT PARTICIPATION REPORT

PROPOSER _____

NAME OF FIRMS, ADDRESS, TELEPHONE NO. AND CONTACT PERSON; FEDERAL I.D. NO. (or STATE I.D. NO.)	SBE		NON-SBE		SCOPE OF WORK & CERTIFICATION TYPE & CERT. NO.	ANTICIPATED PERCENTAGE AND/OR \$ AMOUNT OF PARTICIPATION
	MALE	FEMALE	MALE	FEMALE		
Name & Signature: Authorized Officer of Consultant Firm					Total SBE (Male)	
					Total SBE(Female)	
Print or Type Name:					Total Non-SBE (Male)	
Date					Total Non-SBE(Female)	
					TOTAL % AND/OR \$:	

SFMTA SBE FORM No. 2

SBE CONSULTANT/SUBCONSULTANT PARTICIPATION – GOOD FAITH EFFORTS

This form must be completed and submitted along with compelling documentation detailing the good faith efforts made to meet the SBE participation goal if the information submitted on SFMTA SBE Form No. 1 indicates that the SBE goal has not been met.

If the SBE participation goal is not met, and if this form, along with compelling documentation detailing the good faith efforts made to meet the goal, is not completed and returned with the proposal, **the proposal shall be deemed non-responsive and rejected.**

Even if proposers' SFMTA SBE Form No. 1 indicates the SBE goal has been met, proposers **should still submit** the following information to protect their eligibility for the contract. This is because SFMTA's Contract Compliance office may determine that proposers have not met the goal for various reasons, e.g., if an SBE subconsultant submitted by the prime consultant was not SBE/DBE/LBE certified on the proposal due date. In these cases, SFMTA's SBE Form No. 1 will not normally provide sufficient information to demonstrate that the proposer made good faith efforts.

Contract Number:	_____	Contract Name:	_____
Proposer's Name:	_____	CCO Staff Assigned:	_____

Please supply the following information:

1. Attending any presolicitation or proposal meetings scheduled by the awarding department to inform all proposers of SBE Program requirements for the project for which the contract is awarded.

2. List below the names and dates of all certified SBEs solicited by direct mail for this project or print out a list of SBE contacted via the States' SBE website, City's HRC website, or UCP DBE website. List the dates and methods used for following up initial solicitations to determine with certainty whether the SBEs were interested. Attach copies of letters and supporting documentation.

3. Summarize below the items of work for which the Proposer requested subconsultant services supplied by SBEs, the information furnished interested SBEs regarding work requirements and any breakdown of tasks into economically feasible units to facilitate SBE participation. Where there are SBEs available for doing portions of the work normally performed by the proposer with its own staff, the proposer will be expected to make portions of such work available for SBEs.

SUBMIT WITH PROPOSAL

4. List below the names of SBEs solicited for any of the work indicated above and which were not utilized, and a summary of the proposer's discussions and/or negotiations with them.

a. List the names of rejected SBEs:

b. Summarize below discussions and/or negotiations:

5. List the names of subconsultants that were selected over the rejected SBEs listed above and the reasons for that choice.

6. Summarize below assistance that the Proposer has extended to rejected SBEs identified above to remedy the deficiency in their sub-proposals.

7. If insurance is a reason for rejecting any potential SBE, a complete explanation must be provided as follows.

a. List the names and phone numbers of insurance firms contacted by the proposer and/or other involved parties:

b. List the names and phone numbers of public assistance agencies contacted and their responses (for example, the City's Bonding and Insurance Assistance Program):

NOTE: Use additional sheets of paper if necessary. Appropriate documentation such as copies of newspaper ads, letters soliciting bids, & telephone logs should accompany this form.

Signature of Proposer _____ Date: _____
Print Name of Proposer: _____ Phone Number: _____
Name of Company: _____ email: _____
Address, City, ST, Zip: _____

**SFMTA SBE FORM No. 2A
BIDDERS LIST**

(Supply the following information for all firms bidding or quoting on this contract. If any information is not included, specify reason why you could not obtain the information.)

PROPOSER'S NAME: _____

Name/ Federal I.D. or State I.D. No.	Address	Phone	SBE Certified (CUCP DBE, CITY LBE, STATE SBE)		Yrs. in Business	Annual Gross Receipts of Firm
			Yes	No		

PROPOSER: _____

SFMTA SBE FORM No. 2B

**SBE CONSULTANT/JOINT VENTURE PARTNER/SUBCONSULTANT GROSS REVENUE
DECLARATION**

**(TO BE COMPLETED BY SBE CONSULTANT/JOINT VENTURE
PARTNER/SUBCONSULTANT)**

An SBE consultant and every listed SBE subconsultant or supplier, including lower tier subconsultants, must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office. In order to be counted towards the SBE goal, the SBE must declare, under penalty of perjury, that its total average gross revenues for the past three years are equal to or below the \$12 million threshold.

Contract Number: _____ Contract Title: _____

SECTION I

Name: _____ Vendor Number: _____

Address: _____

Phone: _____ Type of Consultant's License(s): _____ Federal I.D. No.: _____

SECTION II

(Check Ownership and Certification Type check all that apply)

- | | |
|--|--|
| <input type="checkbox"/> Sole Proprietor | <input type="checkbox"/> DBE (Issued by Calif. Unified Certification Prog.) |
| <input type="checkbox"/> Partnership | <input type="checkbox"/> SBE (Issued by Calif. Dept. of General Services) |
| <input type="checkbox"/> Corporation, s-Corp, LLC | <input type="checkbox"/> LBE (Issued by SF Human Rights Commission) |

DECLARATION

The undersigned declares under penalty of perjury under the laws of the State of California that its total average gross revenues for the past three years are equal to or below the \$12 million threshold.

Name and Title (Print)

Signature

Date

PROPOSER: _____

**SFMTA SBE FORM No. 3
SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY
QUESTIONNAIRE
NONDISCRIMINATION REQUIREMENTS**

Professional or Technical Services

Instructions

1. Please complete and return the attached Nondiscrimination Questionnaire, Workforce Data forms and Participation Form with a copy of your entire proposal directly to the awarding Department.
2. Please complete the questionnaire for the office that will ultimately perform the project work.
3. The questionnaire must be completed by:
 - a. All prime consultants
 - b. All joint venture partners and subconsultants
4. Support firms (e.g., printers, photographers, etc.) need not complete any part of the questionnaire.
5. Approved State or Federal Nondiscrimination Programs may be substituted for those items where the information requested in the questionnaire is identical to that contained in the State or Federal Programs.
6. If the questionnaire(s) is/are not correctly and fully completed, SFMTA will not consider your proposal. For firms selected as finalists, all SBEs participating in the project must be certified prior to contract award.

SFMTA FORM No. 3

**SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY
QUESTIONNAIRE ON RECRUITMENT, HIRING, AND TRAINING PRACTICES FOR
CONSULTANTS**

NOTE: The term "minority" refers to the following groups: American Indian or Alaskan Native, Asian or Pacific Islander, African-American, Filipino, and Hispanic.

(Please answer all questions. Use additional sheets if necessary.)

Name of Company: _____

Address: _____

Location of Company Workforce (Check one):

_____ San Francisco

_____ Other Location, provide address:

1. Name, title, telephone number of company official at the establishment who is responsible for recruitment and hiring and who will provide information concerning this matter.

2. Name, title, and telephone number of senior managing official at the establishment if not the person named in the answer to question 1.

3. Describe briefly the basic business activity at the establishment (i.e., identify the product produced or the services performed.)

4. Describe briefly how employees at various levels are hired (see Workforce Breakdown #8).

SUBMIT WITH PROPOSAL

- A. Technicians and/or others.

 - B. Support Staff (accounting, reception, and clerical).
5. Describe in full, Nondiscrimination programs in the past two years. (Consultants may submit one (1) copy of their Nondiscrimination Program directly to SFMTA Contract Compliance Office, One South Van Ness Ave., 3rd Floor, San Francisco, CA 94103, (415) 701-4443.
- Participation in training programs.

 - Participation in apprenticeship programs.

 - Participation in any summer hire program or own program.

 - Paid educational leave or tuition to improve skills and level.

 - Participation in scholarship fund.

 - Participation in clerical training programs.

SUBMIT WITH PROPOSAL

-- Participation in "other" programs.

6. If minorities and/or women are underutilized explain steps to ensure the firm is not discriminating.

7. Describe joint ventures or subconsulting arrangements in past projects. If there is a company policy on this issue, include it.

8. Complete workforce breakdown. (Separate form, Page SBE-27.)

- 8a. Hires in last 12 months. (Complete separate form, Page SBE-28.)

SFMTA SBE FORM No. 3

WORKFORCE DATA SPREADSHEET #1

8. Please fill out this workforce breakdown

Name of firm: _____
 Address: _____

EMPLOYEE * CATEGORIES	TOTAL EMPLOYEE		AFRICAN AMERICAN		HISPANIC		ASIAN/ PAC. ISL.		AMER. IND./ ALAK. NTV.		TOTAL MINORITY		PERCENTAGE WHITE		PERCENTAGE MINORITY	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Officials																
Managers																
Professionals																
Technicians																
Admin. Support																
Trainees																
Others																
Full-time																
Part-time																
TOTAL																

3/30/95

COMPLETED BY Name: _____ Title: _____ Date: _____

* If the list of occupations on the left side of the workforce data form does not match your occupation titles, please modify the data form to indicate occupations peculiar to your organization.

SFMTA SBE FORM No. 3
 WORKFORCE DATA SPREADSHEET #2

8a. Hires in last 12 months

Name of firm: _____

Address: _____

EMPLOYEE CATEGORIES	TOTAL EMPLOYEE		AFRICAN AMERICAN		HISPANIC		ASIAN/ PAC. ISL.		AMER. IND./ ALAK. NTV.		TOTAL MINORITY		PERCENTAGE WHITE		PERCENTAGE MINORITY	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Officials																
Managers																
Professionals																
Technicians																
Admin. Support																
Trainees																
Others																
Full-time																
Part-time																
TOTAL																

3/30/95
 COMPLETED BY Name: _____ Title: _____ Date: _____

* If the list of occupations on the left side of the workforce data form does not match your occupation titles, please modify the data form to indicate occupations peculiar to your organization

PROPOSER _____

SFMTA SBE FORM No. 4

SBE SUBCONSULTANT PARTICIPATION DECLARATION

(To be submitted by the prospective prime consultant or subconsultant, as appropriate, to the Contract Compliance Office with its proposal, unless an extension of time is requested and granted.)

(Name and Title)

declares as follows: That contingent upon award of _____
(Name of Project)

_____ will award subcontracts or pursue
(Name of Prime Consultant)

orders to the following Small Business firms: (If the firm is a joint venture, you must attach a copy of the joint venture agreement.)

Name and Address of SBE	Type of SBE Certification	Lic.#	Gender		Ethnicity	Type of Work (Describe)	% and/or \$ Amount of Contract
			M	F			

Total dollar value of SBE work: \$ _____ = _____ % of SBE Participation
 Total dollar value of Proposal Price \$ _____ 100%

I declare under penalty of perjury under the laws of the State of California, that the above information is true and correct.

Owner or Authorized Representative (Signature)

Dated: _____

PROPOSER: _____

SFMTA SBE FORM No. 5

SMALL BUSINESS ENTERPRISE ACKNOWLEDGMENT DECLARATION

Every listed SBE subconsultant or supplier (including lower tier subconsultant) must submit the completed declarations to the Prime Consultant. The Prime Consultant shall submit completed declarations with its proposal to the Contract Compliance Office, unless an extension of time is requested.)

(Owner or Authorized Representative and Title)

declares that _____ will award
(Name of Prime Consultant)

_____ [(%) percent and/or (\$) amount], of subcontract or

_____ [(%) percent and/or (\$) amount] of a purchase order of the total value of the
prime contract to _____ (Name of your firm).

License No. _____ Type of SBE Certification: _____

Nature of work to be performed by SBE: _____

FORM OF OWNERSHIP FOR SMALL BUSINESS ENTERPRISE

Sole Proprietorship _____ Partnership _____ Joint Venture _____ Corporation _____

Limited Liability Partnership _____ Limited Liability Corporation _____

LIST OWNERS

Name _____ Ethnicity* _____ Gender _____ % of Ownership _____

Name _____ Ethnicity* _____ Gender _____ % of Ownership _____

Name _____ Ethnicity* _____ Gender _____ % of Ownership _____

Name _____ Ethnicity* _____ Gender _____ % of Ownership _____

Percentage of SBE Stockholders: _____

*Ethnic Codes: AI/AN = American Indian or Alaskan Native, A/PI = Asian or Pacific Islander, B = Black, F = Filipino, H = Hispanic, and W = White.

LIST INSURANCE POLICIES AND BONDING ARRANGEMENTS

Name of Policy _____ Party Insured _____

Name of Policy _____ Party Insured _____

Name of Policy _____ Party Insured _____

For Prime Consultants and Subconsultants Only:

List the firm's annual gross receipts for the last three fiscal years:

20_____ \$ _____, 20_____ \$ _____, 20_____ \$ _____

For Suppliers or Manufacturers Only:

List the number of employees for the last three fiscal years:

20_____ Number _____, 20_____ Number _____, 20_____ Number _____

ADDITIONAL SUBCONTRACTING BY SUBCONSULTANTS:

a. _____ We will not subcontract any portion of work to another subconsultant.

b. _____ We will subcontract _____ [% and/or \$ amount] of our work to _____
(Name of Subconsultant)

Indicate owners' ethnicity and gender _____

I declare under penalty of perjury under the laws of the State of California that the above information is true and correct; and that our firm is a certified SBE as defined under the Municipal Transportation Agency's SBE Program.

Owner/Authorized Representative (Signature)

Name & Title (Please Print)

Address

Telephone No.

END OF SFMTA SBE FORM No. 5

POST AWARD SUBMITTAL

**SFMTA SBE FORM No. 6
PROGRESS PAYMENT REPORT**

To be completed by Consultant and submitted to Project Manager with its monthly progress payment application (transmit and copy to all of the following.)

TRANSMITTAL To: Project Manager Copy: Contract Compliance Office

From: Consultant _____ Date Transmitted: _____

PART 1: Fill in all blanks and check the box below.

Contract Number:	Contract Title:
------------------	-----------------

Reporting Period (Month and Year): _____
 Corresponding Progress Payment No.: _____

Note: The information submitted on Parts 1 and 2 of this form is accurate for the progress payment period immediately preceding that of the current payment application attached herewith.

1. Amount of Prime Contract	\$
2. Amount of Change Orders, Amendments and Modifications to Date	\$
3. Total Contract to Date including Change Orders, Amendments and Modifications (Line 1 + Line 2)	\$
4. Amount Invoiced this Reporting Period	\$
5. Total Amount Paid to Date including Retention (excluding Line 4)	\$
6. Amount of Progress Payment Requested to Date (Line 4 + Line 5)	\$
7. Percent Complete (Line 6 ÷ Line 3)	
8. Reporting Period - From (date):	To (date):

Consultant, including each joint venture partner, must execute this form.

Owner/Authorized Representative (Signature)

Owner/Authorized Representative

Name & Title (Please Print) Date

Name & Title (Please Print) Date

Firm Name

Firm Name

() _____
Telephone Fax

() _____
Telephone Fax

POST AWARD SUBMITTAL

PART 2: Provide complete information in the following table for Consultant, each SBE joint venture partner and all subconsultants. Make copies of this sheet as needed. Attach copies of all invoices from subconsultants supporting the information tabulated on this form and Consultant's invoice and Contract Payment Authorization for the immediately preceding progress payment period.
Note: Failure to submit all required information may lead to partial withholding of progress payments. See 49 CFR Sections 26.29, 26.37.

A Name of Firm (List consultant, including each joint venture partner, and all subconsultants, and indicate if firm is a SBE.)	B Portion of Work	C Amount of Subcontract or Purchase Order	D Amount of Change Orders to Date	E Total Amount Subcontract or Purchase Order to Date + Change Orders (C + D)	F Amount Invoiced this Reporting Period	G Amount of Progress Payments Paid to Date	H Percent Completed to Date [F + G] / E
TOTALS							

POST AWARD SUBMITTAL

**SFMTA SBE FORM No. 7
SUBCONSULTANT PAYMENT DECLARATION**

(To be completed and submitted by Consultant, including all joint venture partners, if any, and submitted to the Contract Compliance Office within 5 working days following actual payment to subconsultant. Payments to subconsultant shall be made no later than 3 working days following receipt of progress payment from the City).

TRANSMITTAL TO: Contract Compliance Office

COPY TO: Project Manager

From: Prime Consultant: _____ Date Transmitted: _____

Provide the following information for each progress payment received from SFMTA. Use additional sheets to include complete payment information for all subconsultants and vendors utilized on this Contract including each joint venture partner. Failure to submit all required information may lead to partial withholding of progress payment.

Contract No.: _____ Contract Title: _____

Contract Awarding Department: _____

Progress Payment No.: _____ Period Ending: _____

Amount Received: \$ _____ Date: _____ Warrant/Check No.: _____

Prime JV/Subconsultant/ Vendor Name	Business Address	Amount Paid	Payment Date	Check Number

I/We declare under penalty of perjury under the laws of the State of California that the above information is complete, and that the tabulated amounts paid to date are accurate and correct.

Prime Consultant, including each joint venture partner, must sign this form.

POST AWARD SUBMITTAL

SFMTA SBE FORM No. 8

DECLARATION – AMENDMENTS OF PROFESSIONAL SERVICE CONTRACTS

This section is to be completed for all modifications to this contract. All prime consultants, individual joint venture partners, subconsultants and any other vendors participating in the modifications must be listed.

CONTRACT NO.:		CONTRACT MOD NO.:
CONTRACT TITLE:		
ORIGINAL AMOUNT:	\$	SBE GOAL:
CONTRACT MODIFICATION AMOUNT:	\$	
CONSULTANT:		
CONTACT PERSON:		PHONE:
ADDRESS:		
CITY:	STATE:	ZIP CODE:

JV/P/S: Indicate if consultant is Joint Venture Partner, Prime or Sub.

JV/P/S	NAME	SERVICES PERFORMED	% of Total Mod	MODIFICATION AMOUNT	% SBE

I declare, under penalty of perjury under the laws of the State of California, that the information contained on this form is true and correct.

Owner/Authorized Representative (Signature):	Date:
Owner/Authorized Representative (Print):	Title:

POST AWARD SUBMITTAL

SFMTA SBE FORM No. 8

DECLARATION – AMENDMENTS TO PROFESSIONAL SERVICE CONTRACTS

Information is needed for each firm listed on Page 1 (prime consultants, joint venture partners, subconsultants and suppliers). Firms that have previously worked on City contracts may already have a vendor number. You may enter the vendor or federal I.D. number instead of completing the rest of the information. Use additional sheets if necessary.

FIRM NAME			
ADDRESS:			
CITY:		<u>FEDERAL I.D. NO.:</u>	VENDOR NO.
STATE:	ZIP:		
PHONE NO.:	FAX NO.:	ETHNIC OWNERSHIP:	
SERVICE:		\$ AMOUNT:	
FIRM NAME			
ADDRESS:			
CITY:		<u>FEDERAL I.D. NO.:</u>	
STATE:	ZIP:		
PHONE NO.:	FAX NO.:	ETHNIC OWNERSHIP:	
SERVICE:		\$ AMOUNT:	
FIRM NAME			
ADDRESS:			
CITY:		<u>FEDERAL I.D. NO.:</u>	
STATE:	ZIP:		
PHONE NO.:	FAX NO.:	ETHNIC OWNERSHIP:	
SERVICE:		\$ AMOUNT:	
FIRM NAME			
ADDRESS:			
CITY:		<u>FEDERAL I.D. NO.:</u>	
STATE:	ZIP:		
PHONE NO.:	FAX NO.:	ETHNIC OWNERSHIP:	
SERVICE:		\$ AMOUNT:	

ETHNIC OWNERSHIP: Asian, Black, Hispanic, Native American, White, Other (please state) _____.

END OF SFMTA SBE FORM No. 8

SFMTA SBE FORM No. 9

CONSULTANT EXIT REPORT AND DECLARATION

To be completed by Consultant, including all joint venture partners if any, and submitted to Resident Engineering (copy to Contract Compliance) with its final progress payment application (transmit and copy to all of the following.)

TRANSMITTAL To: Project Manager Copy: Contract Compliance Office
From: Consultant:
Date Transmitted:

Consultant must complete SFMTA SBE Form 9, Page 2 and have it executed by all SBE joint venture partners and all subconsultants.

Reporting Date:

I/We declare under penalty of perjury under the laws of the State of California, that the information on Page 2 of this form is complete, that the tabulated amounts paid to date are accurate and correct, and that the tabulated amounts owing will be paid within forty (40) days after the date of SFMTA's final payment under the Contract.

Consultant, including each joint venture partner, must execute this form.

Owner/Authorized Representative (Signature)

Owner/Authorized Representative (Signature)

Name (Please print/type)

Name (Please print/type)

Title (Please print/type) Date

Title (Please print/type) Date

Firm Name

Firm Name

Telephone Fax

Telephone Fax

Note: Failure to submit all required information may lead to partial withholds of progress payment. See 49 CFR Sections 26.29, 26.37.

Name of Firm (List Consultant, including each joint venture partner, and all subconsultants, and indicate if the firm is a SBE.)	Portion of Work	Amount of Progress Payments Paid to Date	Amount Owing under the Contract including all Change Orders, Amendments and Modifications	Owner/Authorized Representative Signature (Consultant, including each joint venture partner, and all subconsultants)
TOTALS				

END OF SFMTA SBE FORM No. 9

APPENDIX H
OVERHEAD RATES FOR FIELD AND HOME OFFICE PERSONNEL

Central Subway Project - Design Package #2

Contract No. CS-155-2

**APPENDIX H – OVERHEAD RATES FOR FIELD AND HOME OFFICE PERSONNEL
CENTRAL SUBWAY PROJECT – DESIGN PACKAGE 2
CONTRACT NO. CS-155-2 (BASE AND OPTIONAL SERVICES)**

FIRM	Field Office Overhead	Home Office Overhead
PB Americas, Inc. (JV)	109.5%	157.9%
Kwan Henmi Architecture/Planning, Inc. (JV)	167.0%	172.0%
Michael Willis Architects (JV)	144.03%	150.10%
A.R. Sanchez-Corea & Associates, Inc.	Billing Rate	Billing Rate
Carey & Co.	236.0%	236.0%
CB Engineers, Inc.	131.0%	141.0%
Creegan + D'Angelo Consulting Engineers	216.00%	216.0%
CHS Consulting Group	166.67%	166.67%
Cornerstone Transportation Consulting, Inc.	108.0%	126.48%
Dr. G. Sauer Corporation	129.36%	183.10%
Forell/Elsesser Engineers, Inc.	220.44%	220.44%
F.E. Jordan Associates, Inc.	175.0%	206.0%
F.W. Associates, Inc.	126.0%	135.14%
HortScience, Inc.	172.99%	172.99%
ILF Consultants, Inc.	244.2%	244.2%
Martin M. Ron & Associates	214.0%	214.0%
National Constructors' Group, Inc.	Billing Rate	Billing Rate
Robin Chiang & Company	153.1%	153.1%
SC Solutions, Inc.	216.32%	216.32%
S.J. Engineers	168.0%	168.0%
Silverman & Light, Inc.	115.2%	185.24%
SOHA Engineers	107.34%	142.9%
Sonoma State University	48.0%	48.0%
Stevens & Associates	278.0%	278.0%
Telamon Engineering Consultants, Inc.	123.2%	169.1%
Timmons Design Engineers, Inc.	120.8%	120.8%
Trans Pacific Geotechnical Consultants, Inc.	172.0%	172.0%
Treadwell & Rollo	182.0%	200.0%
YEI Engineers, Inc.	159.51%	179.51%
Independent Consultants	Billing Rate	Billing Rate

APPENDIX L
DESIGN CONTROL PROCEDURES

Central Subway Project - Design Package #2
Contract No. CS-155-2

Title: central T subway DESIGN CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Change Control	Document Type: Plan and Procedures
	Document Number: DCP 2.14
Unit/Function: Capital Programs & Construction Division Central Subway	Revision Number: Rev 1 11.20.09

DESIGN CHANGE CONTROL

APPROVED BY: John Funghi
Senior Program Manager
SFMTA Central Subway



DATE: 11-30-09

Title: central T subway DESIGN CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Change Control	Document Type: Plan and Procedures
	Document Number: DCP 2.14
Unit/Function: Capital Programs & Construction Division Central Subway	Revision Number: Rev 1 11.20.09

1.0 PURPOSE

This procedure addresses the control of design changes that affect the Project's baseline documents. This procedure does not establish the basis for a design contract modification.

Baseline documents are critical to the definition of the functional and physical characteristics of the Project. The baseline documents for Final Design are defined in the Project Management plan and include the following:

1. Final Environmental Impact Statement/Final Environmental Impact Report (FEIS/FEIR).
2. Central Subway Design Criteria.
3. Preliminary Engineering Package, which includes the Preliminary Engineering Report, drawings, and outline specifications.

As a minimum, proposed changes that meet the following four "criteria" must be reviewed through the "change control" process described in this procedure:


1. Design changes that affect a baseline document.
2. Design changes that affect safety or security.
3. Design changes that affect multiple disciplines.
4. Design changes that affect SFMTA Operations and Maintenance (O&M).

2.0 RESPONSIBILITY

Project Team members are responsible for notifying the impacted Contract Package Managers of any potential or identified issues that would cause the design to deviate from the Project baseline documents, affect multiple disciplines, or significantly impact safety, security, cost, schedule, or rail operations.

Contract Package Managers are responsible for documenting design changes within their task by preparing the Engineering Change Proposal (form ECP 2.14-1) included as an attachment to this procedure. They are also responsible for reviewing and recommending, or not, and expediting proposed design changes that affect their discipline.

Design Package Project Managers are responsible for reviewing and approving their Contract Package Managers proposed design changes.

Title: <div style="text-align: center;">  DESIGN CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Change Control </div>	Document Type: Plan and Procedures
	Document Number: DCP 2.14
Unit/Function: Capital Programs & Construction Division Central Subway	Revision Number: Rev 1 11.20.09

The Project Controls Manager is responsible for reviewing and recommending, or not, proposed design changes as well as verifying cost and schedule impact values placed on form ECP 2.14-1. The Project Controls Manager maintains the Trend/Change Control Log (form PCP 01-2) included as an attachment to this procedure.

Discipline Leads are responsible for reviewing and recommending, or not, proposed design changes.

The Contract Package Manager is responsible for routing the form ECP 2.14-1 for review and signature.

The Program Manager Project Development is responsible for final approval, or not, of proposed design changes and for routing, if necessary, to the Configuration Management Board as described in Section 3.1.8. If the Program Manager Project Development does not approve the proposed change, or approves the change and it does not go to the CMB, he/she transmits form ECP 2.14-1 to the Project Controls Manager.

3.0 PROCEDURES


3.1 EXECUTION

3.1.1 Identified Design Change Notification and Documentation

Step 1. A Project Team member notifies his/her Contract Package Manager of an identified design change that impacts baseline documents, multiple disciplines, safety, security, Muni/DPT O&M or Project cost or schedule.

Step 2. The Contract Package Manager documents all identified potential changes that meet the criteria described above in 1.0 Purpose on form ECP 2.14-1, Engineering Change Proposal. The information documented in the ECP form includes, but is not limited to the following:

- Title of change
- ECP # (provided by Document Control)
- Name and signature of the Contract Package Manager requesting the change and the date
- Project elements impacted – Safety/Security, FEIS/FEIR, Design Criteria, Muni/DPT O&M, Preliminary Engineering Package

Title:	 DESIGN CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Change Control	Document Type: Plan and Procedures
		Document Number: DCP 2.14
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- Other Tasks/Discipline(s) affected
- Construction and design schedule impact (if any)
- Construction and design cost impact (if any)
- Description of and justification for the change
- Reference documents

The Contract Package Manager transmits form ECP 2.14-1 to the Design Package Project Manager for his/her review.

3.1.2 Design Package Project Manager Assessment

Step 3. The Design Package Project Manager of the Contract Package Manager originating the ECP assesses whether the proposed change should be implemented and needs to be reviewed through this Change Control process.

If the Design Package Project Manager does not recommend the proposed design change be processed through this Change Control process, he/she:

- Records his/her decision on the ECP form
- Signs and dates the ECP form
- Notifies the Contract Package Manager of his/her decision
- Forwards the ECP form to the Project Controls Manager to file and to update the Trend/Change Control Log


If the Design Package Project Manager recommends the change be processed through this Change Control process, he/she:

- Records his/her decision on the ECP form
- Signs and dates the ECP form
- Notifies the Discipline Leads through design review meetings, technical coordination meetings, or other venue of all potential changes and issues the ECP to the Project Controls Manager.

3.1.3 Project Controls Manager Review

Step 4. The Project Controls Manager shall:

- Review the ECP form
- Log the change on the PCP 01-2 form Trend/Change Control Log
- Sign and date the ECP form

Title: <div style="text-align: center;">  DESIGN CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Change Control </div>	Document Type: Plan and Procedures Document Number: DCP 2.14
Unit/Function: Capital Programs & Construction Division Central Subway	Revision Number: Rev 1 11.20.09

- Transmit the ECP form to the Discipline Lead for review.

3.1.4 Discipline Lead's Assessment

Step 5. The Discipline Leads assess whether the proposed change should be implemented and needs to be reviewed through this Change Control process.

If the Discipline Leads do not require the proposed design change be processed through this Change Control process, they:

- Record their decision on the ECP form
- Sign and date the ECP form
- Notify the Contract Package Manager of their decision
- Returns the ECP form to the Project Controls Manager to file and to update the Trend/Change Control Log

If the Discipline Leads require the change be processed through this Change Control process, they:

- Record their decision on the ECP form and inform the affected Tasks/Disciplines that are listed on the ECP form
- Sign and date the ECP form
- Forward the ECP form to the Contract Package Manager for routing to the individuals impacted by the change


3.1.5 Affected Contract Package Manager Review

Step 6. Each Contract Package Manager affected by the proposed change shall:

- Review the ECP form
- Record his/her recommendation on the ECP form
- Sign and date the ECP form

The last Contract Package Manager to review the ECP form shall transmit it to the SFMTA Design Manager for his/her review.

3.1.6 Design Manager Review

Title: <div style="text-align: center;">  DESIGN CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Change Control </div>	Document Type: Plan and Procedures <hr/> Document Number: DCP 2.14
Unit/Function: Capital Programs & Construction Division Central Subway	Revision Number: Rev 1 11.20.09

Step 7. The Design Manager reviews the proposal and may ask the Contract Package Manager requesting the change for additional documentation in support of the proposed change. The Design Manager will either reject the change or recommend it to the Program Manager Project Development for review and approval.

If the Design Manager rejects the change, he/she:

- Records their decision on the ECP form
- Notifies the impacted Contract Package Managers and Project Controls Manager that the change has been rejected
- Forwards the ECP form to the Project Controls Manager to file and to update the Trend/Change Control Log

If the Design Manager recommends the change, he/she:

- Records their recommendation on the ECP form
- Forwards the ECP form to the Project Controls Manager for review and for verification of cost and schedule impacts

Note: To expedite the proposed change review process, the Project Controls Manager may call a meeting of Contract Package Manager, affected Task/Design Package Project Managers, and Design Managers to execute Steps 7 and 8.

3.1.7 Project Controls Manager Review

Step 8. The Project Controls Manager shall:

- Review the ECP form
- Verify cost and schedule values placed on the form per procedure PCP 02 which includes a review of the potential for impact upon the Buffer or Reserve contingency
- Record his/her recommendation on the ECP form
- Sign and date the ECP form
- Transmit the ECP form to the Program Manager Project Development for review

3.1.8 Program Manager Project Development Review

Step 9. The Program Manager Project Development reviews the proposal.

Title: central T subway DESIGN CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Change Control	Document Type: Plan and Procedures
	Document Number: DCP 2.14
Unit/Function: Capital Programs & Construction Division Central Subway	Revision Number: Rev 1 11.20.09

If the Program Manager Project Development rejects the change, he/she:

- Records his/her decision on the ECP form and transmits the form to the Design Manager
- The Design Manager notifies the impacted Contract Package Managers and Project Controls Manager that the change has been rejected
- The Design Manager forwards the ECP form to the Project Controls Manager to file and to update the Trend/Change Control Log

If the change is approved by the Program Manager Project Development, he/she:

- Records his/her approval on the ECP form
- Makes one of the following dispositions:
 - If the design change results in a construction cost impact that exceeds \$500,000 and/or create a schedule delay of greater than one week, or the Program Manager Project Development deems necessary, the change will be forwarded to the Configuration Management Board (CMB). The CMB and its process are described in Program Control Procedure PCP 01.
 - If the design change results in a construction cost impact that is below \$500,000 and the schedule impact is less than one week, the change will not need further review.

Whichever disposition the Program Manager Project Development makes for the design change, he/she transmits form ECP 2.14-1 to the Project Controls Manager who will enter the disposition of the change in the Trend/Change Control Log, form PCP 01-2 and report to the Senior Program Manager on a regular basis as required by PCP 02. The Project Controls Manager also notifies the originator of the change with the decision.

See Figure 1 below for a flow chart illustrating this change control process. Figure 2 depicts the details of "Complete Form ECP 2.14-1," circled in Figure 1.

Title: <p style="text-align: center;">central T subway DESIGN CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Change Control</p>	Document Type: Plan and Procedures
	Document Number: DCP 2.14
Unit/Function: Capital Programs & Construction Division Central Subway	Revision Number: Rev 1 11.20.09

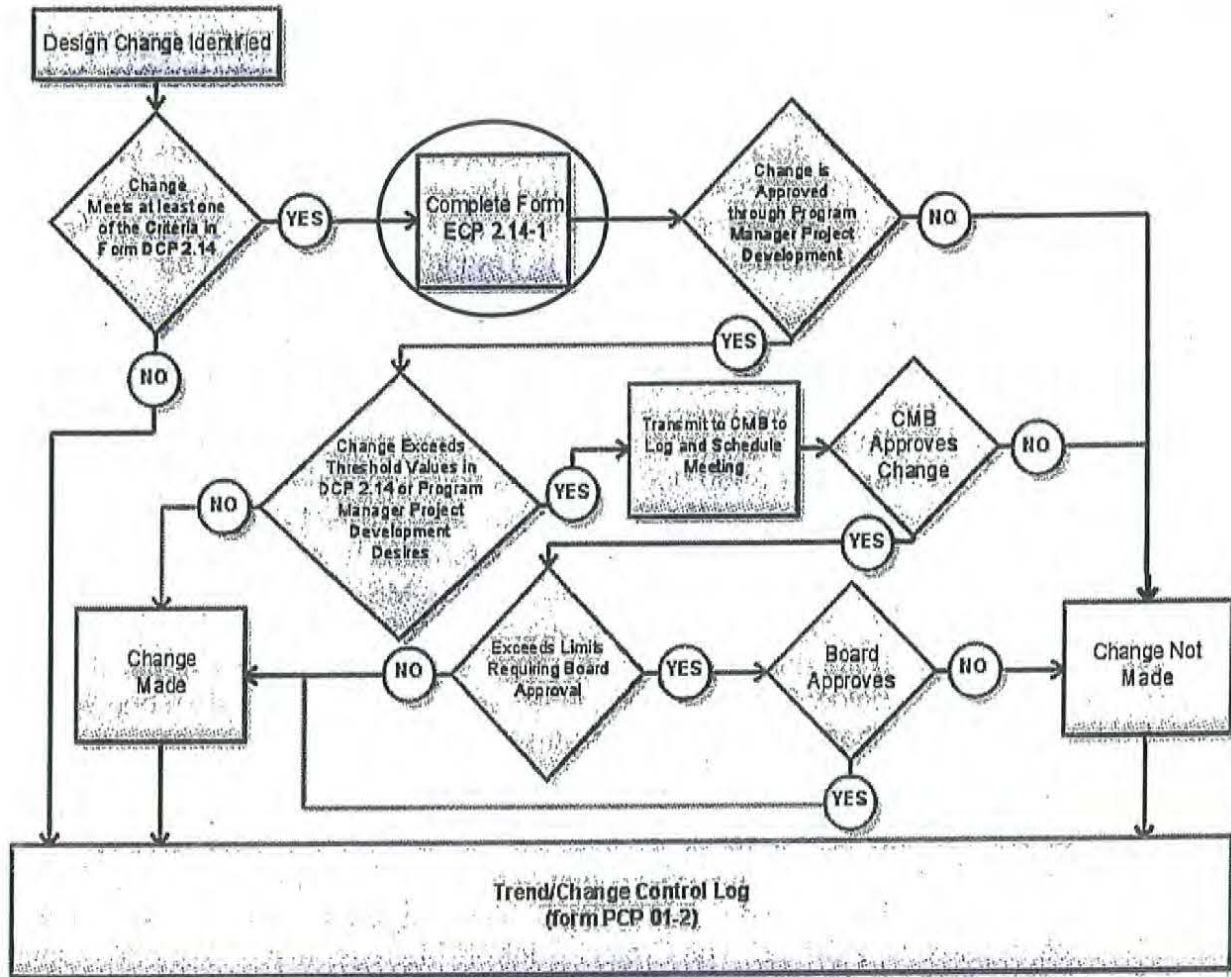


Figure 1. Design Change Flow Chart

<p>Title:</p> <p style="text-align: center;">central T subway</p> <p style="text-align: center;">DESIGN CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Change Control</p>	<p>Document Type: Plan and Procedures</p> <p>Document Number: DCP 2.14</p>
<p>Unit/Function:</p> <p style="text-align: center;">Capital Programs & Construction Division Central Subway</p>	<p>Revision Number: Rev 1 11.20.09</p>

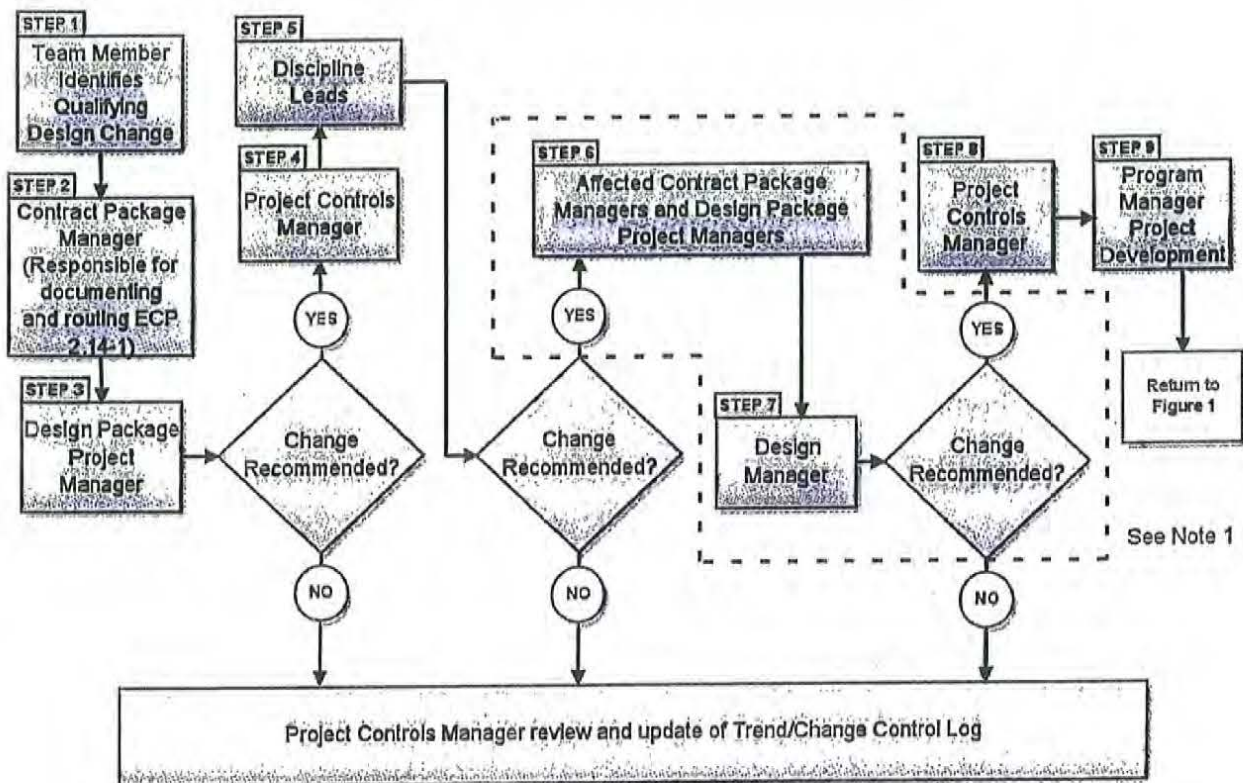



Figure 2. Complete Form ECP 2.14-1

Note 1: To expedite the proposed change review process, the Project Controls Manager may call a meeting of Contract Package Manager, affected Task/Design Package Project Managers, and Design Managers to execute Steps 7 and 8.

3.1.9 Design Change Implementation and Verification

Contract Package Managers can only implement design changes approved by the Program Manager Project Development or the CMB. Changes that require the use of Buffer or Reserve contingency cannot be implemented until the use of Buffer or Reserve contingency have been approved per the Contingency Management Plan of the Project Execution Plan. All changes that are approved must be verified as having been incorporated in the respective documents. The respective Design Package QC Managers (Design Packages 1, 2, and 3) are responsible for verifying that changes have been incorporated by signing the "Verification of Design Change" box on form ECP 2.14-1.

Title: <div style="text-align: center;">  DESIGN CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Change Control </div>	Document Type: Plan and Procedures
	Document Number: DCP 2.14
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3.2 RECORDS

The following records shall be maintained in the Document Control Files and made readily available for quality audits/surveillances:

1. ECP 2.14-1, Engineering Change Proposal
2. PCP 01-2, Trend/Change Control Log

4.0 ATTACHMENTS

1. Form ECP 2.14-1, Engineering Change Proposal
2. Form PCP 01-2, Trend/Change Control Log

5.0 REFERENCES

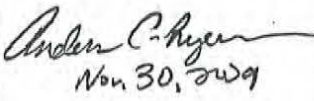
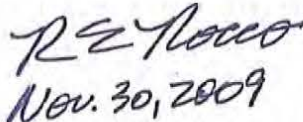
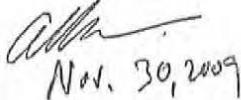
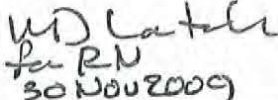
1. Central Subway Program Control Procedure PCP 01 Configuration Management.

Title: <p style="text-align: center;">central T subway DESIGN CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Change Control</p>	Document Type: Plan and Procedures
	Document Number: DCP 2.14
Unit/Function: Capital Programs & Construction Division Central Subway	Revision Number: Rev 1 11.20.09

6.0 PROCEDURE HISTORY

<u>Revision Level</u>	<u>Revision Date</u>	<u>Summary of Revision</u>	<u>Approved By</u>
Rev 1	11/20/09	Changes to CMB process including thresholds.	J. Funghi

7.0 APPROVALS

<u>Prepared by</u>	<u>Reviewed by</u>	<u>Signature & Date</u>
Originator of SOP, Title & Unit: Anders Ryerson Engineer Central Subway Partnership	Robert Rocco Configuration and Risk Manager Central Subway Partnership Albert Høe Project Engineer SFMTA Central Subway Roger Nguyen Manager Quality Assurance Office	 Nov. 30, 2009  Nov. 30, 2009  Nov. 30, 2009  30 Nov 2009

Title: central T subway DESIGN CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Change Control	Document Type: Plan and Procedures
	Document Number: DCP 2.14
Unit/Function: Capital Programs & Construction Division Central Subway	Revision Number: Rev 1 11.20.09

ATTACHMENTS

Title: <p style="text-align: center;">central T subway DESIGN CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Change Control</p>	Document Type: Plan and Procedures
	Document Number: DCP 2.14
Unit/Function: Capital Programs & Construction Division Central Subway	Revision Number: Rev 1 11.20.09

Engineering Change Proposal


ECP 2.14-1

STEP 1

Title: <Insert Short Description of Change>		ECP #: <Obtain from Document Control>
Submitted By: <Insert Name> Task #: <Insert Task #> Task Name: <Insert Task Title>	Date:	Signature:

STEP 2

Change Affects: FEIS/FEIR: Yes <input type="checkbox"/> No <input type="checkbox"/> Design Criteria: Yes <input type="checkbox"/> No <input type="checkbox"/> PE Package: Drawings, Specifications Yes <input type="checkbox"/> No <input type="checkbox"/> Safety or Security: Yes <input type="checkbox"/> No <input type="checkbox"/> Multiple Disciplines: Yes <input type="checkbox"/> No <input type="checkbox"/> Muni or DPT O&M: Yes <input type="checkbox"/> No <input type="checkbox"/>	Other Tasks/ Disciplines Affected: <List the Tasks/Disciplines Affected Other than the Subject One>
Construction Schedule Impact (if any): <Insert Construction and Design Schedule Impact> *Design Schedule Impact (if any):	
Construction Cost Impact (if any): <Insert order of magnitude estimate or detailed estimate preferred, if available> *Design Cost Impact (if any):	
Description of Change: <Insert Detailed Description of Change Requested>	
Reason and Justification for Change: <Insert Justification for Change>	
Reference Documents: <Reference or attach relevant documentation>	

Title: <div style="text-align: center;">  central T subway DESIGN CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Change Control </div>	Document Type: Plan and Procedures
	Document Number: DCP 2.14
Unit/Function: Capital Programs & Construction Division Central Subway	Revision Number: Rev 1 11.20.09

STEP 3

Reviewed By ECP Submittal Design Package Project Manager: <Insert Design Package Project Manager Name>	Date:	Signature:
Comments:		
Change Recommended: Yes <input type="checkbox"/> No <input type="checkbox"/>		

*Design schedule and/or cost impacts provided here are for reference only and acceptance of the subject design change does not constitute acceptance of either the design schedule or design cost impacts.

STEP 4

Reviewed By Project Controls Manager (Cost and Schedule): <Insert Project Controls Manager Name>	Date:	Signature:
Comments:		

STEP 5

Approved for Distribution By Discipline Lead: <Insert Discipline Lead Name(s)>	Date:	Signature:
Comments:		
Change Recommended: Yes <input type="checkbox"/> No <input type="checkbox"/>		


STEP 6

Reviewed By Impacted Task/Design Package Project Manager: <Insert Task/Design Package Project Manager Name>	Date:	Signature:
Comments:		
Change Recommended: Yes <input type="checkbox"/> No <input type="checkbox"/>		

Add as many Contract Package Manager review blocks as necessary

STEP 7

Reviewed By SFMTA Design Manager: <Insert SFMTA Design Manager Name(s)>	Date:	Signature:
Comments:		

Title: <div style="text-align: center;">  DESIGN CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Change Control </div>	Document Type: Plan and Procedures
	Document Number: DCP 2.14
Unit/Function: Capital Programs & Construction Division Central Subway	Revision Number: Rev 1 11.20.09

Change Recommended (If yes, forward to Project Manager): Yes No

STEP 8

Reviewed By Project Controls Manager (Cost and Schedule): <Insert Contract Package Manager Name>	Date:	Signature:
--	--------------	-------------------

Comments:

Change Recommended: Yes No

STEP 9

Reviewed By Program Manager Project Development: <Insert Program Manager's Name>	Date:	Signature:
---	--------------	-------------------

Comments:

Change Approved: Yes No
Change to be forwarded to CMB: Yes No

Verification of Design Change Implementation	
The undersigned verifies that changes have been made to all documents impacted by the above approval design change.	
Design Package: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3	
Design Package QC Manager:	

	Print

	Signature

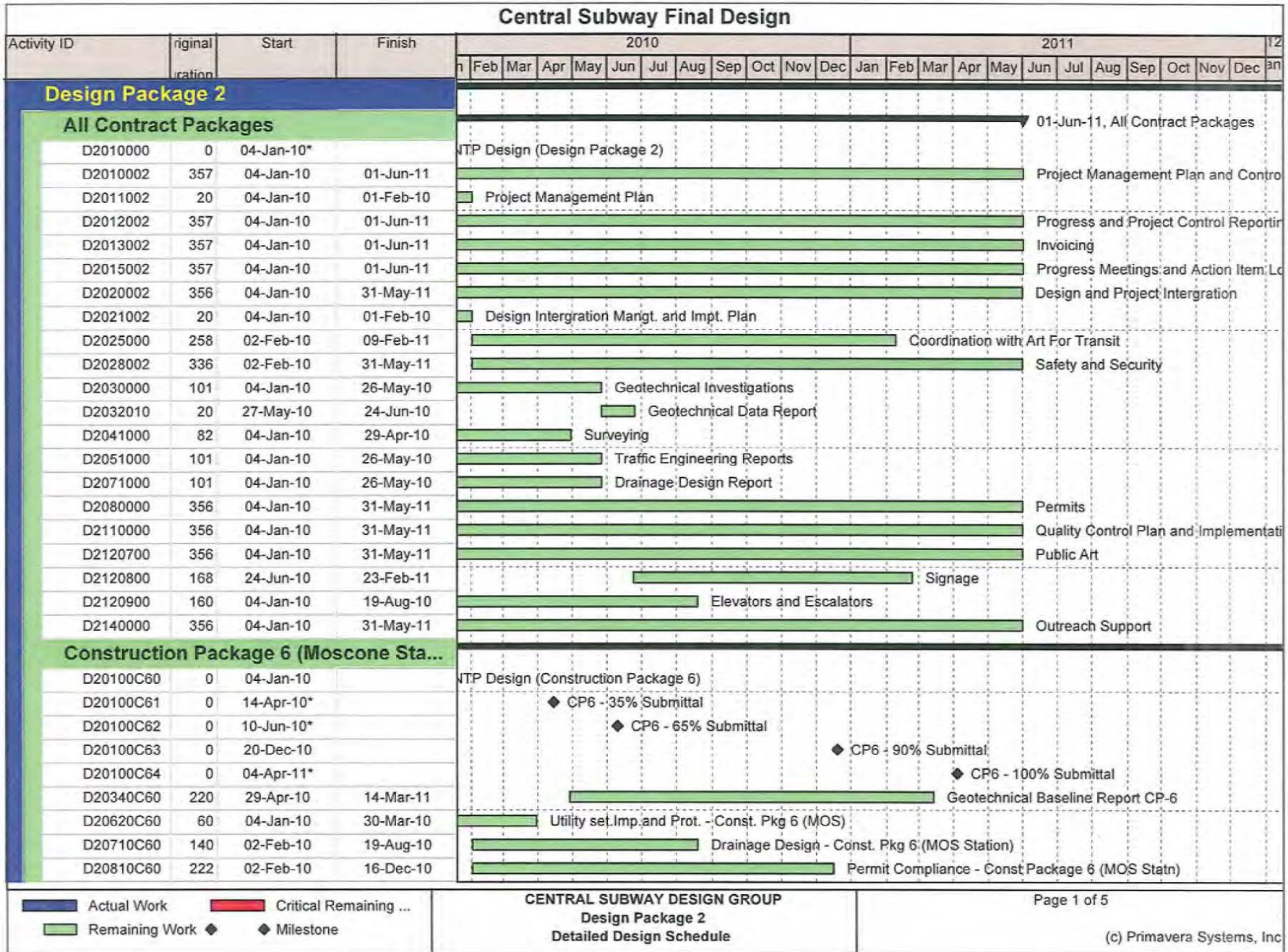
	Date

APPENDIX M
DESIGN SCHEDULE

Central Subway Project - Design Package #2

Contract No. CS-155-2

APPENDIX M - DESIGN SCHEDULE - DESIGN PACKAGE 2



As negotiated, it was agreed that the schedule for the 65% submittal would be reduced to conform to the contract RFP.

APPENDIX M - DESIGN SCHEDULE - DESIGN PACKAGE 2

Central Subway Final Design					2010												2011											
Activity ID	Original Duration	Start	Finish		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
D20910C60	260	03-Mar-10	11-Mar-11																									Specifications - Const. Pkg 6 (MOS Station)
D21030C60	260	03-Mar-10	11-Mar-11																									Cost Estimate - Const. Package 6 (MOS Station)
D21201C60	265	13-Jan-10	01-Feb-11																									Civil - Const. Pkg 6 (MOS Station)
D21202C60	240	04-Jan-10*	14-Dec-10																									Utilities - Const. Pkg 6 (MOS Station)
D21203C60	240	04-Jan-10	14-Dec-10																									Traffic Plans - Const. Pkg 6 (MOS Station)
D21204C60	250	28-Jan-10*	25-Jan-11																									Structural - Const. Pkg 6 (MOS Station)
D21205C60	250	28-Jan-10	25-Jan-11																									Archl - Const. Pkg 6 (MOS Station)
D21206C60	250	28-Jan-10*	25-Jan-11																									Urban Design - Const. Pkg 6 (MOS Station)
D21207C60	170	04-Jan-10	02-Sep-10																									Public Art - Moscone Station
D21208C60	120	24-Jun-10	14-Dec-10																									Signage - Moscone Station
D21209C60	120	04-Jan-10	23-Jun-10																									Elevators and Escalators - MOS Station
D21210C60	120	04-Jan-10	23-Jun-10																									Noise & Vibration - Const Pkg #6(MOS)
D21211C60	243	04-Jan-10	17-Dec-10																									Mechanical - Const.Pkg 6 (MOS Station)
D21211C61	45	04-Jan-10	09-Mar-10																									Mechanical Plumbing(MOS)
D21211C62	45	10-Mar-10	11-May-10																									Mechanical - Fire Safety & Suppression(MOS)
D21211C63	50	12-May-10	22-Jul-10																									Mechanical - Ventilation(MOS)
D21212C60	243	04-Jan-10	17-Dec-10																									Electrical -Const. Pkg 6 (MOS Station)
D21212C61	45	10-Mar-10	12-May-10																									Power & Lighting(MOS)
D21212C62	45	12-May-10	15-Jul-10																									ACS /CCTV / IDS / PA / Telephone(MOS)
D21212C63	45	16-Jul-10	17-Sep-10																									Fire Detection(MOS)
D21213C60	140	03-Mar-10	17-Sep-10																									Systems(Civil Interfaces)-Const.Cont.Pkg.6(MOS)
D21213C61	40	03-Mar-10	28-Apr-10																									Traction Power System(MOS)
D21213C62	40	28-Apr-10	23-Jun-10																									Overhead Contact System(MOS)
D21213C63	35	24-Jun-10	12-Aug-10																									Auto Train Control System(MOS)
D21213C64	25	13-Aug-10	17-Sep-10																									Communication Systems(MOS)
D212FRC65	20	20-Dec-10	19-Jan-11																									Final Review
D212FRC66	25	20-Jan-11	23-Feb-11																									Incorporate Comments
D21310C60	130	15-Apr-10*	18-Oct-10																									Constructibility/ Peer Review CP-6 (MOS Station)
D21320C60	120	29-Apr-10	18-Oct-10																									Construction Sched-Const.Cont.Pkg6(MOS)
D21410C60	150	28-Jan-10	30-Aug-10																									Graphics Support-Const.Cont.Pkg6(MOS)
D21510C60	130	24-Feb-11	26-Aug-11																									Bid Support - Const. C
D21620C60	1196	29-Aug-11	24-May-16																									
D21630C60	440	29-Aug-11	28-May-13																									
D21640C60	44	28-Jul-11	28-Sep-11																									Confirmed Contr

■ Actual Work ■ Critical Remaining ...
■ Remaining Work ◆ Milestone

CENTRAL SUBWAY DESIGN GROUP
 Design Package 2
 Detailed Design Schedule

Page 2 of 5

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APPENDIX M - DESIGN SCHEDULE - DESIGN PACKAGE 2

				Central Subway Final Design																							
Activity ID	Original Duration	Start	Finish	2010												2011											
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
D21650C60	66	23-Feb-16	24-May-16	Construction Package 5 (Chinatown St...																							
D20100C50	0	04-Jan-10		NTP Design (Construction Package 5)																							
D20100C51	0	22-Apr-10*		◆ CP5 - 35% Submittal																							
D20100C52	0	12-Jul-10*		◆ CP5 - 65% Submittal																							
D20100C53	0	09-Mar-11		◆ CP5 - 90% Submittal																							
D20100C54	0	11-May-11*		◆ CP5 - 100% Submittal																							
D20340C50	244	29-Apr-10	15-Apr-11	Geotechnical Baseline Report CP-5																							
D20620C50	60	04-Jan-10*	30-Mar-10	Utility Set. Imp. and Prot.-Const. Pkg 5(CTS Stat)																							
D20710C50	140	04-Jan-10	22-Jul-10	Drainage Design - Const. Package 5 (CTS Station)																							
D20810C50	222	03-Mar-10	18-Jan-11	Permit Compliance - Const Package 5 (CTS Statn)																							
D20910C50	261	05-Apr-10	14-Apr-11	Specifications - Const. Package 5 (CTS Statn)																							
D21030C50	261	05-Apr-10	14-Apr-11	Cost Estimate - Const. Package 5 (CTS Statn)																							
D21201C50	268	11-Feb-10	04-Mar-11	Civil - Const. Pkg 5 (CTS Station)																							
D21202C50	210	05-Mar-10	31-Dec-10	Utilities - Const. Pkg 5 (CTS Station)																							
D21203C50	210	05-Mar-10	31-Dec-10	Traffic Plans - Const. Pkg 5 (CTS Station)																							
D21204C50	250	12-Mar-10	08-Mar-11	Structural - Const. Pkg 5 (CTS Station)																							
D21205C50	250	12-Mar-10	08-Mar-11	Archl - Const. Pkg 5 (CTS Station)																							
D21206C50	200	09-Apr-10	25-Jan-11	Urban Design - Const. Pkg 5 (CTS Station)																							
D21207C50	170	02-Feb-10	01-Oct-10	Public Art - Chinatown Station																							
D21208C50	120	13-Jul-10	31-Dec-10	Signage - Chinatown Station																							
D21209C50	120	02-Feb-10	22-Jul-10	Elevators and Escalators - CTS Station																							
D21210C50	120	02-Feb-10	22-Jul-10	Noise & Vibration - Const Pkg #5(CTS)																							
D21211C50	252	10-Mar-10	08-Mar-11	Mechanical - Const. Pkg. 5 (CTS Station)																							
D21211C51	45	10-Mar-10	11-May-10	Mechanical - Plumbing(CTS)																							
D21211C52	45	12-May-10	15-Jul-10	Mechanical - Fire Safety & Suppression(CTS)																							
D21211C53	50	27-Dec-10	08-Mar-11	Mechanical - Ventilation(CTS)																							
D21212C50	252	10-Mar-10	08-Mar-11	Electrical - Const. Pkg 5 (CTS Station)																							
D21212C51	45	12-May-10	15-Jul-10	Power & Lighting(CTS)																							
D21212C52	45	16-Jul-10	17-Sep-10	ACS / CCTV / IDS / PA / Telephone(CTS)																							
D21212C53	45	04-Jan-11	08-Mar-11	Fire Detection(CTS)																							
D21213C50	140	28-Apr-10	12-Nov-10	Systems(Civil Interfaces)-Const.Cont.Pkg.5(CTS)																							
D21213C51	40	28-Apr-10	23-Jun-10	Traction Power System(CTS)																							

█ Actual Work █ Critical Remaining ...
█ Remaining Work ◆ Milestone

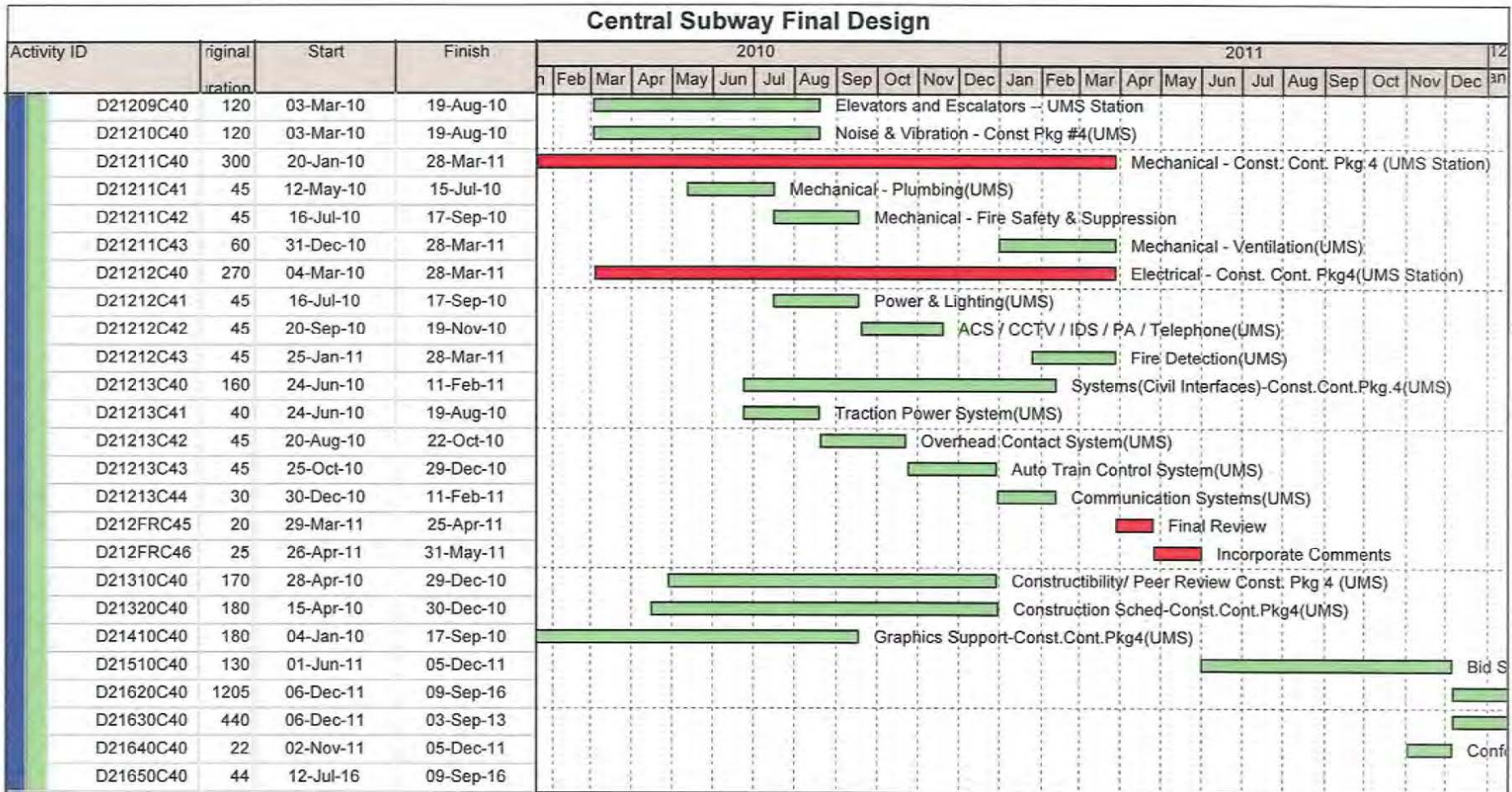
CENTRAL SUBWAY DESIGN GROUP
 Design Package 2
 Detailed Design Schedule

Page 3 of 5

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As negotiated, it was agreed that the schedule for the 65% submittal would be reduced to conform to the contract RFP.

APPENDIX M - DESIGN SCHEDULE - DESIGN PACKAGE 2



█ Actual Work █ Critical Remaining ...
█ Remaining Work ◆ Milestone

APPENDIX N
CONSTRUCTION CONTRACT PACKAGE DEFINITIONS

Central Subway Project - Design Package #2
Contract No. CS-155-2

APPENDIX N

Construction Contract Package Definitions

Construction Contract 1253 (CBP 4) -- Union Square/Market Street (UMS) Station

Contract: Includes maintenance of pedestrian and vehicular traffic on Stockton Street; removal / relocation and restoration of curbs, sidewalks, streetlight & trolley poles, traffic signals and fire hydrants as needed to perform the contract work; removal / restoration of the overhead contact system on Stockton Street as needed to perform the contract work; removal of the temporary trolley reroute system; relocation / protection / restoration of utilities and other facilities as needed for and to repair damage as a result of the contract work; mitigation of the effects of groundwater changes, settlement due to the combination of tunneling and excavation, and other mitigations required by the FEIS / FEIR; connection and modifications to the Powell Street Station to handle the flow of passengers transferring to / from the UMS Station and maintain the safety and security of the Powell Street Station; reconstruction of the Powell Street Station Apple Store entrance; modifications to the Ellis Street garage and Union Square garage and Park required for UMS Station emergency ventilation and Union Square entrances / exits; finishes, railings, Agent Booths, doors, gates, AC substation, Gap Breaker, elevators, escalators, lighting, emergency ventilation fans including local controls and logic controllers, and HVAC; fire alarm, suppression and protection; interface relays and panels, and local status indications for and control of station systems and controllers and interfaces to communication systems and equipment installed under Contract 1256 for remote status indication and control; wiring, conduit and protection devices between interface and power panels; installation of infrastructure for fare collection equipment, station waterproofing and waterproofing over underground spaces including sub-sidewalk basements; pavement restoration and resurfacing; surface restoration; and station interface and systems testing, station commissioning, station safety and security certification, and start-up, as-built and record documents, and operations and maintenance manuals and training.

Construction Contract 1254 (CBP 5) -- Chinatown Station Contract: Includes maintenance of pedestrian and vehicular traffic on Stockton Street; removal / relocation and restoration of curbs, sidewalks, streetlight & trolley poles, traffic signals and fire hydrants; adjustments to the overhead contact system on Stockton Street as-needed to perform the contract work; relocation / protection / restoration of utilities and other facilities as needed for and to repair damage as a result of the contract work; mitigation of the effects of groundwater changes, settlement due to the combination of tunneling and excavation, and other mitigations required by the FEIS / FEIR; finishes, railings, Agent Booth, doors, AC and DC Traction Power substations, elevators, escalators, lighting, emergency ventilation fans including local controls and logic controllers, and HVAC; fire alarm, suppression and protection; interface relays, panels, local status indications for and control of station systems and controllers and interfaces to communication systems and equipment installed under Contract 1256 for remote status indication and control; wiring, conduit and protection devices between interface and power panels; crossover cavern; tunnel cross passages 1-4; installation of infrastructure for fare collection equipment,

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station waterproofing and waterproofing over underground spaces; pavement restoration and resurfacing; surface restoration; and station interface and systems testing, station commissioning, station safety and security certification, and start-up, as-built and record documents, and operations and maintenance manuals and training.

Construction Contract 1255 (CBP 6) -- Moscone Station Contract: Includes maintenance of pedestrian and vehicular traffic on Fourth Street; relocation / relocation and restoration of curbs, sidewalks, streetlight & trolley poles, traffic signals and fire hydrants as needed to perform the contract work; removal / restoration of the Fourth Street overhead contact system as needed to perform the contract work; relocation / protection / restoration of utilities and other facilities as needed for and to repair damage as a result of the contract work; mitigation of the effects of groundwater changes, settlement due to the combination of tunneling and excavation, and other mitigations required by the FEIS / FEIR; finishes, railings, Agent Booth, doors, AC and DC Traction Power substations, elevators, escalators, lighting, emergency ventilation fans including local controls and logic controllers, and HVAC; fire alarm, suppression and protection; interface relays, panels, local status indications for and control of station systems and controllers and interfaces to communication systems and equipment installed under Contract 1256 for remote status indication and control; wiring, conduit and protection devices between interface and power panels; installation of infrastructure for fare collection equipment, station waterproofing and waterproofing over underground spaces; pavement restoration and resurfacing; surface restoration; and station interface and systems testing, station commissioning, station safety and security certification, and start-up, as-built and record documents, and operations and maintenance manuals and training.

Assumptions: The above Construction Bid Packages describe the work included in the construction budgets in section 6.1.1 of the contract with the following exceptions:

- a) The construction budget for Contract 1253 does not include lengthening or widening the UMS platform.
- b) The construction budget for Contract 1253 does not include relocation of rooms within the Powell Street Station.
- c) The construction budget for Contract 1254 does not reflect the proposed reduction in the Chinatown Station cavern height.
- d) The two percent construction insurance shown in the December 31, 2008 Revision 0i of the Capital Cost Estimate has been deleted to reflect the SFMTA's plan to implement an Owner Controlled Insurance Program.
- e) The construction budgets assume no buffer float between construction activities of the same station construction contract and indirect costs from buffer float. The December 31, 2008 Revision 0i of the Capital Cost Estimate is based on schedule CSP 11-8 dated 12/10/08.
- f) PB Telamon (CS 155-1) will provide written acceptance that amounts shown as "additional costs for tunnel construction" prior to Chinatown Station platform and crossover cavern excavation shown in the December 31, 2008 Revision 0i of the Capital Cost Estimate are costs to Contract 1254 and not to Contract 1252.

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- g) Permanent Utility connection charges and the procurement and installation of Public Art and Fare Collection equipment are not included in the station construction budgets.
- h) The 2009 Base Year Cost of each station construction contract package will be adjusted to reflect the attached reconciliation tables.

APPENDIX N - CONSTRUCTION CONTRACT PACKAGE RECONCILIATION TABLE
CS 155-2 CENTRAL SUBWAY PROJECT DESIGN PACKAGE 2

Contract No. 1253 (CP-4)

Contract Package 4 - Union Square / Market Street Station

All values in this table refer to Base Year Cost

Value as in the 2008 Capital cost estimate, Rev 0i: \$ 172,600,699

PE Phase SCC Code	Item	Value in the 2008 Capital Cost Estimate, Rev 0i	Value as in the 2008 Capital cost estimate, Rev 0i: \$ 172,600,699			Total Adjustment (Variance)	Notes
			Total Additions	Total Deductions	Revised value		
20	STATIONS, STOPS, TERMINALS, INTERMODAL		\$ -	\$ -	\$ -		
20.03	UNDERGROUND, STATION, STOP, SHELTER, MALL, TERMINAL, PLATFORM		\$ -	\$ -	\$ -	\$ -	
20.03.02	Construct UMS Station		\$ -	\$ -	\$ -	\$ -	
20.03.02-1	Site Development and Stockton Street Removals		\$ -	\$ -	\$ -	\$ -	
20.03.02-2	Ground Support (secant piles)		\$ -	\$ -	\$ -	\$ -	
20.03.02-3	Ground Improvement (CSM)		\$ -	\$ -	\$ -	\$ -	
20.03.02-4	Cut and Cover excavation, hauling and disposal		\$ -	\$ -	\$ -	\$ -	
20.03.02-4a	Excavation of Platform Cavern Bulb-out (includes jet grout)		\$ -	\$ -	\$ -	\$ -	
20.03.02-5	Structural Concrete		\$ -	\$ -	\$ -	\$ -	
20.03.02-6	UMS Mechanical (Ventilation, fire protection and plumbing)		\$ -	\$ -	\$ -	\$ -	
*20.03.02-6-55	Station fire sprinklers system		\$ 605,000	\$ -	\$ 605,000	\$ 605,000	
20.03.02-6-56	Fire Line Service: Pipe, steel, galvanized, threaded, 6", schedule 40, Spec. A-53, includes coupling and clevis type hanger sized for covering, 10' OC		\$ -	\$ -	\$ -	\$ -	
20.03.02-6-60	Tunnel Area Wet Standpipe: Pipe, steel, galvanized, threaded, 6", schedule 40	\$ 900,472	\$ -	\$ (900,472)	\$ -	\$ (900,472)	
*20.03.02-6-70	Average FM200 system, maximum (UMS) -- assembly		\$ 514,135	\$ -	\$ 514,135	\$ 514,135	
20.03.02-6-71	Catch basins, frames and covers, cast iron, 24" square, 500 lb., excludes footing, excavation, and backfill	\$ 56,370	\$ -	\$ (49,239)	\$ 7,131	\$ (49,239)	Estimate cost was allocated between contracts CP4 and CP7 proportionally to length of station and tunnels
20.03.02-6-72	Trackway Underdrain (North Bound): Pipe, steel, galvanized, threaded, 6", schedule 40	\$ 391,120	\$ -	\$ (341,640)	\$ 49,480	\$ (341,640)	Estimate cost was allocated between contracts CP4 and CP7 proportionally to length of station and tunnels
20.03.02-6-73	Trackway Underdrain (South Bound): Pipe, steel, galvanized, threaded, 6", schedule 40	\$ 391,120	\$ -	\$ (341,640)	\$ 49,480	\$ (341,640)	Estimate cost was allocated between contracts CP4 and CP7 proportionally to length of station and tunnels
20.03.02-9	Indirects and Margin PLUS addnl indirect costs resulting from inclusion of buffer float	\$ 28,347,834	\$ -	\$ (2,000,000)	\$ 26,347,834	\$ (2,000,000)	
20.03.01-14	Allowance for Construction Insurance at 2% of base costs	\$ 2,359,965	\$ -	\$ (2,359,965)	\$ (0)	\$ (2,359,965)	
20.03.00	Public Art	\$ 3,473,956	\$ -	\$ (3,473,956)	\$ 0	\$ (3,473,956)	
40.02.04---	MUNI Ductbanks 24"x24" Concrete w/Conduits		\$ -	\$ -	\$ -	\$ -	
	Saw cut Asphalt/Concrete Pavement		\$ -	\$ -	\$ -	\$ -	
	Asphalt/Concrete Pavement Demo & Removal		\$ -	\$ -	\$ -	\$ -	
	Trench Excavation		\$ -	\$ -	\$ -	\$ -	
	Trench Backfill		\$ -	\$ -	\$ -	\$ -	
	Haul and Dispose 12 CY dump 30 miles RT		\$ -	\$ -	\$ -	\$ -	
	C.I.P. Concrete Duct (24"x24")		\$ -	\$ -	\$ -	\$ -	
	Aggregate Bedding/Base		\$ -	\$ -	\$ -	\$ -	
	Trench Cover Plates		\$ -	\$ -	\$ -	\$ -	
	Compaction - Backfill		\$ -	\$ -	\$ -	\$ -	
	4" PVC Conduit, 6 EA in Duct Bank (6x1590 LF)		\$ -	\$ -	\$ -	\$ -	
40.06	PEDESTRIAN/BIKE ACCESS ANC ACCOMODATION, LANDSCAPING		\$ -	\$ -	\$ -	\$ -	
40.06.03	UMS Pedestrian/Bike Access, Accommodation and Landscaping		\$ -	\$ -	\$ -	\$ -	
40.06.03	Indirects and Mark up (formula missed this amount)	\$ -	\$ 58,038	\$ -	\$ 58,038	\$ 58,038	
40.07	AUTOMOBILE, BUS, VAN ACCESSWAYS INCL ROADS, PARKING LOTS		\$ -	\$ -	\$ -	\$ -	
40.07.01	Auto/bus access; parking lots etc		\$ -	\$ -	\$ -	\$ -	
40.07.03	UMS Auto/bus access; parking lots etc		\$ -	\$ -	\$ -	\$ -	
---	Indirects and Mark up (formula missed this amount)	\$ -	\$ 104,883	\$ -	\$ 104,883	\$ 104,883	
40.08	TEMPORARY FACILITIES AND OTHER INDIRECT COSTS DURING CONSTRUCTION		\$ -	\$ -	\$ -	\$ -	
40.08.07	UMS Traffic Control	\$ 864,375	\$ 600,000	\$ -	\$ 1,464,375	\$ 600,000	
40.08.08	UMS Building Protection/Minor Repairs		\$ -	\$ -	\$ -	\$ -	
	Trolley Reroute	\$ 1,600,000	\$ -	\$ (960,000)	\$ 640,000	\$ (960,000)	The item has been split between CP2 (60%) and CP4 (40%)
50	SYSTEMS		\$ -	\$ -	\$ -	\$ -	

PE Phase SCC Code	Item	Value in the 2008 Capital Cost Estimate, Rev 01			Revised value	Total Adjustment (Variance)	Notes
			Total Additions	Total Deductions			
50.03	TRACTION POWER SUPPLY: SUBSTATIONS		\$ -	\$ -	\$ -	\$ -	
50.03.(02)	UMS Traction Power Substation		\$ -	\$ -	\$ -	\$ -	
	Gap Breaker (moved from MOS & CTS)	\$ -	\$ 1,089,121	\$ -	\$ 1,089,121	\$ 1,089,121	
	Gap Breaker spares (moved from MOS & CTS)	\$ -	\$ 22,000	\$ -	\$ 22,000	\$ 22,000	
STS	Surface Trackwork and Systems		\$ -	\$ -	\$ -	\$ -	
50.05	COMMUNICATIONS		\$ -	\$ -	\$ -	\$ -	
50.05.02	Communications - Union Square Market Street Station		\$ -	\$ -	\$ -	\$ -	
50.05.02-1	CCTV (Based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
50.05.02-1	Digital Pan/Tilt/Zoom camera, dome enclosure, mounting assemblies, power supply - platform and mezzanine		\$ 7,769	\$ -	\$ 7,769	\$ 7,769	
50.05.02-1	Motor drive 232/422 converter for PTZ cameras		\$ 845	\$ -	\$ 845	\$ 845	
50.05.02-1	Fixed digital cameras - incl. enclosure, mounting assemblies, etc. - platform, mezzanine levels		\$ 153,755	\$ -	\$ 153,755	\$ 153,755	
50.05.02-1	19" LCD monitor (per agent booth)		\$ 7,243	\$ -	\$ 7,243	\$ 7,243	
50.05.02-1	Video Switch (1 per booth)		\$ 1,110	\$ -	\$ 1,110	\$ 1,110	
50.05.02-1	Digital Video Recorder (1 at Comm Rm only)		\$ 18,499	\$ -	\$ 18,499	\$ 18,499	
50.05.02-1	RG6/U coaxial cable from CCTV cameras to Digital Video Recorder - 125' per camera; incl. connectors, etc.		\$ 11,216	\$ -	\$ 11,216	\$ 11,216	
50.05.02-1	#18/2C for CCTV alarm		\$ 14,386	\$ -	\$ 14,386	\$ 14,386	
50.05.02-1	#18/4C for CCTV Pan/Tilt/Zoom		\$ 5,449	\$ -	\$ 5,449	\$ 5,449	
50.05.02-1	#12 THW for power		\$ 508	\$ -	\$ 508	\$ 508	
50.05.02-1	#12 grounding conductor		\$ 518	\$ -	\$ 518	\$ 518	
50.05.02-1	CAT 5E cable		\$ 638	\$ -	\$ 638	\$ 638	
50.05.02-1	3/4" GRSC - power		\$ 3,285	\$ -	\$ 3,285	\$ 3,285	
50.05.02-1	3/4" GRSC - communication for RG6, PTZ, alarm wiring		\$ 96,900	\$ -	\$ 96,900	\$ 96,900	
50.05.02-2	P.A. System (Based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
50.05.02-2	Power Amplifier		\$ 4,243	\$ -	\$ 4,243	\$ 4,243	
50.05.02-2	Ambient Noise Compensator		\$ 3,217	\$ -	\$ 3,217	\$ 3,217	
50.05.02-2	Telephone Access Module		\$ 833	\$ -	\$ 833	\$ 833	
50.05.02-2	Microphone/Line Mixer		\$ 2,695	\$ -	\$ 2,695	\$ 2,695	
50.05.02-2	Speakers (mezzanine and platform levels) - incl. mounting accessories, etc.		\$ 45,774	\$ -	\$ 45,774	\$ 45,774	
50.05.02-2	Paging Microphone (agent booth)		\$ 510	\$ -	\$ 510	\$ 510	
50.05.02-2	Keypad controls (agent booth)		\$ 3,137	\$ -	\$ 3,137	\$ 3,137	
50.05.02-2	Ambient noise sensors (platform)		\$ 1,369	\$ -	\$ 1,369	\$ 1,369	
50.05.02-2	Speaker wiring - for speakers and sensors - #16/2C - 150' per speaker, sensor		\$ 50,490	\$ -	\$ 50,490	\$ 50,490	
50.05.02-2	#12 THW for power		\$ 508	\$ -	\$ 508	\$ 508	
50.05.02-2	#12 grounding conductor		\$ 518	\$ -	\$ 518	\$ 518	
50.05.02-2	CAT 5E cable		\$ 638	\$ -	\$ 638	\$ 638	
50.05.02-2	3/4" GRSC - power		\$ 3,285	\$ -	\$ 3,285	\$ 3,285	
50.05.02-2	3/4" GRSC - communication		\$ 186,246	\$ -	\$ 186,246	\$ 186,246	
50.05.02-4	Destination Sign System (Based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
50.05.02-4	#12 THW for power		\$ 2,436	\$ -	\$ 2,436	\$ 2,436	
50.05.02-4	#12 grounding conductor		\$ 3,315	\$ -	\$ 3,315	\$ 3,315	
50.05.02-4	CAT 5E cable		\$ 4,084	\$ -	\$ 4,084	\$ 4,084	
50.05.02-4	3/4" GRSC - power		\$ 21,022	\$ -	\$ 21,022	\$ 21,022	
50.05.02-4	3/4" GRSC - communication		\$ 21,022	\$ -	\$ 21,022	\$ 21,022	
50.05.02-5	Access Control System (Based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
50.05.02-5	Master panel for access system (incl. mounting accessories, etc.)		\$ 15,685	\$ -	\$ 15,685	\$ 15,685	
50.05.02-5	Card access points (incl. backbox, mounting accessories, etc.)		\$ 2,482	\$ -	\$ 2,482	\$ 2,482	
50.05.02-5	Ethernet Interface		\$ 6,659	\$ -	\$ 6,659	\$ 6,659	
50.05.02-5	Electric door hardware (door alarm)		\$ 36,776	\$ -	\$ 36,776	\$ 36,776	
50.05.02-5	Motion Detectors		\$ -	\$ -	\$ -	\$ -	
50.05.02-5	CAT 5E cable		\$ 510	\$ -	\$ 510	\$ 510	
50.05.02-5	#12 THW for power		\$ 406	\$ -	\$ 406	\$ 406	
50.05.02-5	#12 grounding conductor		\$ 414	\$ -	\$ 414	\$ 414	
50.05.02-5	3/4" GRSC - power		\$ 2,628	\$ -	\$ 2,628	\$ 2,628	
50.05.02-5	3/4" GRSC - communication		\$ 52,556	\$ -	\$ 52,556	\$ 52,556	

PE Phase SCC Code	Item	Value in the 2008 Capital Cost Estimate, Rev 0i			Revised value	Total Adjustment (Variance)	Notes
			Total Additions	Total Deductions			
			\$ -	\$ -	\$ -	\$ -	
50.05.02-6	Fiber Optics and CTS (Based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
50.05.02-6	2" GRSC (stub up for primary, secondary, spare conduits)		\$ 60,578	\$ -	\$ 60,578	\$ 60,578	
50.05.02-6	Router/Switch		\$ 2,060	\$ -	\$ 2,060	\$ 2,060	
50.05.02-6	PLC's for ventilation fan & damper		\$ 53,803	\$ -	\$ 53,803	\$ 53,803	
50.05.02-6	CAT 5E cable		\$ 766	\$ -	\$ 766	\$ 766	
			\$ -	\$ -	\$ -	\$ -	
50.05.02-7	Fire Alarm System (based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
50.05.02-7	F/I fire alarm control panel		\$ 50,381	\$ -	\$ 50,381	\$ 50,381	
50.05.02-7	F/I annunciator		\$ 5,964	\$ -	\$ 5,964	\$ 5,964	
50.05.02-7	F/I smoke/heat detector		\$ 3,245	\$ -	\$ 3,245	\$ 3,245	
50.05.02-7	F/I manual pull station		\$ 3,772	\$ -	\$ 3,772	\$ 3,772	
50.05.02-7	F/I duct detector		\$ 18,400	\$ -	\$ 18,400	\$ 18,400	
50.05.02-7	F/I horn and strobe (ADA type)		\$ 14,980	\$ -	\$ 14,980	\$ 14,980	
50.05.02-7	F/I alarm bell		\$ 222	\$ -	\$ 222	\$ 222	
			\$ -	\$ -	\$ -	\$ -	
50.05.02-7	F/I (5) FS, (5) TS, (2) electrical Rec, (5) HVAC shutdown, (3) preaction, (1) SCADA		\$ 6,652	\$ -	\$ 6,652	\$ 6,652	
50.05.02-7	F/I battery		\$ 1,221	\$ -	\$ 1,221	\$ 1,221	
50.05.02-7	F/I battery charger		\$ 791	\$ -	\$ 791	\$ 791	
50.05.02-7	F/I addressable devices		\$ 2,401	\$ -	\$ 2,401	\$ 2,401	
			\$ -	\$ -	\$ -	\$ -	
50.05.02-7	F/I wiring/conduit for all field devices and FACP (4 wires per 1" C, 1 ckt per device)		\$ 490,677	\$ -	\$ 490,677	\$ 490,677	
50.05.02-7	F/I outlet boxes, square, 4"		\$ 6,754	\$ -	\$ 6,754	\$ 6,754	
50.05.02-7	Test/Training/Documentation/Installation/ Programming		\$ 14,588	\$ -	\$ 14,588	\$ 14,588	
50.05.02-7	Spare parts		\$ 23,286	\$ -	\$ 23,286	\$ 23,286	
			\$ -	\$ -	\$ -	\$ -	
50.05.02-8	Facility Telephone System (based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
			\$ -	\$ -	\$ -	\$ -	
50.05.02-8	F/I phone wire connections to facility phones (1" conduit & 4 pr cable)		\$ 263,252	\$ -	\$ 263,252	\$ 263,252	
			\$ -	\$ -	\$ -	\$ -	
50.05.02-9	Mayor's Emergency Telephone System (METS) (based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
			\$ -	\$ -	\$ -	\$ -	
50.05.02-9	F/I phone wire connection (2" conduit & 4 pr cable)		\$ 4,539	\$ -	\$ 4,539	\$ 4,539	
50.05.02-9	F/I U/G conduit from station to DTIS network		\$ 41,976	\$ -	\$ 41,976	\$ 41,976	
			\$ -	\$ -	\$ -	\$ -	
50.05.02-10	Public Telephone System (based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
			\$ -	\$ -	\$ -	\$ -	
50.05.02-10	F/I phone wire connections (1" conduit & 4 pr cable)		\$ 27,233	\$ -	\$ 27,233	\$ 27,233	
50.05.02-10	F/I power connections (1" conduit & #12 wire)		\$ 25,646	\$ -	\$ 25,646	\$ 25,646	
50.05.02-10	F/I phone and communication cable punch board (general phones use)		\$ 7,722	\$ -	\$ 7,722	\$ 7,722	
50.05.04	Communications Systems Spares		\$ -	\$ -	\$ -	\$ -	
50.05.04-1	CCTV		\$ 12,526	\$ -	\$ 12,526	\$ 12,526	This item has been split between stations, 1/4th to CP4, CP5, CP6 and Fourth Brannan Station respectively
50.05.04-2	P.A. System		\$ 2,661	\$ -	\$ 2,661	\$ 2,661	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.04-3	Remote Infra Red Sign System (RIRS)		\$ -	\$ -	\$ -	\$ -	
50.05.04-5	Access Control (not Security-Monitoring)		\$ 1,077	\$ -	\$ 1,077	\$ 1,077	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.04-7	Intrusion Control & OCC Integration		\$ -	\$ -	\$ -	\$ -	
50.05.08	Systemwide		\$ -	\$ -	\$ -	\$ -	
50.05.08-4	Fire Department Telephone System (based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
			\$ -	\$ -	\$ -	\$ -	
50.05.08-4	F/I power to each fire phone station (station)		\$ 90,478	\$ -	\$ 90,478	\$ 90,478	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.09	Communications Systems (System Integration, Start-up and Operational Testing, Training, O&M, Service Contract)		\$ -	\$ -	\$ -	\$ -	
50.05.09-1	CCTV		\$ -	\$ -	\$ -	\$ -	
50.05.09-1	Training of Muni Personnel		\$ 7,500	\$ -	\$ 7,500	\$ 7,500	This item has been split between stations, 1/4th to CP4, CP5, CP6 and Fourth Brannan Station respectively
50.05.09-1	Operations and Maintenance Manuals		\$ 6,250	\$ -	\$ 6,250	\$ 6,250	This item has been split between stations, 1/4th to CP4, CP5, CP6 and Fourth Brannan Station respectively
50.05.09-1	System Startup and Operational Testing		\$ 6,250	\$ -	\$ 6,250	\$ 6,250	This item has been split between stations, 1/4th to CP4, CP5, CP6 and Fourth Brannan Station respectively

PE Phase SCC Code	Item	Value in the 2008 Capital Cost Estimate, Rev 0i			Revised value	Total Adjustment (Variance)	Notes
			Total Additions	Total Deductions			
50.05.09-2	P.A. System		\$ -	\$ -	\$ -	\$ -	
50.05.09-2	P.A. System		\$ -	\$ -	\$ -	\$ -	
50.05.09-2	Training of Muni Personnel		\$ 10,000	\$ -	\$ 10,000	\$ 10,000	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.09-2	Operations and Maintenance Manuals		\$ 8,333	\$ -	\$ 8,333	\$ 8,333	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.09-2	System Startup and Operational Testing		\$ 8,333	\$ -	\$ 8,333	\$ 8,333	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.09-5	Access Control System		\$ -	\$ -	\$ -	\$ -	
	Training of Muni Personnel		\$ 10,000	\$ -	\$ 10,000	\$ 10,000	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
	Operations and Maintenance Manuals		\$ 8,333	\$ -	\$ 8,333	\$ 8,333	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
	System Startup and Operational Testing		\$ 8,333	\$ -	\$ 8,333	\$ 8,333	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
	Communications Subtotal	\$ -	\$ 2,106,565	\$ -	\$ 2,106,565	\$ 2,106,565	
50.06	FARE COLLECTION SYSTEM AND EQUIPMENT		\$ -	\$ -	\$ -	\$ -	
50.06.02	Union Square/Market Street Station (based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
	6"x 2" underfloor duct under faregates - 1 for power, 1 for communication		\$ 19,006	\$ -	\$ 19,006	\$ 19,006	
	CAT 5E cable		\$ 2,552	\$ -	\$ 2,552	\$ 2,552	
	#12 THW for power		\$ 1,015	\$ -	\$ 1,015	\$ 1,015	
	#18/8C alarm wire		\$ 3,146	\$ -	\$ 3,146	\$ 3,146	
	3/4" GRSC - power		\$ 13,139	\$ -	\$ 13,139	\$ 13,139	
	3/4" GRSC - communication		\$ 13,139	\$ -	\$ 13,139	\$ 13,139	
		\$ 38,385,211	\$ 5,151,739	\$ (10,426,912)	\$ 33,110,039	\$ (5,275,172)	
\$ (19,179,121)				\$ (5,275,172)		\$ 167,325,527	2009 Base Year Cost referred to in section 6.1.1 of Contract CS 155-2
				\$ 167,325,527			

APPENDIX N - CONSTRUCTION CONTRACT PACKAGE RECONCILIATION TABLE
CS 155-2 CENTRAL SUBWAY PROJECT DESIGN PACKAGE 2

Contract No. 1254 (CP-5)

Contract Package 5 - Chinatown Station

All values in this table refer to Base Year Cost

Value as in the 2008 Capital cost estimate, Rev 0i: \$ 149,116,873

PE Phase SCC Code	Item	Value in the 2008 Capital Cost Estimate, Rev 0i	Total Additions	Total Deductions	Revised value	Total Adjustment (Variance)	Notes
10	GUIDEWAY AND TRACK ELEMENTS		\$ -	\$ -	\$ -		
10.07	GUIDEWAY: UNDERGROUND TUNNEL		\$ -	\$ -	\$ -	\$ -	
10.07.08	Excavate & Construct Cross Passages POR-CTS (Moved this to Chinatown)		\$ 3,009,968	\$ -	\$ 3,009,968	\$ 3,009,968	
	Cross Passages -	\$ 1,000,000	\$ -	\$ (1,000,000)	\$ -	\$ (1,000,000)	
	Bored Tunnel to North Beach incl. X-passages		\$ -	\$ -	\$ -	\$ -	
	Crossover Cavern		\$ -	\$ -	\$ -	\$ -	
20	STATIONS, STOPS, TERMINALS, INTERMODAL		\$ -	\$ -	\$ -	\$ -	
20.03	UNDERGROUND, STATION, STOP, SHELTER, MALL, TERMINAL, PLATFORM		\$ -	\$ -	\$ -	\$ -	
20.03.03	Construct CTS Station		\$ -	\$ -	\$ -	\$ -	
20.03.03-1	Site Mobilization		\$ -	\$ -	\$ -	\$ -	
20.03.03-2	Headhouse		\$ -	\$ -	\$ -	\$ -	
20.03.03-3	Emergency Egress		\$ -	\$ -	\$ -	\$ -	
20.03.03-4	Cross cut		\$ -	\$ -	\$ -	\$ -	
20.03.03-6	Platform		\$ -	\$ -	\$ -	\$ -	
20.03.03-5	Station: Mechanical (Ventilation, fire protection and plumbing)		\$ -	\$ -	\$ -	\$ -	
20.03.03-5-71	Catch basins, frames and covers, cast iron, 24" square, 500 lb., excludes footing, excavation, and backfill	\$ 56,370	\$ -	\$ (16,300)	\$ 40,070	\$ (16,300)	Estimate cost was allocated between contracts CP5 and CP7 proportionally to length of station and tunnels
20.03.03-5-78	Trackway Underdrain (North Bound): Pipe, steel, galvanized, threaded, 6", schedule 40	\$ 391,120	\$ -	\$ (113,084)	\$ 278,036	\$ (113,084)	Estimate cost was allocated between contracts CP5 and CP7 proportionally to length of station and tunnels
20.03.03-5-79	Trackway Underdrain (South Bound): Pipe, steel, galvanized, threaded, 6", schedule 40	\$ 391,120	\$ -	\$ (113,084)	\$ 278,036	\$ (113,084)	Estimate cost was allocated between contracts CP5 and CP7 proportionally to length of station and tunnels
	To Correct Error Below Sub & Other Costs (added back in)		\$ -	\$ -	\$ -	\$ -	
20.03.03-5-55	Station fire sprinklers system	\$ 605,000	\$ -	\$ -	\$ 605,000	\$ 605,000	
20.03.03-5-70	Average FM200 system, maximum (Chinatown) -- assembly	\$ 667,149	\$ -	\$ -	\$ 667,149	\$ 667,149	
20.03.03-5-75	Sump Pump (Duplex, 600 gpm each, 100 ft head, valve assembly)	\$ 60,500	\$ -	\$ -	\$ 60,500	\$ 60,500	
20.03.03-7	Station: Architectural Finishes		\$ -	\$ -	\$ -	\$ -	
20.03.03-8	Demobilization		\$ -	\$ -	\$ -	\$ -	
20.03.03-11	Electrical 480V and below, Chinatown Station		\$ -	\$ -	\$ -	\$ -	
20.03.03-12	Adjustment for 2007\$ to 2008\$ and \$2009 Base		\$ -	\$ -	\$ -	\$ -	
20.03.03-13	Allowance for Modifications to Accommodate Enclosed Emergency Egress		\$ -	\$ -	\$ -	\$ -	
20.03.01-14	Allowance for Construction Insurance at 2% of base costs	\$ 1,793,577	\$ -	\$ (1,793,577)	\$ (0)	\$ (1,793,577)	
20.03.01-15	Adjustment for Station Electrical and Lighting December 08 update (COULD NOT FIND JUSTIFICATION FOR \$3.5 MIL ADD, so deducted)	\$ 3,586,000	\$ -	\$ (3,500,000)	\$ 86,000	\$ (3,500,000)	
20.03.01-16	Add'l \$2m indirect costs resulting from inclusion of buffer float	\$ 2,000,000	\$ -	\$ (2,000,000)	\$ -	\$ (2,000,000)	
20.03.00	Public Art	\$ 2,746,849	\$ -	\$ (2,746,849)	\$ -	\$ (2,746,849)	
40.00	ADJUSTMENTS IN FORMULAS		\$ -	\$ -	\$ -	\$ -	
40.00.34	40.00.30 (from CTS Sta formula 20.03.01)	\$ 100,000	\$ -	\$ (100,000)	\$ -	\$ (100,000)	
40.00--	Adjustment (from CTS Sta Formula 20.03.01 - no notes found...)	\$ 100,000	\$ -	\$ (100,000)	\$ -	\$ (100,000)	
40.06	PEDESTRIAN/BIKE ACCESS ANC ACCOMODATION, LANDSCAPING		\$ -	\$ -	\$ -	\$ -	
40.06.04	CTS Pedestrian/Bike Access, Accommodation and Landscaping		\$ -	\$ -	\$ -	\$ -	
40.06.04	Indirects and Mark up (formula missed this amount)		\$ 29,921	\$ -	\$ 29,921	\$ 29,921	
40.07	AUTOMOBILE, BUS, VAN ACCESSWAYS INCL ROADS, PARKING LOTS		\$ -	\$ -	\$ -	\$ -	
40.07.01	Auto/bus access; parking lots etc		\$ -	\$ -	\$ -	\$ -	
40.07.04	CTS Auto/bus access; parking lots etc		\$ -	\$ -	\$ -	\$ -	
-- --	Indirects and Mark up (formula missed this amount)		\$ 77,059	\$ -	\$ 77,059	\$ 77,059	
40.08	Traffic Control		\$ -	\$ -	\$ -	\$ -	

40.08.07	CTS Traffic Control (moved \$600,000 from CTC to UMS)	\$ 864,375	\$ -	\$ (600,000)	\$ 264,375	\$ (600,000)
40.08	Building Protection/Minor Repairs		\$ -	\$ -	\$ -	\$ -
40.08.08	CTS Building Protection/Minor Repairs	\$ 2,500,000	\$ 3,500,000	\$ -	\$ 6,000,000	\$ 3,500,000
	Trolley Reroute	\$ 400,000	\$ -	\$ (400,000)	\$ -	\$ (400,000)
50	SYSTEMS		\$ -	\$ -	\$ -	\$ -
50.03	TRACTION POWER SUPPLY: SUBSTATIONS		\$ -	\$ -	\$ -	\$ -
50.03.(03)	CTS Traction Power Substation		\$ -	\$ -	\$ -	\$ -
50.03.01	TP Substation Equipment and Auxillary		\$ -	\$ -	\$ -	\$ -
50.03.02	TP Equipment and Auxillary Spares		\$ -	\$ -	\$ -	\$ -
50.03.03	Traction Power Scada, RTU	\$ 242,693	\$ -	\$ (242,693)	\$ -	\$ (242,693)
50.03.04	TP Scada Spares	\$ 2,000	\$ -	\$ (2,000)	\$ -	\$ (2,000)
50.03.05	Connection to Scada Master	\$ 296,678	\$ -	\$ (296,678)	\$ -	\$ (296,678)
50.03.06	Scada Master Spares	\$ 10,000	\$ -	\$ (10,000)	\$ -	\$ (10,000)
50.03.07	Gap Breaker (moved to UMS)	\$ 544,561	\$ -	\$ (544,561)	\$ -	\$ (544,561)
50.03.08	Gap Breaker spares (moved to UMS)	\$ 11,000	\$ -	\$ (11,000)	\$ -	\$ (11,000)
50.03.09	Not used	\$ -	\$ -	\$ -	\$ -	\$ -
50.03.10	Not used	\$ -	\$ -	\$ -	\$ -	\$ -
50.03.11	Mimic Panel	\$ 170,587	\$ -	\$ (170,587)	\$ -	\$ (170,587)
50.03.12	Mimic Panel Spares	\$ 4,000	\$ -	\$ (4,000)	\$ -	\$ (4,000)
50.03.13	Maintenace Telephone System	\$ 36,751	\$ -	\$ (36,751)	\$ -	\$ (36,751)
50.03.14	MTS Spares	\$ 1,500	\$ -	\$ (1,500)	\$ -	\$ (1,500)
50.03.15	36 Strand Under Catwalk	\$ 67,444	\$ -	\$ (67,444)	\$ -	\$ (67,444)
50.03.16	36 Strand Spares	\$ 1,500	\$ -	\$ (1,500)	\$ -	\$ (1,500)
50.03.17	12 Strand Under Catwalk	\$ 40,478	\$ -	\$ (40,478)	\$ -	\$ (40,478)
50.03.18	12 strand Spares	\$ 1,000	\$ -	\$ (1,000)	\$ -	\$ (1,000)
50.03.19	Mechanical System (moved to Section 20.03.xx-6)	\$ -	\$ -	\$ -	\$ -	\$ -
50.03.20	Mechanical System Spare(moved to Section 20.03.xx-6)	\$ -	\$ -	\$ -	\$ -	\$ -
	Scada Subtotal	\$ 1,430,191	\$ -	\$ (1,430,191)	\$ -	\$ -
50.03.21	PGE Services	\$ 3,750,000	\$ -	\$ (3,750,000)	\$ -	\$ (3,750,000)
50.03.22	Medium Voltage Distribution System		\$ -	\$ -	\$ -	\$ -
50.03.24	Temporary Substation QC Adjustment 6/6/08		\$ -	\$ -	\$ -	\$ -
50.03.25	December Update of Traction power costs		\$ -	\$ -	\$ -	\$ -
50.05	COMMUNICATIONS		\$ -	\$ -	\$ -	\$ -
50.05.01	Communications - Chinatown Station		\$ -	\$ -	\$ -	\$ -
50.05.01-1	CCTV (Based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -
50.05.01-1	Digital Pan/Tilt/Zoom camera, dome enclosure, mounting assemblies, power supply - platform and mezzanine	\$ 7,769	\$ -	\$ 7,769	\$ 7,769	\$ 7,769
50.05.01-1	Motor drive 232/422 converter for PTZ cameras	\$ 845	\$ -	\$ 845	\$ 845	\$ 845
50.05.01-1	Fixed digital cameras - incl. enclosure, moutingn assemblies, etc. - platform, mezzanine levels	\$ 127,246	\$ -	\$ 127,246	\$ 127,246	\$ 127,246
50.05.01-1	19" LCD monitor (per agent booth)	\$ 7,243	\$ -	\$ 7,243	\$ 7,243	\$ 7,243
50.05.01-1	Video Switch (1 per booth)	\$ 1,110	\$ -	\$ 1,110	\$ 1,110	\$ 1,110
50.05.01-1	Digital Video Recorder (1 at Comm Rm only)	\$ 18,499	\$ -	\$ 18,499	\$ 18,499	\$ 18,499
50.05.01-1	RG6/U coaxial cable from CCTV cameras to Digital Video Recorder - 125' per camera; incl. connectors, etc.	\$ 9,315	\$ -	\$ 9,315	\$ 9,315	\$ 9,315
50.05.01-1	#18/2C for CCTV alarm	\$ 11,948	\$ -	\$ 11,948	\$ 11,948	\$ 11,948
50.05.01-1	#18/4C for CCTV Pan/Tilt/Zoom	\$ 5,449	\$ -	\$ 5,449	\$ 5,449	\$ 5,449
50.05.01-1	#12 THW for power	\$ 508	\$ -	\$ 508	\$ 508	\$ 508
50.05.01-1	#12 grounding conductor	\$ 518	\$ -	\$ 518	\$ 518	\$ 518
50.05.01-1	CAT 5E cable	\$ 638	\$ -	\$ 638	\$ 638	\$ 638
50.05.01-1	3/4" GRSC - power	\$ 3,285	\$ -	\$ 3,285	\$ 3,285	\$ 3,285
50.05.01-1	3/4" GRSC - communication for RG6, PTZ, alarm wiring	\$ 80,477	\$ -	\$ 80,477	\$ 80,477	\$ 80,477
50.05.01-2	P.A. System (Based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -
50.05.01-2	Power Amplifier	\$ 4,243	\$ -	\$ 4,243	\$ 4,243	\$ 4,243
50.05.01-2	Ambient Noise Compensator	\$ 3,217	\$ -	\$ 3,217	\$ 3,217	\$ 3,217
50.05.01-2	Telephone Access Module	\$ 833	\$ -	\$ 833	\$ 833	\$ 833
50.05.01-2	Microphone/Line Mixer	\$ 2,695	\$ -	\$ 2,695	\$ 2,695	\$ 2,695
50.05.01-2	Speakers (mezzanine and platform levels) - incl. mounting access	\$ 510	\$ -	\$ 510	\$ 510	\$ 510
50.05.01-2	Paging Microphone (agent booth)	\$ 510	\$ -	\$ 510	\$ 510	\$ 510

50.05.01-2	Keypad controls (agent booth)		\$ 3,137	\$ -	\$ 3,137	\$ 3,137
50.05.01-2	Ambient noise sensors (platform)		\$ 2,053	\$ -	\$ 2,053	\$ 2,053
50.05.01-2	Speaker wiring - for speakers and sensors - #16/2C - 150' per speaker, sensor		\$ 34,061	\$ -	\$ 34,061	\$ 34,061
50.05.01-2	#12 THW for power		\$ 508	\$ -	\$ 508	\$ 508
50.05.01-2	#12 grounding conductor		\$ 518	\$ -	\$ 518	\$ 518
50.05.01-2	CAT 5E cable		\$ 638	\$ -	\$ 638	\$ 638
50.05.01-2	3/4" GRSC - power		\$ 3,285	\$ -	\$ 3,285	\$ 3,285
50.05.01-2	3/4" GRSC - communication		\$ 125,642	\$ -	\$ 125,642	\$ 125,642
50.05.01-4	Destination Sign System (Based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -
50.05.01-4	#12 THW for power		\$ 2,436	\$ -	\$ 2,436	\$ 2,436
50.05.01-4	#12 grounding conductor		\$ 3,315	\$ -	\$ 3,315	\$ 3,315
50.05.01-4	CAT 5E cable		\$ 4,084	\$ -	\$ 4,084	\$ 4,084
50.05.01-4	3/4" GRSC - power		\$ 21,022	\$ -	\$ 21,022	\$ 21,022
50.05.01-4	3/4" GRSC - communication		\$ 21,022	\$ -	\$ 21,022	\$ 21,022
50.05.01-5	Access Control System (Based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -
50.05.01-5	Master panel for access system (incl. mounting accessories, etc.)		\$ 15,685	\$ -	\$ 15,685	\$ 15,685
50.05.01-5	Card access points (incl. backbox, mounting accessories, etc.)		\$ 6,618	\$ -	\$ 6,618	\$ 6,618
50.05.01-5	Ethernet Interface		\$ 6,659	\$ -	\$ 6,659	\$ 6,659
50.05.01-5	Electric door hardware (door alarm)		\$ 33,328	\$ -	\$ 33,328	\$ 33,328
50.05.01-5	Motion Detectors		\$ -	\$ -	\$ -	\$ -
50.05.01-5	CAT 5E cable		\$ 510	\$ -	\$ 510	\$ 510
50.05.01-5	#12 THW for power		\$ 406	\$ -	\$ 406	\$ 406
50.05.01-5	#12 grounding conductor		\$ 414	\$ -	\$ 414	\$ 414
50.05.01-5	3/4" GRSC - power		\$ 2,628	\$ -	\$ 2,628	\$ 2,628
50.05.01-5	3/4" GRSC - communication		\$ 52,556	\$ -	\$ 52,556	\$ 52,556
50.05.01-6	Fiber Optics and CTS (Based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -
50.05.01-6	2" GRSC (stub up for primary, secondary, spare conduits)		\$ 60,578	\$ -	\$ 60,578	\$ 60,578
50.05.01-6	Router/Switch		\$ 2,060	\$ -	\$ 2,060	\$ 2,060
50.05.01-6	PLC's for ventilation fan & damper		\$ 53,803	\$ -	\$ 53,803	\$ 53,803
50.05.01-6	CAT 5E cable		\$ 766	\$ -	\$ 766	\$ 766
50.05.01-7	Fire Alarm System (based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -
50.05.01-7	F/I fire alarm control panel		\$ 50,381	\$ -	\$ 50,381	\$ 50,381
50.05.01-7	F/I annunciator		\$ 5,964	\$ -	\$ 5,964	\$ 5,964
50.05.01-7	F/I smoke/heat detector		\$ 2,884	\$ -	\$ 2,884	\$ 2,884
50.05.01-7	F/I manual pull station		\$ 3,413	\$ -	\$ 3,413	\$ 3,413
50.05.01-7	F/I duct detector		\$ 18,400	\$ -	\$ 18,400	\$ 18,400
50.05.01-7	F/I horn and strobe (ADA type)		\$ 11,364	\$ -	\$ 11,364	\$ 11,364
50.05.01-7	F/I alarm bell		\$ 222	\$ -	\$ 222	\$ 222
50.05.01-7	F/I (5) FS, (5) TS, (2) electrical Rec, (5) HVAC shutdown, (3) preaction, (1) SCADA		\$ 6,652	\$ -	\$ 6,652	\$ 6,652
50.05.01-7	F/I battery		\$ 1,221	\$ -	\$ 1,221	\$ 1,221
50.05.01-7	F/I battery charger		\$ 791	\$ -	\$ 791	\$ 791
50.05.01-7	F/I addressable devices		\$ 2,801	\$ -	\$ 2,801	\$ 2,801
50.05.01-7	F/I wiring/conduit for all field devices and FACP (4 wires per 1"C, 1 ckt per device)		\$ 436,904	\$ -	\$ 436,904	\$ 436,904
50.05.01-7	F/I outlet boxes, square, 4"		\$ 6,014	\$ -	\$ 6,014	\$ 6,014
50.05.01-7	Test/Training/Documentation/Installation/ Programming		\$ 14,588	\$ -	\$ 14,588	\$ 14,588
50.05.01-7	Spare parts		\$ 21,411	\$ -	\$ 21,411	\$ 21,411
50.05.01-8	Facility Telephone System (based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -
50.05.01-8	F/I phone PBX/media gateway 32 ports		\$ -	\$ -	\$ -	\$ -
50.05.01-8	F/I courtesy phone		\$ -	\$ -	\$ -	\$ -
50.05.01-8	F/I office phone		\$ -	\$ -	\$ -	\$ -
50.05.01-8	Set up cost to Telco.		\$ -	\$ -	\$ -	\$ -
50.05.01-8	F/I phone wire connections to facility phones (1" conduit & 4 pr cable)		\$ 299,562	\$ -	\$ 299,562	\$ 299,562
50.05.01-8	System Installation, Testing, Training, As-Built and Documentation		\$ -	\$ -	\$ -	\$ -
50.05.01-8	F/I handfree phone panels for secondary agent booth		\$ -	\$ -	\$ -	\$ -
50.05.01-8	Spare parts		\$ -	\$ -	\$ -	\$ -

50.05.01-9	Mayor's Emergency Telephone System (METS) (based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
50.05.01-9	F/I METS Phone		\$ -	\$ -	\$ -	\$ -	
50.05.01-9	DTIS Network Connection and Set Up		\$ -	\$ -	\$ -	\$ -	
50.05.01-9	F/I phone wire connection (2" conduit & 4 pr cable)		\$ 4,539	\$ -	\$ 4,539	\$ 4,539	
50.05.01-9	F/I U/G conduit from station to DTIS network		\$ 41,976	\$ -	\$ 41,976	\$ 41,976	
50.05.01-10	Public Telephone System (based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
50.05.01-10	Set Up Public Telephone Station		\$ -	\$ -	\$ -	\$ -	
50.05.01-10	F/I phone wire connections (1" conduit & 4 pr cable)		\$ 27,233	\$ -	\$ 27,233	\$ 27,233	
50.05.01-10	F/I power connections (1" conduit & #12 wire)		\$ 25,646	\$ -	\$ 25,646	\$ 25,646	
50.05.01-10	Telco F/I payphone		\$ -	\$ -	\$ -	\$ -	
50.05.01-10	F/I phone and communication cable punch board (general phones use)		\$ 7,722	\$ -	\$ 7,722	\$ 7,722	
50.05.01-10	Spare parts		\$ -	\$ -	\$ -	\$ -	
50.05.04	Communications Systems Spares		\$ -	\$ -	\$ -	\$ -	
50.05.04-1	CCTV		\$ 12,526	\$ -	\$ 12,526	\$ 12,526	This item has been split between stations, 1/4th to CP4, CP5, CP6 and Fourth Brannan Station respectively
50.05.04-2	P.A. System		\$ 2,661	\$ -	\$ 2,661	\$ 2,661	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.04-3	Remote Infra Red Sign System (RIRS)		\$ -	\$ -	\$ -	\$ -	
50.05.04-5	Access Control (not Security-Monitoring)		\$ 1,077	\$ -	\$ 1,077	\$ 1,077	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.04-7	Intrusion Control & OCC Integration		\$ -	\$ -	\$ -	\$ -	
50.05.08	Systemwide		\$ -	\$ -	\$ -	\$ -	
50.05.08-4	Fire Department Telephone System (based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
50.05.08-4	F/I station audio bridge		\$ -	\$ -	\$ -	\$ -	
50.05.08-4	F/I fire phone for 3 subway stations		\$ -	\$ -	\$ -	\$ -	
50.05.08-4	F/I power to each fire phone station (station)		\$ 90,478	\$ -	\$ 90,478	\$ 90,478	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.08-4	F/I phone service connection to each fire phone station (station)		\$ -	\$ -	\$ -	\$ -	
50.05.09	Communications Systems (System Integration, Start-up and Operational Testing, Training, O&M, Service Contract)		\$ -	\$ -	\$ -	\$ -	
50.05.09-1	CCTV		\$ 7,500	\$ -	\$ 7,500	\$ 7,500	
50.05.09-1	Training of Muni Personnel		\$ 6,250	\$ -	\$ 6,250	\$ 6,250	This item has been split between stations, 1/4th to CP4, CP5, CP6 and Brannan Street Station respectively
50.05.09-1	Operations and Maintenance Manuals		\$ -	\$ -	\$ -	\$ -	This item has been split between stations, 1/4th to CP4, CP5, CP6 and Fourth Brannan Station respectively
50.05.09-1	System Startup and Operational Testing		\$ 6,250	\$ -	\$ 6,250	\$ 6,250	This item has been split between stations, 1/4th to CP4, CP5, CP6 and Fourth Brannan Station respectively
50.05.09-2	P.A. System		\$ -	\$ -	\$ -	\$ -	
50.05.09-2	P.A. System		\$ -	\$ -	\$ -	\$ -	
50.05.09-2	Training of Muni Personnel		\$ 10,000	\$ -	\$ 10,000	\$ 10,000	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.09-2	Operations and Maintenance Manuals		\$ 8,333	\$ -	\$ 8,333	\$ 8,333	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.09-2	System Startup and Operational Testing		\$ 8,333	\$ -	\$ 8,333	\$ 8,333	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.09-5	Access Control System		\$ -	\$ -	\$ -	\$ -	
	Training of Muni Personnel		\$ 10,000	\$ -	\$ 10,000	\$ 10,000	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
	Operations and Maintenance Manuals		\$ 8,333	\$ -	\$ 8,333	\$ 8,333	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
	System Startup and Operational Testing		\$ 8,333	\$ -	\$ 8,333	\$ 8,333	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
	Communications Subtotal	\$ -	\$ 1,943,485	\$ -	\$ 1,943,485	\$ -	
50.06	FARE COLLECTION SYSTEM AND EQUIPMENT		\$ -	\$ -	\$ -	\$ -	
50.06.01	Chinatown Station (based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
	6"x 2" underfloor duct under faregates - 1 for power; 1 for communication		\$ 19,006	\$ -	\$ 19,006	\$ 19,006	

APPENDIX N - CONSTRUCTION CONTRACT PACKAGE RECONCILIATION TABLE
CS 155-2 CENTRAL SUBWAY PROJECT DESIGN PACKAGE 2

Contract No. 1255 (CP-6)
Contract Package 6 - Moscone Station
All values in this table refer to Base Year Cost

Value as in the 2008 Capital cost estimate, Rev 0i: \$91,681,588

PE Phase SCC Code	Item	Value in the 2008 Capital Cost Estimate, Rev 0i	Total Additions	Total Deductions	Revised value	Total Adjustment (Variance)	Notes
20	STATIONS, STOPS, TERMINALS, INTERMODAL						
20.03	UNDERGROUND, STATION, STOP, SHELTER, MALL, TERMINAL, PLATFORM			\$ -	\$ -	\$ -	
20.03.01	Construct Moscone Station			\$ -	\$ -	\$ -	
20.03.01-1	Site Mobilization			\$ -	\$ -	\$ -	
20.03.01-3	Ground Support (assuming Top Down construction for MOS)			\$ -	\$ -	\$ -	
20.03.01-4	Excavation, hauling and disposal			\$ -	\$ -	\$ -	
20.03.01-4a	Allowance for over excavation, subsequent grouting and disposal of pcc tunnel linings			\$ -	\$ -	\$ -	
20.03.01-5	Structural Concrete			\$ -	\$ -	\$ -	
20.03.01	Install headwall at Moscone Station (moved to Guideway Tunnel) Contingency is incorrect...(Move to Guideway Tun)		\$ -	\$ -	\$ -	\$ -	
20.03.01-6	MOS Mechanical (Ventilation, fire protection and plumbing)		\$ -	\$ -	\$ -	\$ -	
20.03.01-6-80	Tunnel Area Wet Standpipe: Pipe, steel, galvanized, threaded, 6", schedule 40	\$ 900,472	\$ -	\$ (900,472)	\$ -	\$ (900,472)	
20.03.01-6-71	Catch basins, frames and covers, cast iron, 24" square, 500 lb., excludes footing, excavation, and backfill	\$ 56,370	\$ -	\$ (48,220)	\$ 8,150	\$ (48,220)	Estimate cost was allocated between contracts CP6 and CP7 proportionally to length of station and tunnels
20.03.01-6-72	Sump Pump to Street Sewer: Pipe, steel, galvanized, welded, 8" diameter, schedule 40	\$ 33,079	\$ -	\$ (33,079)	\$ -	\$ (33,079)	Estimate cost was allocated between contracts CP6 and CP7 proportionally to length of station and tunnels
20.03.01-6-73	Elbow, 90 Deg., cast iron soil, hub and spigot, long sweep, service weight, 8", includes lead & oakum joints	\$ 1,071	\$ -	\$ (1,071)	\$ -	\$ (1,071)	Estimate cost was allocated between contracts CP6 and CP3 proportionally to length of station and tunnels
20.03.01-6-74	Combination Y and 1/8 bend, cast iron soil, hub and spigot, service weight, 8", includes lead & oakum joints	\$ 1,382	\$ -	\$ (1,382)	\$ -	\$ (1,382)	Estimate cost was allocated between contracts CP6 and CP3 proportionally to length of station and tunnels
20.03.01-6-75	Sump Pump (Duplex, 600 gpm each, 100 ft head, valve assembly)	\$ 60,500	\$ -	\$ (60,500)	\$ -	\$ (60,500)	Estimate cost was allocated between contracts CP6 and CP3 proportionally to length of station and tunnels
*20.03.01-6-76	Material Handling Hoist, electric overhead, chain, hook hung, 15' lift, 1 ton capacity	\$ 2,330	\$ -	\$ (2,330)	\$ -	\$ (2,330)	Estimate cost was allocated between contracts CP6 and CP3 proportionally to length of station and tunnels
20.03.01-6-77	Material Handling Crane, 2,000 lb capacity, 12' to 15' range	\$ 3,787	\$ -	\$ (3,787)	\$ -	\$ (3,787)	Estimate cost was allocated between contracts CP6 and CP3 proportionally to length of station and tunnels
20.03.01-6-78	Low Point @ cross-passage: Pump, sewage ejector, duplex system	\$ 4,397	\$ -	\$ (4,397)	\$ -	\$ (4,397)	Estimate cost was allocated between contracts CP6 and CP3 proportionally to length of station and tunnels
20.03.01-6-79	Low Point @ cross-passage: Pump, sewage ejector, system accessories, for switch, magnetic contactor, alarm bell, light, 3 level control, add	\$ 909	\$ -	\$ (909)	\$ -	\$ (909)	Estimate cost was allocated between contracts CP6 and CP3 proportionally to length of station and tunnels
20.03.01-6-80	Trackway Underdrain (North Bound): Pipe, steel, galvanized, threaded, 6", schedule 40	\$ 391,120	\$ -	\$ (334,572)	\$ 56,548	\$ (334,572)	Estimate cost was allocated between contracts CP6 and CP7 proportionally to length of station and tunnels
20.03.01-6-81	Trackway Underdrain (South Bound): Pipe, steel, galvanized, threaded, 6", schedule 40	\$ 391,120	\$ -	\$ (334,572)	\$ 56,548	\$ (334,572)	Estimate cost was allocated between contracts CP6 and CP7 proportionally to length of station and tunnels
	Pyrok Insulation		\$ -	\$ -	\$ -	\$ -	
	Ventilation		\$ -	\$ -	\$ -	\$ -	
	To Correct Error Below Sub & Other Costs (added back in)		\$ -	\$ -	\$ -	\$ -	
	Station fire sprinklers system		\$ 605,000	\$ -	\$ 605,000	\$ 605,000	
	Average FM200 system, maximum (Moscone) -- assembly		\$ 665,969	\$ -	\$ 665,969	\$ 665,969	
	Sump Pump (Duplex, 600 gpm each, 100 ft head, valve assembly)		\$ 60,500	\$ -	\$ 60,500	\$ 60,500	
			\$ -	\$ -	\$ -	\$ -	
	Sub & Other Costs (had to be subtracted to make balance with estimate sheets)		\$ -	\$ -	\$ -	\$ -	
	Station fire sprinklers system		\$ -	\$ -	\$ -	\$ -	
	Average FM200 system, maximum (Moscone) -- assembly		\$ -	\$ -	\$ -	\$ -	
	Sump Pump (Duplex, 600 gpm each, 100 ft head, valve assembly)		\$ -	\$ -	\$ -	\$ -	

			\$ -	\$ -	\$ -	\$ -	
20.03.01-7	Architectural Finishes		\$ -	\$ -	\$ -	\$ -	
20.03.01-8	Surface Restoration, Clean up and Demobilization		\$ -	\$ -	\$ -	\$ -	
20.03.01-11	Electrical 480V and below, Moscone Station(CORRECTED_ESTIMATED HAD ERROR IN FORMULA)	\$ 746,520	\$ 2,314,789	\$ -	\$ 3,061,309	\$ 2,314,789	
20.03.01-12	Adjustment for 2007\$ to 2008\$ and to \$2009 Base for priced items carried forward from 2007 Estimate		\$ -	\$ -	\$ -	\$ -	
20.03.01-13	Allowance for Modifications to Accommodate Enclosed Emergency Egress		\$ -	\$ -	\$ -	\$ -	
20.03.01-14	Allowance for Construction Insurance at 2% of base costs	\$ 1,010,370	\$ -	\$ (1,010,370)	\$ 0	\$ (1,010,370)	
20.03.01-16	Adjustment for Station Electrical and lighting December 08 update		\$ -	\$ -	\$ -	\$ -	
20.03.01-17	Addn'l \$1m indirect costs resulting from inclusion of buffer float	\$ 1,000,000	\$ -	\$ (1,000,000)	\$ -	\$ (1,000,000)	
20.03.00	Public Art	\$ 1,858,162	\$ -	\$ (1,858,162)	\$ 0	\$ (1,858,162)	
20.07	ELEVATORS, ESCALATORS		\$ -	\$ -	\$ -	\$ -	
20.07.01	Moscone Station Elevators and Escalators		\$ -	\$ -	\$ -	\$ -	
40	SITWORK & SPECIAL CONDITIONS		\$ -	\$ -	\$ -	\$ -	
40.00	ADJUSTMENTS IN FORMULAS		\$ -	\$ -	\$ -	\$ -	
40.00.32	40.00.30 (from MOS Sta formula 20.03.01)	\$ 100,000	\$ -	\$ (100,000)	\$ -	\$ (100,000)	
40.00.--	Adjustment (from MOS Sta Formula 20.03.01 - no notes found...)	\$ 100,000	\$ -	\$ (100,000)	\$ -	\$ (100,000)	
40.06	PEDESTRIAN/BIKE ACCESS ANC ACCOMODATION, LANDSCAPING		\$ -	\$ -	\$ -	\$ -	
40.06.02	MOS Pedestrian/Bike Access, Accommodation and Landscaping		\$ -	\$ -	\$ -	\$ -	
40.06.02	Indirects and Mark up (formula missed this amount)	\$ -	\$ 8,730	\$ -	\$ 8,730	\$ 8,730	
40.07	AUTOMOBILE, BUS, VAN ACCESSWAYS INCL ROADS, PARKING LOTS		\$ -	\$ -	\$ -	\$ -	
40.07.01	Auto/bus access; parking lots etc		\$ -	\$ -	\$ -	\$ -	
40.07.02	MOS Auto/bus access; parking lots etc		\$ -	\$ -	\$ -	\$ -	
-----	Indirects and Mark up (formula missed this amount)		\$ 12,583	\$ -	\$ 12,583	\$ 12,583	
50	SYSTEMS		\$ -	\$ -	\$ -	\$ -	
50.03	TRACTION POWER SUPPLY: SUBSTATIONS		\$ -	\$ -	\$ -	\$ -	
50.03 (01)	MOS Traction Power Substation		\$ -	\$ -	\$ -	\$ -	
50.03.01	TP Substation Equipment and Auxillary		\$ -	\$ -	\$ -	\$ -	
50.03.02	TP Equipment and Auxillary Spares		\$ -	\$ -	\$ -	\$ -	
50.03.03	Traction Power Scada, RTU	\$ 242,693	\$ -	\$ (242,693)	\$ -	\$ (242,693)	
50.03.04	TP Scada Spares	\$ 2,000	\$ -	\$ (2,000)	\$ -	\$ (2,000)	
50.03.05	Connection to Scada Master	\$ 296,678	\$ -	\$ (296,678)	\$ -	\$ (296,678)	
50.03.06	Scada Master Spares	\$ 10,000	\$ -	\$ (10,000)	\$ -	\$ (10,000)	
50.03.07	Gap Breaker (moved to UMS)	\$ 544,561	\$ -	\$ (544,561)	\$ -	\$ (544,561)	
50.03.08	Gap Breaker spares (moved to UMS)	\$ 11,000	\$ -	\$ (11,000)	\$ -	\$ (11,000)	
50.03.09	Not used	\$ -	\$ -	\$ -	\$ -	\$ -	
50.03.10	Not used	\$ -	\$ -	\$ -	\$ -	\$ -	
50.03.11	Mimic Panel	\$ 170,587	\$ -	\$ (170,587)	\$ 0	\$ (170,587)	
50.03.12	Mimic Panel Spares	\$ 4,000	\$ -	\$ (4,000)	\$ -	\$ (4,000)	
50.03.13	Maintenance Telephone System	\$ 36,751	\$ -	\$ (36,750)	\$ 0	\$ (36,750)	
50.03.14	MIS Spares	\$ 1,500	\$ -	\$ (1,500)	\$ -	\$ (1,500)	
50.03.15	36 Strand Under Catwalk	\$ 67,444	\$ -	\$ (67,444)	\$ -	\$ (67,444)	
50.03.16	36 Strand Spares	\$ 1,500	\$ -	\$ (1,500)	\$ -	\$ (1,500)	
50.03.17	12 Strand Under Catwalk	\$ 40,478	\$ -	\$ (40,478)	\$ -	\$ (40,478)	
50.03.18	12 strand Spares	\$ 1,000	\$ -	\$ (1,000)	\$ -	\$ (1,000)	
50.03.19	Mechanical System (moved to Section 20.03.xx-6)	\$ -	\$ -	\$ -	\$ -	\$ -	
50.03.20	Mechanical System Spare(moved to Section 20.03.xx-6)	\$ -	\$ -	\$ -	\$ -	\$ -	
50.03.21	PGE Services	\$ 3,750,000	\$ -	\$ (3,750,000)	\$ -	\$ (3,750,000)	
50.03.22	Medium Voltage Distribution System	\$ 2,346,831	\$ -	\$ -	\$ 2,346,831	\$ -	
50.03.24	Temporary Substation QC Adjustment 6/6/08	\$ -	\$ -	\$ -	\$ -	\$ -	
50.03.25	December Update of Traction power costs		\$ -	\$ -	\$ -	\$ -	
STS	Surface Trackwork and Systems		\$ -	\$ -	\$ -	\$ -	
50.05	COMMUNICATIONS		\$ -	\$ -	\$ -	\$ -	
50.05.03	Communications - Moscone Station		\$ -	\$ -	\$ -	\$ -	
50.05.03-1	CCTV (Based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
50.05.03-1	Digital Pan/Tilt/Zoom camera, dome enclosure, mounting assemblies, power supply - platform and mezzanine		\$ 7,769	\$ -	\$ 7,769	\$ 7,769	
50.05.03-1	Motor drive 232/422 converter for PTZ cameras		\$ 845	\$ -	\$ 845	\$ 845	

50.05.03-1	Fixed digital cameras - incl. enclosure, mounting assemblies, etc. - platform, mezzanine levels	\$ 140,500	\$ -	\$ 140,500	\$ 140,500
50.05.03-1	19" LCD monitor (per agent booth)	\$ 7,243	\$ -	\$ 7,243	\$ 7,243
50.05.03-1	Video Switch (1 per booth)	\$ 1,110	\$ -	\$ 1,110	\$ 1,110
50.05.03-1	Digital Video Recorder (1 at Comm Rm only)	\$ 18,499	\$ -	\$ 18,499	\$ 18,499
50.05.03-1	RG6/U coaxial cable from CCTV cameras to Digital Video Recorder - 125' per camera; incl. connectors, etc.	\$ 10,266	\$ -	\$ 10,266	\$ 10,266
50.05.03-1	#18/2C for CCTV alarm	\$ 13,167	\$ -	\$ 13,167	\$ 13,167
50.05.03-1	#18/4C for CCTV Pan/Tilt/Zoom	\$ 5,449	\$ -	\$ 5,449	\$ 5,449
50.05.03-1	#12 THW for power	\$ 508	\$ -	\$ 508	\$ 508
50.05.03-1	#12 grounding conductor	\$ 518	\$ -	\$ 518	\$ 518
50.05.03-1	CAT 5E cable	\$ 638	\$ -	\$ 638	\$ 638
50.05.03-1	3/4" GRSC - power	\$ 3,285	\$ -	\$ 3,285	\$ 3,285
50.05.03-1	3/4" GRSC - communication for RG6, PTZ, alarm wiring	\$ 88,689	\$ -	\$ 88,689	\$ 88,689
		\$ -	\$ -	\$ -	\$ -
50.05.03-2	P.A. System (Based on NECA unit hours)	\$ -	\$ -	\$ -	\$ -
50.05.03-2	Power Amplifier	\$ 4,243	\$ -	\$ 4,243	\$ 4,243
50.05.03-2	Ambient Noise Compensator	\$ 3,217	\$ -	\$ 3,217	\$ 3,217
50.05.03-2	Telephone Access Module	\$ 833	\$ -	\$ 833	\$ 833
50.05.03-2	Microphone/Line Mixer	\$ 2,695	\$ -	\$ 2,695	\$ 2,695
50.05.03-2	Speakers (mezzanine and platform levels) - incl. mounting accessories, etc.	\$ 28,890	\$ -	\$ 28,890	\$ 28,890
50.05.03-2	Paging Microphone (agent booth)	\$ 510	\$ -	\$ 510	\$ 510
50.05.03-2	Keypad controls (agent booth)	\$ 3,137	\$ -	\$ 3,137	\$ 3,137
50.05.03-2	Ambient noise sensors (platform)	\$ 1,711	\$ -	\$ 1,711	\$ 1,711
		\$ -	\$ -	\$ -	\$ -
50.05.03-2	Speaker wiring - for speakers and sensors - #16/2C - 150' per speaker, sensor	\$ 32,859	\$ -	\$ 32,859	\$ 32,859
50.05.03-2	#12 THW for power	\$ 508	\$ -	\$ 508	\$ 508
50.05.03-2	#12 grounding conductor	\$ 518	\$ -	\$ 518	\$ 518
50.05.03-2	CAT 5E cable	\$ 638	\$ -	\$ 638	\$ 638
50.05.03-2	3/4" GRSC - power	\$ 3,285	\$ -	\$ 3,285	\$ 3,285
	3/4" GRSC - communication	\$ 121,208	\$ -	\$ 121,208	\$ 121,208
		\$ -	\$ -	\$ -	\$ -
50.05.03-4	Destination Sign System (Based on NECA unit hours)	\$ -	\$ -	\$ -	\$ -
50.05.03-4	#12 THW for power	\$ 2,436	\$ -	\$ 2,436	\$ 2,436
50.05.03-4	#12 grounding conductor	\$ 3,315	\$ -	\$ 3,315	\$ 3,315
50.05.03-4	CAT 5E cable	\$ 4,084	\$ -	\$ 4,084	\$ 4,084
50.05.03-4	3/4" GRSC - power	\$ 21,022	\$ -	\$ 21,022	\$ 21,022
50.05.03-4	3/4" GRSC - communication	\$ 21,022	\$ -	\$ 21,022	\$ 21,022
		\$ -	\$ -	\$ -	\$ -
50.05.03-5	Access Control System (Based on NECA unit hours)	\$ -	\$ -	\$ -	\$ -
50.05.03-5	Access Control System (Based on NECA unit hours)	\$ -	\$ -	\$ -	\$ -
50.05.03-5	Master panel for access system (incl. mounting accessories, etc.)	\$ 15,685	\$ -	\$ 15,685	\$ 15,685
50.05.03-5	Card access points (incl. backbox, mounting accessories, etc.)	\$ 6,618	\$ -	\$ 6,618	\$ 6,618
50.05.03-5	Ethernet Interface	\$ 6,659	\$ -	\$ 6,659	\$ 6,659
50.05.03-5	Electric door hardware (door alarm)	\$ 33,328	\$ -	\$ 33,328	\$ 33,328
50.05.03-5	Motion Detectors	\$ -	\$ -	\$ -	\$ -
50.05.03-5	CAT 5E cable	\$ 510	\$ -	\$ 510	\$ 510
50.05.03-5	#12 THW for power	\$ 406	\$ -	\$ 406	\$ 406
50.05.03-5	#12 grounding conductor	\$ 414	\$ -	\$ 414	\$ 414
50.05.03-5	3/4" GRSC - power	\$ 2,628	\$ -	\$ 2,628	\$ 2,628
50.05.03-5	3/4" GRSC - communication	\$ 52,556	\$ -	\$ 52,556	\$ 52,556
		\$ -	\$ -	\$ -	\$ -
50.05.03-6	Fiber Optics and CTS (Based on NECA unit hours)	\$ -	\$ -	\$ -	\$ -
50.05.03-6	2" GRSC (stub up for primary, secondary, spare conduits)	\$ 60,578	\$ -	\$ 60,578	\$ 60,578
50.05.03-6	Router/Switch	\$ 2,060	\$ -	\$ 2,060	\$ 2,060
50.05.03-6	PLC's for ventilation fan & damper	\$ 53,803	\$ -	\$ 53,803	\$ 53,803
50.05.03-6	CAT 5E cable	\$ 766	\$ -	\$ 766	\$ 766
		\$ -	\$ -	\$ -	\$ -
50.05.03-7	Fire Alarm System (based on NECA unit hours)	\$ -	\$ -	\$ -	\$ -
50.05.03-7	F/I fire alarm control panel	\$ 50,381	\$ -	\$ 50,381	\$ 50,381
50.05.03-7	F/I annunciator	\$ 5,964	\$ -	\$ 5,964	\$ 5,964
50.05.03-7	F/I smoke/heat detector	\$ 3,966	\$ -	\$ 3,966	\$ 3,966
50.05.03-7	F/I manual pull station	\$ 3,592	\$ -	\$ 3,592	\$ 3,592

50.05.03-7	F/I duct detector		\$ 18,400	\$ -	\$ 18,400	\$ 18,400	
50.05.03-7	F/I horn and strobe (ADA type)		\$ 12,139	\$ -	\$ 12,139	\$ 12,139	
50.05.03-7	F/I alarm bell		\$ 222	\$ -	\$ 222	\$ 222	
50.05.03-7	F/I (5) FS, (5) TS, (2) electrical Rec, (5) HVAC shutdown, (3) preaction, (1) SCADA		\$ 6,652	\$ -	\$ 6,652	\$ 6,652	
50.05.03-7	F/I battery		\$ 1,221	\$ -	\$ 1,221	\$ 1,221	
50.05.03-7	F/I battery charger		\$ 791	\$ -	\$ 791	\$ 791	
50.05.03-7	F/I addressable devices		\$ 2,801	\$ -	\$ 2,801	\$ 2,801	
50.05.03-7	F/I wiring/conduit for all field devices and FACP (4 wires per 1"C, 1 ckt per device)		\$ 460,429	\$ -	\$ 460,429	\$ 460,429	
50.05.03-7	F/I outlet boxes, square, 4"		\$ 6,338	\$ -	\$ 6,338	\$ 6,338	
50.05.03-7	Test/Training/Documentation/Installation/ Programming		\$ 14,588	\$ -	\$ 14,588	\$ 14,588	
50.05.03-7	Spare parts		\$ 22,259	\$ -	\$ 22,259	\$ 22,259	
			\$ -	\$ -	\$ -	\$ -	
50.05.03-8	Facility Telephone System (based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
50.05.03-8	F/I phone PBX/media gateway 32 ports		\$ -	\$ -	\$ -	\$ -	
50.05.03-8	F/I courtesy phone		\$ -	\$ -	\$ -	\$ -	
50.05.03-8	F/I office phone		\$ -	\$ -	\$ -	\$ -	
50.05.03-8	Set up cost to Telco.		\$ -	\$ -	\$ -	\$ -	
50.05.03-8	F/I phone wire connections to facility phones (1" conduit & 4 pr cable)		\$ 281,407	\$ -	\$ 281,407	\$ 281,407	
50.05.03-8	System Installation, Testing, Training, As-Built and Documentation		\$ -	\$ -	\$ -	\$ -	
50.05.03-8	F/I handfree phone panels for secondary agent booth		\$ -	\$ -	\$ -	\$ -	
50.05.03-8	Spare parts		\$ -	\$ -	\$ -	\$ -	
			\$ -	\$ -	\$ -	\$ -	
50.05.03-9	Mayor's Emergency Telephone System (METS) (based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
50.05.03-9	F/I phone wire connection (2" conduit & 4 pr cable)		\$ 4,539	\$ -	\$ 4,539	\$ 4,539	
50.05.03-9	F/I U/G conduit from station to DTIS network		\$ 41,976	\$ -	\$ 41,976	\$ 41,976	
50.05.03-9	Spare parts		\$ -	\$ -	\$ -	\$ -	
			\$ -	\$ -	\$ -	\$ -	
50.05.03-10	Public Telephone System (based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
50.05.03-10	Set Up Public Telephone Station		\$ -	\$ -	\$ -	\$ -	
50.05.03-10	F/I phone wire connections (1" conduit & 4 pr cable)		\$ 27,233	\$ -	\$ 27,233	\$ 27,233	
50.05.03-10	F/I power connections (1" conduit & #12 wire		\$ 25,646	\$ -	\$ 25,646	\$ 25,646	
50.05.03-10	F/I phone and communication cable punch board (general phones use)		\$ 7,722	\$ -	\$ 7,722	\$ 7,722	
50.05.03-10	Spare parts		\$ -	\$ -	\$ -	\$ -	
			\$ -	\$ -	\$ -	\$ -	
50.05.03-11	Intrusion Control & OCC Integration		\$ -	\$ -	\$ -	\$ -	
50.05.03-11	Intrusion Control & OCC Integration		\$ -	\$ -	\$ -	\$ -	
50.05.04	Communications Systems Spares		\$ -	\$ -	\$ -	\$ -	
50.05.04-1	CCTV		\$ 12,526	\$ -	\$ 12,526	\$ 12,526	This item has been split between stations, 1/4th to CP4, CP5, CP6 and Fourth Brannan Station respectively
50.05.04-2	P.A. System		\$ 2,661	\$ -	\$ 2,661	\$ 2,661	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.04-3	Remote Infra Red Sign System (RIRS)		\$ -	\$ -	\$ -	\$ -	
50.05.04-5	Access Control (not Security-Monitoring)		\$ 1,077	\$ -	\$ 1,077	\$ 1,077	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.04-7	Intrusion Control & OCC Integration		\$ -	\$ -	\$ -	\$ -	
50.05.08	Systemwide		\$ -	\$ -	\$ -	\$ -	
50.05.08-4	Fire Department Telephone System (based on NECA unit hours)		\$ -	\$ -	\$ -	\$ -	
50.05.08-4	F/I power to each fire phone station (station)		\$ 90,478	\$ -	\$ 90,478	\$ 90,478	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.09-1	CCTV		\$ -	\$ -	\$ -	\$ -	
50.05.09-1	Training of Muni Personnel		\$ 7,500	\$ -	\$ 7,500	\$ 7,500	This item has been split between stations, 1/4th to CP4, CP5, CP6 and Fourth Brannan Station respectively
50.05.09-1	Operations and Maintenance Manuals		\$ 6,250	\$ -	\$ 6,250	\$ 6,250	This item has been split between stations, 1/4th to CP4, CP5, CP6 and Fourth Brannan Station respectively

50.05.09-1	System Startup and Operational Testing		\$ 6,250	\$ -	\$ 6,250	\$ 6,250	This item has been split between stations, 1/4th to CP4, CP5, CP6 and Fourth Brannan Station respectively
50.05.09-2	P.A. System		\$ -	\$ -	\$ -	\$ -	
50.05.09-2	P.A. System		\$ 10,000	\$ -	\$ 10,000	\$ 10,000	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.09-2	Training of Muni Personnel		\$ 8,333	\$ -	\$ 8,333	\$ 8,333	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.09-2	Operations and Maintenance Manuals		\$ 8,333	\$ -	\$ 8,333	\$ 8,333	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
50.05.09-2	System Startup and Operational Testing		\$ -	\$ -	\$ -	\$ -	
50.05.09-5	Access Control System		\$ -	\$ -	\$ -	\$ -	
	Training of Muni Personnel		\$ 10,000	\$ -	\$ 10,000	\$ 10,000	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
	Operations and Maintenance Manuals		\$ 8,333	\$ -	\$ 8,333	\$ 8,333	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
	System Startup and Operational Testing		\$ 8,333	\$ -	\$ 8,333	\$ 8,333	This item has been split between stations, 1/3rd to CP4, CP5 and CP6 respectively
	Communications Subtotal	\$ -	\$ 1,968,972	\$ -	\$ 1,968,972		
			\$ -	\$ -	\$ -	\$ -	
50.06	FARE COLLECTION SYSTEM AND EQUIPMENT		\$ -	\$ -	\$ -	\$ -	
50.06.03	Moscone Station (based on NECA unit hours)(error in in 50.06.03 formula corrected)		\$ -	\$ -	\$ -	\$ -	
	6"x 2" underfloor duct under faregates - 1 for power, 1 for communication		\$ 19,006	\$ -	\$ 19,006	\$ 19,006	
	CAT 5E cable		\$ 2,552	\$ -	\$ 2,552	\$ 2,552	
	#12 THW for power		\$ 1,015	\$ -	\$ 1,015	\$ 1,015	
	#18/6C alarm wire		\$ 3,146	\$ -	\$ 3,146	\$ 3,146	
	3/4" GRSC - power		\$ 13,139	\$ -	\$ 13,139	\$ 13,139	
	3/4" GRSC - communication		\$ 13,139	\$ -	\$ 13,139	\$ 13,139	
	Fare Collection Subtotal	\$ -	\$ 51,998	\$ -	\$ 51,998		
		\$ 14,188,609	\$ 5,688,541	\$ (10,974,013)	\$ 8,903,138	\$ (5,285,472)	
	New Value			\$ (5,285,472)		\$86,396,116	2009 Base Year Cost referred to in section 6.1.1 of Contract CS 155-2
				\$ 86,396,116			

APPENDIX O
CONSTRUCTION COST BUDGET

Central Subway Project - Design Package #2

Contract No. CS-155-2

APPENDIX O

Construction Cost Budgets

**Construction Contract 1251 (Package No. 2) – Union Square / Market Street Station
Utilities Relocation Contract:** \$3,200,000

Construction Contract 1252 (Package No. 3) -- Tunneling Contract:
\$194,895,740

**Construction Contract 1253 (Package No. 4) -- Union Square / Market Street
Station Contract:** \$167,325,527

Construction Contract 1254 (Package No. 5) -- Chinatown Station Contract:
\$140,498,396

Construction Contract 1255 (Package No. 6) -- Moscone Station Contract:
\$86,396,116

**Construction Contract 1256 (Package No. 7) –Surface, Trackwork & Systems
Contract:** \$94,600,000