

STAFF REPORT FOR CALENDAR ITEM NO.: 8
FOR THE MEETING OF: March 8, 2012

TRANSBAY JOINT POWERS AUTHORITY

BRIEF DESCRIPTION:

Authorize the Executive Director to execute a professional services agreement between the Transbay Joint Powers Authority (TJPA) and Townsend Management, Inc. (TMI) to provide construction management services for the Bus Storage Facility for an amount not to exceed \$1,250,000 and a three (3) year term, with the option to extend the term for an additional two (2) years.

EXPLANATION:

The TJPA plans to advertise for the construction of the Bus Storage Facility in May 2013. Construction will necessitate construction management services to oversee and manage contractor activities, to provide documentation, and to provide quality assurance. In addition the construction manager will perform pre-construction services including conducting a constructability review and assisting in the bidding and procurement effort. The work generally includes the following:

- Design Review (preconstruction)
 - safety and hazard analyses
 - constructability review
 - cost effectiveness review
 - value engineering
 - field conditions review
 - adjacent developments coordination
- Construction Management (during construction)
 - monitor, inspect and interface with construction contractor/work
 - material testing
 - site coordination
 - environmental monitoring
- Resident Engineering/Office Engineering (preconstruction and during construction)
 - communication and documentation of work and progress
 - payment
 - record keeping
 - schedule review/management
 - meeting coordination
 - interface management
 - cost management/change order processing
 - project close out
 - claims management
- Rapid Emergency Response

On November 10, 2011, the TJPA issued a Request for Proposals (RFP) for construction management services for the Bus Storage Facility. On January 11, 2012, the TJPA received six proposals in response to the RFP. A Selection Committee reviewed the proposals for technical merit. Based on the Selection Committee's evaluation of the written proposals, the TJPA invited two firms to interview. Following the interviews, the Selection Committee evaluated the interviews based upon the presentations and the responses to a list of ten technical questions. The proposed TMI team was ranked highest following the written evaluations and interviews. The Selection Committee Report is attached.

TJPA staff has completed negotiations for the attached agreement with TMI. The agreement sets a not to exceed amount of \$1,250,000 for a three (3) year term, with the option to extend the term for an additional two (2) years. Compensation will be on an hourly basis, with no hourly rate to exceed \$80 per hour, an audited overhead rate of 112.5 percent, and a fixed fee of 9 percent.

The RFP had an SBE utilization goal of 55 percent. TMI exceeded this goal in its proposal—TMI is a DBE, and subcontractor YCATC is also a certified SBE. The agreement as negotiated incorporates a 74 percent SBE goal.

RECOMMENDATIONS:

Staff recommends that the Board of Directors authorize the Executive Director to enter into an agreement with Townsend Management, Inc. to provide construction management services for the Bus Storage Facility for an amount not to exceed \$1,250,000 and a three (3) year term, with the option to extend the term for an additional two (2) years.

ENCLOSURES:

1. Resolution
2. Agreement
3. Bus Storage Facility CM Service Selection Committee Report

**TRANSBAY JOINT POWERS AUTHORITY
BOARD OF DIRECTORS**

Resolution No. _____

WHEREAS, On November 10, 2011, the Transbay Joint Powers Authority (TJPA) issued a Request for Proposals (RFP) for construction management services for the Bus Storage Facility; and

WHEREAS, On January 11, 2012, the TJPA received six proposals in response to the RFP; and

WHEREAS, A Selection Committee comprised of construction management professionals, agency stakeholders, and transit operational personnel evaluated the responses to the RFP and gave top scores to TMI based upon technical merit; and

WHEREAS, The Selection Committee found the proposal submitted by TMI to be most responsive to the RFP and that the proposer is well qualified to provide construction management services and perform the scope of services with designated personnel; and

WHEREAS, TJPA staff has negotiated the agreement with TMI attached hereto for construction management services for a term of three (3) years, and TMI has signed the agreement; and

WHEREAS, TJPA staff recommends that the TJPA Board of Directors approve the agreement; now, therefore, be it

RESOLVED, That the TJPA Board of Directors authorizes the Executive Director to execute the agreement with Townsend Management, Inc. to provide construction management services for the Bus Storage Facility for a term of three (3) years, with the option to extend the term for an additional two (2) years, and a total amount not to exceed \$1,250,000.

I hereby certify that the foregoing resolution was adopted by the Transbay Joint Powers Authority Board of Directors at its meeting of March 8, 2012.

Secretary, Transbay Joint Powers Authority

PROFESSIONAL SERVICES AGREEMENT

THIS AGREEMENT ("Agreement") is entered into as of the _____ day of _____ 2012, by and between the TRANSBAY JOINT POWERS AUTHORITY ("TJPA") and Townsend Management, Inc. ("Contractor").

Recitals

A. The TJPA requires CONSTRUCTION MANAGEMENT SERVICES FOR BUS STORAGE FACILITY ("Services") for the Transbay Transit Center Program ("Program").

B. The Contractor submitted a written proposal ("Proposal") in response to the TJPA's Request for Proposals ("RFP"). Based on that Proposal, the TJPA's selection committee determined the Contractor to be the highest-ranked respondent to the RFP and the TJPA invited the Contractor for exclusive negotiations. This Agreement is the product of those negotiations.

C. The Contractor represents and warrants that it is qualified to perform the Services required by this Agreement as set forth in Appendix A ("Scope of Services").

D. The TJPA and the Contractor intend that this Agreement comply with the regulations of the United States Department of Transportation ("USDOT") and certain contracting requirements of the City and County of San Francisco (the "City").

E. On _____, 2012, the TJPA Board of Directors adopted Resolution No. _____ authorizing the TJPA's Executive Director to execute this Agreement with the Contractor for the Services.

Now, THEREFORE, the parties agree as follows:

1. Certification of Funds; Budget and Fiscal Provisions; Termination in the Event of Non-Appropriation

Charges under this Agreement will accrue only after prior written authorization certified by the TJPA's Chief Financial Officer. The amount of the TJPA's obligation hereunder shall not at any time exceed the amount certified for the purpose and period stated in such advance authorization.

This Agreement will terminate without penalty, liability or expense of any kind to the TJPA 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 fiscal year for which funds are appropriated.

The TJPA has no obligation to make appropriations for this Agreement in lieu of appropriations for new or other agreements or Program costs. The TJPA's budget decisions are subject to the discretion of the TJPA Board of Directors. The Contractor's assumption of risk of possible non-appropriation is part of the consideration for this Agreement.

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

2. Term of the Agreement

Subject to Section 1, the term of this Agreement shall be for three (3) years from the Effective Date of the Agreement, as described in Section 3 below, provided that (i) the TJPA shall have the right to extend this Agreement for an additional two (2) years by providing to the Contractor written notice of such extension on or before the expiration of this Agreement, and (ii) any such extension shall be subject to and conditioned upon the written agreement of the Contractor and the approval of such extension by

resolution adopted by the TJPA Board of Directors.

3. Effective Date of Agreement

This Agreement shall become effective when the Finance Manager has certified to the availability of funds for the first notice to proceed ("NTP") and the Contractor has been notified in writing via an NTP.

4. Services Contractor Agrees to Perform

The Contractor agrees to perform the services listed in Appendix "A", "Scope of Services", attached hereto and incorporated by reference as though fully set forth within. Each NTP shall relate to a specified part of the services, and a not-to-exceed maximum price under that NTP. No NTP can be amended, except in writing and signed by an authorized representative of the TJPA.

5. Compensation

All work under this Agreement shall be compensated on an hourly basis, subject to any maximum price set forth in a particular NTP. In no event shall the total compensation under this Agreement exceed One Million Two Hundred and Fifty Thousand Dollars (\$1,250,000). The breakdown of the Contractor's fees appears in Appendix "B", "Calculation of Charges".

Hourly rates for services are to remain fixed during the entire contract period, including any option periods, except for reasonable cost of living increases.

No charges shall be incurred under this Agreement nor shall any payments become due to the Contractor until the Services required under this Agreement are received from Contractor and approved by the Executive Director as being in accordance with this Agreement. The TJPA may withhold payment to the Contractor in any instance in which the Contractor has failed or refused to satisfy any material obligation provided for under this Agreement.

In no event shall the TJPA be liable for interest or late charges for any late payments.

6. Guaranteed Maximum Costs

a. The TJPA's obligation hereunder shall not at any time exceed the amount certified by the Chief Financial Officer for the purpose and period stated in such certification, or the maximum price set forth in an NTP with respect to the work covered under that NTP.

b. Except as may be provided by laws governing emergency procedures, officers and employees of the TJPA are not authorized to request, and the TJPA is not required to reimburse the Contractor for, commodities or services in excess of the price set forth in an NTP and in excess of the total compensation under this Agreement as stated in Section 5, unless the changed scope is authorized by written amendment and approved as required by law.

c. Officers and employees of the TJPA are not authorized to offer or promise, nor is the TJPA required to honor, any offered or promised additional funding in excess of the maximum amount of funding for which the contract or NTP is certified without certification of the additional amount by the Finance Manager.

d. The Chief Financial Officer is not authorized to make payments on any contract or NTP for which funds have not been certified as available in the budget or by supplemental appropriation.

7. Payment

Invoices furnished by the Contractor under this Agreement must be in a form acceptable to the TJPA and must include a unique invoice number. Invoices shall include the first and last day of a calendar

month and be submitted within thirty (30) days of the end of said calendar month. Contractor must submit required DBE Progress Payment Reports with every invoice. All amounts paid to the Contractor shall be subject to audit by the TJPA.

The TJPA shall make payment to the Contractor at the address specified in the Section entitled "Notices to the Parties". The TJPA shall make a good faith effort to pay undisputed amounts within 45 days of receiving a proper invoice from the Contractor.

8. Submitting False Claims; Monetary Penalties

Pursuant to San Francisco Administrative Code Chapter 6, Article V, any Contractor, subcontractor, or consultant who submits a false claim shall be liable to the TJPA for three times the amount of damages which the TJPA sustains because of the false claim. A Contractor, subcontractor or consultant who submits a false claim shall also be liable to the TJPA for the costs, including attorney's fees, of a civil action brought to recover any of those penalties or damages, and may be liable to the TJPA for a civil penalty of up to \$10,000 for each false claim. A Contractor, subcontractor or consultant will be deemed to have submitted a false claim to the TJPA if the Contractor, subcontractor or consultant (a) knowingly presents or causes to be presented to an officer or employee of the TJPA 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 TJPA; (c) conspires to defraud the TJPA by getting a false claim allowed or paid by the TJPA; (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 TJPA; or (e) is a beneficiary of an inadvertent submission of a false claim to the TJPA, subsequently discovers the falsity of the claim, and fails to disclose the false claim to the TJPA within a reasonable time after discovery of the false claim.

9. Disallowance

If Contractor claims or receives payment from the TJPA for a service, reimbursement for which is later disallowed by the State of California or United States Government, the Contractor shall promptly refund the disallowed amount to the TJPA upon the TJPA's request. At its option, the TJPA may offset the amount disallowed from any payment due or to become due to Contractor under this Agreement or any other Agreement.

By executing this Agreement, the Contractor certifies that the Contractor is not suspended, debarred or otherwise excluded from participation in federal assistance programs. The Contractor acknowledges that this certification of eligibility to receive federal funds is a material term of the Agreement.

10. Taxes

Payment of any taxes, including possessory interest taxes and California sales and use taxes, levied upon this Agreement, the transaction, or the services delivered pursuant hereto, shall be the obligation of the Contractor.

11. Payment Does Not Imply Acceptance of Work

The granting of any payment by the TJPA, or the receipt thereof by the Contractor, shall in no way lessen the liability of the Contractor to correct or revise unsatisfactory work, even though the unsatisfactory character of such work may not have been apparent or detected at the time such payment was made.

12. Qualified Personnel

The Contractor represents and warrants to the TJPA that the Contractor is qualified to perform the services as contemplated by this Agreement. The Contractor further represents and warrants to the

TJPA that it has all required licenses and approvals to perform the work contemplated by this Agreement, and that all work performed under this Agreement shall be performed only by personnel under the supervision and in the employment of the Contractor. All personnel engaged in the work shall be fully qualified and shall be authorized, licensed and certified under state and local law to perform such work if authorization, licensing or certification is required. The persons performing professional services under this Agreement on behalf of the Contractor are shown in Appendix "A", attached hereto, and shall not be changed or substituted without the prior written consent of the TJPA, but all personnel, including those assigned at the TJPA's request, must be supervised by the Contractor. The Contractor shall commit adequate resources to complete the project within the project schedule specified in this Agreement.

13. Responsibility for Equipment

The TJPA 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 Contractor, or by any of its employees, even though such equipment be furnished, rented or loaned to Contractor by the TJPA.

14. Independent Contractor, Payment of Taxes and Other Expenses

a. Independent Contractor

The Contractor or any agent or employee of Contractor 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 the TJPA under this Agreement. The Contractor or any agent or employee of the Contractor shall not have employee status with the TJPA, nor be entitled to participate in any plans, arrangements, or distributions by the TJPA pertaining to or in connection with any retirement, health or other benefits that the TJPA may offer its employees. The Contractor or any agent or employee of the Contractor is liable for the acts and omissions of itself, its employees and its agents. The Contractor shall be responsible for all obligations and payments, whether imposed by federal, state or local law, including, but not limited to, Federal Insurance Contributions Act (FICA), income tax withholdings, unemployment compensation, insurance, and other similar responsibilities related to the Contractor's performing services and work, or any agent or employee of the Contractor providing same. Nothing in this Agreement shall be construed as creating an employment or joint venture relationship between the TJPA and the Contractor.

Any terms in this Agreement referring to direction from the TJPA shall be construed as providing for direction as to policy and the result of the Contractor's work only, and not as to the means by which such a result is obtained.

b. Payment of Taxes and Other Expenses

Should the TJPA, in its discretion, or a relevant taxing authority such as the Internal Revenue Service or the State Employment Development Division, or both, determine that the Contractor 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 the Contractor which can be applied against this liability). The TJPA shall then forward those amounts to the relevant taxing authority.

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

A determination of employment status pursuant to the preceding two paragraphs shall be solely for the purposes of the particular tax in question, and for all other purposes of this Agreement, The Contractor shall not be considered an employee of the TJPA. Notwithstanding the foregoing, should any court, arbitrator, or administrative authority determine that the Contractor is an employee for any other purpose, then the Contractor

agrees to a reduction in the TJPA's financial liability so that the TJPA's total expenses under this Agreement are not greater than they would have been had the court, arbitrator, or administrative authority determined that the Contractor was not an employee.

15. Insurance

a. Without in any way limiting the Contractor's other indemnification obligations under this Agreement, the Contractor must maintain in force, during the full term of the Agreement, insurance in the following amounts and coverages.

(1) If required under California law, Worker's Compensation, in statutory amounts, with Employers' liability limits not less than \$1,000,000 each accident, injury, or illness; and

(2) Commercial General Liability Insurance with limits not less than \$1,000,000 each occurrence Combined Single Limit for Bodily Injury and Property Damage, including Contractual Liability, Personal Injury, Products, and Completed Operations; and

(3) Business 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; and

(4) Professional Liability Insurance with limits not less than \$1,000,000 each claim, with respect to negligent acts, errors or omissions in connection with professional services to be provided under this Agreement.

b. Commercial General Liability and Business Automobile Liability Insurance policies must provide the following:

(1) Name as Additional Insured the TJPA, its members, directors, officers, agents, and employees.

(2) 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 policies shall be endorsed to provide thirty (30) days' advance written notice to the TJPA of reduction or nonrenewal of coverages or cancellation of coverages for any reason. Notices shall be sent to the address specified in the Section entitled "Notices to the Parties".

d. Should any of the required insurance be provided under a claims-made form, the Contractor shall maintain such coverage continuously throughout the term of this Agreement, and without lapse, for a period of three (3) years beyond the expiration of this Agreement, to the effect that, should occurrences during the agreement term give rise to claims made after expiration of the Agreement, such claims shall be covered by such claims-made policies.

e. Should any of the required 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.

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

g. Before commencing any operations under this Agreement, the Contractor shall do the following: (a) furnish to the TJPA certificates of insurance and additional insured policy endorsements with insurers with ratings comparable to A-, VII or higher, that are authorized to do business in the State of California, and that are satisfactory to the TJPA, in form evidencing all coverages set forth above, and (b) furnish complete copies of policies promptly upon TJPA request. Failure to maintain insurance shall constitute a material breach of this Agreement.

h. Approval of the insurance by the TJPA shall not relieve or decrease the liability of the Contractor under this Agreement.

16. Indemnification

Contractor shall indemnify and save harmless the TJPA and its officers, directors, agents and employees from, and if requested shall defend them against, any and all loss, cost, damage, injury, liability, and claims thereof for injury to or death of a person, including employees of the Contractor or loss of or damage to property, arising directly or indirectly from the Contractor's performance of this Agreement, including, but not limited to, the Contractor's use of facilities or equipment provided by the TJPA or others, regardless of the negligence of, and regardless of whether liability without fault is imposed or sought to be imposed on the TJPA, except to the extent that such indemnity is void or otherwise unenforceable under applicable law in effect on or validly retroactive to the date of this Agreement, and except where such loss, damage, injury, liability or claim is the result of the active negligence or willful misconduct of the TJPA and is not contributed to by any act of, or by any omission to perform some duty imposed by law or agreement on Contractor, its subcontractors or either's agent or employee. The foregoing indemnity shall include, without limitation, reasonable fees of attorneys, consultants and experts and related costs and the TJPA's costs of investigating any claims against the TJPA.

In addition to the Contractor's obligation to indemnify the TJPA, the Contractor specifically acknowledges and agrees that it has an immediate and independent obligation to defend the TJPA from any claim which actually or potentially falls within this indemnification provision, even if the allegations are or may be groundless, false or fraudulent, which obligation arises at the time such claim is tendered to the Contractor by the TJPA and continues at all times thereafter. The Contractor shall have the exclusive right to select and retain attorneys to defend against such indemnified claims (subject to the reasonable approval of the TJPA) and the TJPA shall cooperate with the Contractor and its attorneys, at no cost to the TJPA.

The Contractor shall indemnify and hold the TJPA harmless from all loss and liability, including attorneys' fees, court costs and all other litigation expenses for any infringement of the patent rights, copyright, trade secret or any other proprietary right or trademark, and all other intellectual property claims of any person or persons in consequence of the use by the TJPA, or any of its officers or agents, of articles or services to be supplied in the performance of this Agreement.

17. Incidental and Consequential Damages

Contractor shall be responsible for incidental and consequential damages to the TJPA resulting in whole or in part from Contractor's acts or omissions. Nothing in this Agreement shall constitute a waiver or limitation of any rights that the TJPA may have under applicable law to seek a defense, indemnity, or damages for such acts or omissions.

18. Liability of TJPA

The TJPA's monetary obligations under this agreement shall be limited to the payment of the compensation provided for in the Section of this Agreement entitled "Compensation". Notwithstanding any other provision of this Agreement, in no event shall the TJPA be liable, 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.

19. Left blank by agreement of the parties

20. Default; Remedies

a. Each of the following shall constitute an event of default ("Event of Default") under this Agreement.

(1) Contractor fails or refuses to perform or observe any term, covenant or condition contained in any of the following Sections of this Agreement: Payment; Submitting False Claims, Monetary Penalties; Taxes; Insurance; Proprietary or Confidential Information of TJPA; Protection of Private Information; Assignment; Drug-Free Workplace; Compliance With Laws; USDOT Requirements.

(2) Contractor 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 (10) days after written notice thereof from TJPA to Contractor.

(3) The Contractor (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 the Contractor or of any substantial part of the Contractor's property, or (e) takes action for the purpose of any of the foregoing.

(4) A court or government authority enters an order (a) appointing a custodian, receiver, trustee or other officer with similar powers with respect to Contractor or with respect to any substantial part of the Contractor'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 the Contractor.

b. On and after any Event of Default, the TJPA 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, the TJPA shall have the right (but no obligation) to cure (or cause to be cured) on behalf of the Contractor any Event of Default; the Contractor shall pay to the TJPA on demand all costs and expenses incurred by the TJPA in effecting such cure, with interest thereon from the date of incurrence at the maximum rate then permitted by law. The TJPA shall have the right to offset from any amounts due to Contractor under this Agreement or any other agreement between the TJPA and the Contractor all damages, losses, costs or expenses incurred by the TJPA as a result of such Event of Default and any liquidated damages due from the Contractor pursuant to the terms of this Agreement or any other agreement.

c. 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.

21. Termination for Convenience

a. The TJPA shall have the option, in its sole discretion, to terminate this Agreement, at any time during the term hereof, for convenience when it is in the TJPA's best interest, which best interest shall be determined at the TJPA's sole discretion. The TJPA shall exercise this option by giving the Contractor written notice of termination. The notice shall specify the date on which termination shall become effective.

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

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

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

(3) Terminating all existing orders and subcontracts.

(4) At the TJPA's direction, assigning to the TJPA any or all of the Contractor's right, title and interest under the orders and subcontracts terminated. Upon such assignment, the TJPA 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.

(5) Subject to the TJPA's approval, settling all outstanding liabilities and all claims arising out of the termination of orders and subcontracts.

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

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

c. Within thirty (30) days after the specified termination date, the Contractor shall submit to the TJPA an invoice, which shall set forth the reasonable cost to the Contractor for all services and other work the TJPA directed the Contractor to perform prior to the specified termination date, for which services or work the TJPA has not already tendered payment. The costs shall be determined as provided in Section 5, and shall be invoiced as provided in Section 7. The Contractor may also recover the reasonable cost of preparing the invoice.

d. In no event shall the TJPA be liable for costs incurred by the Contractor or any of its subcontractors after the termination date specified by the TJPA, except for those costs specifically enumerated and described in the immediately preceding subsection (c). 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, 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 (c).

e. In arriving at the amount due to the Contractor under this Section, the TJPA may deduct (1) all payments previously made by the TJPA for work or other services covered by the Contractor's final invoice; (2) any claim which the TJPA may have against the Contractor in connection with this Agreement; (3) any invoiced costs or expenses excluded pursuant to the immediately preceding

subsection (d); and (4) in instances in which, in the opinion of the TJPA, the cost of any service or other work performed under this Agreement is excessively high due to costs incurred to remedy or replace defective or rejected services or other work, the difference between the invoiced amount and the TJPA's estimate of the reasonable cost of performing the invoiced services or other work in compliance with the requirements of this Agreement.

f. The TJPA's payment obligation under this Section shall survive termination of this Agreement.

22. Rights and Duties Upon Termination or Expiration

a. This Section and the following Sections of this Agreement shall survive termination or expiration of this Agreement: Submitting False Claims, Monetary Penalties; Disallowance; Taxes; Payment Does Not Imply Acceptance of Work; Responsibility for Equipment; Independent Contractor, Payment of Taxes and Other Expenses; Insurance; Indemnification; Incidental and Consequential Damages; Liability of TJPA; Proprietary or Confidential Information of TJPA; Protection of Private Information; Notices to the Parties; Ownership of Results; Works for Hire; Audit and Inspection of Records; Non-Waiver of Rights; Limitations on Contributions; Modification of Agreement; Administrative Remedy for Agreement Interpretation; Agreement Made in California, Venue; Construction; Entire Agreement; Severability; USDOT Requirements; Prompt Payment of Subcontractors.

b. Subject to the immediately preceding subsection (a), upon termination of this Agreement prior to expiration of the term specified in Section 2, this Agreement shall terminate and be of no further force or effect. The Contractor shall transfer title to the TJPA, and deliver in the manner, at the times, and to the extent, if any, directed by the TJPA, 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 the TJPA. This subsection shall survive termination of this Agreement.

23. Notices to the Parties

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

To TJPA: Ms. Maria Ayerdi-Kaplan, Executive Director
Transbay Joint Powers Authority
201 Mission Street, Suite 2100
San Francisco, CA 94105
(415) 597-4615 fax
MAyerdi-Kaplan@TransbayCenter.org

To Contractor: Zamir Zuraek, Principal
Townsend Management, Inc.
P.O. Box 24442
San Francisco, CA 94124
(415) 285-9011 fax
Zamir_Zuraek@tmi-cm.com

Any notice of default must be sent by registered mail.

24. Proprietary or Confidential Information of the TJPA

The Contractor understands and agrees that, in the performance of the work or services under the Agreement or in contemplation thereof, the Contractor may have access to private or confidential information which may be owned or controlled by the TJPA and that such information may contain proprietary or confidential details, the disclosure of which to third parties may be damaging to the TJPA. The Contractor agrees that all information disclosed by the TJPA to the Contractor shall be held in

confidence and used only in performance of this Agreement. The Contractor shall exercise the same standard of care to protect such information as a reasonably prudent contractor would use to protect its own proprietary data.

25. Protection of Private Information

The Contractor agrees to comply fully with and be bound by all of the provisions of Chapter 12M of the San Francisco Administrative Code (the "Nondisclosure of Private Information Ordinance"), including the remedies provided. The provisions of the Nondisclosure of Private Information Ordinance are incorporated herein by reference and made a part of this Agreement as though fully set forth. Capitalized terms used in this Section and not defined in this Agreement shall have the meanings assigned to such terms in the Nondisclosure of Private Information Ordinance. Consistent with the requirements of the Nondisclosure of Private Information Ordinance, the Contractor agrees to all of the following:

a. Neither the Contractor nor any of its subcontractors shall disclose Private Information obtained from the TJPA or the City in the performance of this Agreement to any other subcontractor, person, or other entity, unless one of the following is true.

- (i) The disclosure is authorized by this Agreement;
- (ii) The Contractor received advance written approval from the TJPA to disclose the information; or
- (iii) The disclosure is required by law or judicial order.

b. Any disclosure or use of Private Information authorized by this Agreement shall be in accordance with any conditions or restrictions stated in this Agreement. Any disclosure or use of Private Information authorized by the TJPA shall be in accordance with any conditions or restrictions stated in the approval.

c. Private Information shall mean any information that (1) could be used to identify an individual, including without limitation, name, address, social security number, medical information, financial information, date and location of birth, and names of relatives or (2) the law forbids any person from disclosing.

d. Any failure of the Contractor to comply with the Nondisclosure of Private Information Ordinance 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 TJPA may terminate this Agreement, debar Contractor, or bring a false claim action against the Contractor.

26. News Releases/Interviews

All Contractor news releases, media interviews, testimony at hearings and public comment relating to the Transbay Transit Center Program shall be prohibited unless expressly authorized by the TJPA.

27. Ownership of Results

Any interest of the Contractor or its subcontractors, in drawings, plans, specifications, blueprints, studies, reports, memoranda, computation sheets, computer files and media, or other documents prepared by the Contractor or its subcontractors in connection with services to be performed under this Agreement, shall become the property of and will be transmitted to the TJPA. However, the Contractor may retain and use copies for reference and as documentation of its experience and capabilities.

28. Works for Hire

If, in connection with services performed under this Agreement, the Contractor or its subcontractors create artwork, copy, posters, billboards, photographs, videotapes, audiotapes, systems designs, software, reports, diagrams, surveys, source codes or any other original works of authorship, such works of authorship shall be works for hire as defined under Title 17 of the United States Code, and all copyrights in such works are the property of the TJPA. If it is ever determined that any works created by the Contractor or its subcontractors under this Agreement are not works for hire under U.S. law, the Contractor hereby assigns all copyrights to such works to the TJPA, and agrees to provide any material and execute any documents necessary to effectuate such assignment. With the approval of the TJPA, the Contractor may retain and use copies of such works for reference and as documentation of its experience and capabilities.

29. Audit and Inspection of Records

The Contractor agrees to maintain and make available to the TJPA, during regular business hours, accurate books and accounting records relating to its work under this Agreement. The Contractor will permit the TJPA to audit, examine 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 related to all other matters covered by this Agreement, whether funded in whole or in part under this Agreement. The Contractor shall maintain such data and records in an accessible location and condition for a period of not less than five years after final payment under this Agreement or until after final audit has been resolved, whichever is later. The State of California or any governmental agency having an interest in the subject of this Agreement shall have the same rights conferred upon the TJPA by this Section.

30. San Francisco Sunshine Ordinance

In accordance with S.F. Administrative Code Section 67.24(e), the Contractors' bids, responses to solicitations and all other records of communications between the TJPA 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's or organization's net worth or other proprietary financial data submitted for qualification for a contract or other benefits until and unless that person or organization is awarded the contract or benefit. Information provided which is covered by this paragraph will be made available to the public upon request.

31. Public Access to Meetings and Records

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

32. Subcontracting

The Contractor is permitted to subcontract portions of the services to be performed under this Agreement as follows:

*Yolanda's Construction Administration & Traffic Control, Inc.
280 Newhall Street
San Francisco, CA 94124*

*Harris & Associates
1401 Willow Pass Road
Concord, CA 94520*

The Contractor will be permitted to subcontract additional portions of the work under this Agreement subject to the prior written approval of the TJPA Executive Director. Subcontractors shall be solely responsible to the Contractor throughout the performance of their services under this Agreement. Assignment by the Contractor of work to subcontractors shall not relieve the Contractor of any obligation to the TJPA for the work performed.

33. Assignment

The services to be performed by the Contractor are personal in character and neither this Agreement nor any duties or obligations hereunder may be assigned or delegated by the Contractor unless first approved by the TJPA by written instrument executed and approved in the same manner as this Agreement.

34. 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. There shall be no waiver except in writing, signed by the party to be charged.

35. Services Provided by Attorneys

Any services to be provided by a law firm or attorney must be reviewed and approved in writing in advance by the TJPA. No invoices for such services provided by law firms or attorneys, including, without limitation, as subcontractors of the Contractor, will be paid unless the provider received advance written approval from the TJPA.

36. Conflict of Interest

Through its execution of this Agreement, the Contractor acknowledges that it is familiar with the provisions of the Conflict of Interest Code of the TJPA; Section 15.103 of the San Francisco City Charter; Article III, Chapter 2 of San Francisco's Campaign and Governmental Conduct Code; and Section 87100 et seq. and Section 1090 et seq. of the Government Code of the State of California, and certifies that it does not know of any facts which constitute a violation of said provisions.

37. Limitations on Contributions

Through execution of this Agreement, the Contractor acknowledges that it is familiar with Section 1.126 of the San Francisco Campaign and Governmental Conduct Code, which prohibits any person who contracts with the TJPA for the rendition of personal services, for the furnishing of any material, supplies or equipment, or for the sale or lease of any land or building, from making any campaign contribution to (1) a TJPA elective officer 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, (2) a candidate for the office held by such individual, or (3) 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. The Contractor 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. The Contractor further acknowledges that the prohibition on contributions applies to

each prospective party to the contract; each member of the Contractor's board of directors; the Contractor's chairperson, chief executive officer, chief financial officer and chief operating officer; any person with an ownership interest of more than 20 percent in the Contractor; any subcontractor listed in the bid or contract; and any committee that is sponsored or controlled by the Contractor. Additionally, the Contractor acknowledges that the Contractor must inform each of the persons described in the preceding sentence of the prohibitions contained in Section 1.126.

38. Prohibition on Political Activity with TJPA Funds

In accordance with San Francisco Administrative Code Chapter 12.G, the Contractor 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. The Contractor agrees to comply with San Francisco Administrative Code Chapter 12.G and any implementing rules and regulations promulgated by the TJPA's Chief Financial Officer. The terms and provisions of Chapter 12.G are incorporated herein by this reference. In the event that the Contractor violates the provisions of this Section, the TJPA may, in addition to any other rights or remedies available hereunder, (i) terminate this Agreement, and (ii) prohibit the Contractor from bidding on or receiving any new TJPA contract for a period of two (2) years. The TJPA will not consider the Contractor's use of profit as a violation of this Section.

39. Equal Employment Opportunity/Nondiscrimination; Penalties

a. Contractor Shall Not Discriminate

In the performance of this Agreement, the Contractor agrees not to discriminate against any TJPA or City employee working with such Contractor or subcontractor, applicant for employment with such Contractor or subcontractor, 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, sex, sexual orientation, gender identity, domestic partner status, marital status, disability, weight, height or Acquired Immune Deficiency Syndrome or Human Immunodeficiency Virus (AIDS/HIV) status, or association with members of such protected classes, or in retaliation for opposition to discrimination against such classes.

Such action shall include, but shall not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; lay-offs or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Contractor further agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause. The Contractor is encouraged to actively recruit minorities and women for its workforce and take other steps, such as on-the-job training and education, to ensure nondiscrimination in the Contractor's employment practices.

b. Subcontracts

The Contractor shall incorporate by reference in all subcontracts the provisions of Chapters 12B.2(a), 12B.2(c)-(k), and 12C.3 of the San Francisco Administrative Code (copies of which are available from the TJPA upon request) and shall require all subcontractors to comply with such provisions. Contractor's failure to comply with the obligations in this subsection shall constitute a material breach of this Agreement.

c. Nondiscrimination in Benefits

The Contractor 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 the work is being performed for the TJPA elsewhere within 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 Chapter 12B.2(b) of the San Francisco Administrative Code.

d. Condition to Contract

As a condition to this Agreement, the Contractor shall execute the appropriate "San Francisco Administrative Code Chapters 12B & 12C Declaration: Nondiscrimination in Contracts and Benefits" form (Form HRC-12B-101, HRC-12B-102, or HRC-12B-103) with supporting documentation and file the form with the TJPA Contract Compliance Manager.

e. 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. The Contractor shall comply fully with and be bound by all of the provisions that apply to this Agreement under such Chapters of the Administrative Code, including but not limited to the remedies provided in such Chapters. Without limiting the foregoing, the Contractor understands that pursuant to Section 12B.2(h) and 12C.3(g) 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 the Contractor and/or deducted from any payments due the Contractor.

40. Disadvantaged Business Enterprise (DBE) Requirements

The Contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this agreement. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the Contractor 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 TJPA deems appropriate.

Pursuant to the monitoring requirements outlined in Section XIII of the TJPA's DBE Program (49 CFR 26.37), the Contractor will be required to update and submit the TJPA's "Bidders/Proposers Information Request Form," regardless of DBE participation. Upon award of the contract, the Contractor shall submit the TJPA's "Progress Payment Report" with every invoice, the "Subcontractor Payment Declaration" within five days of each Contractor payment to a subcontractor, and a "Final Expenditure Report" with the completion of the contract.

41. Small Business Enterprise (SBE) Requirements

Contractor shall comply with the SBE provisions contained in the TJPA Small Business Enterprise Program and incorporated into this Agreement as though fully set forth, including, but not limited to, achieving and maintaining the SBE goal as submitted by Contractor in its Proposal of 74% percent. Failure of the Consultant to comply with any of these requirements, or to submit compelling documentation acceptable to the TJPA detailing the good faith efforts to comply, shall be deemed a material breach of this Agreement.

Pursuant to the monitoring requirements outlined in Section IX of the TJPA's SBE Program, the Contractor will be required to update and submit the TJPA's "Bidders/Proposers Information Request Form," regardless of SBE participation. Upon award of the contract, the Contractor shall submit the TJPA's "Progress Payment Report" with every invoice, the "Subcontractor Payment Declaration" within five days of each Contractor payment to a subcontractor, and a "Final Expenditure Report" with the completion of the contract.

42. Prompt Payment to Subcontractors

a. Prompt Progress Payment to Subcontractors

A prime contractor or subcontractor shall pay a subcontractor not later than ten (10) days of receipt of each progress payment in accordance with the provision in Section 7108.5 of the California Business and Professions Code concerning prompt payment to subcontractors. The ten (10) days is applicable unless a longer period is agreed to in writing. Any violation of Section 7108.5 shall subject the violating contractor or subcontractor to the penalties, sanction and other remedies of that Section. Federal regulation (49 CFR 26.29) requires that any delay or postponement of payment over thirty (30) days of receipt of each payment may take place only for good cause and with the TJPA's prior written approval. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise, available to the prime contractor or subcontractor in the event of a dispute involving late payment, or nonpayment by the prime contractor, deficient subcontract performance, or noncompliance by a subcontractor. This provision applies to both DBE and non-DBE prime contractors and subcontractors.

b. Prompt Payment of Withheld Funds to Subcontractors

If the TJPA requires retainage from the prime contractor and prompt and regular incremental acceptances of portions, as determined by the TJPA of the contract work and retainage is paid to the prime contractor based on these acceptances, then the prime contractor or subcontractor shall return all monies withheld in retention from all subcontractors within thirty (30) days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the TJPA. Any delay or postponement of payment may take place only for good cause and with the TJPA's prior written approval. Any violation of these provisions shall subject the violating prime contractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business Professions Code. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise, available to the prime contractor or subcontractor in the event of a dispute involving late payment, or nonpayment by the contractor, or deficient subcontractor's performance, or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors.

43. Requiring Minimum Compensation for Covered Employees

The Contractor 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 <http://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 12P. Consistent with the requirements of the MCO, Contractor agrees to all of the following:

a. For each hour worked by a Covered Employee during a Pay Period on work funded under the TJPA contract during the term of this Agreement, the Contractor shall provide to the Covered Employee no less than the Minimum Compensation, which includes a minimum hourly wage and compensated and uncompensated time off consistent with the requirements of the MCO. Note that the gross hourly compensation for covered employees is \$12.06 as of January 2012.

If a Covered Employee of a Nonprofit Corporation works in San Francisco, then the gross hourly compensation as of January 1, 2012, is \$11.03 per hour.

b. The Contractor shall not discharge, reduce in compensation, or otherwise discriminate against any employee for complaining to the TJPA with regard to the Contractor's compliance or anticipated compliance with the requirements of the MCO, for opposing any practice proscribed by the MCO, for participating in proceedings related to the MCO, or for seeking to assert or enforce any rights under the

MCO by any lawful means.

c. The Contractor understands and agrees that the failure to comply with the requirements of the MCO shall constitute a material breach by the Contractor of the terms of this Agreement. The TJPA shall determine whether such a breach has occurred.

d. If, within thirty (30) days after receiving written notice of a breach of this Agreement for violating the MCO, the Contractor fails to cure such breach or, if such breach cannot reasonably be cured within such period of thirty (30) days, the Contractor fails to commence efforts to cure within such period, or thereafter fails diligently to pursue such cure to completion, the TJPA shall have the right to pursue the following rights or remedies and any rights or remedies available under applicable law:

(1) The right to charge the Contractor an amount equal to the difference between the Minimum Compensation and any compensation actually provided to a Covered Employee, together with interest on such amount from the date payment was due at the maximum rate then permitted by law;

(2) The right to set off all or any portion of the amount described in Subsection (d)(1) of this Section against amounts due to the Contractor under this Agreement;

(3) The right to terminate this Agreement in whole or in part;

(4) In the event of a breach by the Contractor of the covenant referred to in Subsection (b) of this Section, the right to seek reinstatement of the employee or to obtain other appropriate equitable relief; and

(5) The right to bar the Contractor from entering into future contracts with the TJPA for three (3) years.

Each of the rights provided in this Subsection (d) shall be exercisable individually or in combination with any other rights or remedies available to the TJPA. Any amounts realized by the TJPA pursuant to this subsection shall be paid to the Covered Employee who failed to receive the required Minimum Compensation.

e. The Contractor 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.

f. The Contractor shall keep itself informed of the current requirements of the MCO, including increases to the hourly gross compensation due Covered Employees under the MCO, and shall provide prompt written notice to all Covered Employees of any increases in compensation, as well as any written communications received by the Contractor from the TJPA, which communications are marked to indicate that they are to be distributed to Covered Employees.

g. The Contractor shall provide reports to the TJPA in accordance with any reporting standards promulgated by the TJPA under the MCO, including reports on subcontractors.

h. The Contractor shall provide the TJPA with access to pertinent records after receiving a written request from the TJPA to do so and being provided at least five (5) business days to respond.

i. The TJPA may conduct random audits of the Contractor. Random audits shall be (1) noticed in advance in writing; (2) limited to ascertaining whether Covered Employees are paid at least the minimum compensation required by the MCO; (3) accomplished through an examination of pertinent records at a mutually agreed upon time and location within ten (10) days of the written notice; and (4) limited to one audit of Contractor every two years for the duration of this Agreement. Nothing in this Agreement is intended to preclude the TJPA from investigating any report of an alleged violation of the MCO.

j. Any subcontract entered into by the Contractor shall require the subcontractor to comply with the requirements of the MCO and shall contain contractual obligations substantially the same as those set forth in this Section. A subcontract means an agreement between the Contractor and a third party which requires the third party to perform all or a portion of the services covered by this Agreement. The Contractor shall notify the TJPA when it enters into such a subcontract and shall certify to the TJPA that it has notified the subcontractor of the obligations under the MCO and has imposed the requirements of the MCO on the subcontractor through the provisions of the subcontract. It is the Contractor's obligation to ensure that any subcontractors of any tier under this Agreement comply with the requirements of the MCO. If any subcontractor under this Agreement fails to comply, the TJPA may pursue any of the remedies set forth in this Section against the Contractor.

k. Each Covered Employee is a third-party beneficiary with respect to the requirements of subsections (a) and (b) of this Section, and may pursue the following remedies in the event of a breach by the Contractor of subsections (a) and (b), but only after the Covered Employee has provided the notice, participated in the administrative review hearing, and waited the 21-day period required by the MCO. The Contractor understands and agrees that if the Covered Employee prevails in such action, the Covered Employee may be awarded (1) an amount equal to the difference between the Minimum Compensation and any compensation actually provided to the Covered Employee, together with interest on such amount from the date payment was due at the maximum rate then permitted by law; (2) in the event of a breach by the Contractor of subsections (a) or (b), the right to seek reinstatement or to obtain other appropriate equitable relief; and (3) in the event that the Covered Employee is the prevailing party in any legal action or proceeding against the Contractor arising from this Agreement, the right to obtain all costs and expenses, including reasonable attorney's fees and disbursements, incurred by the Covered Employee. The Contractor also understands that the MCO provides that if the Contractor prevails in any such action, the Contractor may be awarded costs and expenses, including reasonable attorney's fees and disbursements, from the Covered Employee if the court determines that the Covered Employee's action was frivolous, vexatious or otherwise an act of bad faith.

l. If the Contractor 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 (\$50,000 for nonprofits), but the Contractor later enters into an agreement or agreements that cause the Contractor to exceed that amount in a fiscal year, the Contractor 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 Contractor and the TJPA to exceed \$25,000 (\$50,000 for nonprofits) in the fiscal year.

44. Requiring Health Benefits for Covered Employees

Unless exempt, the Contractor 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 herein by reference and made a part of this agreement as though fully set forth. The text of the HCAO is available on the Web at <http://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.

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

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

c. The Contractor's failure to comply with the HCAO shall constitute a material breach of this agreement. The TJPA shall notify the Contractor if such a breach has occurred. If, within thirty (30) days after receiving the TJPA's written notice of a breach of this Agreement for violating the HCAO, the

Contractor fails to cure such breach or, if such breach cannot reasonably be cured within such period of thirty (30) days, the Contractor fails to commence efforts to cure within such period, or thereafter fails diligently to pursue such cure to completion, the TJPA shall have the right to pursue the remedies set forth in 12Q.5(f)(1-6). Each of these remedies shall be exercisable individually or in combination with any other rights or remedies available to the TJPA.

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

e. The Contractor shall not discharge, reduce in compensation, or otherwise discriminate against any employee for notifying the TJPA with regard to Contractor's compliance or anticipated compliance 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.

f. The Contractor 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.

g. The Contractor 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 TJPA agreement.

h. The Contractor shall keep itself informed of the current requirements of the HCAO.

i. The Contractor shall provide reports to the TJPA in accordance with any reporting standards promulgated by the TJPA under the HCAO, including reports on subcontractors and subtenants, as applicable.

j. The Contractor shall provide the TJPA with access to records pertaining to compliance with HCAO after receiving a written request from the TJPA to do so and being provided at least five (5) business days to respond.

k. The Contractor shall allow the TJPA to inspect the Contractor's job sites and have access to the Contractor's employees in order to monitor and determine compliance with HCAO.

l. The TJPA may conduct random audits of the Contractor to ascertain its compliance with HCAO. The Contractor agrees to cooperate with the TJPA when it conducts such audits.

m. If the Contractor is exempt from the HCAO when this Agreement is executed because its amount is less than \$25,000 (\$50,000 for nonprofits), but the Contractor later enters into an agreement or agreements that cause the Contractor's aggregate amount of all agreements with TJPA 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 the Contractor and the TJPA to be equal to or greater than \$75,000 in the fiscal year.

45. First Source Hiring Program

a. 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. The Contractor 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.

b. First Source Hiring Agreement

(1) The Contractor will comply with First Source interviewing, recruitment and hiring requirements, which will provide the San Francisco Workforce Development System with the exclusive opportunity to initially provide Qualified Economically Disadvantaged Individuals for consideration for employment for Entry Level Positions. The duration of the First Source interviewing requirement shall be ten (10) days, unless business necessity requires a shorter period of time.

(2) The Contractor will comply with requirements for providing timely, appropriate 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.

(3) The Contractor agrees to use good faith efforts to comply with the First Source hiring requirements. A Contractor may establish its good faith efforts by filling (i) its first available Entry Level Position with a job applicant referred through the First Source Program; and (ii) fifty percent (50%) of its subsequent available Entry Level Positions with job applicants referred through the San Francisco Workforce Development System. Failure to meet this target, while not imputing bad faith, may result in a review of the Contractor's employment records.

c. Hiring Decisions

The Contractor shall make the final determination of whether an Economically Disadvantaged Individual referred by the System is "qualified" for the position.

d. Exceptions

Upon application by Employer, the First Source Hiring Administration ("FSHA") 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.

e. Liquidated Damages

Violation of the requirements of Chapter 83 is subject to an assessment of liquidated damages in the amount of \$2,070 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.

f. Subcontracts

Any subcontract entered into by the Contractor shall require the subcontractor to comply with the requirements of Chapter 83 and shall contain contractual obligations substantially the same as those set forth in this Section.

46. Reserved

47. MacBride Principles – Northern Ireland

Pursuant to San Francisco Administrative Code Section 12F.5, the TJPA urges companies doing business in Northern Ireland to move towards resolving employment inequities, and encourages such

companies to abide by the MacBride Principles. The TJPA 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 the Contractor acknowledges and agrees that he or she has read and understood this Section.

48. Drug-Free Workplace Policy

The Contractor acknowledges that pursuant to the Federal Drug-Free Workplace Act of 1989, the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited on TJPA premises. The Contractor agrees that any violation of this prohibition by the Contractor, its employees, agents or assigns will be deemed a material breach of this Agreement.

49. Resource Conservation

Chapter 5 of the San Francisco Environment Code ("Resource Conservation") is incorporated herein by reference. Failure by the Contractor to comply with any of the applicable requirements of Chapter 5 will be deemed a material breach of contract.

50. Tropical Hardwood/Virgin Redwood Ban

Pursuant to Section 804(b) of the San Francisco Environment Code, the TJPA urges Contractors not to import, purchase, obtain, or use for any purpose, any tropical hardwood, tropical hardwood wood product, virgin redwood or virgin redwood wood product.

51. Preservative-treated Wood Containing Arsenic

The Contractor may 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. Contractor 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 the Contractor 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.

52. 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 and County of San Francisco'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.

The Contractor shall remove all graffiti from any real property owned or leased by the Contractor in the City and County of San Francisco within forty eight (48) hours of the earlier of the Contractor's (a) discovery or notification of the graffiti or (b) receipt of notification of the graffiti from the City's Department of Public Works or the TJPA. This Article is not intended to require the Contractor 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 (a) 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 (b) 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. Sections 101 et seq.).

53. 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 according to TJPA requirements.

54. Administrative Remedy for Agreement Interpretation

Should any question arise as to the meaning and intent of this Agreement, the question shall, prior to any other action or resort to any other legal remedy, be referred to the TJPA who shall decide the true meaning and intent of the Agreement. Nothing in this Section shall be interpreted as the Contractor waiving any legal rights or remedies to which it is entitled.

55. 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.

56. Construction

All Section captions are for reference only and shall not be considered in construing this Agreement.

57. Entire Agreement

This Agreement sets forth the entire Agreement between the parties, and supersedes all other oral or written provisions. This Agreement may be modified only as provided in the Section entitled "Modification of Agreement".

58. 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.

59. USDOT Requirements

The provisions contained in "USDOT Requirements for Agreements with the TJPA," attached as Appendix "C", are incorporated into this Agreement, and the Contractor agrees to abide by such provisions. Such provisions supplement the provisions in this Agreement, and shall be interpreted in the broadest possible manner to avoid any conflicts. If there is an unavoidable conflict between the FTA terms and conditions and any other terms and conditions of this Agreement, in the TJPA's sole determination, the FTA terms and conditions shall take precedence.

60. Compliance With Laws

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

61. Compliance with Americans with Disabilities Act

The Contractor 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 contractor, must be accessible to the disabled public. The Contractor shall provide the services specified in this Agreement in a manner that complies with the ADA and any and all other applicable federal, state and local disability rights legislation. The Contractor agrees not to discriminate against disabled persons in the provision of services, benefits or activities provided under this Agreement and further agree that any violation of this prohibition on the part of the Contractor, its employees, agents or assigns will constitute a material breach of this Agreement.

62. Authority to Execute Agreement

Each individual executing this Agreement, on behalf of one of the parties, represents that he or she is duly authorized to sign and deliver the Agreement on behalf of such party and that this Agreement is binding on such party in accordance with its terms. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which taken together shall constitute one and the same instrument.

63. Intern Mentoring Program

The Contractor shall cooperate with the TJPA to either expand its adopted intern mentoring program through a professional architect/engineering/management organization's intern mentoring program, or the Contractor shall create an intern mentoring program specifically for this Program. The purpose of the intern mentoring program shall be to involve local youth or residents interested in exploring professional careers in architecture, engineering, construction management, or related professional services, into the professional services work of the Contractor on the Program. The intern mentoring program will be designed to engage, inform, and challenge youth, and to enlighten and motivate students toward professional careers in architecture, engineering, construction management, and related professional services. The program will include opportunities throughout the period of the Program for local high school youth or local residents to participate as a volunteer or paid intern in the conduct of substantive professional services work of the Contractor on the Program. The Contractor will contact and seek intern applicants from local schools and community-based organizations. The Contractor shall report to the TJPA those individuals participating in the intern mentoring program, and their activities on the Program.

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

TRANSBAY JOINT POWERS AUTHORITY

Approved as to Form by:

Maria Ayerdi, Executive Director

TJPA Legal Counsel

Transbay Joint Powers Authority
Board of Directors
Resolution No. _____
Adopted: _____
Attest:

Secretary, TJPA Board

CONTRACTOR

By signing this Agreement, I certify that I comply with the requirements of the Minimum Compensation Ordinance, which entitles Covered Employees to certain minimum hourly wages and compensated and uncompensated time off.

I have read and understood the Section entitled "MacBride Principles—Northern Ireland", San Francisco'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

Authorized Signature

Address

Printed Name

City, State, Zip Code

Title

Phone Number

Company Name

Federal Employer ID Number

Appendix “A”
SCOPE OF SERVICES

A. Scope of Services

The Contractor will work closely with the TJPA’s staff and other consultants to provide the Services. The Services shall include all construction management services required for successful bidding, award and construction of the new Bus Storage Facility (Project) including the following:

1.1 General

Professional services to be provided by the Contractor under this Agreement shall comply with the latest edition of all applicable codes, ordinances, criteria, standards, regulations and other laws unless otherwise specified by the TJPA. The Services may include, but not necessarily be limited to, the following:

- a. Design review services including safety and hazard analyses, constructability and cost effectiveness reviews, as well as reviews of existing field conditions, and construction impacts to surrounding environments.
- b. Construction management services to administer, monitor, inspect and interface with the construction contractor and the TJPA in accordance with the TJPA Construction Management Procedures Manual included in Appendix D.
- c. Administrative tasks generally associated with the construction management services provided, which include documentation of work progress, progress reports, correspondence recordkeeping, payment and certified payroll verification, and facilitating communications with the TJPA, the TJPA Program Management/Program Controls (PMPC) consultant, and other agencies as required.
- d. Claims management and dispute resolution assistance in order to mitigate the size and number of any claims, as requested.
- e. Rapid emergency response to the TJPA as required.

1.2 Design Review

The Contractor shall provide multi-disciplinary design review services to support the Project. Services to be provided may include, but not necessarily be limited to, the following:

- a. Verification of existing field conditions and interferences
- b. Hazard and safety analyses
- c. Constructability and cost effectiveness reviews
- d. Analyses of construction impacts on surrounding environments

1.3 Construction Management

The Contractor shall provide multi-disciplinary construction management services to support the Project. Services to be provided may include, but are not necessarily limited to the following:

- a. **Project Communication/Recordkeeping and Meeting Coordination**
 - i. Participate in partnering meetings as required by the TJPA.
 - ii. Conduct pre-construction meeting.
 - iii. Conduct weekly progress meetings with construction contractor and key stakeholders.
 - iv. Document construction progress, quality and budget, including digital photographs of key activities.

- v. Update and maintain on a daily basis all project documents (e.g., submittals, correspondence, RFIs, PCOs, COs) using a web-based computerized recordkeeping system as provided by the TJPA (Constructware ASP)
 - vi. Verify contractor's timely documentation of certified payroll records and use of apprentices using TJPA's web-based computerized record keeping system (Elation Systems).
 - vii. Provide assistance/support with community relations activities.
 - viii. Coordinate with Caltrans staff and transit agencies' operations, maintenance and planning staff.
- b. Cost Management**
- i. Verify, evaluate and negotiate invoices submitted by the contractor for payment.
 - ii. Prepare and maintain construction contract and overall project cost forecasts and recommend methods of cost containment to the TJPA.
 - iii. Provide multi-discipline cost estimating as required.
 - iv. Evaluate changes to the construction contract for appropriateness of costs and identify options for cost mitigation.
 - v. Negotiate change orders with construction contractor.
 - vi. Prepare change orders and associated documentation.
- c. Schedule Management**
- i. Monitor and review the contractor's schedule for compliance with contract requirements. Recommend approval to the TJPA when appropriate.
 - ii. Review, compare and analyze the contractor's work progress against its schedule so any delays or potential delays to milestones or critical items of work become known at the earliest possible date. As required, the Contractor may be requested to develop and recommend corrective measures to the TJPA.
 - iii. Prepare and review construction and payment schedules.
 - iv. Monitor changes and potential changes so that the TJPA will have timely information as to the effect of changes on project time and cost.
- d. Technical Support**
- i. Provide resident, field, and office engineering.
 - ii. Perform constructability reviews.
 - iii. Perform hazard analysis and safety certification.
 - iv. Provide traffic control monitoring.
 - v. Coordinate owner and specialty inspections.
 - vi. Construction safety oversight.
 - vii. Review and process contractor submittals.
 - viii. Provide quality assurance (QA) to oversee the contractor's quality control (QC) activities, as requested.
- e. Environmental Monitoring.** The Contractor shall monitor construction contractors' activities for compliance with environmental requirements, including those included in Appendix E, Bus Storage MMRP. These requirements include, but are not necessarily limited to, the following:
- i. Storm water pollution prevention
 - ii. Noise and vibration

- iii. Air emissions
 - iv. Cultural historic resources
 - v. Hazardous materials/waste
- f. **Coordination with Other Agencies and Affected Entities.** The Project site is located within the State right-of-way and improvements will be constructed under a Caltrans encroachment permit. Upon completion of the Project the completed facility will be operated under a leasehold agreement with Caltrans. Coordination with designated Caltrans staff will be required as part of the project.

The Contractor may be required to assist the TJPA with construction coordination. Anticipated interfaces include, but are not necessarily limited to, the following:

- i. City, county and state agencies
 - ii. Transit agencies
 - iii. Utility agencies
 - iv. Other contractors
- g. **Project Reporting.** The Contractor shall prepare and submit to the TJPA monthly project reports. These project reports shall be submitted within 10 days following the end of the month, unless otherwise specified. Project reports shall include, but are not necessarily limited to, the following:
- i. Progress (narrative of contract status, achievements, community relation issues, etc.).
 - ii. Schedule data (critical activities, actual versus planned milestones, change order status, forecast-at-completion, comments on status and planned corrective actions, etc.).
 - iii. Financial data (contractor's planned vs. actual invoices; change order status, forecast-at-completion, comments on status and planned corrective actions, etc.).
 - iv. Critical items (e.g., approvals, schedule delays, etc.).
 - v. Problem areas (identify issues and concerns and discuss planned corrective action).
- h. **Project Closeout.** The Contractor shall provide contract closeout assistance to the TJPA which may include, but is not necessarily be limited to, the following:
- i. Prepare a punch list of incomplete or unsatisfactory items.
 - ii. Pursue correction and completion of all punch list items.
 - iii. Conduct/assist with final inspections.
 - iv. Audit receipt of contract deliverable items.
 - v. Obtain and review as-built drawings, specifications, and operations and maintenance manuals.
 - vi. Negotiate and resolve claim issues.
 - vii. Administer and perform close-out of contract documentation.
 - viii. Prepare close-out report.
- i. **Inspection and Testing**
- i. Provide code and quality inspections, on a timely basis in conformance with the Construction Documents General Requirements (Division 01).
 - ii. Provide specialty inspections and independent testing including, but not limited to, steel, concrete, masonry, and soil compaction on a timely basis in conformance with the Construction Documents General Requirements (Division 01).
 - iii. Coordinate various agency inspector visits (i.e., City).

- iv. Log and track non-compliance work to resolution and acceptance.
- v. Log and track construction issues identified in the Architect/Engineer (A/E) field observation reports to resolution and acceptance.

1.4 Agreement Administration

The Contractor shall provide administrative services in support of the Agreement including, but not necessarily limited to, the following:

- a. **Communications/Meetings/Recordkeeping.**
 - i. Maintain communication tracking system using Constructware ASP, which documents all formal communications between consultants, Contractor, and/or the TJPA.
 - ii. Meet with the TJPA and PMPC staff, and other team members on a regular basis as required throughout the life of the Agreement.
 - iii. Conduct, participate, document, and/or facilitate other meetings and presentations with affected parties as required.
- b. **Progress Reporting.** Prepare and submit to the TJPA monthly progress reports and invoices that include financial and DBE/SBE participation data in the TJPA-approved format. The reports shall be submitted as an attachment to the invoice submittal and shall be provided within 10 days following the end of each month.
- c. **Schedule/Cost Management/Subconsultant Management.**
 - i. Develop resource-loaded schedules with deliverables and milestones for the Project, as requested by the TJPA.
 - ii. Coordinate with the TJPA and PMPC staff on trend analyses and associated data.
 - iii. Develop and implement a plan to manage subconsultants.
- d. **Quality Assurance/Quality Control (QA/QC).** Establish a QA/QC plan and implementing procedures for construction management activities that meet the requirements of the Program's Quality Management System, including compliance with the FTA quality assurance and quality control guidelines. The CM QA/QC plan and procedures shall provide for effective oversight of the contractor's quality control (CQC) plan and may be developed from standards currently implemented by the Contractor.

The Contractor shall submit the project-specific QA/QC plan to the TJPA within 30 days of notice to proceed. The Contractor shall appoint a quality assurance manager, subject to approval by the Program Quality Assurance Manager, with appropriate skills and experience for the specific project and the work to be performed.

Specific areas the CM QA/QC plan and procedures must include, but are not limited to, the following:

- i. **CM Team Organization and Responsibilities:** The individuals responsible for Quality Assurance/Quality Control shall be clearly indicated in the project team organization chart.
- ii. **Document Control:** Distribution, tracking, and control of Project documents, including review and approval of Requests for Information and Requests for Substitution.
- iii. **Design Control:** Review of drawings, specifications, technical reports, memoranda, meeting summaries, calculations, and estimates, as directed by the TJPA. Incorporate procedures to ensure the following:
 - TJPA review of all project documents, and that all TJPA comments, including both print and electronic, are addressed by the contractor.

- Contractor deliverables contain a statement that the information contained in the submittal has been quality control checked in accordance with the CQC Plan.
- iv. Inspection and Testing: The CM QA/QC plan shall include development of appropriate inspection guidelines and checklists, Independent Assurance and Sampling Test guidelines, and inspection and test documentation requirements. Include procedures for oversight and implementation of the non-conformance reporting and corrective action processes.
- v. Management and Project QA Audits: Support for Program QA surveillance and audits of Construction contractor, supplier, and Contractor activities and products.

The TJPA reserves the right, in its sole discretion, to change this Scope of Services at any time during the term of the Agreement. The Contractor shall be paid for any work that meets the requirements of the Agreement and that is performed prior to the date of such change.

The Contractor shall provide the Services by personnel listed below. Any changes in personnel will be subject to the TJPA's prior review and written approval, which approval shall not be unreasonably withheld.

B. Persons Providing Services

The following employees of Contractor will provide the Services:

<u>Name</u>	<u>Title</u>
Zamir Zuraek	Project Principal/Senior Estimator
Pete McKean, PE	Resident Engineer
Richard Medeghini	Project Inspector
LaJuene Smith	Office Engineer
Shannon Alford	Remediation Project Manager

APPENDIX "B"

CALCULATION OF CHARGES

This Appendix B sets forth the method for calculating charges to be invoiced by the Contractor for services rendered under this Agreement. This Appendix B does not modify or affect the Fixed Fee under the Agreement or any maximum fee specified in a Notice To Proceed issued under this Agreement. Contractor represents that all charges invoiced under this Agreement shall be made in good faith for services performed and shall conform to the schedule set forth in this Appendix B. Contractor acknowledges and agrees that all information supporting the amounts listed in this Appendix B and any other requests to the TJPA for payment or approval may be subject to investigation as a false claim, as provided in paragraph 8 of this Agreement.

A. Charges for Services Performed by the Contractor

1. Direct Labor Costs

Contractor has submitted to the TJPA audited individual hourly base salary rates (the "Base Hourly Rate"), to establish limits to base salary rates per the attached Appendix B as part of Appendix B-1. The TJPA acknowledges and agrees that actual Base Hourly Rates may be adjusted annually beginning January 1, 2013. The amount of such annual adjustment, if any, is limited to a maximum of the CPI annual percent change increase (San Francisco Bay Area for Urban Wage Earners and Clerical Workers) for the previous calendar year. If the Index declines or shows no increase, Base Hourly Rates shall not increase. Wage rates which are set by a federal or state published scope of work and prevailing wage rate shall be increased in conformance with applicable published increases. In no event shall any Base Hourly Rate exceed \$80.

Contractor has also submitted to the TJPA an audited overhead rate of 112.50% (the "Overhead Rate"). The Overhead Rate includes all direct and indirect costs of labor for each employee and in no event shall the TJPA be responsible to the Contractor for the payment of labor or overhead costs in excess of the Base Hourly Rate plus the Overhead Rate. The Overhead Rate shall remain in effect during the entire term of this Agreement, including all extensions.

The TJPA shall compensate the Contractor the Base Hourly Rate plus the Overhead Rate multiplied by the number of hours worked in the invoice period. The formula to calculate Direct Labor Costs shall be as follows: $([\text{Base Hourly Rate}] + [\text{Overhead Rate}]) \times \text{number of hours} = \text{Direct Labor Costs}$.

2. Profit and Fee

Contractor shall invoice its profit and fee at a rate of 9% (the "Profit/Fee Rate"), up to an amount not to exceed \$100,000.

The Profit/Fee Rate shall remain in effect during the entire term of this Agreement, including all extensions. The Contractor may invoice the Profit/Fee rate only on Direct Labor Costs and on no other charge under this Agreement. The Profit/Fee rate shall not be applied to any portions of Overhead Rate exceeding 150%.

B. Charges for Other Direct Costs

Direct reimbursable expenses, or Other Direct Costs ("ODCs"), shall include actual direct costs (with no mark up) of expenses directly incurred in performing the work. All ODCs are subject to pre-approval in writing by the TJPA. ODCs shall not exceed \$100,000 during the entire term of this Agreement, including all extensions.

The following items will be eligible for reimbursement as ODCs:

- Temporary Facilities
 - Move in/out (moving charge only, storage is not included)
 - Cleaning
 - Office furniture
 - Office supplies
 - Postage or delivery/messenger services as requested or approved by TJPA
- Telephone
 - Equipment
 - Monthly charges
 - Cell phones (for Project use only)
- Copier and blueprints
 - Copy machine and supplies
 - Miscellaneous reproduction necessary for Project CM services
- Computers
 - Network/data set up
 - New computer equipment dedicated for Project CM services
 - Monthly software licenses, technical support, repair

Any item not listed above shall not be eligible for reimbursement as an ODC. Ineligible items include but are not limited to:

- Travel expenses (unless specifically requested and authorized in advance by TJPA)
- Contractor personnel relocation costs
- Any home office labor charges or pass-through, including but not limited to administrative and clerical personnel time
- Entertainment expenses
- Home office expenses
- Telephone calls and faxes originating in the firm's home office, standard computer use charges, non-Project specific computer hardware or software, communication devices, and electronic equipment
- Meal expenses which are not related to Project-related business trips, including refreshments and working lunches with TJPA staff
- Postage and courier services not requested and approved by TJPA
- Costs of preparing the proposal for the Project
- Taxes
- Insurance premiums

C. Charges for Services Performed by Subcontractors

The approved Subcontractors and their respective Base Hourly Rates and Overhead Rates are listed in Appendix B-2 to this Agreement. If a Subcontractor's Rates are not audited as of the date of this Agreement, the Rates shall be subject to audit and no payments shall be made for a Subcontractors' services until such time as an audit is completed; actual payments shall be made only upon the audited rates. The Contractor may charge the TJPA only the Subcontractors' Direct Labor Costs (calculated as provided above), multiplied by the Subcontractor's Profit/Fee Rate which shall not exceed 9%, multiplied by a Subcontractor Administration Fee of 2%. No additional Administration Fee shall be charged for Subcontractors at the second tier or lower. All restrictions on the Contractor's rate and fee charges shall apply to Subcontractors' rate charges.

D. Invoice Requirements

The Contractor shall submit one original invoice package with the appropriate reporting forms and supporting documentation to substantiate services provided and allowable ODCs. Contractor will work with TJPA and PM/PC staff to establish an invoice format that will correlate with appropriate Project software and will be used throughout the Project. Each invoice submission must include sufficient information to identify the participation and amount payable to each Subcontractor. Timesheets, cards or logs must include a brief description of when and what work was performed, memorializing the day's progress. If vehicle travel is authorized, the Contractor shall submit mileage logs which include the beginning and ending mileage to substantiate the variable portal-to-portal distance and driving required while performing the work. Any ODCs must be substantiated with receipts including a brief description for each receipt documenting the purpose of the expense. All invoices must include the contract number, the NTP number (and title, if applicable). Any authorized travel expenses must be approved in advanced by the TJPA and must adhere to the "TJPA Travel Policy for Consultants and Subconsultants" (<http://transbaycenter.org/tjpa/documents>).

APPENDIX B – 1

**CONTRACTOR'S AUDITED
INDIVIDUAL HOURLY BASE SALARY RATES**

TOWNSEND MANAGEMENT, INC.		
Position Description/Classification	Name of Staff Person	Base Hourly Rate
Resident Engineer	Pete McKean	80.00
Project Inspector	Rich Medeghini	70.00
Senior Estimator	Zamir Zuraek	72.00
Assistant Resident Engineer		70.00
Project Inspector		70.00
Project Engineer		60.00
Office Engineer		40.00
Cost Engineer		60.00
Sr. Admin		40.00
Admin		30.00
Intern		20.00
The audited Field Overhead Rate is 112.50%.		

APPENDIX B – 2

**SUBCONTRACTORS' AUDITED
INDIVIDUAL HOURLY BASE SALARY RATES**

Yolanda's Construction Administration & Traffic Control, Inc.		
Position Description/Classification	Name of Staff Person	Base Hourly Rate
Office Engineer	LaJuene Smith	33.00
The Overhead Rate is 112%.		

HARRIS & ASSOCIATES, INC.		
Position Description/Classification	Name of Staff Person	Base Hourly Rate
Remediation Project Manager	Shannon Alford	54.00
The Overhead Rate is 192.47%.		

Appendix “C”

USDOT REQUIREMENTS FOR AGREEMENTS WITH THE TJPA

The USDOT’s requirements for agreements between the TJPA and a third party are summarized below. Certain USDOT provisions described below may not be applicable to all agreements with the TJPA. The italicized text is intended to assist the Contractor in understanding which Federal requirements may be applicable to an agreement. The USDOT and the TJPA have sole discretion to apply any particular provision described below.

These provisions supplement the provisions in the Agreement, and shall be interpreted in the broadest possible manner to avoid any conflicts. If there is an unavoidable conflict between the USDOT requirements and any other terms and conditions of the Agreement, in the TJPA’s sole determination, the USDOT requirements shall take precedence.

The following provisions (1-12) apply to all Agreements (excluding micropurchases—purchases of \$3,000.00 or less).

1. DEFINITIONS

****** *The Definitions apply to all Agreements.*

- (a). **Agreement** means a contract, purchase order, memorandum of understanding or other agreement awarded by the TJPA to a Contractor, financed in whole or in part with Federal assistance awarded by FTA or FRA.
- (b). **Approved Project Budget** means the most recent statement, approved by the FTA, of the costs of the Project, the maximum amount of Federal assistance for which the TJPA is currently eligible, the specific tasks (including specified contingencies) covered, and the estimated cost of each task.
- (c). **Contractor** means the individual or entity awarded an Agreement financed in whole or in part with Federal assistance originally derived from FTA.
- (d). **Federal Cooperative Agreement** means the instrument by which FRA or FTA awards Federal assistance to the TJPA to support a particular Project, and in which FRA or FTA takes an active role or retains substantial control
- (e.) **Federal Grant Agreement** means the instrument by which FTA or FRA awards Federal assistance to the TJPA to support a particular Project, and in which FTA or FRA does not take an active role or retain substantial control, in accordance with 31 U.S.C. Section 6304.
- (f.) **FRA** is the acronym for the Federal Railroad Administration, one of the operating administrations of the U.S. DOT.
- (g.) **FRA Directive** includes any FRA regulation, policy, procedure, directive, circular, notice, order or guidance providing information about FRA’s programs, application processing procedures, and Project management guidelines.
- (h). **FTA** is the acronym for the Federal Transit Administration, one of the operating administrations of the U.S. DOT.
- (i). **FTA Directive** includes any FTA regulation, policy, procedure, directive, circular, notice,

order or guidance providing information about FTA's programs, application processing procedures, and Project management guidelines, including the Master Agreement between FTA and the TJPA.

- (j). **Government** means the United States of America and any executive department thereof.
- (k). **Project** means the Transbay Transit Center Program, which will extend Caltrain to Transbay Terminal and replace Transbay Terminal with the new Transbay Transit Center Building. Total project consists of three major components: a new, multi-modal Transbay Transit Center (TTC) on the site of the present Transbay Terminal; the extension of Caltrain commuter rail from its current SF terminus at 4th and Townsend St. to a new underground terminus under a proposed new TTC; and the establishment of a Redevelopment Area with related development projects, including transit-oriented development on publicly owned land in the vicinity of the new multi-modal TTC.
- (l). **Recipient** means the TJPA.
- (m). **Secretary** means the U.S. DOT Secretary, including his or her duly authorized designee.
- (n). **Subcontract** means a subcontract at any tier entered into by Contractor or its subcontractor relating to the Agreement, financed in whole or in part with Federal assistance originally derived from FTA or FRA. Unless otherwise specified, the Contractor must include each of these Federal provisions in any Subcontract related to this Agreement.
- (o). **U.S. DOT** is the acronym for the U.S. Department of Transportation, including its operating administrations.
- (p). **U.S.DOT Directives** means any U.S. DOT regulation, policy, procedure, directive, circular, notice, order or guidance providing information about U.S.DOT's programs, application processing procedures, and Project management guidelines.

2. NO GOVERNMENT OBLIGATION TO THIRD PARTIES

****** *This requirement applies to all Agreements.*

The TJPA and Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the Agreement, absent the express written consent by the Federal Government, the Federal Government is not a party to this Agreement and shall not be subject to any obligations or liabilities to the TJPA, Contractor, or any other party (whether or not a party to that Agreement) pertaining to any matter resulting from the Agreement.

3. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS AND RELATED ACTS

****** *This provision applies to all Agreements.*

- (a). The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. Section 3801 et seq., and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 CFR Part 31, apply to its actions under the Agreement. Upon execution of the Agreement, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the Agreement or the FTA- or FRA-assisted Project for which this Agreement work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, 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 on the Contractor to the extent the Federal Government deems appropriate.

- (b). The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under an Agreement connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA or FRA under the authority of 49 U.S.C. Section 5307, the Government reserves the right to impose the penalties of 18 U.S.C. Section 1001 and 49 U.S.C. Section 5307(n)(1) on the Contractor, to the extent the Federal Government deems appropriate.

4. ACCESS TO DOCUMENTS

****** *This requirement applies to all Agreements. FRA requires the inclusion of these requirements in Subcontracts over \$100,000.*

****** *Please be aware that the requirements in the Agreement regarding audit and inspection of records may require the Contractor to maintain files relating to this Agreement for a longer period of time than described in the requirement below. Please also be aware that, as described in the Agreement, the TJPA follows the provisions of the City and County of San Francisco Sunshine Ordinance regarding responses to public requests for certain bid documents. The Contractor must comply with the requirements described below and in the Agreement.*

- (a). Where the TJPA is considered a “local government” and is a Recipient or a subgrantee of a Recipient, in accordance with 49 CFR Section 18.36(i), the Contractor agrees to provide the TJPA, the FTA or FRA Administrator, the Comptroller General of the United States and/or any of their authorized representatives access to any books, documents, accounts papers and records of the Contractor which are directly pertinent to this Agreement (“Documents”) for the purposes of making audits, examinations, excerpts and transcriptions. Contractor also agrees, pursuant to 49 CFR Section 633.17, to provide the FTA or FRA Administrator or its authorized representatives, including any project management oversight Contractor, access to Contractor's Documents and construction sites pertaining to a major capital project, defined at 49 U.S.C. Section 5302(a)1, which is receiving Federal financial assistance through the programs described at 49 U.S.C. sections 5307, 5309 or 5311.
- (b). Where the TJPA is a Recipient or a subgrantee of a Recipient, in accordance with 49 U.S.C. Section 5325(a), and enters into a contract for a capital project or improvement (defined at 49 U.S.C. Section 5302[a]1) through other than competitive bidding, the Contractor agrees to provide the TJPA, the Secretary and the Comptroller General, or any authorized officer or employee of any of them, access to any Documents for the purposes of conducting an audit and inspection.
- (c). The Contractor agrees to permit any of the foregoing parties to reproduce, by any means whatsoever, or to copy excerpts and transcriptions, as reasonably needed, of any Documents.
- (d). The Contractor agrees to maintain all Documents required under this Agreement for a period of not less than three years after the date of termination or expiration of this Agreement, except in the event of litigation or settlement of claims arising from the performance of this Agreement, in which case Contractor agrees to maintain same until the TJPA, the FTA or FRA Administrator, the Comptroller General, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto. (See 49 CFR Section 18.39[i][11]).

5. FEDERAL CHANGES

** *This requirement applies to all Agreements.*

Contractor shall at all times comply with all applicable federal laws and regulations, and all FTA Directives, FRA Directives and U.S. DOT Directives applicable to the Project, as they may be amended or promulgated from time to time during the term of this Agreement. It is Contractor's responsibility to be aware of any amendments or changes to such federal requirements and directives. Contractor's failure to so comply shall constitute a material breach of this Agreement.

6. CIVIL RIGHTS REQUIREMENT

** *This requirement applies to all Agreements.*

** *Please be aware that the requirements in the Agreement regarding nondiscrimination are broader than the USDOT Requirements described below. The Contractor must comply with the requirements described below and in the Agreement.*

(a). **Nondiscrimination** - In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. Section 2000d et seq.; the Age Discrimination Act of 1975, as amended, 42 U.S.C. Section 6101 et seq.; the Americans with Disabilities Act of 1990, 42 U.S.C. Section 12101 et seq.; Federal transit law at 49 U.S.C. Section 5332; and the Rehabilitation Act of 1973, as amended, 29 U.S.C. 794 et seq.; the Drug Abuse Office and Treatment Act of 1972, as amended, 21 U.S.C. 1101 et seq.; the Comprehensive Alcohol Abuse and Alcoholism Prevention Act of 1970, as amended, 42 U.S.C. 4541 et seq.; and the Public Health Service Act, as amended, 42 U.S.C. 290dd et seq., the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, disability, or other protected class. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements federal agencies may issue, including U.S. DOT regulations, "Nondiscrimination in Federally-Assisted Programs of the Department of Transportation-Effectuation of Title VI of the Civil Rights Act," 49 CFR part 21; and U.S. DOT regulations, "Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance," 49 CFR parts 27 and 37.

(b). **Equal Employment Opportunity** - The following equal employment opportunity requirements apply to the Agreement:

(1). **Race, Color, Creed, National Origin, Sex** - In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. Section 2000e, and Federal transit laws at 49 U.S.C. Section 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 CFR Parts 60, (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. Section 2000e note), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Project. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex, or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA or FRA may issue.

- (2). **Age** - In accordance with Section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. Section 623, and Federal transit law at 49 U.S.C. Section 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA or FRA may issue.
- (3). **Disabilities** - In accordance with Section 102 of the Americans with Disabilities Act, as amended, 42 U.S.C. Section 12112, the Contractor agrees that it will comply with the requirements of U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 CFR Part 1630, pertaining to employment of persons with disabilities. In addition, the Contractor agrees to comply with any implementing requirements FTA or FRA may issue.

7. DISADVANTAGED BUSINESS ENTERPRISE (DBE)

**

The specific provisions checked below apply to this Agreement.

- (a). This Agreement is subject to the requirements of 49 CFR Part 26, *Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs*. The national goal for participation of Disadvantaged Business Enterprises (DBEs) is 10 percent. The TJPA's Anticipated DBE Participation Level for each Federal Fiscal Year is published on the TJPA website by August 1 of each year.
- A separate Agreement goal of _____ percent DBE participation has been established for this Agreement.
- A separate Agreement goal **has not** been established for this Agreement.
- (b). The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of this DOT-assisted Agreement. Failure by the Contractor 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 TJPA deems appropriate. Each Subcontract the Contractor signs with a subcontractor must include the assurance in this paragraph (see 49 CFR Section 26.13[b]).
- (c). *(Checked box is applicable to this Agreement.)*
- (If a separate Agreement goal has been established, use the following)*

The Contractor was required to document sufficient DBE participation to meet the separate Agreement goal established for this Agreement or, alternatively, document adequate good faith efforts to do so, as provided for in 49 CFR Section 26.53.

(If no separate Agreement goal has been established, use the following)

The Contractor is required to report its DBE participation obtained through race-neutral means throughout the period of performance.

- (d). The Contractor is required to pay its subcontractors performing work related to this Agreement for satisfactory performance of that work no later than ten (10) days after the Contractor's receipt of payment for that work from the TJPA. In addition, the Contractor is required to return any retainage payments to those subcontractors within thirty (30) days

after incremental acceptance of the subcontractor's work by the TJPA and Contractor's receipt of the partial retainage payment related to the subcontractor's work.

- (e). The Contractor must promptly notify the TJPA whenever a DBE subcontractor performing work related to this Agreement is terminated or fails to complete its work, and must make good faith efforts to engage another DBE subcontractor to perform at least the same amount of work. The Contractor may not terminate any DBE subcontractor and perform that work through its own forces or those of an affiliate without prior written consent of the TJPA.

8. AMERICANS WITH DISABILITIES ACT

** *This requirement applies to all Agreements.*

The Consultant agrees that all facilities constructed under this Agreement will be designed to meet the applicable Accessibility Guidelines for Transportation Facilities set out as appendix A to 49 CFR Part 37.

9. INCORPORATION OF U.S. DEPARTMENT OF TRANSPORTATION TERMS

** *This requirement applies to all Agreements.*

The preceding provisions include, in part, certain standard terms and conditions required by U.S. DOT, FTA and FRA of the TJPA's agreements, whether or not expressly set forth in the preceding Agreement provisions. All contractual provisions required by U.S. DOT, FTA, and FRA are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all USDOT, FTA, and FRA-mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any TJPA requests which would cause the TJPA to be in violation of the USDOT, FTA, or FRA terms and conditions.

10. FLY AMERICA REQUIREMENTS

** *This provision applies to all Agreements that involve the transportation of persons or property, by air, between a place in the U.S. and a place outside the U.S., or between places outside the U.S.*

- (a). The Contractor agrees to comply with 49 U.S.C. Section 40118 (the "Fly America Act") in accordance with the General Services Administration's regulations at 41 CFR Part 301-10, which provide that recipients and subrecipients of Federal funds and their contractors are required to use U.S. flag air carriers for U.S. Government-financed international air travel and transportation of their personal effects or property, to the extent such service is available, unless travel by foreign air carrier is a matter of necessity, as defined by the Fly America Act.
- (b). The Contractor shall submit the "Fly America Certification" if the regulation is applicable to the particular Agreement.
- (c). The Contractor shall submit, if a foreign air carrier was used, an appropriate certification or memorandum adequately explaining why service by a U.S. flag air carrier was not available or why it was necessary to use a foreign air carrier.
- (d). Notwithstanding the foregoing, transportation on a foreign air carrier is permissible when provided by a foreign air carrier under a code share agreement when the ticket identifies the U.S. air carrier's designator code and flight number. Transportation by a foreign air carrier is also permissible if there is a bilateral or multilateral air transportation agreement to which the U.S. Government and a foreign government are parties and which the U.S. DOT has determined meets the requirements of the Fly America Act.

11. CARGO PREFERENCE REQUIREMENTS

****** *This provision applies to all Agreements involving equipment, materials, or commodities which may be transported by ocean vessels.*

The Contractor agrees to:

- (a). use privately owned United States flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to the Agreement to the extent such vessels are available at fair and reasonable rates for United States flag commercial vessels;
- (b). furnish within twenty (20) working days following the date of loading for shipments originating within the United States or within thirty (30) working days following the date of leading for shipments originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill-of-landing in English for each shipment of cargo described in the preceding paragraph to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590 and to the TJPA (through the Contractor in the case of a subcontractor's bill-of-landing).

12. ENERGY CONSERVATION REQUIREMENTS

****** *This provision applies to all Agreements.*

The Contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act, 42 U.S.C. Section 6201 *et seq.*

The following provision (13) applies to Agreements exceeding \$10,000.

13. RECYCLED PRODUCTS

****** *This provision applies to all Agreements to procure \$10,000 or more of any one item designated by the EPA under 40 CFR Part 247, Subpart B in a single fiscal year, and to all Agreements to procure any items designated in 40 CFR Part 247, Subpart B where the TJPA or the Contractor has used Federal funds to procure \$10,000 or more of any one item in the previous fiscal year.*

****** *Please be aware that the requirements in the Agreement regarding resource conservation may be more restrictive than the USDOT Requirements described below. The Contractor must comply with the requirements described below and in the Agreement.*

The Contractor agrees to comply with the requirements of Section 6002 of the Resource Conservation and Recovery Act (RCRA), as amended (42 U.S.C. Section 6962 *et seq.*), including but not limited to the regulatory provisions of 40 CFR Part 247, and Executive Order 12873, as they apply to the procurement of the items designated in 40 CFR Part 247, Subpart B.

The following provision (14) applies to Agreements exceeding \$25,000.

14. GOVERNMENT-WIDE DEBARMENT AND SUSPENSION (NON-PROCUREMENT)

****** *This requirement applies to all Agreements and Subcontracts greater than or equal to \$25,000, and to any Agreement for auditing services at any dollar value.*

- (a). This Agreement is a "covered transaction" for purposes of federal suspension and debarment laws, including 2 CFR part 1200, and the provisions of U.S. Office of Management and Budget Appendix A "Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," 2 CFR part

180 , and the Contractor is required to comply with same. In particular, the Contractor is required to verify that the Contractor, its “principals,” and its “affiliates” are not “excluded” or “disqualified,” as defined by federal suspension and debarment laws.

- (b). The Contractor shall submit the “Certification Regarding Debarment, Suspension, and Other Responsibility Matters.”

The following provisions (15-16) apply to Agreements exceeding \$50,000.

15. CLEAN AIR

****** *This provision applies to all Agreements greater than \$50,000 and to subcontracts greater than \$50,000.*

- (a) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. Section 7401 et seq. The Contractor agrees to report each violation to the TJPA and understands and agrees that the TJPA will, in turn, report each violation as required to assure notification to FTA and FRA and the appropriate EPA Regional Office.
- (b) The Contractor also agrees to include these requirements in each subcontract exceeding \$50,000.

16. CLEAN WATER REQUIREMENTS

****** *This provision applies to all Agreements greater than \$50,000.*

- (a). The Contractor 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. Section 1251 et seq. The Contractor agrees to report each violation to the TJPA and understands and agrees that the TJPA will, in turn, report each violation as required to assure notification to FTA and FRA and the appropriate EPA Regional Office.
- (b). The Contractor also agrees to include these requirements in each Subcontract exceeding \$50,000 financed in whole or in part with Federal assistance provided by FTA and FRA.

The following provisions (17-20) apply to Agreements exceeding \$100,000.

17. BUY AMERICA REQUIREMENTS

****** *This provision applies only to the following types of Agreements: construction agreements of any value; agreements for the acquisition of goods or rolling stock of any value if funded by FRA, and valued at more than \$100,000 if funded by FTA.*

- (a). The Contractor agrees to comply with 49 U.S.C. Section 5323(j), 49 CFR Part 661, and 49 U.S.C. 24405, which provide that Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA- and FRA-funded projects, such as the Transbay Transit Center Program that is the subject of this Agreement, are produced in the United States, unless a waiver has been granted by FTA, FRA, or the product is subject to a general waiver. General waivers, when FTA funds are used, are listed in 49 CFR Section 661.7. Separate requirements for rolling stock are set out at 49 U.S.C. Section 5323(j)(2)(C) and 49 CFR Section 661.11 when FTA funds are used, and 49 CFR 24405(a) when FRA funds are used.
- (b). The Contractor shall submit the “Buy America Certification” at the time of bid/offer if the regulation is applicable to the particular agreement. The Prime Contractor is responsible for ensuring that lower tier subcontractors are in compliance.

18. BREACHES AND DISPUTE RESOLUTION

****** *This requirement applies to all Agreements in excess of \$100,000.*

- (a). **Disputes** - Disputes arising in the performance of this Agreement which are not resolved by agreement of the parties shall be decided in writing by the authorized representative of TJPA's Executive Director. This decision shall be final and conclusive unless within ten (10) days from the date of receipt of its copy, the Contractor mails or otherwise furnishes a written appeal to the Executive Director. In connection with any such appeal, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of the Executive Director shall be binding upon the Contractor and the Contractor shall abide by the decision.
- (b). **Performance During Dispute** - Unless otherwise directed by the TJPA, Contractor shall continue performance under this Agreement while matters in dispute are being resolved.
- (c). **Claims for Damages** - Should either party to the Agreement suffer injury or damage to person or property because of any act or omission of the party or of any of the party's employees, agents or others for whose acts the party is legally liable, a claim for damages therefore shall be made in writing to such other party within a reasonable time after the first observance of such injury of damage.
- (d). **Remedies** - Unless this Agreement provides otherwise, all claims, counterclaims, disputes and other matters in question between the TJPA and the Contractor arising out of or relating to this Agreement or its breach will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within the state in which the TJPA is located.
- (e). **Rights and Remedies** - The duties and obligations imposed by the Agreement Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by the TJPA or Contractor shall constitute a waiver of any right or duty afforded any of them under the Agreement, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

19. LOBBYING

****** *This provision applies to the following types of Agreements, if the Agreement is equal to or greater than \$100,000: construction, architectural and engineering; acquisition of rolling stock; professional services; operational services; and Turnkey.*

****** *Please be aware that the requirements in the Agreement regarding limitations on contributions may be more restrictive than the USDOT Requirements described below. The Contractor must comply with the requirements described below and in the Agreement.*

- (a). The contractor shall submit the "New Restrictions on Lobbying Certification" if the regulation is applicable to the particular agreement.
- (b). (1). No Federal appropriated funds have been or will be paid by or on behalf of the Contractor to any person to influence or attempt to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress regarding the award of a Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance, or the extension, continuation, renewal, amendment, or modification of any Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance;

- (2). If any funds other than Federal appropriated funds have been or will be paid to any person to influence or attempt to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any application for a Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance, the Applicant assures that it will complete and submit Standard Form- LLL, 'Disclosure Form to Report Lobbying,' in accordance with its instructions. Such forms are forwarded from tier to tier up to the TJPA.

20. AGREEMENT WORK HOURS AND SAFETY STANDARDS ACT

****** *This requirement applies to Agreements and Subcontracts for construction over \$100,000, and to non-construction Agreements valued at more than \$100,000 that employ "laborers or mechanics on a public work," as defined by 42 U.S.C. Section 3701.*

- (a). **Overtime requirements** - No Contractor or subcontractor contracting for any part of the Agreement work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- (b). **Violation; liability for unpaid wages; liquidated damages** - In the event of any violation of the clause set forth in paragraph (a) of this section the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (a) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.
- (c). **Withholding for unpaid wages and liquidated damages** - The TJPA shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such Agreement or any other Federal contract with the same Contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b) of this section.

The following provisions (21-23) apply to Construction Agreements.

21. SEISMIC SAFETY REQUIREMENTS

****** *This provision applies only to Agreements for the construction of new buildings or additions to existing buildings.*

The Contractor agrees that any new building or addition to an existing building that is the subject of this Agreement will be designed and constructed in accordance with the standards for Seismic Safety required in U.S. DOT Seismic Safety Regulations 49 CFR Part 41 and will certify to compliance with such regulations to the extent required by the regulations. The Contractor also agrees to ensure that all work performed under this Agreement, 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.

22. BONDING REQUIREMENTS

****** *This provision applies to Agreements for construction or facility improvements. For those Agreements or Subcontracts exceeding \$100,000, however, USDOT may accept the bonding policy and requirements of the TJPA, provided that the TJPA's bonding policy and requirements meet the minimum requirements as follows:*

- (a). *A bid guarantee from each bidder equivalent to 5 percent of the bid price. The "bid guarantees" shall consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of his bid, execute such contractual documents as may be required within the time specified.*
- (b). *A performance bond on the part of the Contractor for 100 percent of the Agreement price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the Contractor's obligations under such contract.*
- (c). *A cash deposit, certified check or other negotiable instrument may be accepted by the TJPA in lieu of performance and payment bonds, provided the TJPA has established a procedure to assure that the interest of USDOT is adequately protected. An irrevocable letter of credit would also satisfy the requirement for a bond.*

TJPA requirements regarding payment bonds are more stringent than USDOT amounts stated below. The TJPA requires a payment bond on the part of the Contractor for 100 percent of the Agreement price.

(1). Bid Bond Requirements (Construction)

- (a). **Bid Security**
A Bid Bond must be issued by a fully qualified surety company acceptable to TJPA and listed as a company currently authorized under 31 CFR Part 223 as possessing a Certificate of Authority.
- (b). **Rights Reserved**
In submitting a bid, it is understood and agreed by bidder that the right is reserved by TJPA to reject any and all bids, or part of any bid, and it is agreed that a bid may not be withdrawn for a period of ninety (90) days subsequent to the opening of bids, without the written consent of the TJPA.

It is also understood and agreed that if a bidder should withdraw any part or all of its bid within ninety (90) days after the bid opening without the written consent of the TJPA, shall refuse or be unable to enter into this Agreement, or refuse or be unable to furnish adequate and acceptable Performance Bonds and Labor and Material Payments Bonds, or refuse or be unable to furnish adequate and acceptable insurance, it shall forfeit its bid security to the extent of TJPA's damages occasioned by such withdrawal, or refusal, or inability to enter into an agreement, or provide adequate security therefor.

It is further understood and agreed that to the extent the defaulting bidder's Bid Bond, Certified Check, Cashier's Check, Treasurer's Check, and/or Official Bank Check (excluding any income generated thereby which has been retained by the TJPA) shall prove inadequate to fully recompense the TJPA for the damages occasioned by default, then a bidder agrees to indemnify the TJPA and pay over

to the TJPA the difference between the bid security and the TJPA's total damages, so as to make the TJPA whole.

A bidder understands that any material alteration of any of the above or any of the material contained on this form, other than that requested, will render the bid unresponsive.

(2). **Performance and Payment Bonding Requirements (Construction)**

The Contractor shall be required to obtain performance and payment bonds as follows:

(a). Performance Bonds

1. The penal amount of performance bonds shall be 100 percent of the original Agreement price, unless the TJPA determines that a lesser amount would be adequate for the protection of the TJPA.
2. The TJPA may require additional performance bond protection when an Agreement price is increased. The increase in protection shall generally equal 100 percent of the increase in Agreement price. The TJPA may secure additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(b). Payment Bonds

1. The penal amount of the payment bonds shall equal:
 - (i) 50 percent of the Agreement price if the Agreement price is not more than \$1 Million;
 - (ii) 40 percent of the Agreement price if the Agreement price is more than \$1 Million but not more than \$5 Million; or
 - (iii) \$2.5 Million if the Agreement price is more than \$5 Million.
2. If the original Agreement price is \$5 Million or less, the TJPA may require additional protection, as required by subparagraph 1, if the Agreement price is increased.

(3). **Performance and Payment Bonding Requirements (Non-Construction)**

The Contractor also may be required to obtain performance and payment bonds when necessary to protect the TJPA's interest.

(a). The following situations may warrant a performance bond:

1. TJPA property or funds are to be provided to the Contractor for use in performing the Agreement or as partial compensation (as in retention of salvaged material).
2. A Contractor sells assets to or merges with another concern, and the TJPA, after recognizing the latter concern as the successor in interest, desires assurance that it is financially capable.
3. Substantial progress payments are made before delivery of end items starts.
4. Agreements are for dismantling, demolition, or removal of improvements.

(b). When it is determined that a performance bond is required, the Contractor shall be required to obtain performance bonds as follows:

1. The penal amount of performance bonds shall be 100 percent of the original Agreement price, unless the TJPA determines that a lesser amount would be adequate for the protection of the TJPA.
2. The TJPA may require additional performance bond protection when an Agreement price is increased. The increase in protection shall generally equal 100 percent of the increase in Agreement price. The TJPA may secure additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

- (c). A payment bond is required only when a performance bond is required, and if the use of payment bond is in the TJPA's interest.
- (d). When it is determined that a payment bond is required, the Contractor shall be required to obtain payment bonds as follows:
 - 1. The penal amount of payment bonds shall equal:
 - (i) 50 percent of the Agreement price if the Agreement price is not more than \$1 Million;
 - (ii) 40 percent of the Agreement price if the Agreement price is more than \$1 Million but not more than \$5 Million; or
 - (iii) \$2.5 Million if the Agreement price is increased.
- (4). **Advance Payment Bonding Requirements**
The Contractor may be required to obtain an advance payment bond if the Agreement contains an advance payment provision and a performance bond is not furnished. The TJPA shall determine the amount of the advance payment bond necessary to protect the TJPA.
- (5). **Patent Infringement Bonding Requirements (Patent Indemnity)**
The Contractor may be required to obtain a patent indemnity bond if a performance bond is not furnished and the financial responsibility of the Contractor is unknown or doubtful. The TJPA shall determine the amount of the patent indemnity to protect the TJPA.
- (6). **Warranty of the Work and Maintenance Bonds**
 - (a). The Contractor warrants to the TJPA, the architect and/or engineer that all materials and equipment furnished under this Agreement will be of highest quality and new unless otherwise specified by the TJPA, free from faults and defects and in conformance with the Agreement documents. All work not so conforming to these standards shall be considered defective. If required by the Executive Director, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.
 - (b). The work furnished under the Agreement must be of first quality and the workmanship must be the best obtainable in the various trades. The work must be of safe, substantial and durable construction in all respects. The Contractor hereby guarantees the work against defective materials or faulty workmanship for a minimum period of one (1) year after Final Payment by the TJPA and shall replace or repair any defective materials or equipment or faulty workmanship during the period of the guarantee at no cost to the TJPA. As additional security for these guarantees, the Contractor shall, prior to the release of final payment, furnish separate Maintenance (or Guarantee) Bonds in form acceptable to the TJPA written by the same corporate surety that provides the Performance Bond and Labor and Material Payment Bond for this Agreement. These bonds shall secure the Contractor's obligation to replace or repair defective materials and faulty workmanship for a minimum period of one (1) year after final payment and shall be written in an amount equal to 100 percent of the Agreement sum, as adjusted (if at all).

23. DAVIS-BACON AND COPELAND ANTI-KICKBACK ACTS

****** *This requirement applies to any Agreement for construction greater than \$2,000. "Construction," for purposes of this requirement, includes "actual construction, alteration and/or repair, including painting and decorating." (29 CFR Section 5.5[a]).*

- (a). **Minimum Wages**

- (1). All laborers and mechanics employed or working upon the site of the work that is the subject of this Agreement (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the Project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act [29 CFR Part 3]), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

- (2). (A). The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the Agreement shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (i). Except with respect to helpers as defined as 29 CFR Section 5.2(n)(4), the work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (ii). The classification is utilized in the area by the construction industry; and
- (iii). The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and
- (iv). With respect to helpers as defined in 29 CFR Section 5.2(n)(4), such a classification prevails in the area in which the work is performed.

(B). If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the

contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within thirty (30) days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C). In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within thirty (30) days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D). The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this Agreement from the first day on which work is performed in the classification.

- (3). Whenever the minimum wage rate prescribed in the Agreement for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- (4). If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.
- (5). (A). The contracting officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the Agreement shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:
 - (i). The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (ii). The classification is utilized in the area by the construction industry; and
 - (iii). The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (B). If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the

contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within thirty (30) days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C). In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within thirty (30) days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D). The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(v) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this Agreement from the first day on which work is performed in the classification.

(b). **Withholding** - The TJPA shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this Agreement or any other Federal contract with the same Contractor, or any other federally assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the Agreement. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the Agreement, the TJPA may, after written notice to the Contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(c). **Payrolls and Basic Records**

(1). Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three (3) years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR Section 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records

which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(2). (A). The Contractor shall submit weekly for each week in which any Agreement work is performed a copy of all payrolls to the TJPA for transmission to the USDOT. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under Section 5.5(a)(3)(i) of Regulations, 29 CFR Part 5. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, DC 20402. The Contractor is responsible for the submission of copies of payrolls by all subcontractors.

(B). Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the Agreement and shall certify the following:

- (i). That the payroll for the payroll period contains the information required to be maintained under Section 5.5(a)(3)(i) of Regulations, 29 CFR Part 5 and that such information is correct and complete;
- (ii). That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the Agreement during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR Part 3;
- (iii). That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the Agreement.

(C). The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D). The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(3). The Contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the USDOT or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the Contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or

guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR Section 5.12.

(d). **Apprentices and Trainees**

- (1). Apprentices - Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first ninety (90) days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a Contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator of the Wage and Hour Division of the U.S. Department of Labor determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (2). Trainees - Except as provided in 29 CFR Section 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount

of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (3). Equal employment opportunity - The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.
- (e). **Compliance with Copeland Act Requirements** - The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this Agreement.
- (f). **Subcontracts** - The Contractor or subcontractor shall insert in any Subcontracts the clauses contained in 29 CFR Section 5.5(a)(1) through (10) and such other clauses as the USDOT may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier Subcontracts. The Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Section 5.5.
- (g). **Agreement Termination: Debarment** - A breach of the contract clauses in 29 CFR Section 5.5 may be grounds for termination of the Agreement, and for debarment as a contractor and a subcontractor as provided in 29 CFR Section 5.12.
- (h). **Compliance with Davis-Bacon and Related Act Requirements** - All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this Agreement.
- (i). **Disputes Concerning Labor Standards** - Disputes arising out of the labor standards provisions of this Agreement shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.
- (j). **Certification of Eligibility**
 - (1). By entering into this Agreement, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR Section 5.12(a)(1).
 - (2). No part of this Agreement shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR Section 5.12(a)(1).

- (3). The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. Section 1001.

Appendix D



Procedure: 04-01 Construction Meetings and Reporting

Revision Record

Revision	Description of Revision	Date
0	Original Issue	October 25, 2011

1.0 Purpose

This procedure defines the requirements for construction meetings and reporting during the construction phase of the Bus Storage project.

2.0 Scope

This procedure applies to TJPA Program Management, PMPC (Program Management/Program Controls) staff, the contractor, and the construction manager (CM).

If any procedure in this document conflicts with a provision in the construction contractor's contract documents, the contract documents must be followed.

3.0 References

The following documents are sources for the requirements in this procedure.

- Division 00 and 01 specification sections:
 - 00 07 00, General Conditions
 - 00 08 13, Specific Project Requirements
 - 00 08 14, Health and Safety Criteria
 - 00 08 15, Waste Management Requirements
 - 00 08 21, Disadvantaged and Small Business Enterprise and Equal Employment Opportunity/Employment Nondiscrimination Requirements
 - 01 10 40, Coordination
 - 01 12 00, Project Meetings
 - 01 13 10, Progress Schedule
 - 01 13 00, Submittals
 - 01 13 40, Contractor's Activities
 - 01 15 40, Protection of Property
 - 01 17 00, Completion and Contract Closeout
- Program Management Plan, Section 8, Construction Management
- Procedure 04-02, Submittals, Substitutions, and Requests for Information

Constructware work instructions referenced in this procedure are stored in the following folder under the Programwide Project in Constructware: *File Management>File Director>Administration>Procedures & Audits>Procedures>Constructware Work Instructions*.

4.0 Definitions

For general Program terms, refer to Section 00 07 00, *General Conditions*, and Appendix B of the Program Management Plan.

The term CM and contractor used throughout this procedure is defined in the contract’s general conditions under the entry TJPA Representative and Contractor. The designer is the A/E consultant for the project. Refer to Section 2 of the Program Management Plan for descriptions of project participants from the PMPC and TJPA.

5.0 Responsibilities

Responsibility Matrix: Meetings

	Project Participants							Notes
	TJPA Program Management	Contracts Compliance Manager (TJPA)	Project Manager (PMPC)	Construction Manager (CM)	Designer	Program Controls Manager (PMPC)	Construction Contractor (Contractor)	
<i>Action Codes:</i>								
<i>P - Perform the activity</i>								
<i>R - Review the work product of another</i>								
<i>I - Input required to performer of activity</i>								
<i>S - Support when requested by performer</i>								
<i>C - Communicate; be kept informed by performer</i>								
Prebid conference	C	P	S	I	S			
Preconstruction conference		S	S	P	S		I	
Site mobilization conference	C	S	C	P	S		I	
Solid Waste Mgmt. & Recycling Program Meetings			S	P	S		I	Approved by City department
Progress meetings	C		R	P	S	S	I	
Schedule and progress payment reviews			R	P	S	S	I	
Coordination meetings			R	R	R	S	P	
Non-discrimination compliance review		P	S	S			I	
Pre-installation conferences			R	R	S		P	
Close-out meeting	C	S	S	P	I		I	

Responsibility Matrix: Construction Reports and Surveys

<i>Action Codes:</i>	Project Participants								Notes
	TJPA Program Management	Contracts Compliance Manager (TJPA)	Project Manager (PMPC)	Construction Manager (CM)	Designer	Program Controls Manager (PMPC)	Program QA Manager	Construction Contractor (
<i>A - Approve the work product of an activity</i>									
<i>P - Perform the activity</i>									
<i>R - Review the work product of another</i>									
<i>I - Input required to performer</i>									
<i>S - Support when requested by performer</i>									
<i>C - Communicate; be kept informed by performer</i>									
Pre & postconstruction surveys	A	S	R	R	I	C	R	P	
Report of existing conditions	A	S	R	R	S		R	P	
Construction photographs	C		R	P	P		R	P	Inspectors
Daily reports	C		C	P			R	P	
Schedule updates	C		R	A	S	R	R	P	
Accident and near miss reports	R	R	R	R		C	R	P	
Solid Waste Management Plan Monthly Report	C	R	A	R	I		R	P	
Certified payroll info. report	C	C	C	A			R	P	
Progress payment report	C	A	R	R	S	C	R	P	
Subcontractor payment declaration	C		C	R				P	
Contract modification form	C	A	C	R		C		P	
Field observation reports	C		R	R	P			R	

6.0 Procedures

The CM is responsible for managing meetings and reviewing reports.

6.1 Construction Meetings

Meetings during construction constitute a key tool for managing the construction process and minimizing project impacts. Throughout construction, meetings are used to assess milestone progress, identify and work to resolve all issues, and obtain agreements. All project meetings and meeting agenda are prepared and distributed using Constructware, the Program Management Information System.

The CM is responsible for verifying that construction meetings are scheduled, coordinated, conducted, and documented in accordance with these procedures and the construction contract. The CM must verify that all issues are resolved or brought to the attention of TJPA Program Management in meetings.

Many meetings are recurring, and similar types of meetings will be held for most projects. Meeting organizers may set up recurring meetings in Constructware to help ensure that unresolved agenda items are carried over to subsequent meetings and that meeting minutes contain a consistent level of information.

Table 6.1 at the end of this procedure describes project construction meetings that are mandatory. Refer to the specification section referenced under Meeting Type for specific requirements.

The construction contract may specify additional mandatory meeting types or additional requirements.

Additional specialty meetings may be related to City departments, state authorities (e.g., the State Fire Marshal), the TJPA art program, the partnering program, pending change orders, community groups, and public outreach. For matters that need to be resolved urgently, specialty meetings may be arranged without advance notice.

6.1.1 Scheduling, Coordinating, and Conducting Meetings

The meeting's coordinator should consult TJPA Program Management regarding the appropriate attendees before scheduling a meeting. If the contractor is the meeting coordinator, the CM ensures that the meeting is coordinated with the appropriate parties. Routine meetings should be scheduled at least 5 working days in advance. All meetings are scheduled using the calendar features of Microsoft Outlook. All meetings are documented using Constructware. Refer to the work instructions, *Meetings*, for details on creating meeting agendas, sign-in sheets, and minutes in Constructware.

Every meeting must have an agenda. Use as a starting point any open issues from the previous meeting minutes and construction activities being performed. The CM and contractor should collaborate on the meeting agenda. Include at a minimum the following information for standard meetings.

- Title, purpose, date, time, and location of the meeting
- Meeting facilitator
- Attendees
- Recap of issues resolved in the previous meeting
- Open issues
- New issues
- Routine or standing issues or documents to be statused
- Action items and the individuals assigned to complete them and target dates

The CM ensures that the agenda is distributed at least 2 working days before the meeting.

6.1.2 Documenting Meetings

Every meeting must be documented by meeting minutes recorded during the meeting. The meeting's coordinator may take the minutes or assign the task to another person attending the meeting. The CM ensures that all meetings are documented.

Draft meeting minutes are distributed within 3 working days of the meeting to all attendees; comments or corrections should be returned within 2 working days. Final meeting minutes are issued

within 5 working days of the meeting. If no comments are received, the draft minutes are considered the final minutes.

The CM ensures that all final meeting minutes are distributed within 7 working days of the meeting. Meeting minutes should capture the major topics of discussion, information exchanged, agreements or resolutions reached, actions assigned to individuals or groups, and issues tabled for later discussion. A unique tracking number is assigned to each open issue.

6.2 Construction Reporting

Construction reporting encompasses the timely submission of reports and surveys that are used to document work or events as they occur. Compliance with contract requirements for construction reporting is essential to keeping project personnel informed and ensuring prompt progress payments. Construction reports also provide some of the information needed to conduct useful project meetings. Construction reports and surveys must be submitted using Constructware. The specific Constructware module to use depends on the type of report or survey being submitted and the contract documents. The CM must be notified electronically using Constructware.

The construction contractor has the primary responsibility for issuing reports and surveys. Additional or supplemental reports or surveys may be provided by the CM. Distribution and scheduling of contractor reports and surveys should be discussed and agreed on during the preconstruction conference. Table 6.2 at the end of this procedure describes project construction reports and surveys that are mandatory.

6.2.1 Report and Survey Preparation and Submission

Written reports and surveys should be prepared in accordance with PMPC standards. Daily reports should be prepared and distributed using the Constructware Daily Report module. Refer to the procedures and Constructware work instructions on daily reports for details on creating and distributing daily reports. Reports and surveys that consist of completed data in a standard form should be attached to a cover letter or memo, which should clearly state the name of the addressee and describe the nature of the report or survey. Schedules and photographs submitted as a report or survey should be attached to a corresponding letter or memo. Completed forms to be submitted with invoices in accordance with contract requirements do not need a cover letter or memo, as the invoice itself should have a cover letter or memo.

6.2.2 Draft Report and Survey Review and Approval

Some technical reports and surveys require review and approval by the TJPA before being issued. The contract technical specifications identify these reports and surveys and any special requirements for submission, comments, changes, timing, and approvals. Any questions should be addressed to the CM.

A report or survey that requires TJPA Program Management approval is treated as a submittal and processed in accordance with Procedure 04-02, *Submittals, Substitutions, and Requests for Information*. The CM ensures that the contractor adheres to Section 01 13 00, *Submittals*, and that issues are resolved or brought to the attention of TJPA Program Management in a timely manner.

6.3 Document Distribution

Table 6.3 summarizes the Program document distribution.

The CM ensures that all Disadvantaged Business Enterprise (DBE), Small Business Enterprise (SBE), and Equal Employment Opportunity (EEO) forms and reports required for payment have been submitted by the contractor. Late reports related to DBE, SBE, EEO, and non-discrimination or schedule updates may delay the processing of progress payments. See Procedure 04-03, *Contractor Payment Processing*, for details on the required reports. The TJPA's website contains documentation and forms for the TJPA's DBE and SBE programs.

The contractor's health and safety plan, security plan, traffic plans, and shoring plans are also required to be submitted prior to payment. These submittals are provided to the TJPA for general review only, and any comments are for information only.

7.0 Quality Records

Meeting Minutes

- Bidder question/response meetings
- Addenda meetings
- Prebid conference
- Preconstruction conference
- Site mobilization conference
- Solid Waste Management and Recycling Program meetings
- Weekly progress and monthly progress payment reviews
- Coordination meetings
- Pre-installation conferences
- Closeout meeting

Reports and Surveys

- Pre- and postconstruction surveys (site photographs and video)
- Report of existing conditions
- Construction photographs
- Daily reports
- Schedule updates
- Accident and near-miss reports
- Solid Waste Management Plan monthly report
- Certified payroll information report
- Progress payment form
- Subcontractor payment declaration
- Contract modification form
- Final expenditure report

8.0 Attachments

- Table 6.1, Mandatory Construction Meetings
- Table 6.2, Mandatory Reports and Surveys
- Table 6.3, Program Document Distribution Matrix

Table 6.1, Mandatory Construction Meetings

Report or Survey	Issued By	Purpose	Frequency	Provided To
Pre- and post-construction surveys (see Division 1, Sec. 01 15 40)	Contractor	Document possible claims or damages to nearby structures (photograph and video)	Before starting and after completion of work	CM
Report of existing conditions (see Division 1, Sec. 01 15 40)	Contractor	Document existing conditions in a report in accordance with the Division 1 site survey	Before starting work	CM
Construction photographs (see Division 1, Secs. 01 15 40 and 01 15 05)	Contractor	Prepare and document photographic history of the project's progress	Submit before work starts and progress photos twice a month	CM
Daily reports (see Division 1, Contractor's Activities, Sec. 01 13 40)	Contractor	Record and document project construction activities and events, i.e., manpower, equipment, subcontractors, work accomplished, accidents	Daily when Contractor on site	CM
Schedule updates (see Division 1, Sec. 01 13 10)	Contractor	Critical path method (CPM) schedule update and critical path report to show work progress, current status, and history.	Monthly on an agreed upon date	CM
Three week schedules (see Division 1, Sec. 01 13 10)	Contractor	Document a three-week window; completed activities for last week and scheduled activities for next two weeks	Weekly at progress meeting	CM
Accident and near miss reports (see Division 0, Sec. 00 08 14 and Division 1, Sec. 01 13 40)	Contractor	Document and take corrective actions for accidents and near-miss events	Verbal report within 24 hours; written report within 7 days of event	CM
Solid Waste Disposal and Recycling Report (see Division 0, Sec. 00 08 15)	Contractor	Document waste generated and recycled, reused or disposed at Class 3 landfills	Monthly	CM and City government recycling coordinator
Certified Payroll (see Division 0, Secs. 00 08 21, & 00 08 22; Division 1, Sec. 01 10 28)	Contractor	Provide information on wages, opportunities for minorities and women, and compliance with TJPA requirements	Monthly with invoice submission	CM and TJPA
TJPA Progress Payment Form (see Division 0, Sec. 00 08 21)	Contractor	Document construction progress for invoice payment	Monthly with invoice submission	CM and TJPA
TJPA Contract Forms (see Division 0, Section 00 08 21)	Contractor and all sub-contractors over \$50,000	Report employee data for verification of TJPA requirements	Monthly with invoice submission	CM and TJPA
Subcontractor Payment Declaration (see Division 0, Sec. 00 08 21)	Contractor	Document and demonstrate timely payments to subcontractors	Monthly within 10 working days of receipt of progress payment	CM and TJPA
Final Expenditure Report Form (see Division 0, Sec. 00 08 21)	Contractor	Provide payment and contract information for DBEs and SBEs used by contractor	With the final progress payment request	CM and TJPA

Table 6.2, Mandatory Reports and Surveys

Report or Survey	Issued By	Purpose	Frequency	Provided To
Pre- and post-construction surveys (see Division 1, Sec. 01 15 40)	Contractor	Document possible claims or damages to nearby structures (photograph and video)	Before starting and after completion of work	CM
Report of existing conditions (see Division 1, Sec. 01 15 40)	Contractor	Document existing conditions in a report in accordance with the Division 1 site survey	Before starting work	CM
Construction photographs (see Division 1, Secs. 01 15 40 and 01 15 05)	Contractor	Prepare and document photographic history of the project's progress	Submit before work starts and progress photos twice a month	CM
Daily reports (see Division 1, Contractor's Activities, Sec. 01 13 40)	Contractor	Record and document project construction activities and events, i.e., manpower, equipment, subcontractors, work accomplished, accidents	Daily when Contractor on site	CM
Schedule updates (see Division 1, Sec. 01 13 10)	Contractor	Critical path method (CPM) schedule update and critical path report to show work progress, current status, and history	Monthly on an agreed upon date	CM
Three week schedules (see Division 1, Sec. 01 13 10)	Contractor	Document a three-week window; completed activities for last week and scheduled activities for next two weeks	Weekly at progress meeting	CM
Accident and near miss reports (see Division 0, Sec. 00 08 14 and Division 1, Sec. 01 13 40)	Contractor	Document and take corrective actions for accidents and near-miss events	Verbal report within 24 hours; written report within 7 days of event	CM
Solid Waste Disposal and Recycling Report (see Division 0, Sec. 00 08 15)	Contractor	Document waste generated and recycled, reused or disposed at Class 3 landfills	Monthly	CM and City government recycling coordinator
Certified Payroll (see Division 0, Secs. 00 08 21, & 00 08 22; Division 1, Sec. 01 10 28)	Contractor	Provide information on wages, opportunities for minorities and women, and compliance with TJPA requirements	Monthly with invoice submission	CM and TJPA
TJPA Progress Payment Form (see Division 0, Sec. 00 08 21)	Contractor	Document construction progress for invoice payment	Monthly with invoice submission	CM and TJPA
TJPA Contract Forms (see Division 0, Section 00 08 21)	Contractor and all sub-contractors over \$50,000	Report employee data for verification of TJPA requirements	Monthly with invoice submission	CM and TJPA
Subcontractor Payment Declaration (see Division 0, Sec. 00 08 21)	Contractor	Document and demonstrate timely payments to subcontractors	Monthly within 10 working days of receipt of progress payment	CM and TJPA
TJPA Contract Modification Form (see Division 0, Sec. 00 08 21)	Contractor	Provide revised contract amounts for the Contractor, subcontractors, and vendors (including DBEs and SBEs)	When contract growth is 20%, and for all subsequent amendments	CM and TJPA
Final Expenditure Report Form (see Division 0, Sec. 00 08 21)	Contractor	Provide payment and contract information for DBEs and SBEs used by contractor	With the final progress payment request	CM and TJPA



Procedure: 04-02 Submittals, Substitutions, and Requests for Information

Revision Record

Revision	Description of Revision	Date
0	Original Issue	October 25, 2011

1.0 Purpose

This procedure defines the requirements for processing construction submittals, substitutions, and requests for information (RFIs) during the construction phase of the Bus Storage project.

2.0 Scope

This procedure applies to TJPA staff, PMPC (Program Management/Program Controls) staff, the contractor, and the construction manager (CM).

If any procedure in this document conflicts with a provision in the contract documents, the contract documents must be followed.

3.0 References and Coordinated Documents

The following Division 00 and 01 specification sections are sources for the requirements in this procedure:

- 00 04 40, Request for Substitution
- 00 07 00, General Conditions
- 01 10 40, Coordination
- 01 13 00, Submittals
- 01 16 30, Product Options and Substitutions
- 01 17 20, Project As-Built Drawings
- 01 31 25, Project Management Software

Constructware work instructions referenced in this procedure are stored in the following folder under the Programwide Project in Constructware: *File Management>File Director>Administration> Procedures & Audits>Procedures> Constructware Work Instructions*.

4.0 Definitions

Refer to the above contract sections for the definitions of terms in this procedure.

For general Program terms, refer to Section 00 07 00, *General Conditions*, and Appendix B of the Program Management Plan.

The term CM contractor used throughout this procedure is defined in the contract's general conditions under the entries TJPA Representative and Contractor. The designer is the A/E consultant for the project. Refer to Section 2 of the Program Management Plan for descriptions of project participants from the PMPC and TJPA.

5.0 Responsibilities

Responsibility Matrix: Submittals, Substitutions, and RFIs

<i>Action Codes:</i> <i>A - Approve the work product of an activity</i> <i>P - Perform the activity</i> <i>R - Review the work product of another</i> <i>S - Support when requested by performer</i> <i>C - Communicate; be kept informed by performer</i>	Project Participants						Third-party Reviewers	
	TJPA Program Management	Contracts Compliance Manager (TJPA)	Project Manager (PMPC)	Construction Manager (CM)	Designer	Program Controls Manager (PMPC)	Construction Contractor (
Submittals								
Submittal schedule		C	C	A	S	S	P	
Technical submittals				R	A		P	Facility users
Administrative submittals	A			R	C	C	P	
Contractual submittals	C	A	C	R			P	Regulatory and financial oversight
Substitutions								
Substitution List	C		S	R	A		P	
Substitutions Requests	C		C	R	A		P	Facility users
Requests for Information								
Technical RFI				R	A		P	
Contractual RFI		A	C	R			P	
Administrative RFI	A		C	R			P	
Issue ASI	A		C	C	P			Facility users

6.0 Procedures

The construction manager is responsible for managing the submittal, substitution, and RFI processes and monitoring timely resolution and closeout.

6.1 Submittals

Submittals include reports, schedules, shop drawings, product data, and samples submitted by the contractor to the construction manager and the designer for review. Refer to the following contract sections for contractor requirements.

- 01 13 00, Submittals
- 00 07 00, General Conditions (paragraphs 3.09 through 3.12)
- Sections in divisions 02 though 48 (specific required submittals)

Additional requirements apply to the following specific submittal types.

Shop Drawings and Other Written and Graphic Material. Electronic files of shop drawings, product data, calculations, and other written or graphic material are provided in portable document format (PDF) unless otherwise agreed to by the contractor, contractor CM, and designer.

Samples and Manufacturers Certificates. Unless otherwise specified, two samples are sent to the CM and two to the designer. All certificates are sent to the CM.

6.1.1 Submittal Schedule

The contractor, CM, and designer agree on the timing of planned submittals to ensure that drawings, products, or materials are available at the appropriate time during the construction. The contractor is responsible for preparing a submittal schedule in accordance with Section 00 13 00, *Submittals*, paragraph 1.4. The submittal schedule also serves as a list or log of planned submittals.

The CM and contractor agree on a format for the contractor's submittal schedule. The dates entered to indicate the scheduled review time for each submittal should allow for two review cycles in case the first submittal is rejected. Refer to 01 13 00 paragraph 1.4.

The contractor transmits the completed submittal schedule to the CM for review and approval. The CM forwards the schedule to the designer, PMPC project manager, PMPC Program Controls Manager, and TJPA Program Management for information. The CM manages the submittal schedule review and approval process as follows:

1. Reviews the submittal schedule against the contractor's construction schedule to verify consistency.
2. Provides reviewer comments to the contractor for resolution.
3. Documents final approval of the schedule with the project manager, TJPA Program Management, and the contractor after all review comments are satisfactorily resolved.

6.1.2 Submittal Processing

The CM reviews and processes the contractor's submittals. The review of the submittals does not relieve the contractor of the obligation to comply with the contract documents.

The CM ensures that the contractor processes all submittals according to the procedures specified in 01 13 00 paragraph 1.5. In addition to the requirements and procedures specified in the contract documents, the contractor is responsible for documenting each submittal in the Submittal module of Constructware, the Program Management Information System. To the extent practical, all submittals are distributed and tracked in Constructware. Submittals in electronic format are uploaded in PDF to Constructware and linked to each submittal record; submittals such as samples, original certificates, and mock-ups are manually distributed and stored. All comments and approvals are documented in Constructware.

Technical Submittal Review and Approval. The CM should monitor the submittal schedule at least daily to verify that no submittals or submittal responses are overdue and promptly process any incoming submittals.

Once a technical submittal is received from the contractor, the CM takes the following steps to manage the submittal review process.

1. Review the submittal for completeness and compliance with the contract and schedule.
The CM rejects and returns to the contractor all submittals that do not meet contract requirements.
2. Send a submittal that meets contract requirements to the designer¹, indicating the deadline for returning review comments.
The reviewer indicates the approval status of the submittal and responds to the CM.
3. Status the returned submittal according to the reviewer’s response, compile comments, and return the annotated submittal to the contractor.

Response	Status
No Exceptions Taken	Completed & Approved
Make Corrections Noted	Completed & Approved
Make Corrections Noted–Resubmit	Proceed with Work; Resubmittal Required
Rejected	Rejected
Revise and Resubmit	Rejected
For Record Purposes Only	For Record Purposes Only

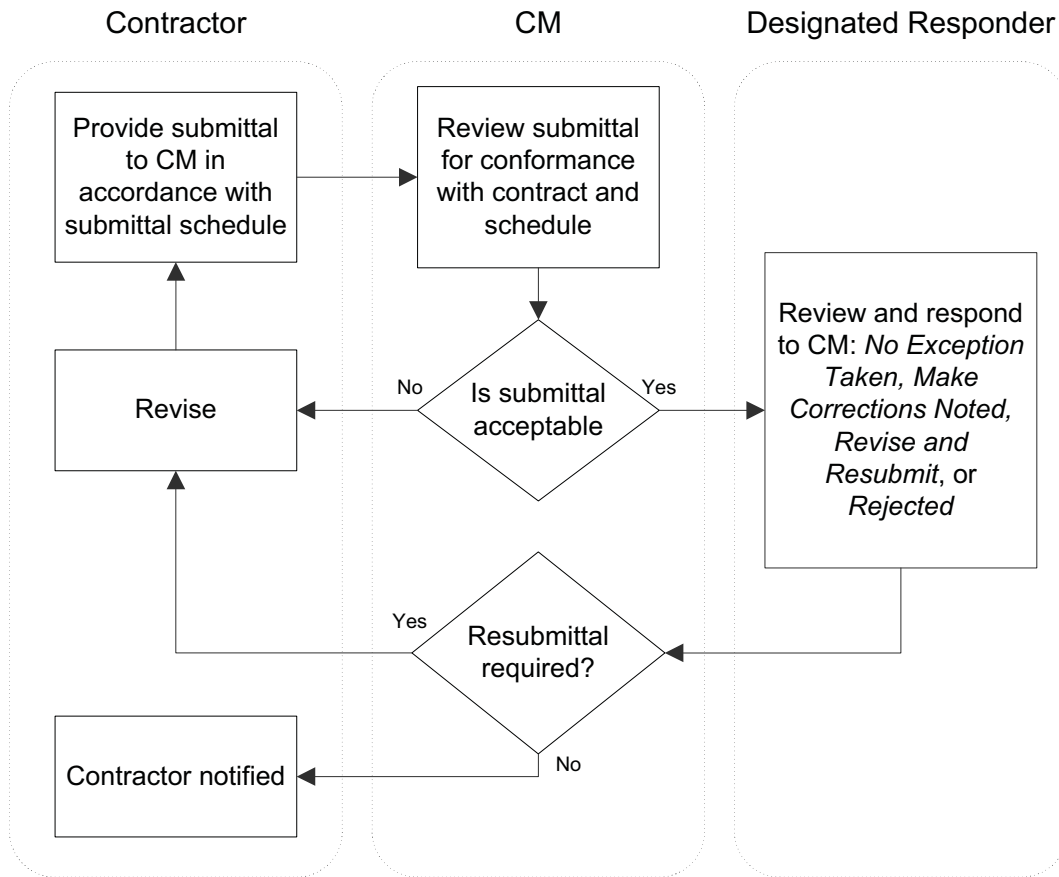
4. Track submittals that are in the pipeline for the timely review and return of pending submittals (except reports).

The CM and reviewers must update the submittal item in Constructware to reflect the current status of the submittal during the review and approval process. Refer to the work instructions on submittal processing for details on transmitting submittal packages to reviewers and responding to the contractor.

The contractor is responsible for copying and distributing approved submittals to its subcontractors and suppliers.

Figure 6.1 shows the submittal review process for technical submittals.

¹ The designer may be the architect of record or a third-party designer, such as a utility agency.



* Architect of Record or Third-party designer

Figure 6.1, Technical Submittal Reviews

Administrative or contract-related submittals. The TJPA reviews and approves submittals that relate to administrative or contractual matters. The CM manages the review and approval process of such submittals.

Submittals that require agency review. The CM, in conjunction with the PMPC Project Manager, coordinates the review and resolution of technical submittals that require the review and approval of a third party, such as a government agency.

6.2 Substitutions

A request for substitution is a written communication to record, track, and monitor a contractor's request to substitute one product or material for a product or material specified in the contract. Refer to the following specification sections for contractor requirements.

- 00 04 40, Request for Substitution
- 01 16 30, Product Options and Substitutions
- 00 07 00, General Conditions (paragraph 3.13)

No substitute products, equipment, or services may be ordered without written acceptance by the designer and the CM.

Any cost savings that result from an approved contractor-proposed substitution will be shared equally between the TJPA and the contractor.

6.2.1 Substitution Processing

Each request for substitution is documented on a *request for substitution* form, provided in contract section 00 04 40. In addition to completing the form, the contractor creates a record in the RFI module² of Constructware for each request, links the completed form 00 04 40 to the record, and forwards it to the CM for processing. Refer to the work instructions on substitution processing for detailed instructions on creating and processing a request for substitution using the RFI module in Constructware.

Within 10 days after contract award, the contractor submits to the CM a complete list of proposed substitutions, in accordance with contract section 01 16 30. Substitution lists submitted after the period stipulated in the contract are rejected, and the CM considers on a case-by-case basis only requests for substitution of products that are unavailable or incompatible.

Each item in the list of proposed substitutions must be accompanied by a corresponding form 00 04 40. The CM verifies that the list was prepared in compliance with 01 16 30, and forwards it to the designer for review. The CM provides copies to the project manager and TJPA Program Management. The designer considers each request for substitution and issues a formal response to the CM within the period stipulated in the contract.

Potential substitutions that affect budget or represent a significant change to the project require the approval of the TJPA. The CM in concert with the designer manages the review and approval process for such requests to ensure that requests for supporting documentation, review meetings, and the formal response to the contractor occur within the timeframe stipulated in the contract.

² RFIs are not normally allowed or used to request substitutions. Because Constructware does not have a substitution module, the RFI module is used for requesting substitutions.

Figure 6.2 shows the process for the review of proposed substitutions.

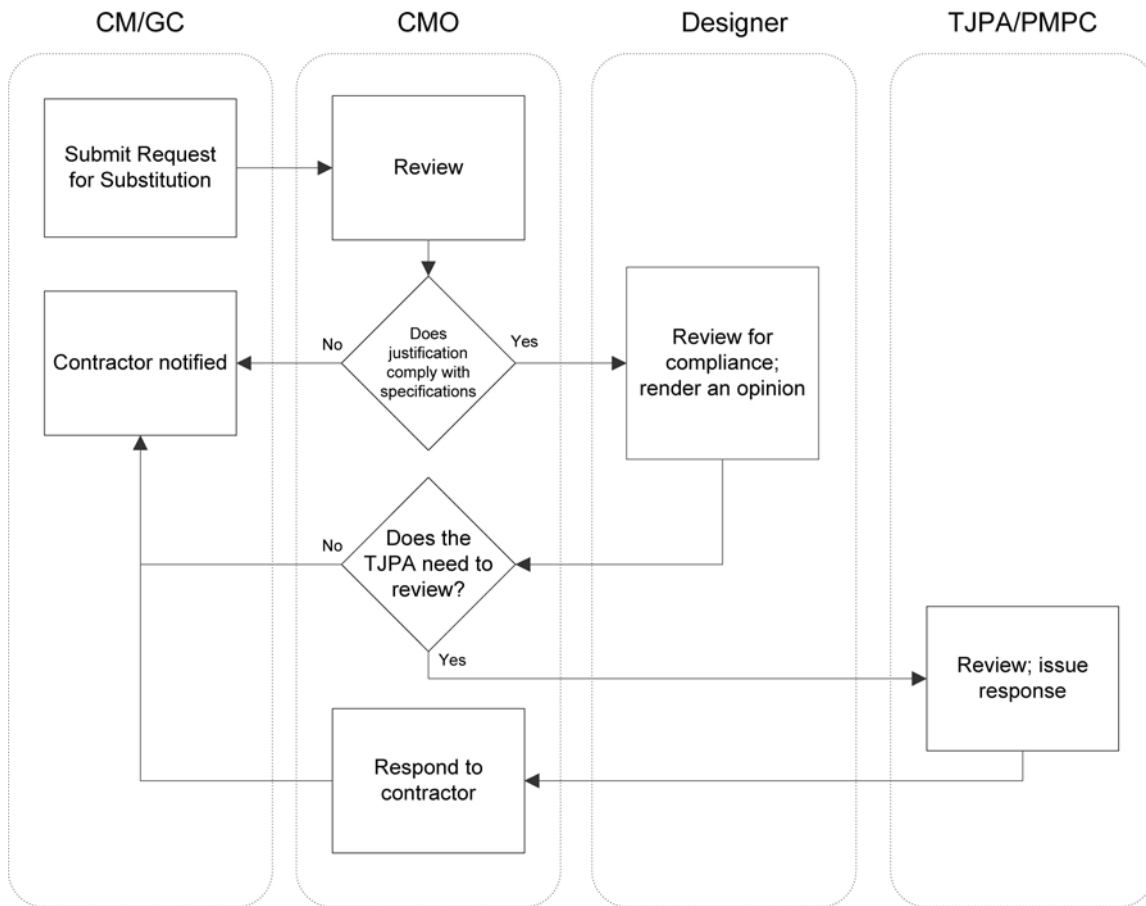


Figure 6.2, Request for Substitution Reviews

6.3 Requests for Information

A request for information (RFI) is a written request prepared by the contractor or other party for information on the contract documents. Refer to the following contract sections for contractor requirements.

- 01 10 40, Coordination (paragraph 1.6)
- 00 07 00, General Conditions (paragraph 6.02)

The TJPA’s interpretation or clarification in response to a contractor’s RFI is binding on the contractor and the TJPA. If the contractor believes that an interpretation or clarification justifies an adjustment in the contract sum or time, then the contractor must make a written request for change order in accordance with the contract’s General Conditions and specification for change orders. Refer to Procedure 04-04, *Construction Change Orders*.

The contractor is responsible for correcting all damage and non-conforming work resulting from proceeding with the work in question before receiving a reply to an RFI.

Figure 6.3 shows the RFI review process.

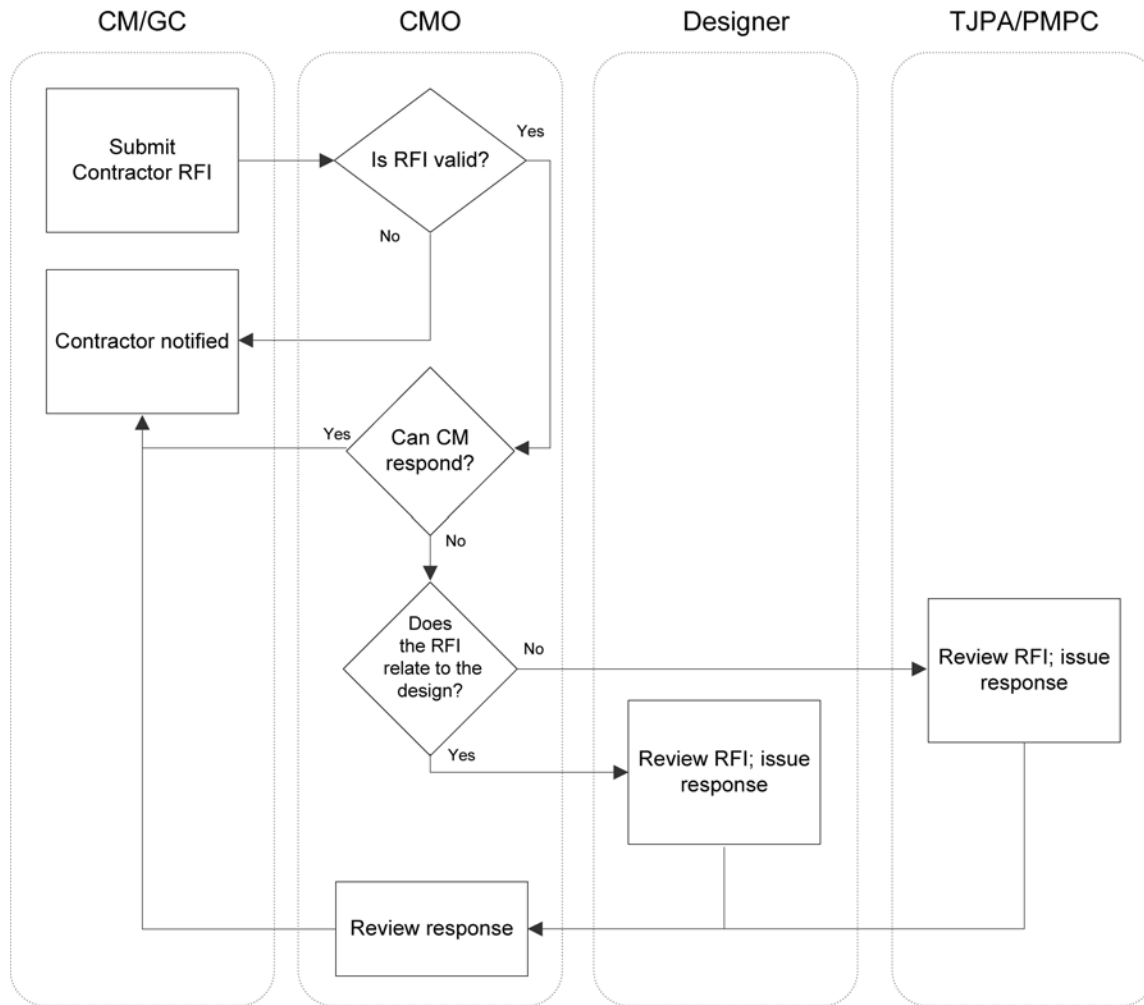


Figure 6.3, RFI Reviews

6.3.1 RFI Processing

All RFIs are processed in Constructware. The contractor creates an RFI in the RFIs module of Constructware. Refer to the work instructions on RFIs for steps on creating and processing an RFI.

The CM checks Constructware at least once each work day to identify and process any new RFIs and determine if any RFI responses may be overdue.

The log of open RFIs should be reviewed at each weekly contractor’s progress meeting, and any RFIs that need immediate attention, or *hot* RFIs, should be identified.

Once an RFI is received, the CM takes the following steps to manage the response to the RFI.

1. Review each new RFI and determine that it is valid and the request is understood.
 - If the RFI does not follow contract specifications, the CM notifies the contractor that the RFI is not valid and provides an explanation.
 - If the RFI is valid and within the CM's scope of responsibility, the CM issues the response to the contractor.
 - If the RFI must be resolved by the designer or the TJPA, the CM requests a response from the appropriate party.
2. Update the RFI record in Constructware to reflect the status and action taken.
 - If the CM resolves the RFI, the record should be completed with all relevant information, and the status set to *closed*.
 - If the CM requires a response from the designer or the TJPA, the CM sets the status of the RFI to *open* until the response and all relevant information have been documented.
 - When an unanswered RFI is within 3 days of its due date, the CM reminds the responder of the deadline.
3. Review the response to the RFI, assess the potential for scope, cost, and schedule impacts, and review potential impacts with the PMPC project manager and TJPA Program Management.
4. Respond to the contractor; notify the relevant project manager and TJPA Program Management of the response.

6.3.2 Impacts and Changes to the Work

If the action resulting from the RFI response causes a scope, cost, or schedule impact, and the TJPA decides to proceed, the CM may issue a proposed change order in accordance with 00 07 00 paragraph 6.03 and a request for quotation from the contractor. Refer to Procedure 04-04, *Construction Change Orders*.

7.0 Quality Records

Reviewed or approved submittals
Approved requests for substitution
Completed requests for information



Procedure: 04-03 Contractor Payment Processing

Revision Record

Revision	Description of Revision	Date
0	Original Issue	October 25, 2011
	CM contractor	

1.0 Purpose

This procedure defines the requirements for processing contractor invoices (or payment requests) during the construction phase of the Bus Storage project.

2.0 Scope

This procedure applies to TJPA staff, PMPC (Program Management/Program Controls) staff, the contractor, and the construction manager (CM).

If any procedure in this document conflicts with a provision in the contractor's contract documents, the contract documents must be followed.

3.0 References

The following Division 00 and 01 specification sections are sources for the requirements in this procedure.

- 00 07 00, General Conditions
- 00 08 05, Insurance Requirements
- 00 08 14, Health and Safety Criteria
- 00 08 15, Waste Management Requirements
- 00 08 21, Disadvantaged and Small Business Enterprise and Equal Employment Opportunity/Employment Nondiscrimination Requirements
- 00 10 26, Schedule of Values
- 00 13 10, Progress Schedule
- 00 15 05, Mobilization
- 00 17 00, Completion and Contract Closeout

Constructware work instructions are stored in the following folder under the Programwide Project in Constructware: *File Management>File Director>Administration>Procedures & Audits>Procedures>Constructware Work Instructions.*

4.0 Definitions

For general Program terms, refer to Section 00 07 00, *General Conditions*, and Appendix B of the Program Management Plan.

The terms CM and contractor used throughout this procedure are defined in the contract's general conditions under the entries TJPA Representative and Contractor or, respectively. The designer is the A/E consultant for the project. Refer to Section 2 of the Program Management Plan for descriptions of project participants from the PMPC and TJPA.

5.0 Responsibilities

Responsibility Matrix: Contractor Payment Processing

<i>Action Codes:</i> <i>A - Approve the work product of an activity</i> <i>P - Perform the activity</i> <i>R - Review the work product of another</i> <i>S - Support when requested by performer</i> <i>C - Communicate; be kept informed by performer or approver</i>	Project Participants						
	TJPA Program Management	Contracts Compliance Manager (TJPA)	Project Manager (PMPC)	Construction Manager (CM)	Designer	Program Controls Manager (PMPC)	Construction Contractor
Provide schedule of values	C	C	R	A	R		P
Provide schedule update	C	C	R	A		R	P
Evaluate percent of completion				P	R		S
Progress payment requests		A	C	R	R		P
Adjust progress payment amounts		A	C	P	S		C
Submit schedule updates during payment cycle	C		C	A		R	P
Submit application for final payment	C	A	C	R	S	C	P
Calculate actual payment amounts	A	P	C	S		C	
Issue payments to contractor		P		S		C	
Issue final payment	C	P	C	S		S	

6.0 Procedures

The CM is responsible for managing payment processing and monitoring the timely resolution of pay issues.

The contractor establishes a schedule of values, prepares payment applications, and submits the payment applications and any required supporting documentation to the CM.

Payment applications may be made (a) at the completion of specified work or periods of work or (b) as progress payments for a lump sum contract.

6.1 Schedule of Values

A schedule of values (SOV) is a detailed cost breakdown of the contractor’s bid and contains a value for each item of work to be performed. Refer to 01 10 26 for the requirements for establishing and submitting the SOV to the CM.

The SOV must be updated to reflect each executed contract change order. The CM reviews the SOV once every month to verify that the contractor has updated and resubmitted the SOV to reflect contract changes.

Upon receiving the SOV from the contractor, the CM takes the following steps to manage the review and approval of the contractor's SOV.

1. Verify that the contractor has prepared the SOV in accordance with the requirements of Section 01 10 26, *Schedule of Values*.
2. Coordinate review of the SOV with the designer.
3. Return comments to the contractor in accordance with the provisions of 01 10 26 paragraph 1.3.
4. Ensure that any necessary revisions to the SOV are made by the contractor and resubmitted for approval in accordance with the contract requirements.
5. Issue written acceptance to the contractor upon approval of the SOV.

The SOV is accepted if it provides a reasonable allocation of the contractor's bid amount to component parts of the work.

Acceptance by the CM indicates consent to the SOV only as a basis for the preparation of applications for progress payments; acceptance of the SOV does not constitute an agreement as to the value of each indicated item. If it is determined later that the SOV is insufficient or incorrect, the CM ensures that the contractor makes the needed corrections.

Figure 6.1 shows the SOV approval process.

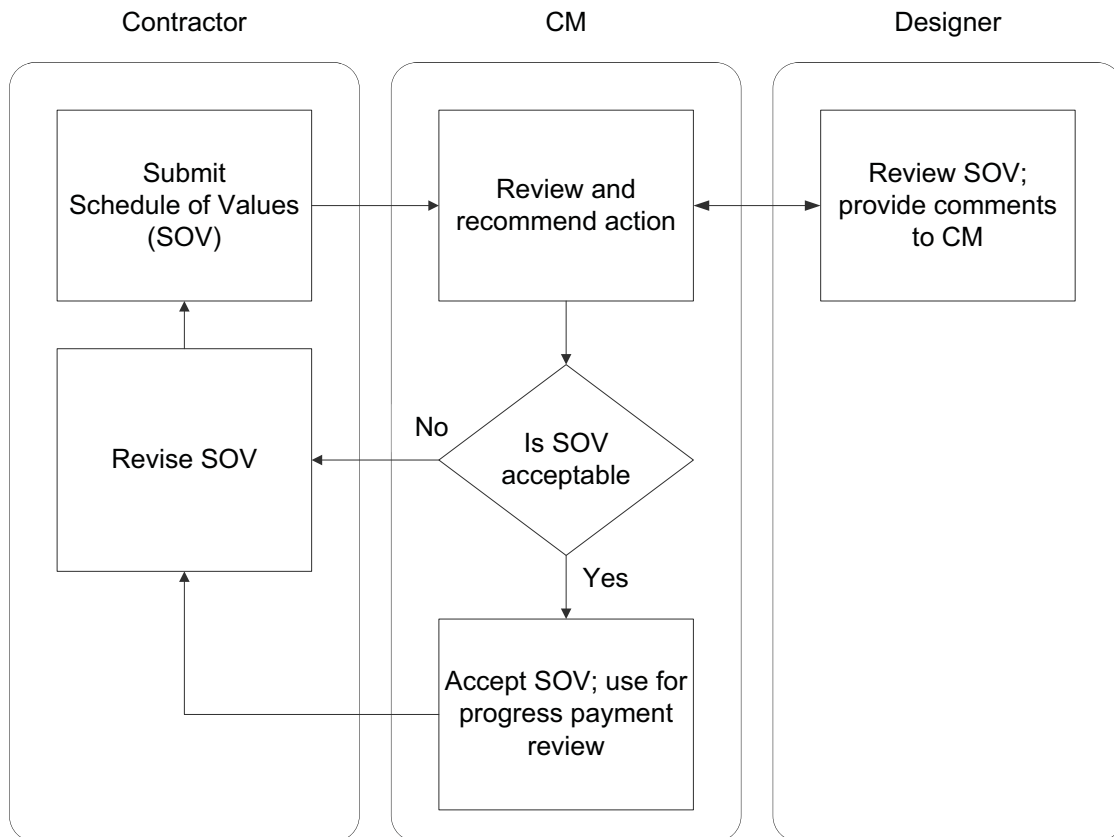


Figure 6.1, SOV Approval

6.2 Progress Payments

Monthly progress payments to the contractor are based upon completed work or percentages of work completed prior to the end of the payment period.

6.2.1 Prerequisites

The CM verifies that the contractor has submitted the following documentation and satisfied the following conditions prior to recommending approval of an application for payment. These items describe the most common issues that delay payments; other items not described in this procedure may also be required.

Certified Payroll Submittal. The certified payroll for the time period covered by the application for payment must be submitted electronically via the labor compliance software system.

Disadvantaged Business Enterprise (DBE) and Small Business Enterprise (SBE) Program

Submittals. The following DBE/SBE forms must be submitted in accordance with section 00 08 21. Delays in submission will delay progress payments.

- Progress Payment Report—submitted with every invoice
- Subcontractor Payment Declaration—submitted to TJPA contracts compliance staff within 5 days of payments made to subconsultants (which must be within 10 days of receiving payment from the TJPA)

- Final Expenditure Report

The TJPA DBE/SBE forms are located on the *Documents* page of the TJPA's website at www.transbaycenter.org.

Progress Schedule and Monthly Schedule Update. A CPM construction schedule must be reviewed and approved by the TJPA before any payments will be processed, in accordance with Section 01 13 10, *Progress Schedule*.

A monthly schedule update that is concurrent with the payment application time period and consistent with the payment application must accompany the monthly progress payment request, in accordance with 01 13 10 paragraph 1.5. The schedule update is used for review at the monthly progress meeting.

Disposal and Recycle Report Submittal. A monthly disposal and recycling summary report must be submitted to the TJPA and the City (San Francisco Department of Environment, in accordance with Section 00 08 15, *Waste Management Requirements*, paragraph 1.5. The contractor's failure to submit this report will render the application for payment incomplete.

Evidence of Insurance. Certificates of insurance are due to the TJPA before the contractor commences work, in accordance with Section 00 08 05, *Insurance Requirements*. The CM will recommend that the TJPA withhold payment if the contractor fails to maintain any required insurance in full force and effect. Payments are re-initiated when notice is received that the insurance has been restored to full force and effect and that the premiums have been paid for a period satisfactory to the TJPA.

Environment, Health, and Safety Requirements. The contractor's health and safety plan must be prepared and certified before the contractor commences work on the site, in accordance with Section 00 08 14, *Health and Safety Criteria*, paragraph 1.5. Contractor noncompliance with applicable safety and health standards, rules, regulations, and orders are considered failure by the contractor to perform a provision of the contract and may be cause for the suspension of work. If the contractor is notified by the TJPA of any unsafe or unhealthy condition associated with the work and does not take remedial action within 48 hours of a notice of violation, or if the contractor does not provide adequate measures for public safety, the TJPA may have corrective work performed by others and deduct the costs from progress payment.

6.2.2 Application for Payment Review and Approval (on or about the 25th of the month)

Before the contractor submits the application for payment, the CM and contractor should review the work on site and agree on the work completed. After receiving the contractor's application for payment, the CM takes the following steps to manage review and approval of the contractor's application for payment.

1. In consultation with the designer, determine whether the application is complete. Refer to section 6.2.1 of this procedure. Return incomplete applications to the contractor with an explanation.
2. Evaluate complete applications for payment and recommend to the TJPA the amount due to the contractor.

Base the recommendation on verification that the work has progressed satisfactorily to the point stated in the application for payment. The CM may recommend that the TJPA withhold from any payment amounts necessary to protect the TJPA to ensure completion of the project, based on the

requirements of the contract. If any payment or portion of payment is withheld by the TJPA, the CM must explain the cause of such action to the contractor in writing.

Figure 6.2 shows the review and approval process for an application for payment.

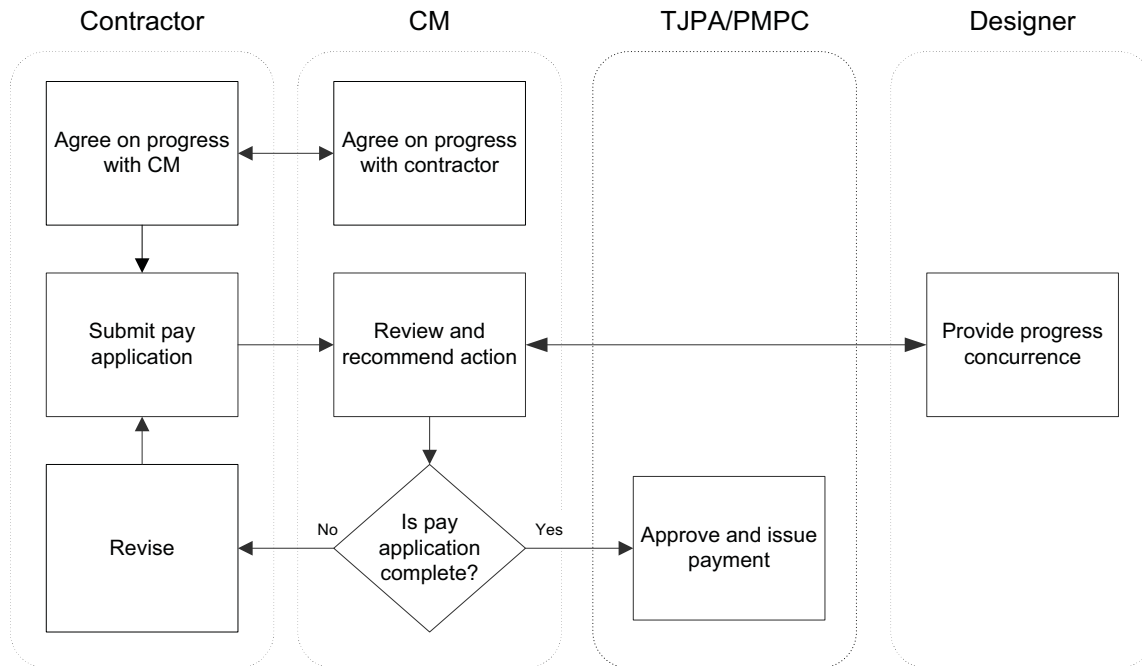


Figure 6.2, Progress Payment Approvals

The TJPA retains the right to correct errors made in the application for payment at a later date. Payments to the contractor do not constitute acceptance of the work and in no way lessen the liability of the contractor to replace unsatisfactory work or material that was not apparent or detected at the time the payment was made.

6.2.3 Payment and Retention

After approval of the payment application, the TJPA determines the amount due after retention, in accordance with Section 00 07 00, *General Conditions*, paragraph 9.03. The TJPA makes best efforts to pay the contractor no later than 45 days after the application for payment and all required documentation have been received. In accordance with California Public Contract Code, the contractor is permitted to substitute securities for any monies withheld by the TJPA, as stated in 00 07 00 paragraph 9.03, or request the payment of retention to an escrow agent.

If a “stop” notice is filed by the contractor’s supplier or subcontractor, an amount equal to 125% of the claimant’s demand must be deducted from the progress payment and retained by the TJPA until a stop notice release or direction from a court of competent jurisdiction is received. If the contractor disputes the stop notice, it may request a release of the retained amount by providing a bond equal to 125% of the amount. See California Civil Code sections 3103, 3186, and 3196.

6.3 Final Payment

Before the Certificate of Acceptance is issued and before recommending final payment, the CM must confirm that the work is substantially complete and the contractor has satisfied the requirements in Section 01 17 00, *Completion and Contract Closeout*. The CM's responsibilities are summarized in the following sections.

6.3.1 Substantial Completion

Verify that the contractor has satisfied the requirements specified in 01 17 00 paragraph 1.3. Inspect the work in accordance with 01 17 00 paragraph 1.3. After concurring that work is substantially complete, issue the Notice of Substantial Completion and a punch list of any items to be completed or corrected.

6.3.2 Final Acceptance

Before the final inspection, verify that the contractor has completed all remedial work noted on the punch list and satisfied all prerequisites stipulated in 01 17 00 paragraph 1.4. In accordance with 01 17 00 paragraph 1.4, inspect the work, and after concurring that the work is complete, verify that the contractor has submitted the items required by the contract. Recommend final payment and prepare the Certificate of Acceptance.

Before final payment is issued, verify that the contractor has satisfied the requirements of 00 17 00 paragraphs 1.6, *Project Record Documents*, and 1.8, *Release of Liens or Claims*.

6.3.3 Liquidated Damages

Liquidated damages (LDs) are estimates of the impacts suffered by the TJPA when the work is completed beyond the contract completion date. LDs are normally expressed in dollars per day of delay and may also be applied to contract milestones and required submittals. At the completion of the work, LDs are normally deducted from retention. If the LDs exceed the retention, then the contractor and its surety are liable for the remainder. The CM evaluates the project, determine whether any liquidated damages are due, and make a recommendation to the TJPA, in accordance with 00 07 00 paragraph 7.3.

7.0 Quality Records

Progress Payment Report
Subcontractor Payment Declaration
Final Expenditure Report



Procedure: 04-04 Construction Change Orders

Revision Record

Revision	Description of Revision	Date
0	Original Issue	October 25, 2011

1.0 Purpose

This procedure defines the requirements for processing change orders during the construction phase of the Bus Storage project.

2.0 Scope

This procedure applies to TJPA staff, PMPC (Program Management/Program Controls) staff, contractor, and the construction manager (CM).

If any procedure in this document conflicts with a provision in the contractor's contract documents, the contract documents must be followed.

3.0 References and Coordinated Documents

The following Division 00 and 01 specification sections are sources for the requirements in this procedure.

- 00 07 00, General Conditions
- 00 08 10, Existing Utility Facilities
- 00 08 12, Archaeological Conditions
- 00 08 13, Specific Project Requirements
- 00 08 21, Disadvantaged and Small Business Enterprise and Equal Employment Opportunity/Employment Nondiscrimination Requirements
- 01 10 20, Unit Prices and Allowances
- 01 13 10, Progress Schedule

Constructware work instructions are stored in the following folder under the Programwide Project in Constructware: *File Management>File Director>Administration> Procedures & Audits>Procedures>Constructware Work Instructions.*

4.0 Definitions

For general Program terms, refer to Section 00 07 00, *General Conditions*, and Appendix B of the Program Management Plan.

The terms CM and contractor used throughout this procedure are defined in the contract's general conditions under the entries TJPA Representative and Contractor. The designer is the A/E consultant for the project. Refer to Section 2 of the Program Management Plan for descriptions of project participants from the PMPC and TJPA.

5.0 Responsibilities

Responsibility Matrix: Construction Change Orders

<i>Action Codes:</i> <i>A - Approve the work product of an activity</i> <i>P - Perform the activity or Provide</i> <i>R - Review the work product of another</i> <i>I - Input required to performer</i> <i>S - Support when requested by performer</i> <i>C - Communicate; be kept informed by performer</i>	Project Participants							
	TJPA Program Management	Contracts Compliance Manager (TJPA)	Project Manager (PMPC)	Program Controls Manager (PMPC)	Construction Manager (CM)	Designer	Construction contractor	Subcontractors
All Change Orders								
Prepares contract change order checklist	A	C	R		P			
Issues change orders	P	C	C		C			
Files claim for disputed work		C	S		R		P	
Coordinates resolution of disputes and claims	C	C	S		P		I	
Proposed Change Order (PCO)								
Initiates PCO	P	C	C		C	C		
Prepares PCO description & drawings			C		C	P		
Prepares PCO cost & schedule estimates				P	S	I		
Prepares PCO quotation			R		R		P	S
Change Order Request (COR)								
Prepares change order request			C		R		P	I
Reviews entitlement and recommends initial action			S		P	S	C	
Prepares COR cost & schedule checks			A	S	P	S		
Negotiates and recommends PCOs & CORs	A	C	S		P	S	I	
Unilateral Change Orders & Force Account (FA) Work								
Prepares unilateral CO & FA change request	A	C	S		P	S	C	
Issues unilateral CO & FA change request	A		C	C	P		C	
Gives prior day notification of disputed & FA work					R		P	I
Provides daily & weekly FA work logs					R		P	I
Monitors disputed and/or FA work			C		P			

6.0 General Requirements

A change order (CO) is a written agreement issued after the date of the contract, executed by the TJPA and the contractor, stating their agreement on (a) a change in the work; (b) any adjustment in the contract sum; (c) any adjustment in the contract time; and (d) any amendments to the contract terms or conditions. Refer to the following specification sections: 00 07 00, *General Conditions* (paragraph 6) and 01 10 20, *Unit Prices and Allowances*.

6.1 Instructions for Minor Work

The CM may advise the contractor of minor changes in the work not involving changes to the contract sum, time or scope by issuing written interpretations or clarifications of the contract documents. Responses to requests for information, clarifications, bulletins, and authorizations for substitutions do not constitute a proposed change order (PCO) or a change order request (COR). Requests for information and substitutions are discussed in Procedure 04-02, *Submittals, Substitutions, and Requests for Information*.

6.2 Delays and Compensability

Any delay to the project schedule that is allowed requires a CO to change the project schedule. The CO should clearly state if additional compensation is allowed or if a time extension only is allowed.

The contract's general conditions (00 07 00 paragraph 7.02) describe delays and the conditions under which the contractor would be entitled to compensation. Avoidable delays, as defined in paragraph 7.02, are considered the contractor's fault; therefore, the contractor is responsible for mitigating the time impact at its own expense. If the delay is not mitigated, then the contractor may be assessed liquidated damages as prescribed in the construction contract.

6.3 Unit Price Work

Unit prices establish the price for future work for which exact quantities are not known. Estimated quantities are multiplied by unit prices to establish bid item costs that are part of the contract sum. If the quantities involved are outside the range stated in the contract specifications, the unit prices may be adjusted in accordance with the provision of 00 07 00 paragraph 6.08, based on actual costs to the contractor. The contractor must submit a COR, in accordance with the provisions of paragraph 6.03 to obtain an adjustment to unit prices. In addition, if the quantity of work performed differs from that specified in the contract then a PCO must be prepared by the CM and executed before contract closeout to correct the contract sum.

6.4 Claims and Disputes

Paragraphs 6.05 and 13.02 of the general conditions cover notices of potential claim. If the contractor disputes any directive, determination, or CO by the CM that has the potential to affect the performance of the work, the contractor must submit to the CM a notice of potential claim. The contractor's failure to submit a timely and properly documented notice constitutes a waiver of any claim arising from the potential claim event.

The contractor must notify the CM at the beginning of each day or shift before performing disputed work. The contractor and the CM must agree on the number of workers, equipment, and materials and document the agreement at the end of every day until resolution or completion of the disputed work. If the contractor disagrees with the CM's daily assessment of disputed work, the contractor must submit a disputed work report, with the CM signing off on worksheets at the end of each work day. The CM will not verify the disputed work if the contractor fails to notify the CM before performing disputed work.

6.5 Required Documentation

The TJPA has the right to audit the contractor's records relating to activities covered by the contract. CO and claims records are included in these records. Article 6 of the general conditions (00 07 00) describes the cost and schedule documentation required for COs and for disputed work. Paragraph 6.06 describes how costs for CO work are established. Paragraph 7.02 describes how delays and time

extensions are determined. To avoid common administrative problems, the CM must ensure that the contractor adheres to the following specific documentation requirements.

Documentation of Costs. When preparing a COR or responding to a PCO, the contractor must provide sufficient data to allow for the evaluation of the cost and schedule impacts. Incomplete or ambiguous data will delay review and approval. The contractor shall document all direct costs, overhead and profit and markup, bonds and insurance costs, as specified in paragraph 6.06.

Differentiation of Costs. The contractor's records must show a clear distinction between the direct costs of CO work and the cost of the original contract work. This requirement pertains to all types of COs, as well as additions, deletions, revisions, CORs, and claims initiated by the contractor.

Extension of Time. The contractor must submit adequate justification for any time extension in accordance with paragraph 7.02. A delay to the work that does not affect the project's critical path is not considered a time extension.

Hard Copies. The CM provides hard copies of all COs for signatures of the parties. The contractor signs two copies and returns them to the CM. One fully executed copy is returned to the contractor.

Change Order Files. When the CM concurs that a PCO is warranted, a hard copy PCO file is established, and a PCO number is generated in Constructware. (Refer to the Constructware work instructions on change requests.) The hard copy file duplicates the documentation that must be uploaded to Constructware and is used to facilitate reviews and evaluations. The PCO file should contain the following items.

- A copy of the original RFI, field order, or any other change-initiating form or letter; a copy of the PCO; and once approved, a copy of the CO.
- The justification for the change and copies of the pertinent specifications and drawings. The justification must include an entitlement analysis, including an evaluation of the reason for the change (e.g., design error or omission, scope change, differing site condition). If a time extension is requested, the justification must also contain a critical path schedule analysis indicating the impact of the change on the critical path schedule activities.
- A copy of the CM's independent cost estimate.
- A copy of the contractor's detailed pricing proposal.
- The negotiation plan and negotiation record.
- Miscellaneous information and copies of all correspondence.

Cost Estimates. The PMPC must prepare and document an independent cost estimate for each lump-sum CO. For an owner-initiated change, the estimate should be prepared while the contractor is preparing its price proposal. For a contractor-initiated change, the estimate must be prepared before negotiating the change with the contractor.

6.6 Coordination with Other Project Documents

Following the execution of a CO, the CM must ensure that the contractor promptly revises all project documents required for progress payments, schedule review, and as-built records. These revisions are described as follows:

Schedule of Values and Payment Applications. Each executed CO must be added to the schedule of values (SOV) and application for payment, and the contract sum adjusted. The revised SOV should be submitted for review at least 1 week before the next application for payment is due. The contractor may not bill the cost of the subject CO until the SOV and application for payment form is revised and approved. Refer to Procedure 04-03, *Contractor Payment Processing*.

Progress and Other Schedules. Any approved change in contract time must be reflected in the progress schedule and look-ahead schedules. The revised progress schedule must be submitted with or before the next application for payment that includes the subject CO. The most recent progress schedule must always be consistent with the application for payment.

Project Record Documents. The changes caused by an executed CO must be reflected in the project record documents (drawings and specifications) maintained by the contractor. Changes should be made before the next application for payment, but at least within 30 days of the executed CO.

7.0 Change Order Procedures

The CM is responsible for the review and management of the contractor's COR and the preparation of the PCO and CO. No work will be authorized until a CO has been signed by the contractor and the TJPA representative. Oral instructions do not provide authorization.

A modification to contractual conditions, as distinguished from a change in work scope, contract sum, or contract time, may be made by CO. COs that modify contractual conditions shall be referred to the TJPA's legal counsel for approval.

CORs, PCOs, and COs for signature are prepared and managed using the Contract Change Order module in Constructware to create a complete historical record of project change documents. Refer to the Constructware work instructions on contract change orders for steps on preparing COs and submitting COs for approval.

The CM also completes a checklist and submit it to the TJPA with the CO for signature. (Refer to the TJPA Contract Changer Order Checklist). A hard copy of each document is maintained in the Program files as a legal record of the CO. (Refer to section 6.5 of this procedure for the required documentation.) These requirements do not eliminate any requirements specified by contract.

7.1 TJPA-Initiated Change

The TJPA may initiate a change for additional or changed work by directing the CM to issue a PCO. A PCO should include a detailed description of the proposed additions, deletions, or revisions accompanied by supplementary or revised drawings and specifications and a request for a quotation of the cost and time required to complete the proposed work. After a PCO is issued, the contractor may not submit a COR for the same work.

Change orders will be required to implement the use of allowances. For trade packages already awarded, the use of allowances may be implemented without a change order.

The CM takes following steps to manage a TJPA-initiated PCO.

1. Upon being directed to prepare a PCO, coordinate with the designer, PMPC project manager, and the TJPA to prepare the PCO documents.

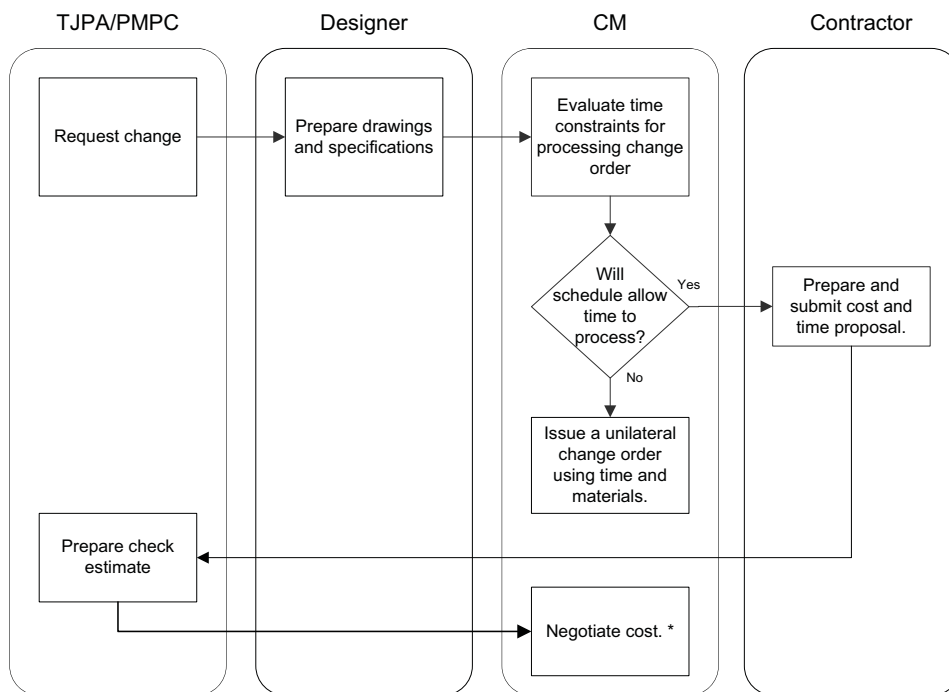
2. Submit the PCO request for quotation to the contractor and coordinate preparation of an independent cost and time estimate for the work for use in evaluating and negotiating the contractor's proposal. This is a requirement for projects funded by the Federal Transit Administration.

The contractor returns a PCO cost proposal and time proposal (if applicable) with supporting documents to the CM. The contractor's proposal must document the basis of claimed additional costs and provide a critical-path-method schedule analysis if additional contract time is requested.

3. Coordinate the evaluation of the contractor's cost and time proposals with the PMPC project manager to verify that the contractor has documented any claimed additional costs.
4. Coordinate negotiation of a final price and time extension (if appropriate).

The CM must document the negotiations and the basis of accepting the final contractor proposal. If appropriate, the CM includes the designer in negotiations. The CM must also ensure that the proposal complies with all contract provisions. At the completion of negotiations, the CM distributes the records of negotiations to the PMPC project manager and the TJPA.

5. Send the recommended PCO to the project manager and TJPA Program Management for approval; indicate the cause of the PCO (e.g., owner request, changed code, design error).
6. Do one of the following:
 - o *If the PCO is acceptable*, prepare a CO for signature by the contractor and the TJPA in accordance with 00 07 00 paragraph 6.04.
 - o *If the PCO is unacceptable*, correct any deficiencies, as requested by the TJPA or PMPC project manager, or both, and submit the revised CO for signature.
7. Ensure that the contractor has signed both copies; forward both copies to the TJPA representative for signature; and return one copy to the contractor for its records.



* Refer to Figure 7.2 for additional steps.

Figure 7.1, TJPA-initiated Proposed Change Orders

Work covered by the CO may not proceed until the CO is signed by both parties. Figure 7.1 shows the PCO process.

If schedule constraints do not allow a CO to be negotiated or if the CM and contractor are unable to agree on the cost of the work or time required to complete it, the TJPA may issue a unilateral change order (UCO) or direct the work to be done on a force account (FA) basis in accordance with 00 07 00 paragraphs 6.05 and 6.07. The CM prepares the UCO, sets a not-to-exceed budget, and verifies that the contractor has complied with paragraphs 6.05, 6.07, and 13.02 in the submittal of any COR or notice of potential claim in response to the UCO. The CM must also witness, document, administer, and approve the FA work performed. The contractor must proceed with the FA work while any COR or notice of potential claim related to the UCO is evaluated.

7.2 Contractor-initiated Change

The contractor may request a change in the cost or time for the work by submitting a COR to the CM for negotiation and approval. Because changes or differing conditions may not significantly affect the work or add to work scope, the COR must include the following:

- An evaluation that conclusively demonstrates contractual entitlement to the additional cost or need for additional time, or both. Impacts that are claimed to cause work sequence changes must be evaluated using the as-built schedule and the critical path activities.
- Reference to relevant written directives, specifications, and drawings.
- A cost proposal and (if appropriate) a time adjustment proposal.

The CM takes the following steps to review and respond to a COR.

1. Upon receiving a COR from the contractor, verify that the COR contains a cost proposal and (if appropriate) a schedule analysis, and supporting documentation in accordance with 00 07 00 paragraphs 6.03, 6.06, and 7.02.

If the COR does not conform to the contract requirements, the CM returns it to the contractor with an explanation.

2. Coordinate with the PMPC project manager to prepare an independent cost and schedule estimate for the work for use in evaluating and negotiating the contractor's cost proposal.
3. Record the reason for the COR (e.g., design error or omission, differing site condition, scope change, force majeure, regulation change).
4. Coordinate review of the COR with the designer, the project manager, and TJPA Program Management.

The following are the three possible outcomes of the review: (a) the COR is accepted, (b) the COR requires revision or justification, or (c) the COR is rejected.

- *If the COR is accepted*, the PMPC project manager recommends formal acceptance to the TJPA.
 - *If the COR requires revision or justification*, the CM instructs the contractor to provide the needed data. The CM negotiates the time extensions and cost with the contractor and ensure that contract requirements are followed. At the completion of negotiations, the CM distributes the records of negotiations to the project manager and TJPA Program Management. Following successful negotiations, the CM recommends formal acceptance to the TJPA. If negotiations are unsuccessful, the PMPC project manager may direct the CM to issue a UCO or field order. Refer to sections 7.3 and 7.4 of this procedure.
 - *If the COR is rejected*, the CM documents the reasons for rejection. The contractor may submit a notice of potential claim to the CM in accordance with 00 07 00 paragraph 13.02.
5. Respond to the contractor.

If the COR is accepted, the CM prepares and issues a CO. Refer to steps 6 and 7 in section 7.1 of this procedure.

Figure 7.2 shows the contractor-initiated change order request process.

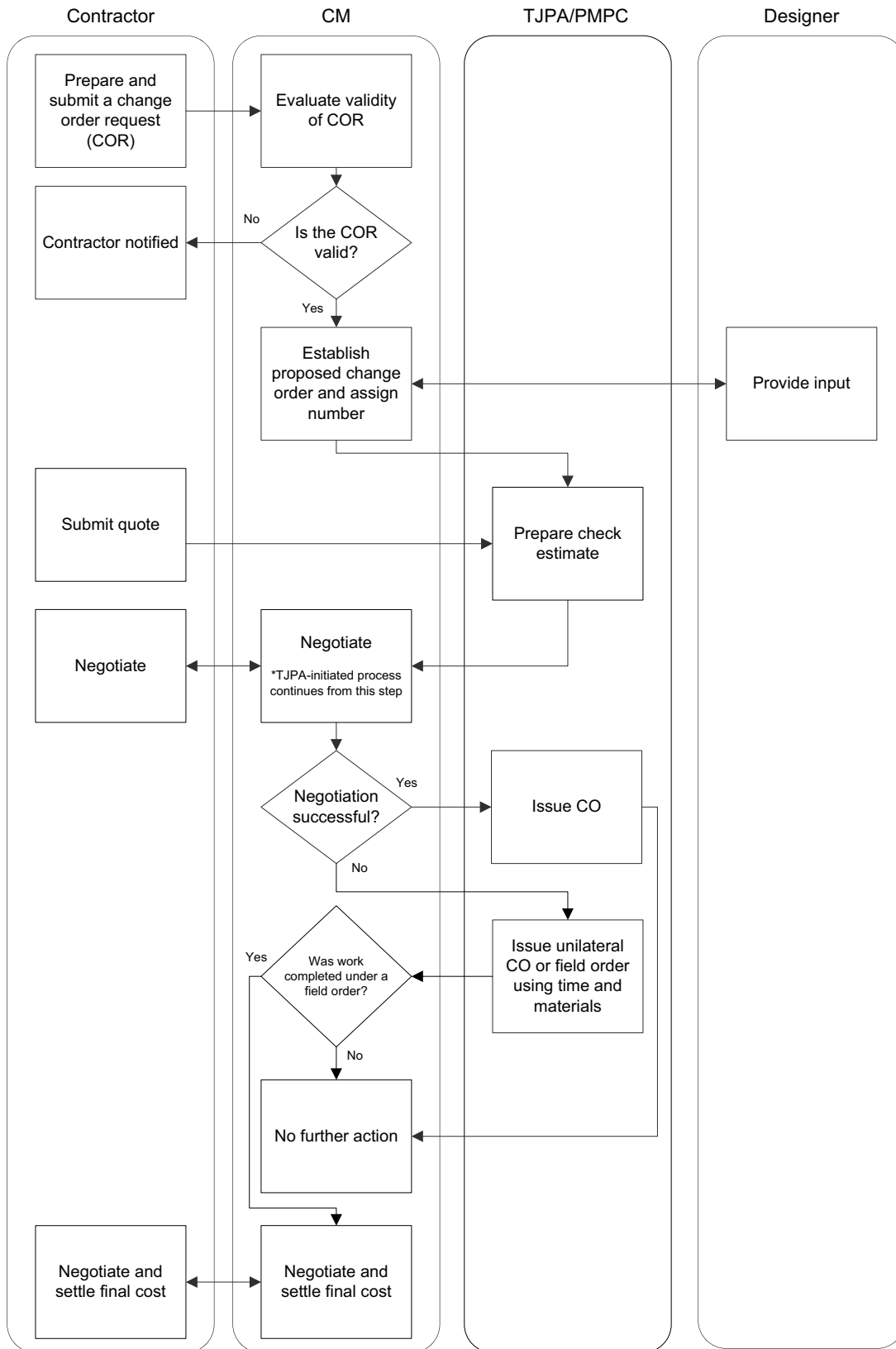


Figure 7.2, Contractor-initiated Change Order Request Process

7.3 Unilateral Change Orders

The TJPA may direct the CM to issue a UCO when time does not allow a CO to be negotiated or when the CM and contractor are unable to agree on the cost or time required. A UCO instructs the contractor to proceed with a change on the basis of the TJPA's estimate of cost and time to perform the change. Upon receipt of a UCO, the contractor must proceed with the ordered work.

The contractor may submit a COR as initial notification if it disputes the UCO. If the contractor disputes the TJPA's cost estimate, it must submit a notice of potential claim in accordance with the provisions of 00 07 00 paragraphs 6.05 and 13.02; otherwise, the contractor waives all incurred costs that exceed the estimate.

7.4 Force Account Work

The TJPA may authorize the CM to issue a change request to direct the contractor to complete the work on a force account (FA) basis. FA change request's are used to mitigate emergency situations, for new work when the scope of work cannot be determined, when there is insufficient time to determine the scope of work (without affecting schedule), or when an agreed price for the work cannot be established. On receipt of an FA change request, the contractor must proceed with the ordered work. The CM verifies that the contractor performs the FA work and all required documentation and reporting in accordance with 00 07 00 paragraph 6.07. The FA daily work report must be reviewed and signed by the CM for the contractor to be paid for the work.

8.0 Quality Records

Records of negotiations
Contract change order checklist
Change requests
Executed COs

9.0 Attachment

TJPA Contract Change Order Checklist

Transbay Joint Powers Authority Contract Change Order Checklist

Date of Review:	Vendor #	CCO #
Contractor Name:	Contract #	
Type of Services: Construction		
Change Order Approved Time In Days:	Change Order Approved Amount:	

I/We have conducted a technical review of the attached contract change order and supporting documentation as follows:

	Yes	No	N/A
▪ All supporting documentation has been reviewed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
▪ Construction contingency amount is available to cover approved amount.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
▪ Involves schedule impact to Program critical path.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
▪ Copies of the original RFI, field order, or any other change-initiating form or letter and PCO are attached.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
▪ Justification including a contractual entitlement analysis and an evaluation of the reason for the change (e.g., design error or omission, scope change, differing site condition) is attached.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
▪ Copies of the pertinent specifications and drawings are attached.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
▪ Copy of the construction manager's independent cost estimate is attached.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
▪ Copy of the contractor's detailed pricing proposal is attached.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
▪ Copies of the negotiation plan and negotiation record are attached.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
▪ Copies of all correspondence are attached.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For Quantity Changes and Extra Work Authorization Line Items Only:

▪ Back-up documentation to quantity changes, materials procurement, and equipment usage is attached.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
▪ Timesheets are signed and approved.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
▪ Direct hourly rates, overhead rates, and the fee percentage agree with contract provisions for both prime contractors and subcontractors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Yes No

Based on my review findings, I recommend approval.

Construction Manager

Print and Sign Name

Date

Project Manager or Other Reviewer

Print and Sign Name

Date

Comments:

TJPA project manager certification for change order reviewed by a consultant project manager:

For professional services contracts that are reviewed by a consultant project manager, I have reviewed the accuracy and thoroughness of the review work of the consultant project manager and concur with the consultant project manager's findings and recommendations on the change order under review.

Yes No

Based on my review findings, I recommend approval.

TJPA Project Manager

Print and Sign Name

Date



Procedure: 04-05 Construction Safety and Security

Revision Record

Revision	Description of Revision	Date
0	Original Issue	October 25, 2011

1.0 Purpose

This procedure describes the requirements for establishing and maintaining satisfactory construction safety and security during the construction phase of the Bus Storage project.

2.0 Scope

This procedure applies to TJPA staff, PMPC (Program Management/ Program Controls) staff, the contractor contractor, and the construction manager (CM).

If any procedure in this document conflicts with a provision in the contractor's contract documents, the contract documents must be followed.

3.0 References

The following Division 00 and 01 specification sections are sources for the requirements in this procedure.

- 00 07 00, General Conditions (Article 12—Safety)
- 00 08 05, Insurance Requirements
- 00 08 13, Specific Project Requirements
- 00 08 14, Health and Safety Criteria
- 01 10 10, Summary of Work
- 01 14 10, Regulatory Requirements
- 01 14 00, Quality Control
- 01 15 05, Mobilization
- 01 35 65, Mitigation Measures and Monitoring

4.0 Definitions

For general Program terms, refer to Section 00 07 00, *General Conditions*, and Appendix B of the Program Management Plan.

The terms CM and contractor used throughout this procedure are defined in the contract's general conditions under the entries TJPA Representative and Contractor. The designer is the A/E consultant for the project. Refer to Section 2 of the Program Management Plan for descriptions of project participants from the PMPC and TJPA.

5.0 Responsibilities

Responsibility Matrix: Construction Safety and Security

Action Codes: <i>A - Approve the work product of an activity</i> <i>P - Perform the activity or Provide</i> <i>R - Review the work product of another</i> <i>I - Input required to provider</i> <i>S - Support when requested by provider</i> <i>C - Communicate; be kept informed by performer</i>	Program Participants							Notes
	TJPA Program Management	Contracts Compliance Manager (TJPA)	Project Manager (PMPC)	Construction Manager (CM)	Program QA Manager	Construction Contractor (Subcontractors	
Provide Health & Safety Plan			C	R	R	P	I	General compliance approval
Provide Material Safety Data Sheets				R		P	I	
Provide Site Safety Representative			C	R		P		General qualification approval
Safety & Security Procedures			C	R	R	P	S	General compliance approval
Construction Life Safety Measures & Emergency Access Plan			C	R		P	I	If SFFD permit is required, approval by SFFD
Provide Personal Protective Equipment				R		P	S	General compliance review
Provide Safety Training				C	R	P	S	General compliance review
Provide Site Safety Inspection				C		P	I	
Hold Weekly & Monthly Safety Meetings				C		P	P	
Respond to Accidents & Security Problems				C		P	I	
Report Accidents & Security Problems	C		C	R	R	P	I	General compliance review
Control Personnel Access to Work Areas				R		P	I	General compliance review
Maintain Insurance Coverage		A	C	R		P		General compliance approval
Maintain Training & Qualification Records				R	R	P	S	General compliance review

6.0 General Requirements

The contractor must not create any condition that endangers the safety or security of the work force, TJPA representative, or the public. If a dangerous condition is observed, then the CM is authorized to stop work without incurring a penalty of any kind to the TJPA until the contractor corrects the condition.

The contractor is responsible for initiating, maintaining, and supervising all safety and security precautions and programs in connection with the work. Maintenance of safety and security is incidental work, unless specified otherwise. If the TJPA or its representatives review the contractor’s safety and security plans or procedures, the review is for general compliance only and in no way

relieves the contractor from its responsibility for site safety and security. The construction contractor's safety and security requirements may be found in the referenced contract documents.

7.0 Safety Procedures

The CM is responsible for observing the safety program of the contractor.

7.1 Safety Personnel

Site Safety Representative (SSR). Before on-site work begins (and nominally within 10 days of the notice to proceed), the CM must verify that the contractor has designated a qualified SSR. The SSR is responsible for the prevention of accidents as well as the maintenance and supervision of safety precautions and programs. The SSR must be dedicated to the specific project and be physically present on the site during all working hours. The SSR must be available 24 hours a day, 7 days a week by telephone or other means approved by the TJPA.

Hazardous Materials Workers. The contractor is responsible for checking the qualifications and training of personnel planned to engage in hazardous material-related work before that work starts. Subsequently, the CM should spot check that qualifications and training are maintained by the contractor and that the contractor's medical monitoring meets regulatory requirements. Contractor personnel who come into contact with, are exposed to, operate equipment near, or otherwise handle hazardous or contaminated material must have appropriate hazard training and personal and medical monitoring, and they must be certified to wear appropriate personal protective equipment.

Hazardous Materials Haulers. The CM spot-checks that workers hauling hazardous materials possess a current Class 1 Certification of Compliance from the California Highway Patrol attached to the vehicle. Such individuals must possess a Hazardous Substance Removal Certification granted by the State of California Department of Toxic Substances Control. The CM should verify that the contractor has designated required routes to and from the site, applicable City street use regulations, and any special TJPA requirements for the transportation of hazardous waste.

7.2 Health and Safety Program

The CM must verify that the contractor has prepared and submitted for review a site-specific Health and Safety Program (HASP) approved by the contractor's HMS. The review is for general compliance only. Any obvious or gross errors in the HASP should be identified by the CM or the TJPA in the review comments. However, the contractor remains responsible for the content of the HASP. The HASP submittal is typically within 10 days of the notice to proceed. No work at the site may begin until the HASP has been reviewed by the CM and approved by the HMS. The contractor has sole responsibility to develop the HASP for the work of the project and to implement the HASP for the duration of construction. It must be readily available for use and review at the project site.

In addition to preparing the HASP, the contractor must prepare a plan showing construction period life safety measures and emergency access during construction. This plan may be required to be provided to the San Francisco Fire Department (SFFD) for review and approval. If an SFFD review and approval is required, the contractor must assist the CM to obtain SFFD approval. The CM assists with obtaining approval.

7.3 Personnel Safety Training

During daily observations of the work, the CM may spot check that the contractor is conducting safety meetings to identify and describe all workplace hazards that are generally associated with each phase of the work. This safety training is conducted during daily job briefings, weekly tailgate safety meetings, and monthly safety meetings. The contractor's foreperson or supervisor normally conducts the daily job briefings and weekly tailgate safety meetings. The SSR or HASO normally conducts monthly safety meetings and may conduct special safety meetings as appropriate to the planned work. Refer to Procedure 04-01 for more on meetings during construction.

Periodically, the CM may verify that the contractor is maintaining on site the training and medical records that meet federal, state, and local laws, regulations and policies. Copies of these records must be promptly provided for review by the resident engineer or the CM when requested. Training records should contain a description of the specific items covered by the training, the personnel who received the training, and the trainer.

7.4 Emergency Response

The contractor's HASP must contain the directions for immediate accident and emergency response as well as formation of an accident and emergency response team if actions are required beyond immediate response. If an emergency affecting safety of persons or property occurs at the site, the contractor must act promptly to prevent damage, injury, or loss. It is also the contractor's responsibility to gather appropriate data, obtain statements, and record the events as completely as possible without interfering with remediation actions. The CM may observe the contractor's actions but is not allowed to be part of the contractor's emergency and accident response team.

The contractor must provide prompt written notice to the CM if it believes that the emergency requires or caused any significant changes in the work or variations in the contract documents. If the TJPA determines that a change in the contract documents is required due to necessary actions taken in an emergency, a change order is issued.

7.5 Notification and Reporting Accidents

If death, serious injuries, or serious damages occur, the accident must be reported immediately by telephone or messenger to the CM as well as to the proper City (police, fire, medical) authorities. A significant accident must be reported within 12 hours to the CM. A significant accident is defined to include events where there is a personal injury, substantial property loss, or where the event posed a significant threat of property loss or personal injury. These reporting requirements include all accidents in connection with the work whether on or adjacent to the site. The CM subsequently informs the TJPA and other interested parties.

Within 5 working days of an accident, the contractor must provide the CM with two copies of the contractor's accident or near-miss reports. The written report should provide full details and statements of witnesses. The contractor must also provide copies of any supplementary accident report, laboratory test data, or medical monitoring results within 5 working days of receipt of that information or on TJPA request.

If a claim is made by anyone against the contractor or any of its subcontractors due to an accident, the contractor must promptly report the facts in writing to the CM, giving full details of the claim. *Promptly* is normally considered by the next working day.

7.6 Hazardous Materials

The CM may periodically check that the contractor informs all workers, supervisory personnel, and authorized visitors on the site of potential materials hazards. The contractor must ensure that all project personnel, including subcontractors, receive appropriate and required awareness training that will prevent inadvertent or unauthorized disturbance of hazardous materials that are present at the site.

In the event the contractor encounters unexpected hazardous materials on site that may present a substantial danger to persons or property, the contractor must stop work in the area affected and immediately notify the CM in writing. The work in the affected area may not be resumed until the CM provides written authorization.

If hazardous substances are used, the contractor gives the CM this information, including areas where the hazardous substances are stored and to be used, and the contractor's measures and facilities to prevent spillage or contamination of soil, water, or atmosphere. Materials that contain hazardous substances for the work must be used in strict adherence to instructions listed on the material safety data sheets. The contractor is responsible for coordinating the distribution of material safety data sheets or other hazard information required by workers.

7.7 Specific Construction Safety Requirements

The contractor is responsible for maintaining site safety and providing appropriate protection and instruction to TJPA representatives and visitors on a case-by-case basis. Before construction starts, the CM and the contractor must agree on how the CM's personnel can access hazardous areas for observations and inspections. The contractor's safety program must be followed by all on-site personnel, and all safety equipment must meet the contractor's program safety requirements.

The following paragraphs describe some of the major safety components or activities that should be implemented by the contractor's HASP. The CM may periodically verify that these components or activities are in place and that contractor personnel are properly implementing them.

Personal Protective Equipment. The contractor is responsible for providing the proper level of personal protective equipment appropriate to the work being performed. At a minimum, the personnel will wear hardhats, eye protection, and appropriate work attire including footwear at the work site. Hardhats will show the company name.

Industrial Safety Permits. Industrial safety permits are required for all of the following conditions.

- construction of any building, structure, false work, or scaffolding of more than 3 stories or the equivalent of 35 feet in height
- demolition of a building, structure, false work, or scaffolding of more than 3 stories or the equivalent of 35 feet in height
- excavation of a trench 5 feet deep or deeper into which a person must descend

Underground and Adjacent Facilities. The contractor must provide owners of adjacent properties, underground facilities, and utilities reasonable advance notice of the contractor's activities to permit the owners to mark the street surface showing facility locations. The contractor must maintain these markings as long as necessary during the work.

Trenching Shoring and Safe Exits. Shoring designed to prevent cave-ins is required for narrow trenches more than 5 feet in depth. When trenches are more than 4 feet in depth, safe exits and an exit (ladder) must be within 25 feet of each worker. Shoring plans must be submitted and approved before any excavation beyond 5 feet.

Confined Space Entry. The contractor must have a confined space entry procedure and provide training if any confined spaces are to be entered. At a minimum, a hazards assessment and pre-entry checklist must be completed and a pre-entry briefing conducted, an attendant must be present at all times, and communications must be maintained between the attendant and the entrant. A closure checklist must be completed during exit from a confined space to ensure all equipment, materials, and personnel are out of the confined space.

Lockout and Tagout Procedures. The contractor must have a procedure for locking out (de-energizing) and tagging electrical mechanical, hydraulic, pneumatic, thermal, and energy storage equipment. The contractor must furnish the locks, keys, necessary tags, and locking devices compatible with the equipment used for lockout.

Temporary Controls. The contractor must take all necessary precautions to isolate and protect the public from hazardous conditions during construction by using protective barricades and warning lights during darkness. Protective barriers prevent unsafe entry to construction areas and protect existing facilities or adjacent properties. Construction operations may not occupy public sidewalks except where pedestrian protection is provided in accordance with the requirements of the San Francisco Department of Parking and Traffic and the City Building Code.

Temporary Enclosures and Fencing. The contractor must provide temporary enclosures for the protection of construction work from exposure, foul weather, other construction operations, and similar activities. The contractor should provide temporary commercial grade chain link construction fences measuring 6 feet in height to protect the contractor's property and the jobsite from unauthorized public entry, vandalism, and theft. These temporary enclosures should be reviewed and approved by the CM.

Maintenance of the Work Area. On a daily basis, the contractor must collect waste from construction areas and place it in suitable collection points. Special attention should be given to flammable and hazardous materials.

7.8 Protection of Materials and Equipment

The contractor is responsible for on-site equipment in the field office and construction work and equipment belonging to the TJPA and CM. The TJPA's and the CM's equipment is protected through the contractor's insurance.

All TJPA and other equipment in the CM's on-site field office must be included in the contractor's insurance coverage for theft, fire, and vandalism. All contractor-furnished equipment for the TJPA or CM that requires maintenance or repair or is out of service for longer than 24 hours must be replaced with a temporary equal substitute.

The CM must furnish a list of all its equipment to be insured within 90 days after the start of the contract or after it is placed in use at the project site. The list should include make, model, and serial number, if any. Within 10 working days of receiving written notice, the contractor must replace the equipment in kind of any property that was lost through theft, fire, or destruction.

7.9 Regulation References

The attachment to this procedure, Regulation References, lists the major regulations and requirements for on-site safety. Specific details in the construction contract documents may add to these requirements. No waivers of current regulations or laws are allowed.

8.0 Security Procedures

The CM must be aware of site security requirements and verify that the contractor is meeting its contractual requirements for security. Security includes protection of all project work, work in progress, materials, and equipment from theft, vandalism, and arson. Security must include the protection of TJPA and the CM's on-site facilities and equipment.

Security may also be required for information and equipment related to facility operational security. Refer to the contract documents for any special requirements to prevent the compromise of information related to the operations security plans and equipment in the finished facility.

Security of the construction site and any areas used for project storage, lay-down, or pre-assembly is the responsibility of the contractor.

8.1 Security during Normal Working Hours

The CM must periodically verify that the contractor is maintaining adequate security measures that comply with the contract documents. The following items describe the most common security measures.

- a. Establish and maintain barriers to direct vehicular and pedestrian traffic to one or more site entrances and exits.
- b. Post signs at site entrances and exits directing visitors and occasional workers to the site offices for directions.
- c. Install video cameras to monitor each entrance and exit during working hours.
- d. Maintain open entrances and exits in view of site workers at all times.
- e. Close and lock remote or unobserved entrances when not in use.
- f. Maintain a specific person on-site during working hours as a security representative for security-related matters.
- g. Ensure that communications with the security representative are acceptable to the CM.
- h. Provide a means to identify the contractor's workers and all subcontractor workers on site.
- i. Ensure that workers display their name, trade, and company on their hard hats or have another form of identification approved by the CM.

8.2 Security outside Normal Working Hours

For the CM's reference, the following list contains the most common security measures required outside normal working hours. Arrangements outside these constraints must be reviewed and approved by the CM.

- a. Lock, shut, or guard entrances and exits to the site.
- b. Use recording video cameras to monitor the site and the on-site offices.

- c. Use intrusion and fire alarms to announce to local police and fire stations and provide an alarm to the security representative.
- d. Provide keys for site or work access to the local fire department to allow quick access.
- e. Immediately report to the CM major damage, theft, or the compromise of security.
- f. Close and lock the site's temporary buildings.
- g. Lock tools in gang boxes and secure equipment to discourage theft.
- h. Cover raw materials (such as copper wire and pipe) and locate them so as to minimize the potential for theft.
- i. Shut off all welding equipment and close all gas cylinder valves.
- j. Leave on sufficient lighting to enable police to observe the site without entry.
- k. Other than lighting, automatic dewatering, and essential ventilation, turn off all equipment.
- l. If equipment must be left running, ensure that sufficient personnel are immediately available to shut down the equipment and deal with any catastrophic failure.

8.3 Training

The CM may periodically verify that the contractor has properly trained all on-site personnel. All personnel working on site should have safety indoctrination within 5 working days of starting on-site work. Documentation must show that the individual has been provided the necessary information, including working hours, site access, identification on hard hats and badges, security requirements of equipment and offices, reporting requirements for suspicious individuals or items, and requirements during off-normal working hours.

8.4 Reporting Security Violations

The contractor should establish procedures to report and document security violations and breaches of security to ensure corrective actions are taken to prevent recurrence. Security violations that result in potential or actual loss or damage should be included in the contractor's daily reports. Security issues that endanger personnel or cause property loss or damage between \$1,000 and \$5,000 should be reported to the CM within 1 working day. Security issues that result in personal injury or loss or damage over \$5,000 should be reported immediately (within 1 hour) to the CM. If a police report is filed, a copy should be provided to the CM within 1 working day. General security issues, events, and follow-up may be documented using the weekly progress meetings or as agreed to with the CM.

9.0 Quality Records

Contractor's health and safety program

Contractor's construction life-safety and emergency access measures (if submitted to the SFFD)

Contractor's accident and near-miss reports

10.0 Attachment

Regulation References

Regulation References

Regulation	Topics
Code of Federal Regulations	
Title 29	
29 CFR Part 1903	Inspections, citations, and proposed penalties
29 CFR Part 1904	Recording and reporting occupational injuries and illness
29 CFR Part 1910	Occupational health and safety standards <ul style="list-style-type: none">• Subpart D – Walking-Working Surfaces• Subpart E – Means of Egress• Subpart F – Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms• Subpart G – Occupational Health and Environment Control• Subpart H – Hazardous Materials• Subpart I – Personal Protective Equipment• Subpart J – General Environmental Controls
29 CFR Part 1910.120	Hazardous waste operations and emergency response
29 CFR Part 1910.134	Respiratory protection
29 CFR Part 1910.1200	Hazard communication
29 CFR 1913	Rules of Agency Practice and Procedure Concerning OSHA Access to Employee Medical Records
29 CFR 1926	Safety and Health Regulations for Construction
29 CFR Part 1926.62	Lead
29 CFR Part 1926.1101	Asbestos
Title 40	
40 CFR Part 61	National Emission Standards for Hazardous Air Pollutants
40 CFR Part 261	Identification and Listing of Hazardous Waste
40 CFR Part 264	Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR Part 311	Worker Protection
40 CFR Part 355	Emergency Planning and Notification
40 CFR Part 370	Hazardous Chemical Reporting and Community Right-to-Know (includes MSDS reporting)
Title 49	
49 CFR Part 171	General Information, Regulations, and Definitions
49 CFR Part 172	Hazardous Materials Table, Special provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements
<hr/>	
California Code of Regulations	
Title 8	
CCR 8, Chapter 3.2	California Occupational Safety and Health Regulations
CCR 8, Chapter 4	Division of Industrial Safety
Subchapter 4	Construction Safety Orders (CSO) <ul style="list-style-type: none">1509 – Injury and Illness Prevention program1529 – Asbestos1532.1 – Lead1540 – Excavations1541 – Shoring, Sloping and Benching Systems1598 – Traffic Control for Public Streets and Highways1599 – Flaggers
Subchapter 5	Electrical Safety Orders (ESO) <ul style="list-style-type: none">2940.2 – Clearances2940.7 – Mechanical Equipment
Subchapter 7	General Industry Safety Orders (GISO)

Regulation References

Regulation	Topics
	3203 – Injury and Illness Prevention Programs
	3380 – Personal Protective Devices
	3381 – Head Protection
	3646 – Operating Instructions (Elevated Work Platforms)
	3648 – Operating Instructions (Aerial Devices)
	5003 – Provisions for Preventing Accidents in the Area of High-Voltage Lines
	5006 – Operators–Qualifications
	5021 – Equipment over Three Tons Rated Capacity
	5022 – Proof Load Test and Examination of Cranes and their Accessory Gear
	5024 – Examination of Bulk Cargo Handling Devices
	5025 – Certificates
	5144 – Respiratory Protective Equipment
	5192 – Hazardous Waste Operators and Emergency Response
	5194 – Hazard Communication
Title 17	Public Health
Division 1, Chapter 8, Article 1, Section 35033	Definition of lead-based paint
Division 3, Chapter 1, Subchapter 7, Toxic Air Contaminants, Subchapter 7.5	Airborne Toxic Control measures, Section 93105 – Provides the asbestos airborne toxic control measures for construction, grading, quarrying, and surface mining operation
Title 19	Public Safety
Division 1	State Fire Marshal
Title 22	Social Security
Division 4	Environmental Health
Division 4.5	Environmental Health Standards for the Management of Hazardous Waste
Title 24	California Building Standard Code
Part 9	California Fire Code – contains fire-safety-related building standards referenced in other parts of Title 24; code is preassembled with the 2000 Uniform Fire Code of the Western Fire Chiefs Association
California Labor Code, Sections 6360 to 6399	Hazardous substances information and training (including MSDS and communication)
San Francisco Fire Code	Regulates and governs the safeguarding of life and property from fire and explosions hazards from the storage, handling and use of hazardous substances and from conditions hazardous to life or property; provides for the issuance of permits, inspections and other Fire Department services, and to assess fees for those permits, inspections and services
The San Francisco Health Code	Articles 21, 21A, 22, and 22A contain requirements for identifying, treating, and managing hazardous material and waste
The Uniform Fire Code	Standard requirements for building construction
The National Electric Code	Standard requirements for building construction
Material Safety Data Sheets (MSDS)	Equipment and materials handling safety instructions
Trade Association Safety Standards	As referenced in the contract documents and provided by material or equipment vendors



Procedure: 04-06 Construction Environmental Mitigation

Revision Record

Revision	Description of Revision	Date
0	Original Issue	October 25, 2011

1.0 Purpose

This procedure defines the requirements for managing and performing required environmental mitigation during the construction phase of the Bus Project project.

2.0 Scope

This procedure applies to TJPA staff, PMPC (Program Management/ Program Controls) staff, the contractor, and the construction manager (CM).

If any procedure in this document conflicts with a provision in the contractor's contract documents, the contract documents must be followed.

3.0 References

The following Division 00 and 01 specification sections are sources for the requirements in this procedure.

- 00 08 12, Archaeological Conditions
- 00 08 13, Specific Project Requirements (Hazmat)
- 00 08 15, Waste Management Requirements (Hazmat)
- 01 10 90, References
- 01 13 50, Hazardous Materials Procedures (Hazmat)
- 01 14 00, Quality Control (Environmental Engineer Qualifications)
- 01 14 10, Regulatory Requirements
- 01 35 65, Mitigation Measures and Monitoring

4.0 Definitions

For general Program terms, refer to Section 00 07 00, *General Conditions*, and Appendix B of the Program Management Plan.

The terms CM and contractor used throughout this procedure are defined in the contract's general conditions under the entries TJPA Representative and Contractor. The designer is the A/E consultant for the project. Refer to Section 2 of the Program Management Plan for descriptions of project participants from the PMPC and TJPA.

5.0 Responsibilities

Responsibility Matrix: Construction Environmental Mitigation

Action Codes: <i>A - Approve the work product of an activity</i> <i>P - Perform the activity or Provide</i> <i>R - Review the work product of another</i> <i>I - Input required to performer</i> <i>S - Support when requested by performer</i> <i>C - Communicate; be kept informed by performer</i>	Project Participants							Notes	
	TJPA Program Management	Contracts Compliance Manager (TJPA)	Project Manager (PMPC)	Construction Manager (CM)	Designer	Program QA Manager	Construction Contractor		Subcontractors
Comply with contract mitigation measures			C	R		R	P	S	See 01 35 65
Provide daily log to the CM			C	R		C	P	I	
Verify contractor compliance with mitigation measures			C	P			I	I	
Respond to questions on design that relates to mitigation measures				S	P		I	I	
Assist the CM and contractor to resolve problems related to mitigation measures			S	C	S		I		
Conduct audits and surveillances of compliance with MMRP	C		C	S		P	S		
Assist the contractor to comply with mitigation measures and to resolve environmental problems			S		S		P		
Report contractor compliance with mitigation measures and identify problem areas	C		C	P			I		
Monitor the CM's verification and reporting of compliance with mitigation measures	C		P	I					
Review reports of contractor compliance with environmental mitigation requirements			P	I					

6.0 Mitigation Monitoring and Reporting Program

The Final Environmental Impact Statement/Environmental Impact Report (FEIS/EIR) for the Program identified mitigation measures in design and construction to minimize harm to the environment. These mitigation measures are contained in the TJPA's Mitigation Monitoring and Reporting Program (MMRP), required by the California Public Resources Code and adopted by the TJPA.

The Federal Transit Administration (FTA) and the Federal Railroad Administration (FRA) require that the TJPA implement all mitigation measures identified in the FEIS/EIR and in the memorandum of agreement between the FTA, the FRA, and the California State Historic Preservation Officer. The TJPA provides the FTA and the FRA with a quarterly written report on the implementation of mitigation measures, including those related to historic preservation.

6.1 MMRP Implementation

The TJPA is responsible for implementing and documenting the mitigation measures in the MMRP. An internal document, Plan to Implement Mitigation Measures, or PIMM, provides a framework for monitoring and reporting the assignment and implementation of mitigation measures. The PMPC is responsible for maintaining the PIMM and overseeing MMRP reporting.

6.2 Mitigation Monitoring

The CM monitors the contractor's environmental mitigation activities and verifies that the contractor complies with the requirements of the construction mitigation measures and the applicable contract requirements listed under section 3.0 of this procedure. Section 01 35 65, *Mitigation Measures and Monitoring*, paragraph 1.2, *Submittals*, lists the submittals required from the contractor.

The CM maintains a list or spreadsheet of all mitigation requirements for the project and with the PMPC project manager establishes a recurring meeting to review, update, and monitor the mitigation requirements and measures being performed on the jobsite.

7.0 Quality Records

Quarterly reports
Surveillances and audits of MMRP compliance



Procedure: 04-07 Construction Permits, Inspections, and Tests

Revision Record

Revision	Description of Revision	Date
0	Original Issue	October 25, 2011

1.0 Purpose

This procedure defines the requirements for obtaining permits for construction and conducting inspections and tests during the construction phase of the Bus Storage project.

2.0 Scope

This procedure applies to TJPA staff, PMPC staff, the contractor, and the construction manager (CM).

If any procedure in this document conflicts with a provision in the contractor's contract documents, the contract documents must be followed.

3.0 References

The following Division 00 and 01 specification sections are sources for the requirements in this procedure.

- 00 07 00, General Conditions
- 00 08 13, Specific Project Requirements
- 01 13 40, Contractor's Activities
- 01 14 00, Quality Control
- 01 14 10, Regulatory Requirements
- 01 15 70, Traffic Routing Work
- 01 31 25, Project Management Software

Constructware work instructions are stored in the following folder under the Programwide Project in Constructware: *File Management>File Director>Administration> Procedures & Audits>Procedures>Constructware Work Instructions.*

4.0 Definitions

For general Program terms, refer to Section 00 07 00, *General Conditions*, and Appendix B of the Program Management Plan.

The terms CM and contractor used throughout this procedure are defined in the contract's general conditions under the entries TJPA Representative and Contractor. The designer is the A/E consultant for the project. Refer to Section 2 of the Program Management Plan for descriptions of project participants from the PMPC and TJPA.

5.0 Responsibilities

Project Responsibility Matrix: Permits, Inspections and Tests

Action Codes: <i>A - Approve the work product of an activity</i> <i>P - Perform the activity or Provide</i> <i>R - Review the work product of another</i> <i>I - Input required to performer</i> <i>S - Support when requested by performer</i> <i>C - Communicate; be kept informed by performer</i>	Project Participants							Notes
	TJPA Program Management	Project Manager (PMPC)	Construction Manager (CM)	Designer	Program QA Manager	Construction Contractor	Subcontractors	
Specify inspection and testing requirements	A	C	C	P		C		
Submit drawings & specifications for building permits*		P	C	I		I	I	
Apply for building/site permit*	A	S	S	S		P	I	
Pull building permit(s)		C	C			P		
Submit shop drawings and construction details		C	C	A		P	I	
Apply for non-building permits related to construction		C	C			P	I	
Comply with construction-related permits			R			P	P	
Call for code and building inspections			P			I		
Final building inspection			R			I		Performed by building official
Daily reports		C	P			P	I	Contractor & CM
Quality control (QC) inspections			R		C	P	S	Contractor QC
Quality assurance surveillances	C		C		P	S	S	In accordance with QMS
Special inspections and tests		C	P	I	R	I	S	Resident engineer/inspector reports

* Department of Building Inspection to issue a recommendation letter to the TJPA regarding issuance of a permit

6.0 Permits

The CM must verify that the contractor has obtained all permits prior to starting work for which permits are required. The CM is responsible for monitoring the timeliness of the contractor's permit applications and checking contractor compliance with permit conditions.

All permits are documented and tracked in the Permits module of Constructware, the Program Management Information System. Refer to the Constructware work instructions, *Permits*, for details on entering permit information into Constructware. Permit data such as the initial application date, the date the permit is obtained, and the date the permit is closed should be updated in Constructware, and electronic files of applications and permits must be uploaded to Constructware and linked to the appropriate permit record. Depending on the type of permit, either the contractor or the PMPC tracks the status of the permit. If permitting begins before the construction contractor is retained, then the PMPC maintains permitting data in Constructware.

6.1 Building Permits

The TJPA issues building permits for the Transit Center project. Documentation supporting the required fire-life safety building permits is reviewed with the San Francisco Fire Department (SFFD), which in turn provides a formal permit recommendation to the TJPA. Refer to article 3 of the general conditions (00 07 00) for the requirements on permits. The CM must track the progress of building permit inspections, as follows.

1. Before work starts, either the contractor or the PMPC (depending on the permit) ensures that the TJPA has issued the appropriate building permits.

The following permit-related records must be kept on the jobsite: all building permits, job cards, and approved plans; the CM also maintains hard copies of these records. Additionally, all permit documents are scanned and linked to the appropriate permit record in Constructware. The PMPC project manager designates the staff responsible for scanning and uploading.

2. The contractor contacts the CM to request periodic site inspections after the completion of phases of work. Refer to section 7.3 of this procedure.
3. The CM and the contractor coordinate special inspections that are critical to the structural integrity or essential to safety and function. Refer to section 7.4 of this procedure.
4. When construction and all inspections are satisfactorily completed, the contractor requests a final inspection by the building inspector through the CM.

Upon successful completion of the final inspection, DBI issues a formal recommendation for a Certificate of Final Completion and Occupancy to the TJPA; the TJPA issues the Certificate of Final Completion and Occupancy to the contractor and closes the building permit.

6.2 Permits for Other Regulated Activities

The contractor is responsible for securing and paying for permits for other regulated activities required for construction, such as permits from the San Francisco Department of Public Works, San Francisco Department of Parking and Traffic, Caltrans, or Cal/OSHA, before starting the associated work. All permits must be kept on the jobsite and available to the CM. The CM verifies that the contractor obtains permits in sufficient time to avoid any construction delays and posts all notices required by the permit. Refer to articles 3 and 12 of the general conditions, and sections 00 08 13 and 01 14 10.

7.0 Inspections

Inspections are performed to document and provide a complete trail of inspections for quality and compliance up to formal acceptance of the work. The designer identifies inspection and testing requirements and includes them in the construction documents.

The CM must coordinate with the contractor to develop a work in-place log (by trade and area) or other system to identify when new work will start. The CM's resident engineer or inspectors, or both, must check new work when it starts and continue to document observations of compliance or non-compliance on a daily basis until it is completed. The critical path method schedule activities may be used by the CM and the contractor to plan inspections.

The CM must also verify with the building official, building inspector, and contractor that witness and hold inspection points have been identified and that specific inspection responsibilities have been properly assigned.

Inspections must be documented by daily inspection reports or special inspection reports, or both. For contractor quality control inspections, the CM verifies adherence to the specified requirements. Refer to section 8.5 of the Quality Management Plan for specific requirements applicable to the contractor and the CM.

The contractor shall notify the CM (including the testing agency or special inspector) before the scheduled inspection, in accordance with contract specifications.

Refer 00 07 00 (article 8) and 01 14 00, *Quality Control*.

7.1 Daily Inspection Procedures

The CM verifies that the contractor submits a daily report in accordance with 01 13 40 and CM Procedure 04-11, *Field Reports and Inspections*.

The CM, in accordance with the the Program's Quality Management System and the CM's quality plan, also produces a daily report to document its verification of work performed by the contractor, contract compliance, and problems. The CM's daily report is created in the Daily Reports module of Constructware. Uploaded reports by subcontractors, field staff, and special inspectors are linked to the appropriate daily report in Constructware. Refer to the procedures and Constructware work instructions for detailed guidance on creating the daily report.

Any corrections to a daily report should be relayed to the author by email within 2 working days. Revised inspection reports must be retransmitted to the CM and the PMPC project manager.

7.2 Quality Control Inspections

Quality control (QC) inspections are performed by the contractor and verified by the CM. The contractor documents QC inspections in its daily report. Program quality assurance (QA) inspections and surveillances verify documentation of required contractor QC activities. The CM may also conduct periodic independent testing and inspections to verify the validity and accuracy of the QC testing being performed. Refer to 01 14 00 for details.

7.3 Building Inspections

The contractor is responsible for providing to the CM the names and contact information of the building official and building inspector that appear on the permit. The CM verifies the contractor's adherence to the following building inspection requirements.

- Notify the CM when a work activity is near completion and a call for inspection is imminent. The CM's field engineer should promptly inspect the work to verify that it is or will be ready for inspection.
- Schedule the inspection with the building inspector following the CM's review.
- Present the approved permit, job card, and plans when the inspector arrives on the jobsite.

If the workmanship is satisfactory and the work corresponds with the approved plans, the contractor receives the inspector's approval to continue construction. If workmanship is not satisfactory, the CM issues a correction notice.

The contractor is responsible for paying any reinspection fees resulting from the contractor's failure to adequately make corrections, prepare the work for inspection, or follow administrative requirements.

7.4 Special Inspections and Tests

The TJPA or CM retains the services of an independent firm to provide special inspections and laboratory services. The contractor notifies the CM and the independent firm or special inspector of the schedule of activities requiring special inspection.

The building official approves a special inspector for inspections of specific types of construction where strength, safety, and construction practices are critical. International Building Code section 1704 and NFPA (National Fire Protection Association) 70 describe the inspection situations that mandate a special inspector.

The contractor must coordinate all special inspections with the CM and the appropriate agencies having jurisdiction. Refer to 01 14 00.

The CM monitors the special inspection process. If the special inspector observes nonconforming work in progress or that is about to occur, the inspector notifies the contractor's representative and the CM of the nature of the discrepancy and the requirements of the code or approved plans.

If the contractor then chooses to proceed with the discrepancy, the special inspector does the following:

1. Notifies the CM and the building official immediately by telephone or other means to relay the nature of the discrepancy.
2. Notifies the engineer or architect of record.
3. Prepares a discrepancy notice and posts it at the jobsite next to the building permit.

The CM tracks resolution of any discrepancies.

Special inspection reports are distributed to the CM, contractor, and the building official. These reports should indicate compliance or noncompliance with the contract documents. Reports indicating nonconforming work are submitted to the building official and the designer.

8.0 Quality Records

Permits

Inspector job cards (inspection records)

Certificate of Final Completion and Occupancy

CM's daily reports

Code inspections and test reports

Special inspections and test reports



Procedure: 04-08 Construction Completion, Turnover, and Closeout

Revision Record

Revision	Description of Revision	Date
0	Original Issue	October 25, 2011

1.0 Purpose

This procedure defines the requirements for project completion, turnover, and closeout at the end of the construction phase of the Bus Storage project.

2.0 Scope

Sections 6.1 through 6.3 of this procedure apply to TJPA staff, PMPC staff, the contractor, and the construction manager (CM). The warranty period activities described in section 6.4 are the responsibility of the owner or designer.

The TJPA has engaged a commissioning agent; consequently, commissioning plans are not covered by this procedure.

If any procedure in this document conflicts with a provision in the construction contractor's contract documents, the contract documents must be followed.

3.0 References

The following Division 00 and 01 specification sections are sources for the requirements in this procedure.

- 00 05 20, Agreement
- 00 07 00, General Conditions
- 00 08 02, Contract Time and Liquidated Damages
- 01 17 00, Completion and Contract Closeout
- 01 17 20, Project As-Built Drawings
- 01 17 30, Operation and Maintenance Data

Constructware work instructions are stored in the following folder under the Programwide Project in Constructware: *File Management>File Director>Administration>Procedures and Audits>Procedures>Constructware Work Instructions*.

4.0 Definitions

For general Program terms, refer to Section 00 07 00, *General Conditions*, and Appendix B of the Program Management Plan.

The terms CM and contractor used throughout this procedure are defined in the contract's general conditions under the entries TJPA Representative and Contractor. The designer is the A/E consultant for the project. Refer to Section 2 of the Program Management Plan for descriptions of project participants from the PMPC and TJPA. *Code authority* is the entity or government agency that issues permits or certificates for construction or construction-related activities.

5.0 Responsibilities

Responsibility Matrix: Completion, Turnover, and Closeout

Action Codes: <i>A - Approve the work product of an activity</i> <i>P - Perform the activity or Provide</i> <i>R - Review the work product of another</i> <i>I - Input required to performer</i> <i>S - Support when requested by performer</i> <i>C - Communicate; be kept informed by performer</i>	Project Participants							
	T/JPA Program Management	Contracts Compliance Manager (T/JPA)	Project Manager (PMPC)	Construction Manager (CM)	Designer	Construction Contractor	Subcontractors	Commissioning Agent
Partial Occupancy								
Request partial occupancy or use	P		C	I	I	S		
Prepare and distribute deficiency list			C	P	I	C		
Obtain Temporary Certificate of Occupancy	C		C	C	C	P		
Substantial Completion								
Coordinate closeout meeting			C	P	I	I		
Request final building inspection			C	C	C	P		
Obtain Certificate of Final Completion and Occupancy	C	C	C	S	C	P	S	
Closeout document submittals			C	R	A	P		
Startup & commissioning completed	C		C	R	R	P		A
Prepare preliminary punch list				R	R	P	S	
Perform Substantial Completion inspection	A		C	S	P	I		P
Prepare final punch list	C		C	S	P			
Issue Notice of Substantial Completion	A	C	C	R	P	C		
Final Completion								
Complete punch list & remaining submittals			C	R	A	P	S	
Perform Final Completion inspection	A		C	P	P	I	S	P
Prepare completion list	C		C	P	S	S		
Correct listed items						P		
Issue Certificate of Acceptance	A	C	C	S	P	C		
Final Payment								
Submit final invoice & documentation			A	R	R	P		
Certify that all work is completed	C	C	C	A	P			P
Calculate final payment			C	P	S			
Issue final payment	A	P	C	S	S			
Final Warranty Inspection								
Correct warranty period deficiencies	R	C				P		
Seasonal training not done earlier	A				R	P		
Final Inspection	A	C			P	I		

6.0 Procedures

Construction completion, turnover, and closeout activities are divided into four phases.

- Partial Occupancy
- Substantial Completion
- Final Completion
- Warranty Period and Final Warranty Inspection

6.1 Partial Occupancy

When, in the opinion of the TJPA, portions of the work are in a condition suitable for use or beneficial occupancy, and the best interest of the TJPA requires such use, the TJPA may request possession and use of that part of the work prior to Substantial Completion. See paragraph 9.07, *Partial Utilization*, of the general conditions (00 07 00).

If a temporary occupancy permit is necessary for the TJPA to use the areas to be occupied, the contractor must obtain a Temporary Certificate of Occupancy (TCO) from the Department of Building Inspection (DBI) or the agency having jurisdiction. The TCO lists or includes an attachment with the outstanding requirements not met and states a date by which these requirements must be met. TCOs are typically granted for 90 days and may be renewed following re-inspections by the DBI inspector or the agency having jurisdiction.

If the contractor agrees that part of the work is Substantially Complete, the contractor requests a joint inspection. The CM, contractor, and TJPA inspect the work to be used to determine and record its status of completion. The CM must verify the following has occurred before the TJPA may take partial possession of the work.

- A TCO, if necessary, has been obtained.
- The CM has prepared a deficiency list for all incomplete, outstanding, and noncompliant items.
- The responsibilities have been established for maintenance and repair for ordinary wear and tear.
- The property insurers have been given notice, have acknowledged changed responsibilities, and have adjusted coverage.
- The contractor has agreed that final cleaning will be completed when requested by the TJPA.

6.2 Substantial Completion

Substantial Completion is the stage in the progress of the work where work or designated portions of work are sufficiently complete to be put to their intended use. The date of Substantial Completion is a contract milestone, established by the Notice of Substantial Completion. Liquidated damages may be assessed if the milestone date is not met.

6.2.1 Substantial Completion Prerequisites

The following four prerequisites must be met before the date of Substantial Completion: A closeout meeting must be held, a Certificate of Final Completion and Occupancy must be obtained, all closeout documents must be submitted, and startup services must be completed. The following sections describe each of these prerequisites. Figure 6.1 shows the process for achieving Substantial Completion.

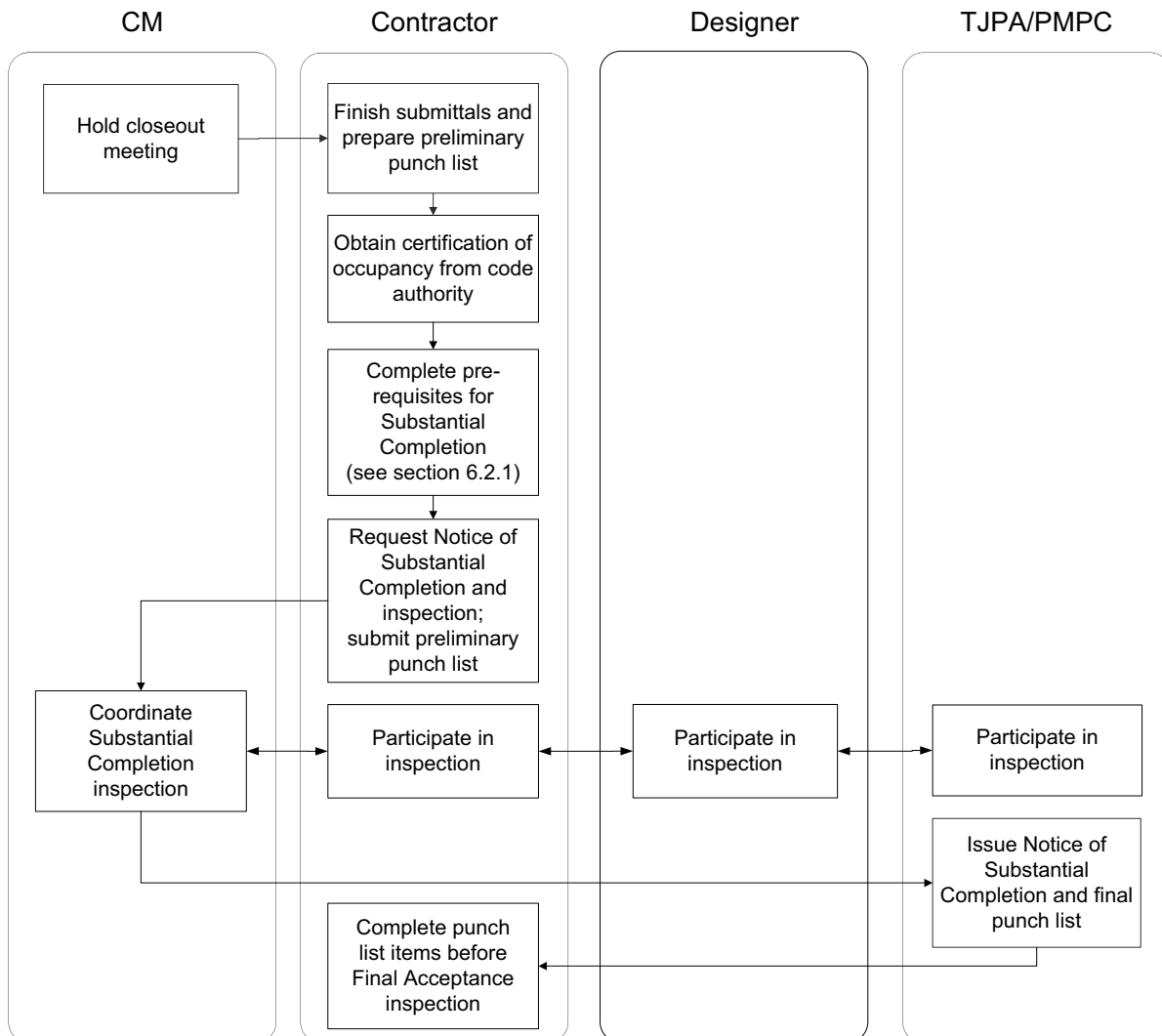


Figure 6.1, Substantial Completion Process

Closeout Meeting. Before the work is 95% complete, the contractor must submit all change orders, claims, and time extension requests, as required by 01 17 00. After receipt of this material, the CM schedules a closeout meeting with the contractor, commissioning agent, TJPA, and designer. The closeout meeting is used by the CM to review closeout procedures, responsibilities, incomplete items, nonconforming items, and all open issues. The CM must prepare and distribute the list of activities that need to be resolved during the closeout period. The list must indicate who is responsible and when the item is scheduled to be done. Activities on the list may include equipment testing, startup, commissioning, operations and maintenance (O&M) training, record documents,

final inspection, administrative activities, and documentation of final quantities and force account work.

Final Building Inspections and Certificate of Final Completion and Occupancy. After all construction codes (i.e., electrical, plumbing, and mechanical) are met and special inspections are satisfactorily completed, the contractor must request a final inspection by the code authority. When the code authority has satisfactorily completed a final inspection, it issues a Certificate of Final Completion and Occupancy to the contractor and closes the permit. A Certificate of Final Completion and Occupancy may be issued if items not related to code compliance, safety, or occupancy are required by the work. Typically, interior finishes, furniture, fixtures, equipment, landscaping, and some tests may be in that category.

Closeout Documents Submitted. The contractor must submit all warranties, guarantees, as-built drawings, O&M manuals, permits, and any other contract deliverables. Before scheduling a Substantial Completion inspection, the CM verifies that all prerequisites have been met and all submittals are satisfactory. Submittals required for granting Substantial Completion are described in 01 17 00. The CM must also verify that all operating permits (e.g., elevator, boiler) have been submitted to the TJPA.

Start-up Services Completed. The contractor must complete its contractual requirements for startup services. The contractor must work with the commissioning agent to coordinate all testing and inspections related to startup and commissioning.

6.2.2 Request for Substantial Completion Inspection

When the contractor considers the work to be substantially complete and after all prerequisites have been completed, the contractor must notify the CM in writing to request an inspection of the work and the Notice of Substantial Completion. See paragraph 9.08, *Substantial Completion*, of the general conditions (00 07 00) for details. The contractor's request must include a preliminary list of items to be completed or corrected before final inspection. The CM uses the contractor's list as a starting point for preparing a punch list.

The CM coordinates and conducts the Substantial Completion inspection with the contractor. The commissioning agent, designer, and TJPA or PMPC personnel participate in the inspection as needed. If the work is not complete, the CM prepares a deficiency list for the contractor. After correcting all the items on the deficiency list, the contractor requests a follow-up inspection. Any subsequent re-inspections of deficiencies are conducted at the contractor's expense.

6.2.3 Notice of Substantial Completion

When the CM, commissioning agent, designer, and TJPA agree that the work is substantially complete, the TJPA issues a Notice of Substantial Completion (Notice). The Notice establishes the contractual Substantial Completion.

With the Notice, the TJPA delivers to the contractor (a) the punch list of items to be corrected by the contractor prior to Final Completion and (b) a written division of responsibilities regarding remaining closeout requirements including security, operation, safety, maintenance, heat, utilities, insurance, and warranties.

6.3 Final Completion

Final Completion is documented by the Certificate of Acceptance issued by the TJPA. Final Completion is a prerequisite for final payment to the contractor. The date of Final Completion is a

contract milestone, established by the Certificate of Acceptance. Liquidated damages may be assessed if the milestone date is not met.

After the Certificate of Acceptance is issued, the CM must submit a closeout report to the TJPA. The closeout report format and content must be agreed to with the TJPA before the Final Completion inspection.

Figure 6.2 shows the process for achieving Final Completion.

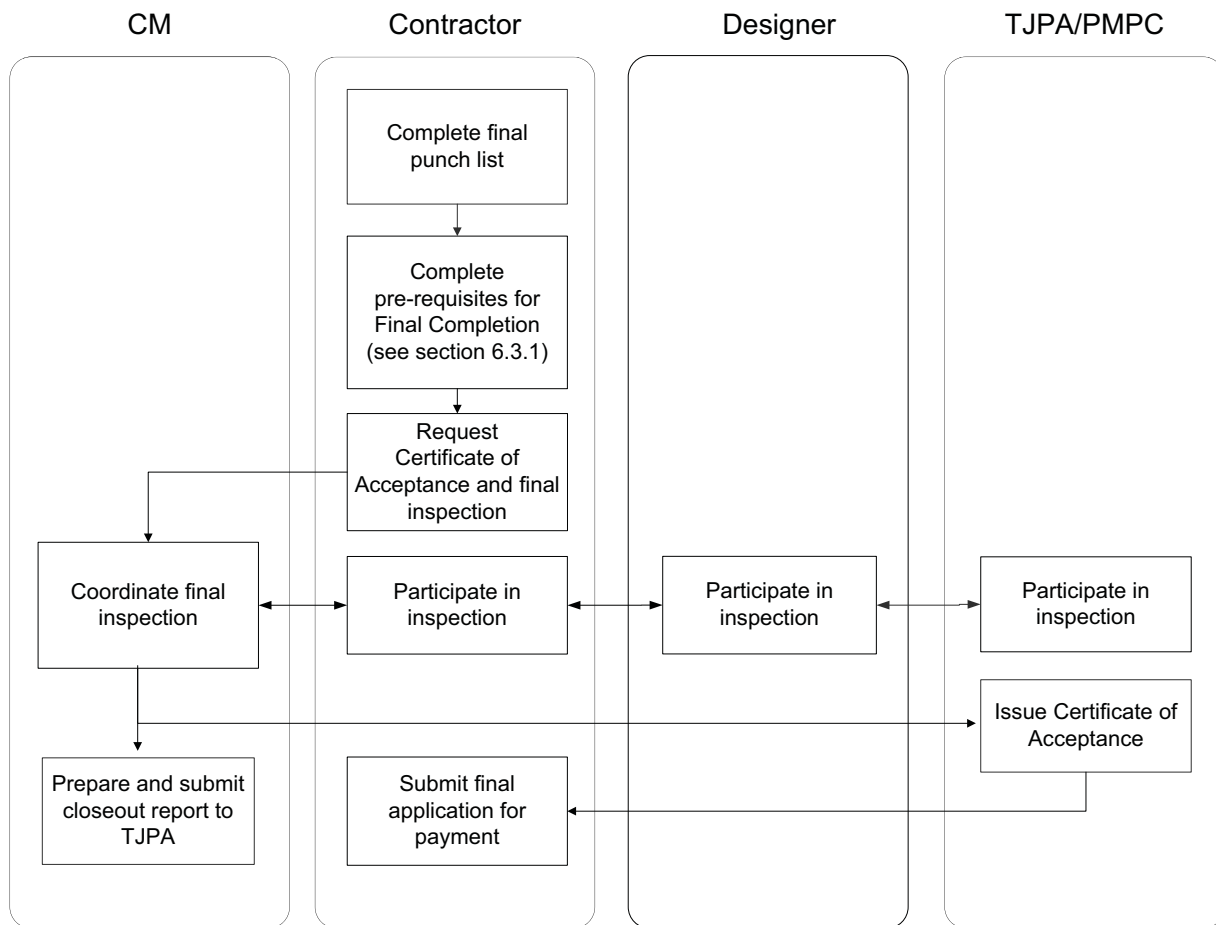


Figure 6.2, Final Completion Process

6.3.1 Final Completion Prerequisites

Before performing a Final Completion inspection, the CM verifies that the contractor has completed the punch list and satisfied all prerequisites specified in 00 17 00. The CM must also verify the following additional contract requirements have been completed or submitted to the TJPA.

- Completed O&M manuals, in accordance with 01 17 30. The TJPA or the commissioning agent provides final comments to the contractor.
- TJPA’s designated personnel training for operation and adjustment, and maintenance of products, equipment, and systems.

- All original signed permit documents including job cards, permit applications, permit drawings, and any additional certificates.
- All punch list items including repairs to damage caused by the installation or use of temporary work, restoration to original or specified condition of existing and permanent facilities used during construction, and final cleaning and removal of all protective coverings.

6.3.2 Request for Final Inspection

Following completion of the prerequisites described in section 6.3.1, the contractor must notify the TJPA and CM in writing to request an inspection of the work and the Certificate of Acceptance. Refer to paragraph 9.09, *Final Completion and Final Payment*, of the general conditions (00 07 00) for details.

The CM coordinates and conducts the final inspection with the contractor. The commissioning agent, designer, and TJPA personnel participate in the inspection. If the work is not complete, the CM prepares a completion list for the contractor. After correcting the items on the completion list, the contractor requests a follow-up inspection. Any subsequent re-inspections of deficiencies are conducted at the contractor's expense.

After the final inspection, the CM verifies that the contractor submits within the timeframe specified by contract the revised and final O&M manuals that incorporate the TJPA's comments. Refer to 01 17 30 for details.

6.3.3 Certificate of Acceptance

Once the CM determines that all contract requirements have been satisfied, the TJPA issues a written Certificate of Acceptance (as required by section 6.22(K) of the San Francisco Administrative Code) stating that the work is acceptable, and the contractor may submit the final application for payment.

The major administrative and technical closeout submittals that must be checked by the CM are listed in 00 17 00.

6.3.4 Final Payment

The CM must coordinate with the commissioning agent, designer, and the TJPA to ensure that the following two items have been completed before final payment can be made by the TJPA.

- The designer must advise the TJPA of the appropriateness of final payment.
- The commissioning agent and the designer must submit a statement that all items of equipment function properly.

Following completion of the prerequisites, the final payment application may be made. The final payment application must include a final statement of accounting, payroll records, and final change orders showing adjustments to the contract price for all force account work and approved change orders.

The TJPA issues final payment in accordance with paragraph 9.09 of the general conditions (00 07 00).

6.4 Warranty Period and Final Warranty Inspection

Following Final Completion, the project warranties and guarantees remain valid for 1 year for above-grade structures and 2 years for below-grade structures. During this time, the contractor remains responsible for correcting any identified defects in workmanship or materials. After Final Completion, the CM's duties are generally concluded.

6.4.1 Final Training

During the Warranty Period, the contractor may be required to finish training that (through no fault of the contractor) could not be provided earlier. For equipment or systems requiring seasonal operation, the contractor must complete training for instructions for other seasons within 6 months of the date the Certificate of Acceptance was issued. The designer may be tasked to oversee this training.

6.4.2 Final Warranty Inspection

During the Warranty Period, the designer enforces the warranties and any additional requirements for LEED certification by assisting maintenance and operations personnel in conducting warranty inspections. The designer must also examine the completed work to develop a list of corrective warranty work items and a schedule for completion of items that did not meet performance criteria or product warranties.

The designer performs a Final Warranty inspection in the eleventh or twelfth month following Final Completion. If systems, components, equipment, or finishes fail to meet the performance criteria or product warranties prior to or during the Final Warranty inspection, the designer develops a list of corrective warranty work and a schedule for completion. The designer coordinates these activities with the TJPA, operations and maintenance personnel, and the contractor.

7.0 Quality Records

Certificate of Final Completion and Occupancy
Record documents
Notice of Substantial Completion
Contractor's certified punch list
Certificate of Acceptance
Final Warranty inspection documents



Procedure: 04-09 Field Orders

Revision Record

Revision	Description of Revision	Date
0	Issued for TJPA review	October 25, 2011

1.0 Purpose

This procedure describes the field order process during the construction phase of the Bus Storage project.

2.0 Scope

This procedure applies to representatives from the TJPA, PMPC (Program Management/Program Controls consultant), contractor, and construction manager (CM).

If any procedure in this document conflicts with a provision in the contractor's contract documents, the contract documents must be followed.

3.0 References

See also Section 00 07 00, *General Conditions*.

Constructware work instructions referenced in this procedure are stored in the following folder under the Programwide Project in Constructware: *File Management>File Director>Administration>Procedures & Audits>Procedures>Constructware Work Instructions*.

4.0 Definitions

For general Program terms, refer to 00 07 00 and Appendix B of the Program Management Plan.

The terms CM and contractor used throughout this procedure are defined in the contract's general conditions under the entries TJPA Representative and Contractor. The designer is the A/E consultant for the project. Refer to Section 2 of the Program Management Plan for descriptions of project participants from the PMPC and TJPA.

5.0 Responsibilities

Responsibility Matrix: Field Orders

<i>Action Codes:</i>							
<i>P - Perform the activity</i>							
<i>R - Review the work product of another</i>							
<i>I - Input required to performer of activity</i>							
<i>S - Support when requested by performer</i>							
<i>C - Communicate; be kept informed by performer</i>							
	TJPA Board of Directors	TJPA	TJPA Legal Counsel	PMPC Project Manager	Construction Contractor (Construction Manager (CM)	Designer
Field Order Process							
Develop field order		P		P		P	P
Evaluate draft field order for cost and schedule impacts	C		C			P	C
Approve field order		P		I		P	
Issue field order			I	P		P	
Evaluate signed field order for cost and schedule impacts					P	C	
Execute work					P	C	

6.0 Procedures

A field order is a written order issued by the TJPA, TJPA representative, designer, project manager, or CM to the contractor requiring minor changes in the work that do not affect the cost or schedule of the contract. A field order may be triggered by a variety of circumstances including a contractor’s request for information.

The field order process is managed by the CM after the change has been evaluated by the appropriate parties to determine whether the change entails cost or schedule impacts.

When the change in the work has been confirmed to be a minor change, the appropriate party initiates a field order as follows:

1. The party responsible for the minor change develops the documentation, including the relevant sketches or specifications, and forwards it to the CM.
In some cases, the issuing party may also develop the field order document.
2. The CM evaluates the change for potential cost and schedule impacts.
 - If the CM determines that the change does not affect cost or schedule, the CM develops the field order document, assembles all required documentation, and issues it to the contractor.
 - If the CM anticipates cost or schedule impacts, or both, the change is categorized as a proposed change order (PCO). The CM consults the TJPA and PMPC. If the TJPA agrees with the proposed change, the TJPA directs the designer to develop the PCO and initiate the PCO process in accordance with CM Procedure 04-04, *Contract Change Orders*.

3. The contractor evaluates the field order for potential cost or schedule impacts.
 - If the contractor determines that the field order does not affect cost or schedule, the contractor acknowledges receiving the field order by signing the document and returning it to the CM and executes the work mandated by the field order.
 - If the contractor anticipates cost or schedule impacts, the contractor issues a change order request, in accordance with the procedure, and proceeds with the work in accordance with paragraph 6.01A of the general conditions.

Figure 1 below shows the field order process.

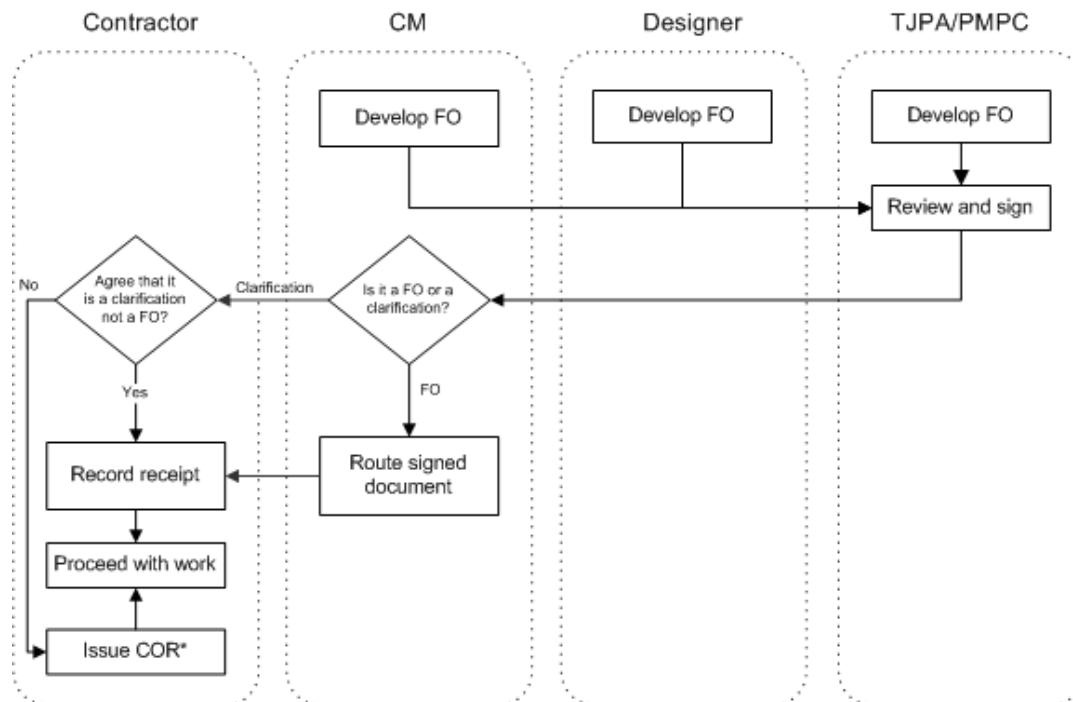


Figure 1, Field Order Process

The CM tracks all field orders and proposed change orders in the CCD (Construction Change Directives) module of Constructware. Refer to the work instructions, *Construction Change Directives*, for steps on creating field orders and PCOs.

7.0 Quality Records

Quality Records

Contractor requests for information

Revised drawings and specifications

Field orders

Proposed change orders

Change order requests



Procedure: 04-11 Field Reports and Inspections

Revision Record

Revision	Description of Revision	Date
0	Issued for TJPA review (not previously issued; based on draft for Transit Center project)	October 25, 2011

1.0 Purpose

This procedure defines the requirements for construction and inspection reporting during the construction phase of the Bus Storage project.

2.0 Scope

This procedure applies to TJPA Program Management, PMPC (Program Management/Program Controls) staff, the contractor, and the construction manager (CM).

If any procedure in this document conflicts with a provision in the construction contractor's contract documents, the contract documents must be followed.

3.0 References

The following documents are sources for the requirements in this procedure.

- Division 00 and 01 specification sections
 - 00 05 20, Agreement
 - 00 07 00, General Conditions
 - 01 13 40, Contractor's Activities
 - 01 31 25, Project Management Software
- Program Management Plan, Section 8, Construction Management

Constructware work instructions referenced in this procedure are stored in the following folder under the Programwide Project in Constructware: *File Management>File Director>Administration>Procedures & Audits>Procedures>Constructware Work Instructions*.

4.0 Definitions

For general Program terms, refer to Section 00 07 00, *General Conditions*, and Appendix B of the Program Management Plan.

The terms CM and contractor used throughout this procedure are defined in the contract's general conditions under the entries TJPA Representative and Contractor. The designer is the A/E consultant for the project. Refer to Section 2 of the Program Management Plan for descriptions of project participants from the PMPC and TJPA.

5.0 Responsibilities

Responsibility Matrix: Daily Reports and Inspections

<i>Action Codes:</i> <i>P - Perform the activity</i> <i>R - Review the work product of another</i> <i>I - Input required to performer of activity</i> <i>S - Support when requested by performer</i> <i>C - Communicate; be kept informed by performer</i>	Project Participants							
	TJPA Program Management	Project Manager (PMPC)	Construction Manager (CM)	Construction Contractor	Subcontractors	Program Quality Control (PMPC)	Third-party inspectors	A/E Consultant
Daily report for trade work			C	R	P	C		
Daily report for construction	C	C	R	P	I			
Daily report for construction oversight	C	R	P	I				
Contractor quality control reports	C	C	R	P	I	R		
Field condition reports	C	C	P	I	I	R		
Special inspection reports	C	C	P	I		R		
Third-party inspection reports	C	C	R	I		R	P	
Architect/engineer observation reports	C	C	R			R		P

6.0 Procedures

Periodic reports from the contractor, the CM, the A/E, and subcontractors document daily construction, inspection, and quality control activity on the project. All daily reports, inspection reports, field condition reports, and incident investigation reports are stored in Constructware, the TJPA’s program management information system.

6.1 Daily Reports

The following sections describe the requirements for each entity producing a daily report.

6.1.1 Contractor

The contractor produces a comprehensive daily report that encompasses all work done during the shift covered by the report. In accordance with the contract, the contractor creates the daily report in the Daily Reports module of Constructware, following specific requirements listed in paragraph 1.4A of 01 13 40, *Contractor’s Activities*. The report should be complete and available for use no later than the day after the shift covered by the report. Subcontractor reports for the shift may be attached directly to the relevant daily report record in Constructware. Refer to section 7.

6.1.2 Subcontractors

Each subcontractor working on the Transit Center construction produces and submits to the contractor a daily report for work during the shift. The content of subcontractor's daily reports should follow the specific requirements listed in 01 13 40; the report format and organization may be agreed upon between the contractor and subcontractor, provided the final report in PDF can be uploaded to Constructware and linked to the contractor's daily report.

6.1.3 CM

The CM's daily report covers all construction management oversight activity done during the shift covered by the report and identifies any third-party inspections or special inspections. The CM creates its daily report in Constructware concurrently with the contractor, in accordance with contract requirements. Relevant inspection reports are uploaded to Constructware as soon as they are available and linked to the appropriate daily report; refer to section 7. The CM should also link a representative selection of progress photographs to the daily report, ensuring that the remainder of progress photos are retained and retrievable for future use on the project. Refer to section 7.

6.2 Special Inspection and Third-party Inspection Reports

Inspection reports are typically finalized after the daily report they are associated with. Because some parties such as code authorities or utility agencies responsible for approving the work may not issue daily or progress inspection reports, any final documentation of approval or sign-off should be treated as an inspection report. Once such reports or approvals are available, the CM (a) uploads them to the designated folder in Constructware and (b) links them to the appropriate daily report. Refer to section 7.

The CM and contractor should establish a file-naming convention for inspection reports that identifies the report type, inspection date, and responsible party to enable the CM to search and retrieve documents by type, date, and author.

6.3 Contractor Quality Control Daily Reports

The subcontractors produce daily quality contractor control (CQC) reports, as required by contract, and the contractor uploads them to the designated folder of Constructware. Refer to section 7.

Construction engineering observation reports are reviewed by the contractor's CQC manager and included in the CQC report.

The CM and contractor should establish a file-naming convention for CQC reports that identifies the report type, date, and responsible party to enable the CM to search and retrieve documents by type, date, and author.

6.4 Field Condition Reports

The CM's field condition reports (FCRs) document issues in the field that require resolution. FCRs are created in the Issues module in Constructware. Refer to the work instructions on field condition reports for steps on creating an FCR in Constructware.

6.5 Architect/Engineer Observation Reports

The A/E field representative files a weekly report that summarizes all A/E observations and notes any non-conformances observed during the reporting period. A/E observation reports are stored in Constructware. Refer to section 7.

7.0 Electronic Filing Requirements

Reports to be linked to the contractor’s or CM’s daily report are uploaded to the designated folder in the File Director module of Constructware under the Bus Storage project, 160. Refer to the following table for the specific folders.

Document Type	Folder	Path
CM Daily Report	n/a	Document Management>Daily Reports (Project 160)
Contractor Daily Report	n/a	Document Management>Daily Reports (Project 160)
Field Condition Report	n/a	Document Management>Issues (Category= <i>Field Condition Report</i>)
Sub Daily Report	7.20.02.01	Construction>Construction Documents>Daily Reports>[year]
Special Inspection Report or Testing Report	10.07	Quality>Inspection and Testing
CQC Report	10.12	Quality>CQC Reports>[trade subcontractor]>[year]>[month]
Incident Investigation Report	7.10.11	Construction>Construction Safety & Security>Construction Safety> Incident Investigation Reports
Progress Photograph	7.20.02	Construction>Construction Documents>Daily Reports>Construction Photos> [year]
Architect/Engineer Observation Report	10.06	Quality/AE Observation Reports> [YYQQ]

Constructware work instructions contain detailed steps on using the Daily Reports module and uploading documents to Constructware. All current work instructions can be viewed, printed, and downloaded from Constructware. Refer to section 3.

8.0 Quality Records

- Daily reports
- Inspection reports
- Field condition reports
- A/E observation reports
- Approvals
- Progress photographs



Procedure: 04-12 Private Utility Service Abandonment Verification

Revision Record

Revision	Description of Revision	Date
0	Issued for TJPA Review (not previously issued; based on draft for Transit Center project)	October 25, 2011

1.0 Purpose

This procedure describes process for requesting and documenting the abandonment of private utilities during construction of the Bus Storage project.

2.0 Scope

This procedure applies to representatives from the TJPA, PMPC (Program Management/Program Controls consultant), contractor, and construction manager (CM).

If any procedure in this document conflicts with a provision in the contractor's contract documents, the contract documents must be followed.

3.0 References

The following specification sections are sources for the requirements in this procedure.

Section 01 10 42, Method of Procedure

Section 02 41 00, Demolition

Section 01 31 25, Project Management Software

Constructware work instructions referenced in this procedure are stored in the following folder under the Programwide Project in Constructware: *File Management>File Director>Administration>Procedures & Audits>Procedures>Constructware Work Instructions*.

4.0 Definitions

For general Program terms, refer to Section 00 07 00, *General Conditions*, and Appendix B of the Program Management Plan.

The terms CM and contractor used throughout this procedure are defined in the contract's general conditions under the entries TJPA Representative and Contractor. The designer is the A/E consultant for the project. Refer to Section 2 of the Program Management Plan for descriptions of project participants from the PMPC and TJPA.

5.0 Responsibilities

Responsibility Matrix: Private Utility Service Abandonment Requests

<i>Action Codes:</i>					
<i>P – Perform the activity</i>					
<i>R – Review the work product of another</i>					
<i>I – Input required to performer of activity</i>					
<i>S – Support when requested by performer</i>					
<i>C – Communicate; be kept informed by performer</i>					
	PMPC Project Manager	Contractor	Construction Manager (CM)	Trade Subcontractor	Utility Representative
Request private utility service abandonment	C	P			
Schedule/confirm abandonment of utility with company	C		P		
Visually verify that utility has been abandoned	C	S	C	P	S
Issue approval to proceed	C		P		
Ensure safety documents are stored in Constructwre	C		P		

6.0 Procedures

In accordance with contract section 02 41 00, Demolition, the contractor is responsible for completing a utility service abandonment request (USAR) to private utilities whose infrastructure will need to be abandoned and removed in order for construction to proceed. The CM is responsible for ensuring that a completed method of procedure form and an approval to proceed are signed and recorded before the contractor removes the utility and proceeds with construction.

6.1 Requesting Private Utility Service Abandonment

1. The contractor requests private utility service abandonment, referencing the CPM activity affected by the utility in accordance with 02 41 00 paragraph 3.5, by submitting an MOP form to the CM. The MOP should include a physical description and location of the service, the request date, and the company names, individual contacts, and initials of both the Trade Subcontractor and contractor contacts. (Refer to the attachment)
2. The CM contacts the appropriate private utility company (e.g., PG&E, AT&T) to schedule abandonment or to confirm abandonment of the utility requested, recording on the MOP the request date, utility contact name, results of the request, and the date of the scheduled abandonment confirmation walkdown. The CM enters the next sequential MOP number from the MOP log in the upper right of the form.
3. The CM scans and uploads the form to Constructwre and notifies the contractor.

6.2 Verifying Utility Abandonment

1. After visually verifying in the field that the utility has been abandoned, the Trade Subcontractor signs and dates the MOP. Representatives from the utility company and the contractor must also be present, confirm that the utility has been abandoned, and sign the MOP.
2. The contractor sends the completed MOP to the CM.
3. The CM uploads the completed MOP to Constructware.

6.3 Issuing Approval to Proceed

1. After receiving the completed MOP, the CM issues approval to proceed to the contractor and uploads the signed approval to Constructware.
2. After receiving approval to proceed, the contractor and Trade Subcontractor can demolish those utilities verified as abandoned.

7.0 Electronic Filing Requirements

Upload the USAR form to Constructware, as indicated in the procedures. USARs are stored under Construction Safety in the File Director folder of Project 160: Construction>Construction Safety & Security>Construction Safety

8.0 Attachments

MOPs for USARs
Approvals to proceed

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
AC 16	<p>The following diesel construction equipment mitigation measures shall be included in all Project construction contracts:</p> <p>Equipment</p> <ol style="list-style-type: none"> 1 Use of ultra-low sulfur fuel (ULSF) (€15 ppm) unless the incremental cost exceeds \$0.20 per gallon; 2. An idling time of 5 minutes per hour; 3. Tuning all equipment to manufacturers' specifications at the manufacturers' recommended frequency; 4. Prohibition of any tampering with engines and continuing adherence to manufacturers' recommendations. <p>Work Limitations</p> <ol style="list-style-type: none"> 1 Use of no more than two major pieces of diesel equipment simultaneously near or upwind of sensitive receptors such as residences and schools; 2. Notification to all schools within 1,000 feet of construction sites regarding outdoor activities during the construction period and recommending use of air conditioners to minimize indoor air pollution. <p>Administrative</p> <ol style="list-style-type: none"> 1. Retention of receipts of ULSF purchase and equipment tuning and repair and making these available to FTA or its designee upon request. 2. The TJPA'S Supervising Engineer shall conduct spot checks for compliance with these measures. 	<p>Include requirements in contract documents and monitor construction activities to ensure compliance</p> <p>During construction</p>	<p>Bus Storage A/E Project Manager</p>	<p>Include specified mitigation in specifications</p>

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
CH 02	Assure supervision of all activities regarding historic preservation, historical archaeology and prehistoric archaeology is carried out by professionals meeting Secretary of the Interior’s professional qualifications standards (48 FR 44738-9).	<p>During preliminary engineering, final design and construction</p> <p>Prior to initiation of design and construction activities, TJPA will require submission of and review qualifications of professionals performing the MOA activities to assure that Secretary of Interior standards are met</p>	Bus Storage A/E Project Manager	Require relevant contractors to submit, and review, qualification of professionals performing the MOA activities to assure that Secretary of Interior standards (48 FR 44738-9) are met
CH 02	Assure supervision of all activities regarding historic preservation, historical archaeology and prehistoric archaeology is carried out by professionals meeting Secretary of the Interior’s professional qualifications standards (48 FR 44738-9).	<p>During preliminary engineering, final design and construction</p> <p>Prior to initiation of design and construction activities, TJPA will require submission of and review qualifications of professionals performing the MOA activities to assure that Secretary of Interior standards are met</p>	Bus Storage A/E Project Manager	Require relevant contractors to submit, and review, qualification of professionals performing the MOA activities to assure that Secretary of Interior standards (48 FR 44738-9) are met
CH 02	Assure supervision of all activities regarding historic preservation, historical archaeology and prehistoric archaeology is carried out by professionals meeting Secretary of the Interior’s professional qualifications standards (48 FR 44738-9).	<p>During preliminary engineering, final design and construction</p> <p>Prior to initiation of design and construction activities, TJPA will require submission of and review qualifications of professionals performing the MOA activities to assure that Secretary of Interior standards are met</p>	Bus Storage A/E Project Manager	Require relevant contractors to submit, and review, qualification of professionals performing the MOA activities to assure that Secretary of Interior standards (48 FR 44738-9) are met

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
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CH 02	Assure supervision of all activities regarding historic preservation, historical archaeology and prehistoric archaeology is carried out by professionals meeting Secretary of the Interior’s professional qualifications standards (48 FR 44738-9).	<p>During preliminary engineering, final design and construction</p> <p>Prior to initiation of design and construction activities, TJPA will require submission of and review qualifications of professionals performing the MOA activities to assure that Secretary of Interior standards are met</p>	Bus Storage A/E project manager	Require relevant contractors to submit, and review qualification of professionals performing the MOA activities to assure that Secretary of Interior standards (48 FR 44738-9) are met.
GC 04	Provide for efficient sidewalk design and maintenance. Wherever feasible, maintain sidewalks at the existing width during construction. Where a sidewalk must be temporarily narrowed during construction (e.g., deck installation), restore it to its original width during the majority of construction period. (In some places this may require placing the temporary sidewalk on the deck.) Each sidewalk design should be of good quality and approved by the Resident Engineer prior to construction. Handicapped access will be maintained during construction where feasible.	<p>During preliminary engineering and construction</p> <p>TJPA to work with CCSF DPW on design of sidewalk plans during preliminary and final design and insure installation during construction</p>	Bus Storage A/E Project Manager	<p>(1 of 2)</p> <p>Design sidewalk plans as specified in scope documents</p>

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GC 04	Provide for efficient sidewalk design and maintenance. Wherever feasible, maintain sidewalks at the existing width during construction. Where a sidewalk must be temporarily narrowed during construction (e.g., deck installation), restore it to its original width during the majority of construction period. (In some places this may require placing the temporary sidewalk on the deck.) Each sidewalk design should be of good quality and approved by the Resident Engineer prior to construction. Handicapped access will be maintained during construction where feasible.	During preliminary engineering and construction TJPA to work with CCSF DPW on design of sidewalk plans during preliminary and final design and insure installation during construction	Bus Storage A/E Project Manager	Include info in specs
GC 04	Provide for efficient sidewalk design and maintenance. Wherever feasible, maintain sidewalks at the existing width during construction. Where a sidewalk must be temporarily narrowed during construction (e.g., deck installation), restore it to its original width during the majority of construction period. (In some places this may require placing the temporary sidewalk on the deck.) Each sidewalk design should be of good quality and approved by the Resident Engineer prior to construction. Handicapped access will be maintained during construction where feasible.	During preliminary engineering and construction TJPA to work with CCSF DPW on design of sidewalk plans during preliminary and final design and insure installation during construction	Bus Storage A/E Project Manager	(2 of 2) Obtain SF Planning Dept. approval
GC 05	Provide construction site fencing of good quality, capable of supporting the accidental application of the weight of an adult without collapse or major deformation. Where covered walkways or other solid surface fencing is installed, establish a program to allow for art work (e.g., by local students) on the surface(s).	During design and construction TJPA to work with CCSF DPW, incorporate requirements in construction documents and inspect installation during construction	Bus Storage A/E Project Manager	Include requirements for fencing in specs, as specified
HMC 01	Follow California OSHA and local standards for fire protection and prevention. Handling and storage of fuels and other flammable materials during construction will conform to these requirements, which include appropriate storage of flammable liquids and prohibition of open flames within 50 feet of flammable storage areas.	During construction Review design and contract documents to insure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations	Bus Storage A/E Project Manager	Include CalOSHA and local fire protection/prevention standards for handling/storage of fuels/flammable materials during construction in specs

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HMC 02	<p>Perform detailed investigations of the potential presence of contaminants in soil and groundwater prior to construction, using conventional drilling, sampling, and chemical testing methods. Based on the chemical test results, a mitigation plan will be developed to establish guidelines for the disposal of contaminated soil and discharge of contaminated dewatering effluent, and to generate data to address potential human health and safety issues that may arise as a result of contact with contaminated soil or groundwater during construction. The investigation and mitigation plan will follow the requirements of the City and County of San Francisco’s Article 22A in the appropriate areas along the alignment.</p> <p>With construction projects of this nature and magnitude, there are typically two different management strategies that can be employed to address contaminated soil handling and disposal issues. Contaminated soil can be excavated and stockpiled at a centralized location and subsequently sampled and analyzed for disposal profiling purposes in accordance with the requirements of the candidate disposal landfill. Alternatively, soil profiling for disposal purposes can be done in-situ so when soil is excavated it is loaded directly on to trucks and hauled to the appropriate landfill facility for disposal based on the in situ profiling results. A project of this nature could also combine both strategies.</p>	<p>During construction</p> <p>Review design and contract documents to insure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW</p>	<p>Bus Storage A/E Project Manager</p>	<p>(2 of 3)</p> <p>Prepare Sampling and Analysis Work Plan</p>

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HMC 02	<p>Perform detailed investigations of the potential presence of contaminants in soil and groundwater prior to construction, using conventional drilling, sampling, and chemical testing methods. Based on the chemical test results, a mitigation plan will be developed to establish guidelines for the disposal of contaminated soil and discharge of contaminated dewatering effluent, and to generate data to address potential human health and safety issues that may arise as a result of contact with contaminated soil or groundwater during construction. The investigation and mitigation plan will follow the requirements of the City and County of San Francisco's Article 22A in the appropriate areas along the alignment.</p> <p>With construction projects of this nature and magnitude, there are typically two different management strategies that can be employed to address contaminated soil handling and disposal issues. Contaminated soil can be excavated and stockpiled at a centralized location and subsequently sampled and analyzed for disposal profiling purposes in accordance with the requirements of the candidate disposal landfill. Alternatively, soil profiling for disposal purposes can be done in-situ so when soil is excavated it is loaded directly on to trucks and hauled to the appropriate landfill facility for disposal based on the in situ profiling results. A project of this nature could also combine both strategies.</p>	<p>During construction</p> <p>Review design and contract documents to insure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW</p>	<p>Bus Storage A/E Project Manager</p>	<p>(2 of 3)</p> <p>Prepare Sampling and Analysis Work Plan</p>

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HMC 02	<p>Perform detailed investigations of the potential presence of contaminants in soil and groundwater prior to construction, using conventional drilling, sampling, and chemical testing methods. Based on the chemical test results, a mitigation plan will be developed to establish guidelines for the disposal of contaminated soil and discharge of contaminated dewatering effluent, and to generate data to address potential human health and safety issues that may arise as a result of contact with contaminated soil or groundwater during construction. The investigation and mitigation plan will follow the requirements of the City and County of San Francisco's Article 22A in the appropriate areas along the alignment.</p> <p>With construction projects of this nature and magnitude, there are typically two different management strategies that can be employed to address contaminated soil handling and disposal issues. Contaminated soil can be excavated and stockpiled at a centralized location and subsequently sampled and analyzed for disposal profiling purposes in accordance with the requirements of the candidate disposal landfill. Alternatively, soil profiling for disposal purposes can be done in-situ so when soil is excavated it is loaded directly on to trucks and hauled to the appropriate landfill facility for disposal based on the in situ profiling results. A project of this nature could also combine both strategies.</p>	<p>During construction</p> <p>Review design and contract documents to insure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW</p>	<p>Bus Storage A/E Project Manager</p>	<p>(1 of 3)</p> <p>Prepare Site History Report</p>
HMC 03	<p>Cover with plastic sheeting soils removed during excavation and grading activities that remain at a centralized location for an extended period of time to prevent the generation of fugitive dust emissions that migrate offsite.</p>	<p>During construction</p> <p>Review design and contract documents to insure compliance. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations</p>	<p>Bus Storage A/E Project Manager</p>	<p>Include requirements to cover with plastic sheeting soils removed during excavation and grading that remain at a centralized location for an extended period of time in specs</p>
HMC 04	<p>Use a licensed waste hauler, applying appropriate manifests or bill of lading procedures, as required to</p>	<p>During construction</p>	<p>Bus Storage A/E Project Manager</p>	<p>Include requirement to use licenses waste hauler and appropriate procedures re</p>

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
	haul soil for disposal at a landfill or recycling facility.	Review design and contract documents to insure compliance. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations		manifests/bills of lading in specs
HMC 05	<p>Use chemical test results for groundwater samples along the alignment to obtain a Batch Discharge Permit under Article 4.1 of the San Francisco Department of Public Works as well as to evaluate requirements for pretreatment prior to discharge to the sanitary sewer. Effluent produced during the dewatering of excavations will be collected in onsite storage tanks and periodically tested, as required under discharge permit requirements, for potential contamination to confirm the need for any treatment prior to discharge.</p> <p>If required, treatment may include:</p> <p>Settling to allow particulate matter (total suspended solids) to settle out of the effluent in order to reduce the sediment load as well as reduce elevated metal and other contaminant concentrations that may be associated with suspended sediments; and/or</p> <p>Construction of a small-scale batch waste water treatment system to remove dissolved contaminants (mainly organic constituents such as petroleum hydrocarbons (gas, diesel, and oils), BTEX, and VOCs) from the dewatering effluent prior to discharge to the sanitary sewer. A treatment system would also likely employ the use of filtration to remove suspended solids.</p>	<p>During construction</p> <p>Review design and contract documents to insure compliance. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW</p>	Bus Storage A/E Project Manager	<p>(3 of 3)</p> <p>Include in specs: requirement to collect dewatering effluent in on site storage tanks, periodically test stored effluent; confirm need for treatment prior to discharge</p>

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HMC 05	<p>Use chemical test results for groundwater samples along the alignment to obtain a Batch Discharge Permit under Article 4.1 of the San Francisco Department of Public Works as well as to evaluate requirements for pretreatment prior to discharge to the sanitary sewer. Effluent produced during the dewatering of excavations will be collected in onsite storage tanks and periodically tested, as required under discharge permit requirements, for potential contamination to confirm the need for any treatment prior to discharge.</p> <p>If required, treatment may include:</p> <p>Settling to allow particulate matter (total suspended solids) to settle out of the effluent in order to reduce the sediment load as well as reduce elevated metal and other contaminant concentrations that may be associated with suspended sediments; and/or</p> <p>Construction of a small-scale batch waste water treatment system to remove dissolved contaminants (mainly organic constituents such as petroleum hydrocarbons (gas, diesel, and oils), BTEX, and VOCs) from the dewatering effluent prior to discharge to the sanitary sewer. A treatment system would also likely employ the use of filtration to remove suspended solids.</p>	<p>During construction</p> <p>Review design and contract documents to insure compliance. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW</p>	<p>Bus Storage A/E Project Manager</p>	<p>(1 of 3)</p> <p>Obtain chemical tests to determine groundwater constituents</p>

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HMC 05	<p>Use chemical test results for groundwater samples along the alignment to obtain a Batch Discharge Permit under Article 4.1 of the San Francisco Department of Public Works as well as to evaluate requirements for pretreatment prior to discharge to the sanitary sewer. Effluent produced during the dewatering of excavations will be collected in onsite storage tanks and periodically tested, as required under discharge permit requirements, for potential contamination to confirm the need for any treatment prior to discharge.</p> <p>If required, treatment may include:</p> <p>Settling to allow particulate matter (total suspended solids) to settle out of the effluent in order to reduce the sediment load as well as reduce elevated metal and other contaminant concentrations that may be associated with suspended sediments; and/or</p> <p>Construction of a small-scale batch waste water treatment system to remove dissolved contaminants (mainly organic constituents such as petroleum hydrocarbons (gas, diesel, and oils), BTEX, and VOCs) from the dewatering effluent prior to discharge to the sanitary sewer. A treatment system would also likely employ the use of filtration to remove suspended solids.</p>	<p>During construction</p> <p>Review design and contract documents to insure compliance. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW</p>	Bus Storage A/E Project Manager	<p>(2 of 3)</p> <p>Evaluate pre-treatment options for construction effluent discharge to sanitary sewer</p>
HMC 06	<p>Develop a detailed mitigation plan for the handling of potentially contaminated soil and groundwater prior to starting project construction.</p>	<p>During final design</p> <p>Review detailed mitigation plan, include provisions in contract documents and inspect construction to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW. Obtain all applicable permits</p>	Bus Storage A/E Project Manager	<p>Include detailed mitigation plan requirements in specs</p>

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
NoiC 01	<p>Comply with San Francisco noise ordinance. The noise ordinance includes specific limits on noise from construction. The basic requirements are:</p> <p>Maximum noise level from any piece of powered construction equipment is limited to 80 dBA at 100 feet. This translates to 86 dBA at 50 feet.</p> <p>Impact tools are exempted, although such equipment must be equipped with effective mufflers and shields. The noise control equipment on impact tools must be as recommended by the manufacturer and approved by the Director of Public Works.</p> <p>Construction activity is prohibited between 8 p.m. and 7 a.m. if it causes noise that exceeds the ambient noise plus 5 dBA</p> <p>The noise ordinance is enforced by the San Francisco DPW, which may waive some of the noise requirements to expedite the project or minimize traffic impacts. For example, along Townsend Street where much of the land use is commercial, business owners may prefer nighttime construction since it would reduce disruption during normal business hours. The DPW waivers usually allow most construction processes to continue until 2 a.m., although construction processes that involve impacts are rarely allowed to extend beyond 10 p.m. This category would include equipment used in demolition such as jackhammers and hoe rams, and pile driving. It is not anticipated that the construction documents would have specific limits on nighttime construction. There may be times when nighttime construction is desirable (e.g., in commercial districts where nighttime construction would be less disruptive to businesses in the area) or necessary to avoid unacceptable traffic disruptions. Since the construction would be subject to the requirements of the San Francisco noise regulations, in these cases, the</p>	<p>During preparation of construction contract documents and construction</p> <p>TJPA to work with CCSF Department of Public Works (DPW) regarding construction noise mitigation program</p>	<p>Bus Storage A/E Project Manager</p>	<p>Noise abatement requirements to be included in technical specs</p>

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
	contractor would need to work with the DPW to come up with an acceptable approach balancing interruption of the business and residential community, traffic disruptions, and reducing the total duration of the construction.			
NoiC 05	Minimize use of vehicle backup alarms. Because backup alarms are designed to get people’s attention, the sound can be very noticeable even when their sound level does not exceed the ambient, and it is common for backup alarms at construction sites to be major sources of noise complaints. A common approach to minimizing the use of backup alarms is to design the construction site with a circular flow pattern that minimizes backing up of trucks and other heavy equipment. Another approach to reducing the intrusion of backup alarms is to require all equipment on the site to be equipped with ambient sensitive alarms. With this type of alarm, the alarm sound is automatically adjusted based on the ambient noise. In nighttime hours when ambient noise is low, the backup alarm is adjusted down.	During construction document preparation and construction Review contract specifications during final design and inspect construction	Bus Storage A/E Project Manager	Include noise abatement requirement in technical specs

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
NoiC 06	<p>Include noise control requirements in construction specifications. These should require the contractor to</p> <p>Perform all construction in a manner to minimize noise. The contractor should be required to select construction processes and techniques that create the lowest noise levels. Examples are using predrilled piles instead of impact pile driving, mixing concrete offsite instead of onsite, and using hydraulic tools instead of pneumatic impact tools.</p> <p>Use equipment with effective mufflers. Diesel motors are often the major noise source on construction sites. Contractors should be required to employ equipment fitted with the most effective commercially available mufflers.</p> <p>Perform construction in a manner to maintain noise levels at noise sensitive land uses below specific limits.</p> <p>Perform noise monitoring to demonstrate compliance with the noise limits. Independent noise monitoring should be performed to check compliance in particularly sensitive areas.</p> <p>Minimize construction activities during evening, nighttime, weekend and holiday periods. Permits would be required before construction can be performed in noise sensitive areas during these periods.</p> <p>Select haul routes that minimize intrusion to residential areas. This is particularly important for the trench alternatives that will require hauling large quantities of excavation material to disposal sites.</p> <p>Controlling noise in contractor work areas during nighttime hours is likely to require some mixture of the following approaches:</p>	<p>Final design and construction</p> <p>TJPA to develop detailed noise control requirements during preliminary engineering and final design. Insure contractor obtains permits if necessary. Inspect construction activities for compliance and monitor noise levels. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such</p>	<p>Bus Storage A/E Project Manager</p>	<p>Noise abatement requirements to be included in technical specs</p>

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
	<p>Restrictions on noise producing activities during nighttime hours.</p> <p>Laying out the site to keep noise producing activities as far as possible from residences, to minimize the use of backup alarms, and to minimize truck activity and truck queuing near the residential areas.</p> <p>Use of procedures and equipment that produce lower noise levels than normal. For example, some manufacturers of construction equipment can supply special noise control kits with highly effective mufflers and other materials that substantially reduce noise emissions of equipment such as generators, tunnel ventilation equipment, and heavy diesel power equipment including mobile cranes and front-end loaders.</p> <p>Use of temporary barriers near noisy activities. By locating the barriers close enough to the noise source, it is possible to obtain substantial noise attenuation with barriers 10 to 12 feet high even though the residences are 30 to 40 feet higher than the construction site.</p> <p>Use of partial enclosures around noisy activities. It is sometimes necessary to construct shed-like structures or complete buildings to contain the noise from nighttime activities.</p>			

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
NoiO 01	<p>Apply noise mitigation at the following locations adjacent to the bus storage facility:</p> <p>Provide sound insulation to mitigate noise impacts at the residences north of the AC Transit Facility at the corner of Perry and Third Street. At a minimum, apply sound insulation to the façade facing the bus storage facility (the south façade).</p> <p>Construct two noise barriers to mitigate noise impacts to Residences south of the AC Transit Facility along Stillman Street. The first noise barrier would be approximately 10 to 12 feet high and run along the southern edge of the AC Transit storage facility. The second noise barrier would be approximately 5 to 6 feet high and would be located on the portion of the ramp at the southwestern corner of the AC Transit facility. Treat the noise barriers with an absorptive material on the side facing the facility to minimize the potential for reflections off the underside of the freeway.</p> <p>Construct a noise barrier to mitigate noise impacts to residences south of the Golden Gate Transit Facility along Stillman Street. The barrier would be approximately 10 to 12 feet high and run along the southern and a portion of the eastern edge of the Golden Gate Transit storage facility. Treat the noise barriers with an absorptive material on the side facing the facility to minimize the potential for reflections off the underside of the freeway.</p>	<p>During construction</p> <p>TJPA to design detailed noise mitigation during preliminary and final design phases. TJPA engineering staff to inspect installation and/or construction of mitigation measures</p>	<p>Bus Storage A/E Project Manager</p>	<p>Design requisite noise engineering controls</p>

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NoiO 01	<p>Apply noise mitigation at the following locations adjacent to the bus storage facility:</p> <p>Provide sound insulation to mitigate noise impacts at the residences north of the AC Transit Facility at the corner of Perry and Third Street. At a minimum, apply sound insulation to the façade facing the bus storage facility (the south façade).</p> <p>Construct two noise barriers to mitigate noise impacts to Residences south of the AC Transit Facility along Stillman Street. The first noise barrier would be approximately 10 to 12 feet high and run along the southern edge of the AC Transit storage facility. The second noise barrier would be approximately 5 to 6 feet high and would be located on the portion of the ramp at the southwestern corner of the AC Transit facility. Treat the noise barriers with an absorptive material on the side facing the facility to minimize the potential for reflections off the underside of the freeway.</p> <p>Construct a noise barrier to mitigate noise impacts to residences south of the Golden Gate Transit Facility along Stillman Street. The barrier would be approximately 10 to 12 feet high and run along the southern and a portion of the eastern edge of the Golden Gate Transit storage facility. Treat the noise barriers with an absorptive material on the side facing the facility to minimize the potential for reflections off the underside of the freeway.</p>	<p>During construction</p> <p>TJPA to design detailed noise mitigation during preliminary and final design phases. TJPA engineering staff to inspect installation and/or construction of mitigation measures</p>	<p>Bus Storage A/E project manager</p>	<p>Design requisite noise engineering controls</p>
NoiO 02	<p>Landscape the noise walls. Develop the actual design of the walls in cooperation with area residents.</p>	<p>During preliminary and final design</p> <p>TJPA to work with area residents during design of noise walls</p>	<p>Bus Storage A/E Project Manager</p>	<p>Design noise walls and landscaping plans</p>

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NoiO 03	Construct noise walls prior to the development of the permanent bus facilities.	During schedule development, construction document preparation and construction TJPA to develop program schedule and contract documents to implement this construction sequencing requirement	Bus Storage A/E Project Manager	Schedule noise wall construction prior to development of permanent bus facility
PC 07	Develop traffic management plans. Traffic management plans to maintain access to all businesses will be prepared for areas affected by surface or cut-and-cover construction. In addition, daily cleaning of work areas would be performed by contractors for the duration of the construction period. Provisions would be contained in construction contracts to require the maintenance of driveway access to businesses to the extent feasible.	During preliminary engineering, final design and construction TJPA to forward traffic management plans to CCSF DPT for review and approval. Include all requirements in construction documents and inspect implementation during construction	Bus Storage A/E Project Manager	(2 of 3) Require daily cleaning of work areas
PC 07	Develop traffic management plans. Traffic management plans to maintain access to all businesses will be prepared for areas affected by surface or cut-and-cover construction. In addition, daily cleaning of work areas would be performed by contractors for the duration of the construction period. Provisions would be contained in construction contracts to require the maintenance of driveway access to businesses to the extent feasible.	During preliminary engineering, final design and construction TJPA to forward traffic management plans to CCSF DPT for review and approval. Include all requirements in construction documents and inspect implementation during construction	Bus Storage A/E Project Manager	(1 of 2) Prepare traffic management plans as specified, to include access provisions
PC 07	Develop traffic management plans. Traffic management plans to maintain access to all businesses will be prepared for areas affected by surface or cut-and-cover construction. In addition, daily cleaning of work areas would be performed by contractors for the duration of the construction period. Provisions would be contained in construction contracts to require the maintenance of driveway access to businesses to the	During preliminary engineering, final design and construction TJPA to forward traffic management plans to CCSF DPT for review and approval. Include all requirements in	Bus Storage A/E Project Manager	(2 of 2) Require daily cleaning of work areas

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
	extent feasible.	construction documents and inspect implementation during construction		
PC 07	Develop traffic management plans. Traffic management plans to maintain access to all businesses will be prepared for areas affected by surface or cut-and-cover construction. In addition, daily cleaning of work areas would be performed by contractors for the duration of the construction period. Provisions would be contained in construction contracts to require the maintenance of driveway access to businesses to the extent feasible.	During preliminary engineering, final design and construction TJPA to forward traffic management plans to CCSF DPT for review and approval. Include all requirements in construction documents and inspect implementation during construction	Bus Storage A/E Project Manager	(3 of 3) Include requirements in specs
PC 07	Develop traffic management plans. Traffic management plans to maintain access to all businesses will be prepared for areas affected by surface or cut-and-cover construction. In addition, daily cleaning of work areas would be performed by contractors for the duration of the construction period. Provisions would be contained in construction contracts to require the maintenance of driveway access to businesses to the extent feasible.	During preliminary engineering, final design and construction TJPA to forward traffic management plans to CCSF DPT for review and approval. Include all requirements in construction documents and inspect implementation during construction	Bus Storage A/E Project Manager	(1 of 3) Prepare traffic management plans as specified, to include access provisions
Saf 01	Provide project plans to the San Francisco Fire Department for its review to ensure that adequate life safety measures and emergency access are incorporated into the design and construction of Project facilities.	Prior to project facility permitting and during construction Project facility plans to be forwarded to CCSF Fire Department prior to permit issuance. Inspect installation during construction	Bus Storage A/E Project Manager	Obtain Fire Dept. approval of Basis of Design

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
Saf 01	Provide project plans to the San Francisco Fire Department for its review to ensure that adequate life safety measures and emergency access are incorporated into the design and construction of Project facilities.	Prior to project facility permitting and during construction Project facility plans to be forwarded to CCSF Fire Department prior to permit issuance. Inspect installation during construction	Bus Storage A/E Project Manager	(1 of 2) Obtain Fire Dept. approval of Basis of Design
Saf 01	Provide project plans to the San Francisco Fire Department for its review to ensure that adequate life safety measures and emergency access are incorporated into the design and construction of Project facilities.	Prior to project facility permitting and during construction Project facility plans to be forwarded to CCSF Fire Department prior to permit issuance. Inspect installation during construction	Bus Storage A/E Project Manager	(2 of 2) Include requirements in design and specs
Saf 02	Prepare a life safety plan including the provision of on-site measures such as a fire command post at the Terminal, the Fire Department's 800-megahertz radio system and all necessary fire suppression equipment.	Prior to project facility permitting TJPA to develop life safety plan during facility design phases and implement during testing and startup up phase	Bus Storage A/E Project Manager	(2 of 2) Include requirements in design and specs
Saf 02	Prepare a life safety plan including the provision of on-site measures such as a fire command post at the Terminal, the Fire Department's 800-megahertz radio system and all necessary fire suppression equipment.	Prior to project facility permitting TJPA to develop life safety plan during facility design phases and implement during testing and startup up phase	Bus Storage A/E Project Manager	(1 of 2) Prepare Life Safety Plan
Saf 02	Prepare a life safety plan including the provision of on-site measures such as a fire command post at the Terminal, the Fire Department's 800-megahertz radio system and all necessary fire suppression equipment.	Prior to project facility permitting TJPA to develop life safety plan during facility design phases and implement during testing and startup up phase	Bus Storage A/E Project Manager	(2 of 2) Include requirements in design and specs

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
Saf 02	Prepare a life safety plan including the provision of on-site measures such as a fire command post at the Terminal, the Fire Department's 800-megahertz radio system and all necessary fire suppression equipment.	Prior to project facility permitting TJPA to develop life safety plan during facility design phases and implement during testing and startup up phase	Bus Storage A/E Project Manager	(1 of 2) Prepare Life Safety Plan
Saf 03	Prepare a risk analysis to accurately determine the number of personnel necessary to maintain an acceptable level of service at Project facilities.	Prior to project facility permitting TJPA to develop risk analysis during facility design phases	Bus Storage A/E Project Manager	Confirm design conforms to risk assessment report
Saf 03	Prepare a risk analysis to accurately determine the number of personnel necessary to maintain an acceptable level of service at Project facilities.	Prior to project facility permitting TJPA to develop risk analysis during facility design phases	Bus Storage A/E Project Manager	Prepare risk analysis
Util 01	Coordinate with utility providers during preliminary engineering, continuing through final design and construction. Utilities would be avoided, relocated, and/or supported as necessary during construction activities to prevent damage to utility systems and to minimize disruption and degradation of utility service to local customers.	During preliminary engineering, final design and construction TJPA to identify utilities; design relocations or protection measures where required; and include requirements in contract documents. Monitor construction activities to insure implementation of all required measures	Bus Storage A/E Project Manager	(2 of 2) Include requirements in plans and specs
Util 01	Coordinate with utility providers during preliminary engineering, continuing through final design and construction. Utilities would be avoided, relocated, and/or supported as necessary during construction activities to prevent damage to utility systems and to minimize disruption and degradation of utility service to local customers.	During preliminary engineering, final design and construction TJPA to identify utilities; design relocations or protection measures where required; and include requirements in contract documents. Monitor construction activities to insure	Bus Storage A/E Project Manager	(1 of 2) Coordinate with utility companies

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
		implementation of all required measures		
Util 01	Coordinate with utility providers during preliminary engineering, continuing through final design and construction. Utilities would be avoided, relocated, and/or supported as necessary during construction activities to prevent damage to utility systems and to minimize disruption and degradation of utility service to local customers.	During preliminary engineering, final design and construction TJPA to identify utilities; design relocations or protection measures where required; and include requirements in contract documents. Monitor construction activities to insure implementation of all required measures	Bus Storage A/E Project Manager	Coordinate with utility companies
Util 01	Coordinate with utility providers during preliminary engineering, continuing through final design and construction. Utilities would be avoided, relocated, and/or supported as necessary during construction activities to prevent damage to utility systems and to minimize disruption and degradation of utility service to local customers.	During preliminary engineering, final design and construction TJPA to identify utilities; design relocations or protection measures where required; and include requirements in contract documents. Monitor construction activities to insure implementation of all required measures	Bus Storage A/E Project Manager	Coordinate with utility companies
VA 01	Assure that construction crews working at night direct any artificial lighting onto the work site in order to minimize “spill over” light or glare effects on adjacent areas.	During construction Include requirements in contract documents and monitor construction activities to insure compliance	Bus Storage A/E Project Manager	Include in specs requirement that construction crews working at night direct any artificial lighting onto the work site in order to minimize “spill over” light or glare effects on adjacent areas

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
VA 02	Assure that contractors make all efforts possible to minimize specific aesthetic and visual effects of construction identified by neighborhood businesses and residents.	During construction Include requirements in contract documents and monitor construction activities to insure compliance	Bus Storage A/E Project Manager	Include in specs requirement that contractors make all efforts possible to minimize specific aesthetic and visual effects of construction identified by neighborhood businesses and residents
W01	Consider potential wind effects of an individual project for the Redevelopment area. If necessary, perform wind tunnel testing in accordance with City Planning Code Section 148. If exceedences of the wind hazard criterion should occur for any individual project, require design modifications or other mitigation measures to mitigate or eliminate these exceedences. Tailor mitigation measures to the individual needs of each project. Examples of mitigation measures include articulation of building sides and softening of sharp building edges.	During environmental review process preceding approval of each individual project in Transbay Redevelopment Area Apply project review procedures for wind when projects are developed by or proposed to Agency	Bus Storage A/E Project Manager	Conduct wind study during ERP to determine impact at pedestrian level
W01	Consider potential wind effects of an individual project for the Redevelopment area. If necessary, perform wind tunnel testing in accordance with City Planning Code Section 148. If exceedences of the wind hazard criterion should occur for any individual project, require design modifications or other mitigation measures to mitigate or eliminate these exceedences. Tailor mitigation measures to the individual needs of each project. Examples of mitigation measures include articulation of building sides and softening of sharp building edges.	During environmental review process preceding approval of each individual project in Transbay Redevelopment Area Apply project review procedures for wind when projects are developed by or proposed to Agency	Bus Storage A/E Project Manager	(1 of 2) If wind criteria exceeded, implement design modifications and/or other mitigation measures to mitigate or eliminate these exceedences
W01	Consider potential wind effects of an individual project for the Redevelopment area. If necessary, perform wind tunnel testing in accordance with City Planning Code Section 148. If exceedences of the wind hazard criterion should occur for any individual project, require design modifications or other mitigation measures to mitigate or eliminate these exceedences. Tailor mitigation measures to the individual needs of each project. Examples of mitigation measures include articulation of building sides and softening of sharp building edges.	During environmental review process preceding approval of each individual project in Transbay Redevelopment Area Apply project review procedures for wind when projects are developed by or proposed to Agency	Bus Storage A/E Project Manager	(2 of 2) Perform further wind study to verify that mitigation measures will eliminate adverse conditions

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
AC 02	Water all active construction areas at least twice daily. Ordinance 175-91, passed by the San Francisco Board of Supervisors on May 6, 1991, requires that non-potable water be used for dust control activities; therefore the project contractor would be required to obtain reclaimed water from the City's Clean Water Program or other appropriate sources.	During construction Include requirements in contract documents and monitor construction activities to insure compliance	Construction Contractor	Water all active construction areas at least twice daily, using reclaimed water from the City's Clean Water Program or other appropriate sources
AC 03	Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.	During construction Include requirements in contract documents and monitor construction activities to insure compliance	Construction Contractor	Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard
AC 04	Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.	During construction Include requirements in contract documents and monitor construction activities to insure compliance	Construction Contractor	Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites
AC 05	Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.	During construction Include requirements in contract documents and monitor construction activities to insure compliance	Construction Contractor	Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites
AC 06	Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.	During construction Include requirements in contract documents and monitor construction activities to insure compliance	Construction Contractor	Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets
AC 07	Install sandbags or other erosion control measures to prevent silt runoff to public roadways.	During construction Include requirements in contract documents and monitor construction activities to insure compliance	Construction Contractor	Install sandbags or other erosion control measures to prevent silt runoff to public roadways

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
AC 08	Replant vegetation in disturbed areas as quickly as possible.	During construction Include requirements in contract documents and monitor construction activities to insure compliance	Construction Contractor	Replant vegetation in disturbed areas as quickly as possible
AC 09	Minimize use of on-site diesel construction equipment, particularly unnecessary idling.	During construction Include requirements in contract documents and monitor construction activities to insure compliance	Construction Contractor	Minimize use of on-site diesel construction equipment, particularly unnecessary idling
AC 10	Shut off construction equipment to reduce idling when not in direct use.	During construction Include requirements in contract documents and monitor construction activities to insure compliance	Construction Contractor	Shut off construction equipment to reduce idling when not in direct use
AC 11	Where feasible, replace diesel equipment with electrically powered machinery.	During construction Include requirements in contract documents and monitor construction activities to insure compliance	Construction Contractor	Where feasible, replace diesel equipment with electrically powered machinery
AC 12	Locate diesel engines, motors, or equipment as far away as possible from existing residential areas.	During construction Include requirements in contract documents and monitor construction activities to insure compliance	Construction Contractor	Locate diesel engines, motors, or equipment as far away as possible from existing residential areas
AC 13	Properly tune and maintain all diesel power equipment.	During construction Include requirements in contract documents and monitor construction activities to insure compliance	Construction Contractor	Properly tune and maintain all diesel power equipment

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
AC 14	Suspend grading operations during first and second stage smog alerts, and during high winds, i.e., greater than 25 miles per hour.	During and following construction Include requirements in contract documents and monitor construction activities to insure compliance	Construction Contractor	Suspend grading operations during first and second stage smog alerts, and during high winds; i.e., greater than 25 miles per hour
AC 15	Upon completion of the construction phase, buildings with visible signs of dirt and debris from the construction site shall be power washed and/or painted (given that permission is obtained from the property owner to gain access to and wash the property with no fee charged by the owner)	During construction Include requirements in contract documents and monitor construction activities to insure compliance	Construction Contractor	Upon completion of the construction phase, power wash and/or paint buildings with visible signs of dirt and debris from the construction site (given that permission is obtained from the property owner to gain access to and wash the property with no fee charged by the owner)
CH 02	Assure supervision of all activities regarding historic preservation, historical archaeology and prehistoric archaeology is carried out by professionals meeting Secretary of the Interior’s professional qualifications standards (48 FR 44738-9).	During preliminary engineering, final design and construction Prior to initiation of design and construction activities, TJPA will require submission of and review qualifications of professionals performing the MOA activities to assure that Secretary of Interior standards are met	Construction Contractor	Require relevant contractors to submit, and review, qualification of professionals performing the MOA activities to assure that Secretary of Interior standards (48 FR 44738-9) are met
CH 02	Assure supervision of all activities regarding historic preservation, historical archaeology and prehistoric archaeology is carried out by professionals meeting Secretary of the Interior’s professional qualifications standards (48 FR 44738-9).	During preliminary engineering, final design and construction Prior to initiation of design and construction activities, TJPA will require submission of and review qualifications of professionals performing the MOA activities to assure that Secretary of Interior standards are met	Construction Contractor	Require relevant contractors to submit, and review, qualification of professionals performing the MOA activities to assure that Secretary of Interior standards (48 FR 44738-9) are met

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
CH 02	Assure supervision of all activities regarding historic preservation, historical archaeology and prehistoric archaeology is carried out by professionals meeting Secretary of the Interior’s professional qualifications standards (48 FR 44738-9).	<p>During preliminary engineering, final design and construction</p> <p>Prior to initiation of design and construction activities, TJPA will require submission of and review qualifications of professionals performing the MOA activities to assure that Secretary of Interior standards are met</p>	Construction Contractor	Require relevant contractors to submit, and review, qualification of professionals performing the MOA activities to assure that Secretary of Interior standards (48 FR 44738-9) are met
CH 02	Assure supervision of all activities regarding historic preservation, historical archaeology and prehistoric archaeology is carried out by professionals meeting Secretary of the Interior’s professional qualifications standards (48 FR 44738-9).	<p>During preliminary engineering, final design and construction</p> <p>Prior to initiation of design and construction activities, TJPA will require submission of and review qualifications of professionals performing the MOA activities to assure that Secretary of Interior standards are met</p>	Construction Contractor	Require relevant contractors to submit, and review, qualification of professionals performing the MOA activities to assure that Secretary of Interior standards (48 FR 44738-9) are met
CH 02	Assure supervision of all activities regarding historic preservation, historical archaeology and prehistoric archaeology is carried out by professionals meeting Secretary of the Interior’s professional qualifications standards (48 FR 44738-9).	<p>During preliminary engineering, final design and construction</p> <p>Prior to initiation of design and construction activities, TJPA will require submission of and review qualifications of professionals performing the MOA activities to assure that Secretary of Interior standards are met</p>	Construction Contractor	Require relevant contractors to submit, and review qualification of professionals performing the MOA activities to assure that Secretary of Interior standards (48 FR 44738-9) are met.

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
GC 02	Provide signage. Work with establishments affected by construction activities to develop appropriate signage for display that directs both pedestrian and vehicular traffic to businesses via alternate routes.	Prior to and during construction TJPA to initiate signage program during final design and monitor contractors' installation during construction	Construction Contractor	Install signage
GC 04	Provide for efficient sidewalk design and maintenance. Wherever feasible, maintain sidewalks at the existing width during construction. Where a sidewalk must be temporarily narrowed during construction (e.g., deck installation), restore it to its original width during the majority of construction period. (In some places this may require placing the temporary sidewalk on the deck.) Each sidewalk design should be of good quality and approved by the Resident Engineer prior to construction. Handicapped access will be maintained during construction where feasible.	During preliminary engineering and construction TJPA to work with CCSF DPW on design of sidewalk plans during preliminary and final design and insure installation during construction	Construction Contractor	Install as specified; restore as required
GC 05	Provide construction site fencing of good quality, capable of supporting the accidental application of the weight of an adult without collapse or major deformation. Where covered walkways or other solid surface fencing is installed, establish a program to allow for art work (e.g., by local students) on the surface(s).	During design and construction TJPA to work with CCSF DPW, incorporate requirements in construction documents and inspect installation during construction	Construction Contractor	(1 of 2) Install fencing as required
GC 05	Provide construction site fencing of good quality, capable of supporting the accidental application of the weight of an adult without collapse or major deformation. Where covered walkways or other solid surface fencing is installed, establish a program to allow for art work (e.g., by local students) on the surface(s).	During design and construction TJPA to work with CCSF DPW, incorporate requirements in construction documents and inspect installation during construction	Construction Contractor	(2 of 2) Establish artwork program as specified
HMC 01	Follow California OSHA and local standards for fire protection and prevention. Handling and storage of fuels and other flammable materials during construction will conform to these requirements, which include appropriate storage of flammable liquids and prohibition of open flames within 50 feet of flammable storage areas.	During construction Review design and contract documents to insure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to insure	Construction Contractor	(1 of 2) Obtain permits

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
		compliance with contract documents and regulations		
HMC 01	Follow California OSHA and local standards for fire protection and prevention. Handling and storage of fuels and other flammable materials during construction will conform to these requirements, which include appropriate storage of flammable liquids and prohibition of open flames within 50 feet of flammable storage areas.	During construction Review design and contract documents to insure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations	Construction Contractor	(2 of 2) Inspect construction for compliance
HMC 02	<p>Perform detailed investigations of the potential presence of contaminants in soil and groundwater prior to construction, using conventional drilling, sampling, and chemical testing methods. Based on the chemical test results, a mitigation plan will be developed to establish guidelines for the disposal of contaminated soil and discharge of contaminated dewatering effluent, and to generate data to address potential human health and safety issues that may arise as a result of contact with contaminated soil or groundwater during construction. The investigation and mitigation plan will follow the requirements of the City and County of San Francisco's Article 22A in the appropriate areas along the alignment.</p> <p>With construction projects of this nature and magnitude, there are typically two different management strategies that can be employed to address contaminated soil handling and disposal issues. Contaminated soil can be excavated and stockpiled at a centralized location and subsequently sampled and analyzed for disposal profiling purposes in accordance with the requirements of the candidate disposal landfill. Alternatively, soil</p>	<p>During construction</p> <p>Review design and contract documents to insure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW</p>	Construction Contractor	Dispose of contaminated soil and discharge contaminated dewatering effluent in compliance w/ Mitigation Plan

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
	<p>profiling for disposal purposes can be done in-situ so when soil is excavated it is loaded directly on to trucks and hauled to the appropriate landfill facility for disposal based on the in situ profiling results. A project of this nature could also combine both strategies.</p>			
HMC 03	<p>Cover with plastic sheeting soils removed during excavation and grading activities that remain at a centralized location for an extended period of time to prevent the generation of fugitive dust emissions that migrate offsite.</p>	<p>During construction</p> <p>Review design and contract documents to insure compliance. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations</p>	Construction Contractor	<p>(2 of 2)</p> <p>Comply with requirements to cover soils as specified</p>
HMC 03	<p>Cover with plastic sheeting soils removed during excavation and grading activities that remain at a centralized location for an extended period of time to prevent the generation of fugitive dust emissions that migrate offsite.</p>	<p>During construction</p> <p>Review design and contract documents to insure compliance. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations</p>	Construction Contractor	<p>(1 of 2)</p> <p>Obtain permits</p>

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
HMC 04	Use a licensed waste hauler, applying appropriate manifests or bill of lading procedures, as required to haul soil for disposal at a landfill or recycling facility.	During construction Review design and contract documents to insure compliance. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations	Construction Contractor	(2 of 2) Used licensed waste hauler, apply appropriate manifests/bills of lading to haul soil for disposal at landfill or recycling facility
HMC 04	Use a licensed waste hauler, applying appropriate manifests or bill of lading procedures, as required to haul soil for disposal at a landfill or recycling facility.	During construction Review design and contract documents to insure compliance. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations	Construction Contractor	(1 of 2) Obtain permits
HMC 05	Use chemical test results for groundwater samples along the alignment to obtain a Batch Discharge Permit under Article 4.1 of the San Francisco Department of Public Works as well as to evaluate requirements for pretreatment prior to discharge to the sanitary sewer. Effluent produced during the dewatering of excavations will be collected in onsite storage tanks and periodically tested, as required under discharge permit requirements, for potential contamination to confirm the need for any treatment prior to discharge. If required, treatment may include: Settling to allow particulate matter (total suspended solids) to settle out of the effluent in order to reduce the sediment load as well as reduce elevated metal and other contaminant concentrations that may be associated with suspended sediments; and/or Construction of a small-scale batch waste water treatment system to remove dissolved contaminants	During construction Review design and contract documents to insure compliance. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW	Construction Contractor	(2 of 2) Comply with effluent collection and discharge requirements

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
	(mainly organic constituents such as petroleum hydrocarbons (gas, diesel, and oils), BTEX, and VOCs) from the dewatering effluent prior to discharge to the sanitary sewer. A treatment system would also likely employ the use of filtration to remove suspended solids.			
HMC 05	<p>Use chemical test results for groundwater samples along the alignment to obtain a Batch Discharge Permit under Article 4.1 of the San Francisco Department of Public Works as well as to evaluate requirements for pretreatment prior to discharge to the sanitary sewer. Effluent produced during the dewatering of excavations will be collected in onsite storage tanks and periodically tested, as required under discharge permit requirements, for potential contamination to confirm the need for any treatment prior to discharge.</p> <p>If required, treatment may include:</p> <p>Settling to allow particulate matter (total suspended solids) to settle out of the effluent in order to reduce the sediment load as well as reduce elevated metal and other contaminant concentrations that may be associated with suspended sediments; and/or</p>	<p>During construction</p> <p>Review design and contract documents to insure compliance. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW</p>	Construction Contractor	<p>(1 of 2)</p> <p>Obtain Batch Discharge Permit</p>

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
	Construction of a small-scale batch waste water treatment system to remove dissolved contaminants (mainly organic constituents such as petroleum hydrocarbons (gas, diesel, and oils), BTEX, and VOCs) from the dewatering effluent prior to discharge to the sanitary sewer. A treatment system would also likely employ the use of filtration to remove suspended solids.			
HMC 06	Develop a detailed mitigation plan for the handling of potentially contaminated soil and groundwater prior to starting project construction.	During final design Review detailed mitigation plan, include provisions in contract documents and inspect construction to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW. Obtain all applicable permits	Construction Contractor	(2 of 2) Implement mitigation plan
HMC 06	Develop a detailed mitigation plan for the handling of potentially contaminated soil and groundwater prior to starting project construction.	During final design Review detailed mitigation plan, include provisions in contract documents and inspect construction to insure compliance. Where applicable,	Construction Contractor	(1 of 2) Obtain all permits

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
		coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW. Obtain all applicable permits		
HMC 08	<p>Require that workers performing activities on site that may involve contact with contaminated soil or groundwater have appropriate health and safety training in accordance with 29 CFR 1910.120.</p> <p>A Worker Health and Safety Plan (HSP) will be developed for the project and monitored for the implementation of the plan on a day-to-day basis by a Certified Industrial Hygienist (CIH). The HSP will include provisions for:</p> <p>Conducting preliminary site investigations and analysis of potential job hazards;</p> <p>Personnel protective equipment;</p> <p>Safe work practices;</p> <p>Site control;</p> <p>Exposure monitoring;</p> <p>Decontamination procedures; and</p> <p>Emergency response actions.</p> <p>The HSP will specify mitigation of potential worker and public exposure to airborne contaminant migration by incorporating dust suppression techniques in construction procedures. The plan will also specify mitigation of worker and environmental exposure to contaminant migration via surface water runoff</p>	<p>During construction</p> <p>Provide health-and-safety training prior to start of and at timely intervals during construction. Include requirements in contract documents and monitor construction activities to insure compliance</p>	Construction Contractor	<p>(1 of 2)</p> <p>Prepare worker HSP to include all requirements including minimum requirements set forth in specs</p>

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
	pathways by implementation of comprehensive measures to control drainage from excavations and saturated materials excavated during construction.			

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
HMC 08	<p>Require that workers performing activities on site that may involve contact with contaminated soil or groundwater have appropriate health and safety training in accordance with 29 CFR 1910.120.</p> <p>A Worker Health and Safety Plan (HSP) will be developed for the project and monitored for the implementation of the plan on a day-to-day basis by a Certified Industrial Hygienist (CIH). The HSP will include provisions for:</p> <p>Conducting preliminary site investigations and analysis of potential job hazards;</p> <p>Personnel protective equipment;</p> <p>Safe work practices;</p> <p>Site control;</p> <p>Exposure monitoring;</p> <p>Decontamination procedures; and</p> <p>Emergency response actions.</p> <p>The HSP will specify mitigation of potential worker and public exposure to airborne contaminant migration by incorporating dust suppression techniques in construction procedures. The plan will also specify mitigation of worker and environmental exposure to contaminant migration via surface water runoff pathways by implementation of comprehensive measures to control drainage from excavations and saturated materials excavated during construction.</p>	<p>During construction</p> <p>Provide health-and-safety training prior to start of and at timely intervals during construction. Include requirements in contract documents and monitor construction activities to insure compliance</p>	<p>Construction Contractor</p>	<p>(2 of 2)</p> <p>Provide documentation that workers performing on site activities that may involve contact with contaminated soil or groundwater have H&S training per 29CFR 1910.120. Update information as required to ensure all training is current.</p>

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NoiC 01	<p>Comply with San Francisco noise ordinance. The noise ordinance includes specific limits on noise from construction. The basic requirements are:</p> <p>Maximum noise level from any piece of powered construction equipment is limited to 80 dBA at 100 feet. This translates to 86 dBA at 50 feet.</p> <p>Impact tools are exempted, although such equipment must be equipped with effective mufflers and shields. The noise control equipment on impact tools must be as recommended by the manufacturer and approved by the Director of Public Works.</p> <p>Construction activity is prohibited between 8 p.m. and 7 a.m. if it causes noise that exceeds the ambient noise plus 5 dBA</p> <p>The noise ordinance is enforced by the San Francisco DPW, which may waive some of the noise requirements to expedite the project or minimize traffic impacts. For example, along Townsend Street where much of the land use is commercial, business owners may prefer nighttime construction since it would reduce disruption during normal business hours. The DPW waivers usually allow most construction processes to continue until 2 a.m., although construction processes that involve impacts are rarely allowed to extend beyond 10 p.m. This category would include equipment used in demolition such as jackhammers and hoe rams, and pile driving. It is not anticipated that the construction documents would have specific limits on nighttime construction. There may be times when nighttime construction is desirable (e.g., in commercial districts where nighttime construction would be less disruptive to businesses in the area) or necessary to avoid unacceptable traffic disruptions. Since the construction would be subject to the requirements of the San Francisco noise regulations, in these cases, the</p>	<p>During preparation of construction contract documents and construction</p> <p>TJPA to work with CCSF Department of Public Works (DPW) regarding construction noise mitigation program</p>	Construction Contractor	Demonstrate compliance by successfully passing monitoring (see NoiC 2)

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
	contractor would need to work with the DPW to come up with an acceptable approach balancing interruption of the business and residential community, traffic disruptions, and reducing the total duration of the construction.			
NoiC 03	Conduct inspections and noise testing of equipment. This measure will ensure that all equipment on the site is in good condition and effectively muffled.	During construction Perform monitoring during construction	Construction Contractor	(2 of 3) Test on-site equipment
NoiC 03	Conduct inspections and noise testing of equipment. This measure will ensure that all equipment on the site is in good condition and effectively muffled.	During construction Perform monitoring during construction	Construction Contractor	(1 of 3) Conduct inspections
NoiC 03	Conduct inspections and noise testing of equipment. This measure will ensure that all equipment on the site is in good condition and effectively muffled.	During construction Perform monitoring during construction	Construction Contractor	(3 of 3) Provide documentation to PMPC

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
NoiC 05	<p>Minimize use of vehicle backup alarms. Because backup alarms are designed to get people’s attention, the sound can be very noticeable even when their sound level does not exceed the ambient, and it is common for backup alarms at construction sites to be major sources of noise complaints. A common approach to minimizing the use of backup alarms is to design the construction site with a circular flow pattern that minimizes backing up of trucks and other heavy equipment. Another approach to reducing the intrusion of backup alarms is to require all equipment on the site to be equipped with ambient sensitive alarms. With this type of alarm, the alarm sound is automatically adjusted based on the ambient noise. In nighttime hours when ambient noise is low, the backup alarm is adjusted down.</p>	<p>During construction document preparation and construction</p> <p>Review contract specifications during final design and inspect construction</p>	Construction Contractor	Minimize use of vehicle backup alarms, where feasible
NoiC 06	<p>Include noise control requirements in construction specifications. These should require the contractor to</p> <p>Perform all construction in a manner to minimize noise. The contractor should be required to select construction processes and techniques that create the lowest noise levels. Examples are using predrilled piles instead of impact pile driving, mixing concrete offsite instead of onsite, and using hydraulic tools instead of pneumatic impact tools.</p> <p>Use equipment with effective mufflers. Diesel motors are often the major noise source on construction sites. Contractors should be required to employ equipment fitted with the most effective commercially available mufflers.</p> <p>Perform construction in a manner to maintain noise levels at noise sensitive land uses below specific limits.</p> <p>Perform noise monitoring to demonstrate compliance with the noise limits. Independent noise monitoring should be performed to check compliance in particularly</p>	<p>Final design and construction</p> <p>TJPA to develop detailed noise control requirements during preliminary engineering and final design. Insure contractor obtains permits if necessary. Inspect construction activities for compliance and monitor noise levels. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such</p>	Construction Contractor	Contractor to implement noise abatement

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
	<p>sensitive areas.</p> <p>Minimize construction activities during evening, nighttime, weekend and holiday periods. Permits would be required before construction can be performed in noise sensitive areas during these periods.</p> <p>Select haul routes that minimize intrusion to residential areas. This is particularly important for the trench alternatives that will require hauling large quantities of excavation material to disposal sites.</p> <p>Controlling noise in contractor work areas during nighttime hours is likely to require some mixture of the following approaches:</p> <p>Restrictions on noise producing activities during nighttime hours.</p> <p>Laying out the site to keep noise producing activities as far as possible from residences, to minimize the use of backup alarms, and to minimize truck activity and truck queuing near the residential areas.</p> <p>Use of procedures and equipment that produce lower noise levels than normal. For example, some manufacturers of construction equipment can supply special noise control kits with highly effective mufflers and other materials that substantially reduce noise emissions of equipment such as generators, tunnel ventilation equipment, and heavy diesel power equipment including mobile cranes and front-end loaders.</p> <p>Use of temporary barriers near noisy activities. By locating the barriers close enough to the noise source, it is possible to obtain substantial noise attenuation with barriers 10 to 12 feet high even though the residences are 30 to 40 feet higher than the construction site.</p>			

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	Use of partial enclosures around noisy activities. It is sometimes necessary to construct shed-like structures or complete buildings to contain the noise from nighttime activities.			

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NoiO 01	<p>Apply noise mitigation at the following locations adjacent to the bus storage facility:</p> <p>Provide sound insulation to mitigate noise impacts at the residences north of the AC Transit Facility at the corner of Perry and Third Street. At a minimum, apply sound insulation to the façade facing the bus storage facility (the south façade).</p> <p>Construct two noise barriers to mitigate noise impacts to Residences south of the AC Transit Facility along Stillman Street. The first noise barrier would be approximately 10 to 12 feet high and run along the southern edge of the AC Transit storage facility. The second noise barrier would be approximately 5 to 6 feet high and would be located on the portion of the ramp at the southwestern corner of the AC Transit facility. Treat the noise barriers with an absorptive material on the side facing the facility to minimize the potential for reflections off the underside of the freeway.</p> <p>Construct a noise barrier to mitigate noise impacts to residences south of the Golden Gate Transit Facility along Stillman Street. The barrier would be approximately 10 to 12 feet high and run along the southern and a portion of the eastern edge of the Golden Gate Transit storage facility. Treat the noise barriers with an absorptive material on the side facing the facility to minimize the potential for reflections off the underside of the freeway.</p>	<p>During construction</p> <p>TJPA to design detailed noise mitigation during preliminary and final design phases. TJPA engineering staff to inspect installation and/or construction of mitigation measures</p>	Construction Contractor	Construct noise walls
NoiO 03	Construct noise walls prior to the development of the permanent bus facilities.	<p>During schedule development, construction document preparation and construction</p> <p>TJPA to develop program schedule and contract documents to implement this construction sequencing requirement</p>	Construction Contractor	Construct noise walls and install landscaping

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PC 07	Develop traffic management plans. Traffic management plans to maintain access to all businesses will be prepared for areas affected by surface or cut-and-cover construction. In addition, daily cleaning of work areas would be performed by contractors for the duration of the construction period. Provisions would be contained in construction contracts to require the maintenance of driveway access to businesses to the extent feasible.	During preliminary engineering, final design and construction TJPA to forward traffic management plans to CCSF DPT for review and approval. Include all requirements in construction documents and inspect implementation during construction	Construction Contractor	Construct in accordance with specs
Saf 01	Provide project plans to the San Francisco Fire Department for its review to ensure that adequate life safety measures and emergency access are incorporated into the design and construction of Project facilities.	Prior to project facility permitting and during construction Project facility plans to be forwarded to CCSF Fire Department prior to permit issuance. Inspect installation during construction	Construction Contractor	(2 of 2) Construct according to specs
Saf 01	Provide project plans to the San Francisco Fire Department for its review to ensure that adequate life safety measures and emergency access are incorporated into the design and construction of Project facilities.	Prior to project facility permitting and during construction Project facility plans to be forwarded to CCSF Fire Department prior to permit issuance. Inspect installation during construction	Construction Contractor	(1 of 2) Obtain permits
Saf 02	Prepare a life safety plan including the provision of on-site measures such as a fire command post at the Terminal, the Fire Department's 800-megahertz radio system and all necessary fire suppression equipment.	Prior to project facility permitting TJPA to develop life safety plan during facility design phases and implement during testing and startup up phase	Construction Contractor	Construct according to specs

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Util 01	Coordinate with utility providers during preliminary engineering, continuing through final design and construction. Utilities would be avoided, relocated, and/or supported as necessary during construction activities to prevent damage to utility systems and to minimize disruption and degradation of utility service to local customers.	During preliminary engineering, final design and construction TJPA to identify utilities; design relocations or protection measures where required; and include requirements in contract documents. Monitor construction activities to insure implementation of all required measures	Construction Contractor	(2 of 2) Continue coordination with utility companies during construction
Util 01	Coordinate with utility providers during preliminary engineering, continuing through final design and construction. Utilities would be avoided, relocated, and/or supported as necessary during construction activities to prevent damage to utility systems and to minimize disruption and degradation of utility service to local customers.	During preliminary engineering, final design and construction TJPA to identify utilities; design relocations or protection measures where required; and include requirements in contract documents. Monitor construction activities to insure implementation of all required measures	Construction Contractor	(1 of 2) Construct according to specs
VA 01	Assure that construction crews working at night direct any artificial lighting onto the work site in order to minimize “spill over” light or glare effects on adjacent areas.	During construction Include requirements in contract documents and monitor construction activities to insure compliance	Construction Contractor	Implement during construction
VA 02	Assure that contractors make all efforts possible to minimize specific aesthetic and visual effects of construction identified by neighborhood businesses and residents.	During construction Include requirements in contract documents and monitor construction activities to insure compliance	Construction Contractor	Construction crews working at night direct any artificial lighting onto the work site in order to minimize “spill over” light or glare effects on adjacent areas

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
NoiC 02	Conduct noise monitoring. The purpose of monitoring is to ensure that contractors take all reasonable steps to minimize noise.	During construction Monitoring data to be provided to CCSF DPW	Construction Contractor or PMPC	Establish ambient noise levels prior to start of construction
NoiC 02	Conduct noise monitoring. The purpose of monitoring is to ensure that contractors take all reasonable steps to minimize noise.	During construction Monitoring data to be provided to CCSF DPW	Construction Contractor or PMPC	Conduct monitoring during construction
AC 16	<p>The following diesel construction equipment mitigation measures shall be included in all Project construction contracts:</p> <p>Equipment</p> <ol style="list-style-type: none"> 1 Use of ultra-low sulfur fuel (ULSF) (€15 ppm) unless the incremental cost exceeds \$0.20 per gallon; 2. An idling time of 5 minutes per hour; 3. Tuning all equipment to manufacturers' specifications at the manufacturers' recommended frequency; 4. Prohibition of any tampering with engines and continuing adherence to manufacturers' recommendations. <p>Work Limitations</p> <ol style="list-style-type: none"> 1 Use of no more than two major pieces of diesel equipment simultaneously near or upwind of sensitive receptors such as residences and schools; 2. Notification to all schools within 1,000 feet of construction sites regarding outdoor activities during the construction period and recommending use of air conditioners to minimize indoor air pollution. <p>Administrative</p>	<p>Include requirements in contract documents and monitor construction activities to ensure compliance</p> <p>During construction</p>	PMPC	<p>(2 of 2)</p> <p>Perform spot checks during construction for Equipment #2; Work Limitation #1</p>

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	<ol style="list-style-type: none"> 1. Retention of receipts of ULSF purchase and equipment tuning and repair and making these available to FTA or its designee upon request. 2. The TJPA'S Supervising Engineer shall conduct spot checks for compliance with these measures. 			

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Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
HMC 02	<p>Perform detailed investigations of the potential presence of contaminants in soil and groundwater prior to construction, using conventional drilling, sampling, and chemical testing methods. Based on the chemical test results, a mitigation plan will be developed to establish guidelines for the disposal of contaminated soil and discharge of contaminated dewatering effluent, and to generate data to address potential human health and safety issues that may arise as a result of contact with contaminated soil or groundwater during construction. The investigation and mitigation plan will follow the requirements of the City and County of San Francisco's Article 22A in the appropriate areas along the alignment.</p> <p>With construction projects of this nature and magnitude, there are typically two different management strategies that can be employed to address contaminated soil handling and disposal issues. Contaminated soil can be excavated and stockpiled at a centralized location and subsequently sampled and analyzed for disposal profiling purposes in accordance with the requirements of the candidate disposal landfill. Alternatively, soil profiling for disposal purposes can be done in-situ so when soil is excavated it is loaded directly on to trucks and hauled to the appropriate landfill facility for disposal based on the in situ profiling results. A project of this nature could also combine both strategies.</p>	<p>During construction</p> <p>Review design and contract documents to insure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW</p>	PMPC	<p>Develop Mitigation Plan for disposal of soil and discharge of contaminated water, if present. Include human health and safety risk assessment.</p>

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Saf 01	Provide project plans to the San Francisco Fire Department for its review to ensure that adequate life safety measures and emergency access are incorporated into the design and construction of Project facilities.	Prior to project facility permitting and during construction Project facility plans to be forwarded to CCSF Fire Department prior to permit issuance. Inspect installation during construction	PMPC	Initiate discussions with Fire Department
Saf 02	Prepare a life safety plan including the provision of on-site measures such as a fire command post at the Terminal, the Fire Department’s 800-megahertz radio system and all necessary fire suppression equipment.	Prior to project facility permitting TJPA to develop life safety plan during facility design phases and implement during testing and startup up phase	PMPC	Define parameters for Bus Storage
Saf 03	Prepare a risk analysis to accurately determine the number of personnel necessary to maintain an acceptable level of service at Project facilities.	Prior to project facility permitting TJPA to develop risk analysis during facility design phases	PMPC	Define parameters for Transit Center Program

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NoiO 02	Landscape the noise walls. Develop the actual design of the walls in cooperation with area residents.	During preliminary and final design TJPA to work with area residents during design of noise walls	Terminal A/E	Include info in specs
AC 01	Assure that, as part of the contract provisions, the project contractor is required to implement the measures below at all project construction sites.	During development of contract documents Include requirement in contract documents [Note: Not identified in MMRP]	TJPA/PMPC	Include mitigation measure requirements AC 2 through AC 15 in specs
CH 02	Assure supervision of all activities regarding historic preservation, historical archaeology and prehistoric archaeology is carried out by professionals meeting Secretary of the Interior's professional qualifications standards (48 FR 44738-9).	During preliminary engineering, final design and construction Prior to initiation of design and construction activities, TJPA will require submission of and review qualifications of professionals performing the MOA activities to assure that Secretary of Interior standards are met	TJPA/PMPC	Require relevant contractors to submit, and review qualification of professionals performing the MOA activities to assure that Secretary of Interior standards (48 FR 44738-9) are met.

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CH 13	<p>Prepare a comprehensive Research Design/Treatment Plan for archeological resources prepared by a qualified consultant. The Research Design/Treatment Plan will be consistent with the Secretary of the Interior’s Standards and Guidelines for Archaeological Documentation (48 FR 44734-37) and take into account the ACHP publication, Treatment of Archaeological Properties: A Handbook (ACHP 1980), and SHPO guidelines.</p> <p>The Research Design/Treatment Plan will include, at a minimum:</p> <p>An historical context for the Area of Potential Effects for Archaeological Resources (APEAR).</p> <p>A research context for the APEAR, identifying expected archeological property types and developing research themes, questions, and data needs.</p> <p>· A testing/data recovery plan that will specify, at minimum:</p> <ul style="list-style-type: none"> – The properties or portion of properties where evaluation and/or data recovery are to be carried out; – The properties, if any, that will be affected by the 	<p>During preliminary engineering</p> <p>TJPA will assure completion of comprehensive research design/treatment plan consistent with the content required in the MOA. TJPA shall transmit this plan to the signatories of the MOA. TJPA will also coordinate these efforts with the CCSF Planning Department</p>	TJPA/PMPC	<p>(1 of 3)</p> <p>Prepare Research Design/Treatment Plan consistent with content required in MOA</p>

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	<p>Undertaking but for which no data recovery will be carried out;</p> <ul style="list-style-type: none"> – The manner in which inadvertent discoveries will be treated; – The methods to be used for data recovery, with an explanation of their relevance to the research questions/themes; – The methods to be used in cataloguing, analysis, data management, and dissemination of data; – The proposed disposition of recovered materials and records, including discard and deaccession; – The manner in which any human remains and associated/unassociated funerary objects, including those of Native American or Native Hawaiian origin, will be treated; – The security procedures to be undertaken to protect the archeological testing/data recovery site from vandalism, theft, or unintended damage; – The final report summarizing, describing and interpreting the results of testing/data recovery; – The measures to be undertaken to ensure curation of recovered data determined to have appropriate research potential. <p>Research Design/Treatment Plan Review</p>			

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CH 14	<p>Submit the Research Design/Treatment Plan to all parties to the MOA for a thirty (30) calendar day review following receipt of the Plan.</p>	<p>During preliminary engineering phase</p> <p>TJPA will submit the Research Design/Treatment Plan to the signatories of the MOA. TJPA will coordinate these efforts with the CCSF Planning Department. If any party fails to submit their comments within 30 days, TJPA may assume that party's concurrence with the Research Design/Treatment Plan. TJPA will take any review comments into account, revise the</p>	TJPA/PMPC	<p>Submit completed Research Design/Treatment Plan to all signatories of the MOA</p>

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
		<p>Research Design/Treatment Plan accordingly, and will notify any party whose comments were not incorporated into the Plan</p>		
CH 14	<p>Submit the Research Design/Treatment Plan to all parties to the MOA for a thirty (30) calendar day review following receipt of the Plan.</p>	<p>During preliminary engineering phase</p> <p>TJPA will submit the Research Design/Treatment Plan to the signatories of the MOA. TJPA will coordinate these efforts with the CCSF Planning Department. If any party fails to submit their comments within 30 days, TJPA may assume that party's concurrence with the Research Design/Treatment Plan. TJPA will take any review comments into account, revise the Research Design/Treatment Plan accordingly, and will notify any party whose comments were not incorporated into the Plan</p>	TJPA/PMPC	<p>Submit completed Research Design/Treatment Plan to all signatories of the MOA</p>
GC 01	<p>Disseminate information to community in a timely manner regarding anticipated construction activities.</p>	<p>During construction</p> <p>TJPA to initiate program during final design and continue during construction</p>	TJPA/PMPC	<p>Disseminate information to community in a timely manner regarding anticipated construction activities</p>

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GC 01	Disseminate information to community in a timely manner regarding anticipated construction activities.	During construction TJPA to initiate program during final design and continue during construction	TJPA/PMPC	(2 of 2) Develop staged info reconstruction
GC 01	Disseminate information to community in a timely manner regarding anticipated construction activities.	During construction TJPA to initiate program during final design and continue during construction	TJPA/PMPC	(1 of 2) Implement traffic management controls, as specified
GC 02	Provide signage. Work with establishments affected by construction activities to develop appropriate signage for display that directs both pedestrian and vehicular traffic to businesses via alternate routes.	Prior to and during construction TJPA to initiate signage program during final design and monitor contractors' installation during construction	TJPA/PMPC	(1 of 3) Develop signage plan for affected establishments as specified
GC 02	Provide signage. Work with establishments affected by construction activities to develop appropriate signage for display that directs both pedestrian and vehicular traffic to businesses via alternate routes.	Prior to and during construction TJPA to initiate signage program during final design and monitor contractors' installation during construction	TJPA/PMPC	(2 of 3) Comply w/ SF Planning Dept. guidelines and requirements
GC 02	Provide signage. Work with establishments affected by construction activities to develop appropriate signage for display that directs both pedestrian and vehicular traffic to businesses via alternate routes.	Prior to and during construction TJPA to initiate signage program during final design and monitor contractors' installation during construction	TJPA/PMPC	(3 of 3) Include requirements in specs
HMC 06	Develop a detailed mitigation plan for the handling of potentially contaminated soil and groundwater prior to starting project construction.	During final design Review detailed mitigation plan, include provisions in contract documents and inspect construction to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW. Obtain all	TJPA/PMPC	(1 of 2) Develop detailed mitigation plan for handling potentially contaminated soil/groundwater

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
		applicable permits		
HMC 06	Develop a detailed mitigation plan for the handling of potentially contaminated soil and groundwater prior to starting project construction.	<p>During final design</p> <p>Review detailed mitigation plan, include provisions in contract documents and inspect construction to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW. Obtain all applicable permits</p>	TJPA/PMPC	<p>(2 of 2)</p> <p>Coordinate with CCSF, DPH, DPW, and others as required</p>

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
HMC 08	<p>Require that workers performing activities on site that may involve contact with contaminated soil or groundwater have appropriate health and safety training in accordance with 29 CFR 1910.120.</p> <p>A Worker Health and Safety Plan (HSP) will be developed for the project and monitored for the implementation of the plan on a day-to-day basis by a Certified Industrial Hygienist (CIH). The HSP will include provisions for:</p> <p>Conducting preliminary site investigations and analysis of potential job hazards;</p> <p>Personnel protective equipment;</p> <p>Safe work practices;</p> <p>Site control;</p> <p>Exposure monitoring;</p> <p>Decontamination procedures; and</p> <p>Emergency response actions.</p> <p>The HSP will specify mitigation of potential worker and public exposure to airborne contaminant migration by incorporating dust suppression techniques in construction procedures. The plan will also specify mitigation of worker and environmental exposure to contaminant migration via surface water runoff pathways by implementation of comprehensive measures to control drainage from excavations and saturated materials excavated during construction.</p>	<p>During construction</p> <p>Provide health-and-safety training prior to start of and at timely intervals during construction. Include requirements in contract documents and monitor construction activities to insure compliance</p>	TJPA/PMPC	<p>(2 of 2)</p> <p>Include in specs</p>

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Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
NoiC 04	Implement an active community liaison program. This program would keep residents informed about construction plans so they can plan around periods of particularly high noise levels and would provide a conduit for residents to express any concerns or complaints about noise.	During construction TJPA to develop and initiate community liaison program during final design prior to construction. Program will continue during construction	TJPA/PMPC	Initiate and continue community outreach
NoiC 04	Implement an active community liaison program. This program would keep residents informed about construction plans so they can plan around periods of particularly high noise levels and would provide a conduit for residents to express any concerns or complaints about noise.	During construction TJPA to develop and initiate community liaison program during final design prior to construction. Program will continue during construction	TJPA/PMPC	Initiate and continue community outreach
NoiO 02	Landscape the noise walls. Develop the actual design of the walls in cooperation with area residents.	During preliminary and final design TJPA to work with area residents during design of noise walls	TJPA/PMPC	Consult w/ neighbors
PC 04	Establish community construction information/outreach program to provide on-going dialogue among the TJPA and the affected community regarding construction impacts and possible mitigation/solutions. Include dedicated personnel for an outreach office in the construction area to deal with construction coordination.	During construction TJPA to establish program during final design prior to construction	TJPA/PMPC	Develop community construction info/outreach program
PC 04	Establish community construction information/outreach program to provide on-going dialogue among the TJPA and the affected community regarding construction impacts and possible mitigation/solutions. Include dedicated personnel for an outreach office in the construction area to deal with construction coordination.	During construction TJPA to establish program during final design prior to construction	TJPA/PMPC	Implement plan, using dedicated personnel during construction

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PC 05	<p>Establish site and field offices located along the Caltrain Downtown Extension alignment. Field office staff, in conjunction with other staff, will:</p> <p>Provide the community and businesses with a physical location where information pertaining to construction can be exchanged,</p> <p>Enable TJPA and JPB to better understand community/business needs during the construction period,</p> <p>Allow TJPA and JPB to participate in local events in an effort to promote public awareness of the project,</p> <p>Manage construction-related matters pertaining to the public,</p> <p>Notify property owners, residences, and businesses of major construction activities (e.g., utility relocation/disruption and milestones, re-routing of delivery trucks),</p> <p>Provide literature to the public and press,</p> <p>Promote and provide presentations on the project via a Speakers Bureau,</p> <p>Respond to phone inquires,</p> <p>Coordinate business outreach programs,</p> <p>Schedule promotional displays, and</p> <p>Participate in community committees.</p>	<p>During construction</p> <p>TJPA to establish program during final design and continue during construction</p>	TJPA/PMPC	<p>Establish site and field offices along alignment, and provide the specified services</p>

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Prop 01	Apply federal Uniform Relocation Act (Public Law 91 646) and California Relocation Act (Chapter 16, Section 7260 et seq., of the Government Code) and related laws and regulations governing both land acquisition and relocation. All real property to be acquired will be appraised to determine its fair market value before an offer is made to each property owner. (Minimum relocation payments are detailed in the laws, and include moving and search payments for businesses.) Provide information, assistance, and payments to all displaced businesses in accordance with these laws and regulations.	Prior to and during property acquisition and relocation activities TJPA to report to Board on compliance during acquisition and relocation activities	TJPA/PMPC	(4 of 4) Develop optimum schedule for appraisal and acquisition, based on recommended workplan
Prop 01	Apply federal Uniform Relocation Act (Public Law 91 646) and California Relocation Act (Chapter 16, Section 7260 et seq., of the Government Code) and related laws and regulations governing both land acquisition and relocation. All real property to be acquired will be appraised to determine its fair market value before an offer is made to each property owner. (Minimum relocation payments are detailed in the laws, and include moving and search payments for businesses.) Provide information, assistance, and payments to all displaced businesses in accordance with these laws and regulations.	Prior to and during property acquisition and relocation activities TJPA to report to Board on compliance during acquisition and relocation activities	TJPA/PMPC	(4 of 4) Develop optimum schedule for appraisal and acquisition, based on recommended workplan
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Prop 01	Apply federal Uniform Relocation Act (Public Law 91 646) and California Relocation Act (Chapter 16, Section 7260 et seq., of the Government Code) and related laws and regulations governing both land acquisition and relocation. All real property to be acquired will be appraised to determine its fair market value before an offer is made to each property owner. (Minimum relocation payments are detailed in the laws, and include moving and search payments for businesses.) Provide information, assistance, and payments to all displaced businesses in accordance with these laws and regulations.	Prior to and during property acquisition and relocation activities TJPA to report to Board on compliance during acquisition and relocation activities	TJPA/PMPC	(3 of 4) Develop list of affected properties
Prop 01	Apply federal Uniform Relocation Act (Public Law 91 646) and California Relocation Act (Chapter 16, Section 7260 et seq., of the Government Code) and related laws and regulations governing both land acquisition and relocation. All real property to be acquired will be appraised to determine its fair market value before an offer is made to each property owner. (Minimum relocation payments are detailed in the laws, and include moving and search payments for businesses.) Provide information, assistance, and payments to all displaced businesses in accordance with these laws and regulations.	Prior to and during property acquisition and relocation activities TJPA to report to Board on compliance during acquisition and relocation activities	TJPA/PMPC	Appraise all real property to be acquired, in accordance with federal URA and California Relocation Act

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
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Prop 01	Apply federal Uniform Relocation Act (Public Law 91 646) and California Relocation Act (Chapter 16, Section 7260 et seq., of the Government Code) and related laws and regulations governing both land acquisition and relocation. All real property to be acquired will be appraised to determine its fair market value before an offer is made to each property owner. (Minimum relocation payments are detailed in the laws, and include moving and search payments for businesses.) Provide information, assistance, and payments to all displaced businesses in accordance with these laws and regulations.	Prior to and during property acquisition and relocation activities TJPA to report to Board on compliance during acquisition and relocation activities	TJPA/PMPC	(2 of 4) Confirm any ROW encroachments
Prop 01	Apply federal Uniform Relocation Act (Public Law 91 646) and California Relocation Act (Chapter 16, Section 7260 et seq., of the Government Code) and related laws and regulations governing both land acquisition and relocation. All real property to be acquired will be appraised to determine its fair market value before an offer is made to each property owner. (Minimum relocation payments are detailed in the laws, and include moving and search payments for businesses.) Provide information, assistance, and payments to all displaced businesses in accordance with these laws and regulations.	Prior to and during property acquisition and relocation activities TJPA to report to Board on compliance during acquisition and relocation activities	TJPA/PMPC	(2 of 4) Confirm any ROW encroachments

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Prop 01	Apply federal Uniform Relocation Act (Public Law 91 646) and California Relocation Act (Chapter 16, Section 7260 et seq., of the Government Code) and related laws and regulations governing both land acquisition and relocation. All real property to be acquired will be appraised to determine its fair market value before an offer is made to each property owner. (Minimum relocation payments are detailed in the laws, and include moving and search payments for businesses.) Provide information, assistance, and payments to all displaced businesses in accordance with these laws and regulations.	Prior to and during property acquisition and relocation activities TJPA to report to Board on compliance during acquisition and relocation activities	TJPA/PMPC	(1 of 4) Provide ROW Plans
Prop 01	Apply federal Uniform Relocation Act (Public Law 91 646) and California Relocation Act (Chapter 16, Section 7260 et seq., of the Government Code) and related laws and regulations governing both land acquisition and relocation. All real property to be acquired will be appraised to determine its fair market value before an offer is made to each property owner. (Minimum relocation payments are detailed in the laws, and include moving and search payments for businesses.) Provide information, assistance, and payments to all displaced businesses in accordance with these laws and regulations.	Prior to and during property acquisition and relocation activities TJPA to report to Board on compliance during acquisition and relocation activities	TJPA/PMPC	(3 of 4) Develop list of affected properties
CH 01	Comply with the provision of the signed Memorandum of Agreement (MOA) between the Federal Transit Administration, the State Historic Preservation Officer, and the TJPA.	During preliminary engineering, final design and construction TJPA will assure compliance with MOA provisions during preliminary engineering, final design and construction, as described below		
CH 03	Integrate into the design of the new terminal a dedicated space for a permanent interpretive exhibit. The interpretive exhibit will include at a minimum, but is not necessarily limited to: plaques or markers, a mural or other depiction of the historic terminal, and Key System, or other interpretive material.	During preliminary engineering and final design TJPA will include space for interpretive exhibit in terminal during design. Review contract		

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
		documents and construction submittals and activities to insure implementation		
CH 04	Consult with the State Department of Transportation (Department) regarding the availability of historical documentary materials and the potential use of salvaged items from the existing Transbay Terminal for the creation of the permanent interpretive display of the history of the original Transbay Terminal building and its association with the San Francisco- Oakland Bay Bridge and the potential salvaged items from the existing Terminal. Invitation to the Oakland Heritage Alliance, the San Francisco Architectural Heritage, the California State Railroad Museum, and the Western Railway Museum to participate in this consultation. While retaining responsibility for the development of the exhibit, TJPA will jointly consider the Department's and participating invitees' recommendations when finalizing the exhibit design. TJPA will produce, install, and maintain the exhibit.	During preliminary engineering and final design TJPA will consult with Department regarding availability of documentary materials and potential use of salvaged items. TJPA will invite participation in this review from the other designated parties. TJPA will produce, install, and maintain the exhibit in the new Transbay Terminal		
CH 05	Consult with the City of Oakland about its interest in having a similar interpretive exhibit in the East Bay. If agreement is reached prior to completion of final design of the Transbay Terminal, TJPA will provide and deliver exhibit materials to a venue designated by the City of Oakland.	During preliminary engineering and final design During preliminary engineering and final design, TJPA will consult with City of Oakland regarding its interest in establishing an exhibit. TJPA will provide and deliver exhibit materials to a venue in the City of Oakland should such an exhibit be developed		

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
CH 06	Identify, in consultation with Department, elements of the existing Transbay Terminal that are suitable for salvage and interpretive use in the exhibit in the new Terminal or by museums. Within two years of signing of this agreement, TJPA will offer these items to San Francisco Architectural Heritage, the California State Railroad Museum, Sacramento, the Western Railway Museum, the Oakland Museum, and any other interested parties. TJPA will remove the items selected in a manner that minimizes damage and will deliver them with legal title to the recipient. Items not accepted for salvage or interpretive use will receive no further consideration.	During preliminary engineering and final design Acceptance of items by interested parties must be completed at least 90 days prior to demolition of the Transbay Terminal		
CH 07	Consult with Department and the Oakland Museum about contributing to Department’s exhibit at the Oakland Museum relating to the history and engineering of the major historic state bridges of the San Francisco Bay Area. TJPA will propose contributions to such an exhibit, which may include an interpretive video that would include the history of the Transbay Terminal and the Key System. Components to such an exhibit may include photographs, drawings, videotape, models, oral histories, and salvaged components from the terminal.	During preliminary engineering and final design TJPA will produce and deliver to the Oakland Museum agreed-upon materials for such an exhibit		
CH 08	Assist the Oakland Museum by contributing to the cost of preparing and presenting the exhibit, as well as the costs of an exhibit catalog or related museum publication in conjunction with the exhibit, in a manner and to the extent agreed upon by TJPA, Department, and the Oakland Museum of California. TJPA has established a maximum budget of \$50,000.00 for the Oakland Museum of California exhibit and the interpretive video.	During preliminary engineering and final design TJPA will work with Oakland Museum and assist in the preparation of an exhibit and an interpretive video if consultation results in agreement between TJPA and Oakland Museum prior to demolition of the existing Transbay Terminal		

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
CH 09	<p>Consult, prior to the start of any work that would have an adverse effect on historic properties, with the California SHPO to ensure that the Transbay Terminal has been adequately recorded by past efforts. Collectively, these past studies, which include Department's past recordation of a series of remodeling and seismic retrofit projects that have occurred since 1993, may adequately document the building, making Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) documentation unnecessary. In addition, TJPA, assisted by Department, will seek to obtain the original drawings of the Transbay Transit Terminal by the architect Timothy Pflueger. If the drawings cannot be copied and included in the documentation, then TJPA will consult with SHPO regarding recordation level and specifications for completing additional documentation. When the SHPO finds the documentation to be adequate, then TJPA will compile this documentation into a comprehensive record. Submit all documentation to SHPO, and Department Headquarters Library, with xerographic copies to the History Center at the San Francisco Public Library, San Francisco Architectural Heritage, the Oakland History Room of the Oakland Public Library, the Oakland Museum of California, the Western Railway Museum, and Department District 4 Office.</p>	<p>During preliminary engineering and final design</p> <p>TJPA will consult with the SHPO regarding adequacy of prior recordation efforts. TJPA will work with Department to seek original drawings of the Transbay Transit Terminal. If drawings cannot be copied and included in documentation, TJPA will consult with SHPO regarding recordation level and specifications for completing additional documentation TJPA will ensure that these records are accepted by SHPO prior to demolition of the Transbay Transit Terminal</p>		
CH 10	<p>Develop and implement measures, in consultation with the owners of historic properties immediately adjoining the construction sites, to protect the contributing elements of the Second and Howard Streets Historic District and the Rincon Point/South Beach Historic Warehouse Industrial District from damage by any aspect of the Undertaking. Such measures will include, but are not necessarily limited to those identified in this Mitigation Monitoring Plan.</p>	<p>During preliminary engineering, final design, and construction</p> <p>As part of its overall outreach efforts, TJPA will contact owners of record of historic properties that will be affected (but that will not be acquired and demolished) by the Project. TJPA will provide and review this mitigation monitoring program with the owners via</p>		

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
		<p>correspondence and/or public and face-to-face meetings. TJPA will coordinate these efforts with the CCSF Planning Department</p>		
CH 11	<p>Assure, prior to the start of any work that would have an adverse effect on historic properties, that the three historic properties to be demolished are recorded in accordance with HABS/HAER standards, as appropriate. These buildings are:</p> <p>191 Second Street, (APN: 3721-022),</p> <p>580-586 Howard Street, (APN: 3721-092 through 3721-106), and</p> <p>165-173 Second Street, (APN: 3721-025)</p> <p>All documentation will be submitted to SHPO, with xerographic copies to the History Center at the San Francisco Public Library, San Francisco Architectural Heritage, and the Oakland History Room of the Oakland Public Library. TJPA will ensure that these HABS/HAER records are accepted by NPS prior to carrying out any other treatment.</p>	<p>During preliminary engineering and final design</p> <p>TJPA shall prepare recordation documents in accordance with HABS/HAER standards. TJPA will coordinate these efforts with the CCSF Planning Department. TJPA shall contract the HABS/HAER branch of the National Park Service to obtain guidance regarding level of recordation and specifications for completing the documentation</p>		

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
CH 12	Repair, in accordance with the Secretary of the Interior’s Standards for Rehabilitation, of any damage to contributing elements of the Second and Howard Streets Historic District and the Rincon Point/South Beach Historic Warehouse Industrial District resulting from the Undertaking. If repair of inadvertent damage is necessary, TJPA will submit plans to the SHPO for review and comment to ensure conformance with the Secretary of the Interior’s Standards for Rehabilitation.	<p>Prior to, during, and following construction</p> <p>Condition of contributing properties will be photographed prior to the start of the Project to establish the baseline condition for assessing damage. TJPA will coordinate these efforts with the CCSF Planning Department. To record existing conditions, TJPA will consult with property owner(s) about the appropriate level of photographic documentation of building interiors and exteriors. A copy of this photographic documentation will be provided to the property owner(s), and will be retained on file by TJPA</p>		
CH 15	In consultation with FTA and SHPO, re-evaluate the Bay Bridge, a property listed on the NRHP, and determine whether the National Register nomination should be amended or whether the bridge no longer qualifies for listing and should be removed from the National Register.	<p>Within 180 days after FTA determines that the Project has been completed</p> <p>As appropriate, TJPA will prepare and submit to the FTA and SHPO either an amended nomination or petition for removal, to be processed according to the procedures set forth in 36 CFR Part 60 (60.14 and 60.15)</p>		

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
CH 16	In consultation with FTA and SHPO, re-evaluate the Second and Howard Streets Historic District and determine whether the National Register nomination should be amended or whether the district no longer qualifies for listing and should be removed from the National Register.	<p>Within 180 days after FTA determines that the Project has been completed</p> <p>As appropriate, TJPA will prepare and submit to the FTA and SHPO either an amended nomination or petition for removal, to be processed according to the procedures set forth in 36 CFR Part 60 (60.14 and 60.15). TJPA will coordinate these efforts with the CCSF Planning Department</p>		
GC 03	Install level deck. Install decking at the cut-and-cover sections to be flush with the existing street or sidewalk levels.	<p>During construction</p> <p>TJPA to design flush decking during preliminary and final design, include in construction documents and insure installation during construction</p>		
HMC 07	Design dewatering systems to minimize downward migration of contaminants that can result from lowering the water table if necessary based on environmental conditions. As necessary, shallow soils with detected contamination would be dewatered first using wells screened only in those soils. Dewatering of deeper soils would then be performed using wells screened only in the zone to be dewatered. Dewatering wells would be installed using drilling methods that prohibit shallow contaminated soils from being carried deeper into the boreholes.	<p>During final design and construction</p> <p>Include requirements in contract documents and monitor construction activities to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW</p>		

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
HMC 09	Review existing asbestos surveys, abatement reports, and supplemental asbestos surveys, as warranted. Perform and asbestos survey for buildings to be demolished, as required. Asbestos-containing building materials (ACM) will require abatement prior to building demolition. Removal and disposal of ACM will be performed in accordance with applicable local, state, and federal regulations.	<p>During preliminary engineering, final design and construction phases</p> <p>Determine extent of ACM throughout project site. Perform abatement work prior to demolition. Include all regulatory requirements in contract documents and inspect construction to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH. Obtain all applicable permits</p>		
HMC 10	Perform a lead-based paint survey for buildings to be demolished to determine areas where lead-based paint is present and the possible need for abatement prior to demolition.	<p>During preliminary engineering prior to building demolitions</p> <p>Determine extent of lead contamination throughout project site. Perform abatement work prior to demolition if necessary. Include all regulatory requirements in contract documents and inspect construction to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH. Obtain all applicable permits</p>		

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
HWO 01	Construct and operate any Caltrain fueling facility in compliance with local, state and Federal regulations regarding handling and storage of hazardous materials.	<p>During construction and operation</p> <p>Review design and contract documents to insure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations. Inspect operations, and comply with all permitting and reporting requirements</p>		
HWO 02	Equip diesel fuel pumps with emergency shut-off valves and, in compliance with U.S. EPA requirements, fuel Underground Storage Tanks (USTs) would be equipped with leak detection and monitoring systems.	<p>During operation</p> <p>Review design and contract documents to insure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations. Inspect operations, and comply with all permitting and reporting requirements</p>		
HWO 03	Employ the use of secondary containment systems for any aboveground storage tanks.	<p>During operations</p> <p>Secondary containment to be included in facility design and construction and maintained during operations</p>		
HWO 04	Store cleaning solvents in 55-gallon drums, or other appropriate containers, within a bermed area to provide secondary containment.	<p>During operations</p> <p>Inspect operations, and comply with all permitting and reporting requirements</p>		

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
HWO 05	Slope paved surfaces within the fueling facility and the solvent storage area to a sump where any spilled liquids could be recovered for proper disposal.	During construction and operations Sloped paved surfaces and sump to be included in facility design		
HWO 06	Follow California OSHA and local standards for fire protection and prevention for the handling and storage of fuels and solvents.	During operation Review design and contract documents to insure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations. Inspect operations, and comply with all permitting and reporting requirements		
HWO 07	Prepare a Hazardous Materials Management/Business Plan and file with the CCSF Department of Public Health.	During final design JPB to prepare and TJPA to file Hazardous Materials Management/ Business Plan with CCSF Department of Public Health (DPH)		
PC 01	Complete a pre-construction building structural survey to determine the integrity of existing buildings adjacent to and over the proposed Caltrain Downtown Extension. Use this survey to finalize detailed construction techniques along the alignment and as the baseline for monitoring construction impacts during and following construction.	Prior to preliminary engineering, final design and construction TJPA to perform building surveys during preliminary engineering. TJPA to include measures to protect existing buildings in final design and construction documents TJPA to review design submittals, contract documents and construction activities to insure		

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
		implementation		
PC 02	Contact and interview individual businesses along the Downtown Extension alignment to gather information and develop an understanding of how these businesses carry out their work. This survey will identify business usage, delivery/shipping patterns, and critical times of the day or year for business activities. Use this information to assist in: (a) the identification of possible techniques during construction to maintain critical business activities, (b) analyze alternative access routes for customers and deliveries to businesses, (c) develop traffic control and detour plans, and (d) finalize construction practices.	During preliminary engineering, final design and construction TJPA to perform business activity survey during preliminary engineering. TJPA to include measures to maintain business activities and access in final design and construction documents TJPA to review design submittals, contract documents and construction activities to insure implementation		
PC 03	Complete detailed geotechnical investigation, including additional sampling (drilling and core samples) and analyses of subsurface soil/rock conditions. Use this information to design the excavation and its support system to be used in the retained cut, cut-and-cover, and tunnel portions of the Caltrain Downtown Extension.	During preliminary engineering and final design TJPA to obtain necessary permits from CCSF prior to performing drilling. TJPA to perform detailed geotechnical investigation during preliminary engineering TJPA to review design submittals, contract documents and construction activities to insure proper utilization of information obtained during		

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
		investigation		
PC 06	Implement an information phone line to provide community members and businesses the opportunity to express their views regarding construction. Review calls received and, as appropriate, forward the message to the necessary party for action (e.g., utility company, fire department, the Resident Engineer in charge of construction operations). Information available from the telephone line will include current project schedule, dates for upcoming community meetings, notice of construction impacts, individual problem solving, construction complaints and general information. Phone service would be provided in English, Cantonese, and Spanish and would be operated on a 24-hour basis.	During construction TJPA to establish informational "Hot Line" during final design and continue during construction		
Ped 01	Use future construction or redevelopment as opportunities to increase building set-backs thereby increasing sidewalk widths. Particular areas where such widening is most needed include: The southeast corner of Fremont and Mission Streets, The northeast corner of First and Mission Streets, The north side of Mission Street between First and Fremont, and Sidewalks south of Howard Street along Folsom, First, Fremont, and Beale that are less than 10 feet wide.	During future project reviews in Transbay Terminal area TJPA will forward guidance to Agency, CCSF Planning Department and DPW		
Ped 02	Eliminate or reduce sidewalk street furniture such as newspaper boxes and magazine racks in the immediate Transbay Terminal area on corners.	Prior to opening of new Transbay Terminal		

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
		TJPA will forward guidance to Agency, CCSF Planning Department and DPW		
Ped 03	Retime traffic light signalization. This could improve pedestrian levels of service at each of the intersections studies that fall into LOS F.	Prior to opening of new Transbay Terminal TJPA will forward guidance to CCSF DPT		
Ped 04	Provide crosswalk signalization at intersections where they do not exist already, such as Folsom and Beale Streets.	Prior to opening of new Transbay Terminal TJPA will forward guidance to CCSF DPT		
Ped 05	Provide cross-walk count-down signals at intersections and cross-walks immediately surrounding the new Transbay Terminal.	Prior to opening of new Transbay Terminal TJPA will forward guidance to CCSF DPT		
Ped 06	Ensure that Transbay Terminal design increases corner and sidewalk widths at the four intersections immediately surrounding the Transbay Terminal.	During Transbay Terminal design phase TJPA and CCSF DPW, where applicable, to include sidewalk width expansion during preliminary and final design of new Transbay Terminal		
Ped 07	Provide lights within crosswalks to warn when pedestrians are present in the crosswalk, such as at the cross-walk associated with the mid-block bus loading area.	Prior to opening of new Transbay Terminal TJPA to work with CCSF DPT to install cross-walk warnings		
SG 01	Monitor adjacent buildings for movement and, if movement is detected, take immediate action to control the movement.	During construction TJPA to include provisions in contract documents requiring such monitoring and corrective measures and inspect contractors' activities to insure		

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
		compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW		
SG 02	Apply geotechnical and structural engineering principles and conventional construction techniques similar to the design and construction of high-rise buildings and tunnels throughout the downtown area. Apply design measures and utilize pile supported foundations to mitigate potential settlement of the surface and underground stations.	During preliminary engineering and final design TJPA to review design and contract documents to insure implementation. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW		
SG 03	Design and construct structural components of the project to resist strong ground motions approximating the maximum anticipated earthquake (0.5 g). The cut-and-cover portions will require pile supports to minimize non-seismic settlement in soft compressible sediments (Bay Mud). The underground Caltrain station at Fourth and Townsend will require pile-supported foundations due to the presence of underlying soft sediments.	During preliminary engineering, final design and construction TJPA to design structural components to meet seismic standards during preliminary engineering and final design. Review design, contract documents and construction activities to insure implementation. Where applicable, coordinate with JPB and CCSF departments with jurisdiction over activities, such as DBI and DPW		

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
SG 04	<p>Underpin existing building, where deemed necessary, to protect existing structures from potential damage that could result from excessive ground movements during construction. Design the tunneling and excavation procedures (and construction sequence), and design of the temporary support system with the objective of controlling ground deformations within small enough levels to avoid damage to adjacent structures. Where the risk of damage to adjacent structures is too great, special measures will be implemented such as: (1) underpinning, (2) ground improvement, and/or (3) strengthening of existing structures to mitigate the risks.</p> <p>Underpinning may include internal strengthening of the superstructure, bracing, reinforcing existing foundations, or replacing existing foundations with deep foundations embedded outside the tunnel zone of influence. Alternatives, in lieu of underpinning, involve strengthening the rock between the building and crown of tunnel. Grouting in combination with inclined pin piles can be used not only to strengthen the rock but make the rock mass over the tunnel act as a rigid beam, allowing construction of tunnels with no adverse effects on the buildings supported on shallow foundations over the tunnel.</p>	<p>During preliminary engineering, final design and construction</p> <p>TJPA to design tunneling, excavation procedures, underpinning, strengthening existing structures or ground improvement to protect existing structures from damage Include provisions in contract documents requiring contractors to implement measures during construction. Monitor construction activities to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW</p>		
SG 05	<p>TJPA shall assure proper design and construction of pile supported foundations for structures to control potential settlement of the surface. Stability of excavations and resultant impacts on adjacent structures can be controlled within tolerable limits by proper design and implementation of the excavation shoring systems.</p>	<p>During preliminary engineering, final design and construction</p> <p>TJPA to insure foundations and excavation shoring systems are designed and constructed to minimize and control settlement and impacts on adjacent structures. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW</p>		

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
VibC 01	Limit or prohibit use of construction techniques that create high vibration levels. At a minimum, processes such as pile driving would be prohibited at distances less than 250 feet from residences.	<p>During preliminary engineering, final design and construction</p> <p>TJPA to ensure preliminary design, final design and contract documents preclude use of pile driving equipment within 250 feet of residences. Construction management and inspection will monitor contractors' activities to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW.</p>		
VibC 02	Restrict procedures that contractors can use in vibration sensitive areas. (It is often possible to employ alternative techniques that create lower vibration levels. For example, unrestricted pile driving is one activity that has considerable potential for causing annoying vibration. Using the cast-in-drilled-hole piling method instead will eliminate most potential for vibration impact from the piling.)	<p>During preliminary engineering, final design and construction</p> <p>TJPA to establish construction vibration design standards during final design. Include provisions in contract documents and monitor contractors' activities to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW</p>		
VibC 03	Require vibration monitoring during vibration intensive activities.	<p>During construction</p> <p>TJPA to include provisions for vibration monitoring in construction contract documents or perform monitoring under a separate</p>		

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
		contract. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW		
VibC 04	Restrict the hours of vibration intensive activities such as pile driving to weekdays during daytime hours.	During design and construction TJPA to include provisions in contract documents and monitor contractors' activities to insure compliance		
VibC 05	Investigate alternative construction methods and practices to reduce the impacts in coordination with the construction contractor if resident annoyance from vibration becomes a problem.	During final design and during construction TJPA to include provisions in contract documents and monitor contractors' activities to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW		
VibC 06	Include specific limits, practices and monitoring and reporting procedures for the use of controlled detonation. Control and monitor use of controlled detonation to avoid damage to existing structures. Include specific limits, practices, and monitoring and reporting procedures within contract documents to ensure that such construction methods, if used, would not exceed safety criteria.	During final design and during construction TJPA to establish detailed limits, practices, and monitoring program for controlled detonation during final design. Include provisions in contract documents and monitor contractors' activities to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and		

Mitigation Measure Code	Mitigation Measure Description	Mitigation Schedule	Responsibility	Action
		DPW		
VibO 01	Use high-resilience track fasteners or a resiliently supported tie system for the Caltrain Downtown Extension for areas projected to exceed vibration criteria, including the following locations: (1) Live/Work Condos, 388 Townsend Street (Hubbell and Seventh), (2) San Francisco Residences on Bryant (Harrison Parking Lot Site), (3) Clock Tower Building, and Second Street High Rise and (4) new Marriott Courtyard (Marine Firefighter’s Union).	<p>During preliminary engineering, final design and construction</p> <p>TJPA to develop locations/use of resilience track fasteners or resiliently supported tie system during preliminary engineering and final design. Review construction documents and inspect installation. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as CCSF Department of Building Inspection (DBI) and DPW.</p>		

**UPDATED MITIGATION MEASURES PRESENTED AND ANALYZED
IN FINAL EIS/EIR AS ADOPTED**

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1. WIND

See discussion of wind impacts in Section 5.1.2 of the Final EIS/EIR. Mitigation measures include:

W 1 – The San Francisco Redevelopment Agency (Agency) shall consider potential wind effects of an individual project for the Redevelopment area. If necessary, perform wind tunnel testing in accordance with City Planning Code Section 148. If exceedences of the wind hazard criterion should occur for any individual project, require design modifications or other mitigation measures to mitigate or eliminate these exceedences. Tailor mitigation measures to the individual needs of each project. Examples of mitigation measures include articulation of building sides and softening of sharp building edges.

2. PROPERTY ACQUISITION/RELOCATION

See discussion of property acquisition impacts, Section 5.2 of the Final EIS/EIR. Mitigation measures include:

Prop 1 – TJPA shall apply federal Uniform Relocation Act (Public Law 91-646) and California Relocation Act (Chapter 16, Section 7260 et seq. of the Government Code) and related laws and regulations governing both land acquisition and relocation. All real property to be acquired will be appraised to determine its fair market value before an offer is made to each property owner. (Minimum relocation payments are detailed in the laws, and include moving and search payments for businesses.) Provide information, assistance, and payments to all displaced businesses in accordance with these laws and regulations.

3. SAFETY AND EMERGENCY SERVICES

See discussion of safety and emergency services, Section 5.4 of the Final EIS/EIR. Mitigation measures include:

Saf 1 – TJPA shall provide Project plans to the San Francisco Fire Department for its review to ensure that adequate life safety measures and emergency access are incorporated into the design and construction of Project facilities.

Saf 2 – TJPA shall prepare a life safety plan including the provision of on-site measures such as a fire command post at the Terminal, the Fire Department's 800-megahertz radio system and all necessary fire suppression equipment.

Saf 3 – TJPA shall prepare a risk analysis to accurately determine the number of personnel necessary to maintain an acceptable level of service at Project facilities.

4. NOISE – OPERATIONS

See discussion of noise impacts, Section 5.8 of the Final EIS/EIR. Mitigation measures include:

NoiO 1 – TJPA shall apply noise mitigation at the following locations adjacent to the bus storage facility:

- Provide sound insulation to mitigate noise impacts at the residences north of the AC Transit Facility at the corner of Perry and Third Street. At a minimum, apply sound insulation to the façade facing the bus storage facility (the south façade).
- Construct two noise barriers to mitigate noise impacts to Residences south of the AC Transit Facility along Stillman Street. The first noise barrier would be approximately 10-12 feet high and run along the southern edge of the AC Transit storage facility. The second noise barrier would be approximately 5-6 feet high and would be located on the portion of the ramp at the southwestern corner of the AC Transit facility. Treat the noise barriers with an absorptive material on the side facing the facility to minimize the potential for reflections off the underside of the freeway.
- Construct a noise barrier to mitigate noise impacts to residences south of the Golden Gate Transit Facility along Stillman Street. The barrier would be approximately 10-12 feet high and run along the southern and a portion of the eastern edge of the Golden Gate Transit storage facility. Treat the noise barriers with an absorptive material on the side facing the facility to minimize the potential for reflections off the underside of the freeway.

NoiO 2 – TJPA shall landscape the noise walls. Develop the actual design of the walls in cooperation with area residents.

NoiO 3 – TJPA shall construct noise walls prior to the development of the permanent bus facilities.

5. NOISE – CONSTRUCTION

See discussion of construction noise impacts, Section 5.21.10 of the Final EIS/EIR. Mitigation measures include:

NoiC 1 – TJPA shall comply with San Francisco noise ordinance. The noise ordinance includes specific limits on noise from construction. The basic requirements are:

- Maximum noise level from any piece of powered construction equipment is limited to 80 dBA at 100 ft. This translates to 86 dBA at 50 feet.
- Impact tools are exempted, although such equipment must be equipped with effective mufflers and shields. The noise control equipment on impact tools must be as recommended by the manufacturer and approved by the Director of Public Works.
- Construction activity is prohibited between 8 p.m. and 7 a.m. if it causes noise that exceeds the ambient noise plus 5 dBA.

The noise ordinance is enforced by the San Francisco DPW, which may waive some of the noise requirements to expedite the Project or minimize traffic impacts. For example, along Townsend Street where much of the land use is commercial, business owners may prefer nighttime

construction since it would reduce disruption during normal business hours. The DPW waivers usually allow most construction processes to continue until 2 a.m., although construction processes that involve impacts are rarely allowed to extend beyond 10 p.m. This category would include equipment used in demolition such as jackhammers and hoe rams, and pile driving. It is not anticipated that the construction documents would have specific limits on nighttime construction. There may be times when nighttime construction is desirable (e.g., in commercial districts where nighttime construction would be less disruptive to businesses in the area) or necessary to avoid unacceptable traffic disruptions. Since the construction would be subject to the requirements of the San Francisco noise regulations, in these cases, the contractor would need to work with the DPW to come up with an acceptable approach balancing interruption of the business and residential community, traffic disruptions, and reducing the total duration of the construction.

NoiC 2 – TJPA shall conduct noise monitoring. The purpose of monitoring is to ensure that contractors take all reasonable steps to minimize noise.

NoiC 3 – TJPA shall conduct inspections and noise testing of equipment. This measure will ensure that all equipment on the site is in good condition and effectively muffled.

NoiC 4 – TJPA shall implement an active community liaison program. This program would keep residents informed about construction plans so they can plan around periods of particularly high noise levels and would provide a conduit for residents to express any concerns or complaints about noise.

NoiC 5 – TJPA shall minimize use of vehicle backup alarms. Because backup alarms are designed to get people's attention, the sound can be very noticeable even when their sound level does not exceed the ambient, and it is common for backup alarms at construction sites to be major sources of noise complaints. A common approach to minimizing the use of backup alarms is to design the construction site with a circular flow pattern that minimizes backing up of trucks and other heavy equipment. Another approach to reducing the intrusion of backup alarms is to require all equipment on the site to be equipped with ambient sensitive alarms. With this type of alarm, the alarm sound is automatically adjusted based on the ambient noise. In nighttime hours when ambient noise is low, the backup alarm is adjusted down.

NoiC 6 – TJPA shall include noise control requirements in construction specifications. These should require the contractor to:

- Perform all construction in a manner to minimize noise. The contractor should be required to select construction processes and techniques that create the lowest noise levels. Examples are using predrilled piles instead of impact pile driving, mixing concrete offsite instead of onsite, and using hydraulic tools instead of pneumatic impact tools.
- Use equipment with effective mufflers. Diesel motors are often the major noise source on construction sites. Contractors should be required to employ equipment fitted with the most effective commercially available mufflers.

- Perform construction in a manner to maintain noise levels at noise sensitive land uses below specific limits.
- Perform noise monitoring to demonstrate compliance with the noise limits. Independent noise monitoring should be performed to check compliance in particularly sensitive areas.
- Minimize construction activities during evening, nighttime, weekend and holiday periods. Permits would be required before construction can be performed in noise sensitive areas during these periods.
- Select haul routes that minimize intrusion to residential areas. This is particularly important for the trench alternatives that will require hauling large quantities of excavation material to disposal sites.

Controlling noise in contractor work areas during nighttime hours is likely to require some mixture of the following approaches:

- Restrictions on noise producing activities during nighttime hours.
- Laying out the site to keep noise producing activities as far as possible from residences, to minimize the use of backup alarms, and to minimize truck activity and truck queuing near the residential areas.
- Use of procedures and equipment that produce lower noise levels than normal. For example, some manufacturers of construction equipment can supply special noise control kits with highly effective mufflers and other materials that substantially reduce noise emissions of equipment such as generators, tunnel ventilation equipment, and heavy diesel power equipment including mobile cranes and front-end loaders.
- Use of temporary barriers near noisy activities. By locating the barriers close enough to the noise source, it is possible to obtain substantial noise attenuation with barriers 10 to 12 feet high even though the residences are 30 to 40 feet higher than the construction site.
- Use of partial enclosures around noisy activities. It is sometimes necessary to construct shed-like structures or complete buildings to contain the noise from nighttime activities.

6. VIBRATION – OPERATIONS

See discussion of vibration impacts, Section 5.8.8 of the Final EIS/EIR. Mitigation measures include:

VibO 1 – TJPA shall use high-resilience track fasteners or a resiliently supported tie system for the Caltrain Downtown Extension for areas projected to exceed vibration criteria, including the following locations: (1) Live/Work Condos, 388 Townsend Street (Hubbell and Seventh), (2) San Francisco Residences on Bryant (Harrison Parking Lot Site), (3) Clock Tower Building, and Second Street High Rise and (4) new Marriott Courtyard (Marine Firefighter's Union).¹

¹ After mitigation, groundborne noise impact at 388 Townsend Street and vibration impact at the Clocktower Building would still exceed the FTA impact threshold by one decibel. This level of impact would not constitute a substantial adverse change requiring further mitigation, in terms of FTA guidance. The next level of vibration buffering that would be effective would be to install floating slab under the Caltrain alignment trackage for 600 to

7. VIBRATION – CONSTRUCTION

See discussion of construction vibration impacts, Section 5.21.10 of the Final EIS/EIR.

Mitigation measures include:

VibC 1 – TJPA shall limit or prohibit use of construction techniques that create high vibration levels. At a minimum, processes such as pile driving would be prohibited at distances less than 250 feet from residences.

VibC 2 – TJPA shall restrict procedures that contractors can use in vibration sensitive areas. (It is often possible to employ alternative techniques that create lower vibration levels. For example, unrestricted pile driving is one activity that has considerable potential for causing annoying vibration. Using the cast-in-drilled-hole piling method instead will eliminate most potential for vibration impact from the piling.)

VibC 3 – TJPA shall require vibration monitoring during vibration intensive activities.

VibC 4 – TJPA shall restrict the hours of vibration intensive activities such as pile driving to weekdays during daytime hours.

VibC 5 – TJPA shall investigate alternative construction methods and practices to reduce the impacts in coordination with the construction contractor if resident annoyance from vibration becomes a problem.

VibC 6 – TJPA shall include specific limits, practices and monitoring and reporting procedures for the use of controlled detonation. Control and monitor use of controlled detonation to avoid damage to existing structures. Include specific limits, practices, and monitoring and reporting procedures within contract documents to ensure that such construction methods, if used, would not exceed safety criteria.

8. SOILS/GEOLOGY

See discussion of geologic impacts in Section 5.9 and construction impacts and approaches in Sections 5.20 and 5.21.17 of the Final EIS/EIR. Mitigation measures include:

SG 1 – TJPA shall monitor adjacent buildings for movement and, if movement is detected, take immediate action to control the movement.

SG 2 – TJPA shall apply geotechnical and structural engineering principles and conventional construction techniques similar to the design and construction of high-rise buildings and tunnels

800 feet on either side of each building (at a construction cost of \$1,000 per linear foot), which would add installed costs approaching one million dollars or even more per building. Such high costs would not be a prudent and reasonable expenditure to eliminate the last one decibel of impact at these two sites. Per FTA guidelines, “to be feasible, the measure, or combination of measures, must be capable of providing a significant reduction of the vibration levels, at least 5 dB, while being reasonable from the standpoint of the added cost.”

throughout the downtown area. Apply design measures and utilize pile-supported foundations to mitigate potential settlement of the surface and underground stations.

SG 3 – TJPA shall design and construct structural components of the Project to resist strong ground motions approximating the maximum anticipated earthquake (0.5g). The cut-and-cover portions will require pile supports to minimize non-seismic settlement in soft compressible sediments (Bay Mud). The underground Caltrain station at Fourth and Townsend will require pile-supported foundations due to the presence of underlying soft sediments.

SG 4 – TJPA shall underpin existing building, where deemed necessary, to protect existing structures from potential damage that could result from excessive ground movements during construction. Design the tunneling and excavation procedures (and construction sequence), and design of the temporary support system with the objective of controlling ground deformations within small enough levels to avoid damage to adjacent structures. Where the risk of damage to adjacent structures is too great, special measures will be implemented such as: (1) underpinning, (2) ground improvement, and/or (3) strengthening of existing structures to mitigate the risks.

As part of the initial studies performed in 1996, preliminary plans were developed to protect/strengthen existing structures to mitigate the risk of adverse impacts of tunneling on existing structures. Underpinning, if it is deemed necessary, is one of the options for mitigating adverse effects of tunneling on the existing buildings. Underpinning involves modification of the foundations of the building so that the superstructure loads can be transferred beyond the zone of influence of tunneling. Underpinning may include internal strengthening of the superstructure, bracing, reinforcing the existing foundations, or replacing existing foundations with deep foundations embedded outside the tunnel zone of influence. Alternatives, in lieu of underpinning, involve strengthening the rock between the building and the crown of the tunnel. Grouting in combination with inclined pin piles can be used not only to strengthen the rock but make the rock mass over the tunnel act as a rigid beam, allowing construction of tunnels with no adverse effects on the buildings supported on shallow foundations over the tunnel.

Preliminary plans for underpinning have been developed that allow cost estimates to be made for underpinning. During the detailed design phase of the Project, underpinning plans will be developed specific to each of the buildings that may require it. It is not necessary at this stage of the Project to develop detailed underpinning plans.

These issues will be addressed on a case by case basis, along the alignment, during the detailed design phase of the Project. The methodology that is proposed for the Caltrain Downtown Extension, i.e., to design the support system to control ground deformations within tolerances and selectively strengthen structures that may be too weak to resist even small deformations, was successfully used for the Muni Metro Turnback project, and are deemed to be effective for the Caltrain Downtown Extension Project as well.

SG 5 – TJPA shall assure proper design and construction of pile-supported foundations for structures to control potential settlement of the surface. Stability of excavations and resultant impacts on adjacent structures can be controlled within tolerable limits by proper design and implementation of the excavation shoring systems.

9. UTILITIES

See discussion of utility impacts, Sections 5.12 and 5.21.12 of the Final EIS/EIR. Mitigation measures include:

Util 1 – TJPA shall coordinate with utility providers during preliminary engineering, continuing through final design and construction. Utilities would be avoided, relocated, and/or supported as necessary during construction activities to prevent damage to utility systems and to minimize disruption and degradation of utility service to local customers.

10. CULTURAL AND HISTORIC RESOURCES

See discussion of cultural and historic resources impacts, Section 5.14 of the Final EIS/EIR. Mitigation measures include:

CH 1 – Comply with the provision of the signed Memorandum of Agreement (MOA) between the Federal Transit Administration (FTA), the State Historic Preservation Officer (SHPO), and the TJPA².

CH 2 – Professional Qualifications. Assure all activities regarding history, historic preservation, historic architecture, architectural history, historic and prehistoric archaeology are carried out by or under the direct supervision of persons meeting, at a minimum, the Secretary of the Interior's professional qualifications standards (48 FR 44738-9) (PQS) in these disciplines. Nothing in this stipulation may be interpreted to preclude any signatory or any agent or contractor thereof from using the properly supervised services or persons who do not meet the PQS.

Historic Preservation Standards. Assure all activities regarding history, historic preservation, historic architecture, architectural history, historic and prehistoric archaeology are carried out to reasonably conform to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716-44740) as well as to applicable standards and guidelines established by SHPO.

Curation and Curation Standards. Ensure that FTA and TJPA shall, to the extent permitted under sections 5097.98 and 5097.991.[sic] of the California Public Resources Code, materials and records resulting from any archaeological treatment or data recovery that may be carried out pursuant to this MOA, are curated in accordance with 36 CFR Part 79.

CH 3 – Integrate into the design of the new terminal a dedicated space for a permanent interpretive exhibit. The interpretive exhibit will include at a minimum, but is not necessarily limited to: plaques or markers, a mural or other depiction of the historic Transbay Transit Terminal (TTT), ramps, or Key System, or other interpretive material.

CH 4 – Consult with the State Department of Transportation (Department) regarding the availability of historical documentary materials for the creation of the permanent interpretive

² A copy of the Memorandum of Agreement is included as Appendix G of the Final EIS/EIR.

display of the history of the original TTT building and its association with the San Francisco-Oakland Bay Bridge. Department will assist TJPA in planning the scope and content of the proposed interpretive exhibit. Invite the Oakland Heritage Alliance, the San Francisco Architectural Heritage, the California State Railroad Museum, and the Western Railway Museum to participate in this consultation. While retaining responsibility for the development of the exhibit, TJPA will jointly consider the Department's and participating invitees' recommendations when finalizing the exhibit design. TJPA will produce, install, and maintain the exhibit.

CH 5 – Consult with the City of Oakland about its possible interest in having a similar interpretive exhibit in the East Bay. If agreement is reached prior to completion of final design of the Transbay Terminal, TJPA will provide and deliver exhibit materials to a venue that is mutually satisfactory to TJPA and the City of Oakland.

CH 6 – Identify, in consultation with Department, elements of the existing TTT that may be suitable for salvage and interpretive use by museums. Within two years following execution of this MOA by FTA and SHPO, TJPA will offer any elements identified as suitable for salvage and interpretive use to San Francisco Architectural Heritage, the California State Railroad Museum, Sacramento, the Western Railway Museum, the Oakland Museum, and any other interested parties. Remove any elements selected in a manner that minimizes damage and deliver with legal title to the recipient. Items not accepted by interested parties for salvage or interpretive use within the time frame specified herein will receive no further consideration.

CH 7 – Oakland Museum of California Exhibit – Consult with Department and the Oakland Museum about contributing to Department's exhibit and the production of an interpretive video at the Oakland Museum relating to the history and engineering of the major historic state bridges of the San Francisco Bay Area. TJPA will propose contributions to such an exhibit and video that would be related to the history of the TTT, bus ramp loop structures, and the Key System. Items contributed by TJPA to such an exhibit may include photographs, drawings, videotape, models, oral histories, and salvaged components from the TTT.

CH 08 – Assist the Oakland Museum by contributing up to \$50,000 toward the cost of preparing and presenting the exhibit and preparing an exhibit catalog or related museum publication in conjunction with the exhibit, in a manner and to the extent that is mutually satisfactory to TJPA, Department, and the Oakland Museum. A separate agreement will outline the negotiated financial contributions.

Work with the Oakland Museum and assist in the preparation of an exhibit and interpretive video if consultation results in agreement between TJPA and the Oakland Museum prior to demolition of the existing TTT.

CH 9 – Request that SHPO, prior to the start of any work that would have an adverse effect on components of the Bay Bridge that are historic properties, determine whether these components, including the TTT and associated ramps, have been adequately recorded in existing documents. If SHPO determines that, collectively, such documents, which include the Department's past recordation of a series of remodeling and seismic retrofit project that have occurred since 1993, adequately document the TTT and ramps, then no further documentation will be necessary.

Seek, with the assistance of the Department, to obtain the original drawings of the TTT by architect T. Pflueger.

If SHPO determines that existing documentation is adequate, compile such documentation into a comprehensive record. Components to be included in the review of past documentation are:

- 425 Mission Transbay Transit Terminal (APN 3719-003, 3720-001, 3721-006);
- Upper Deck San Francisco Approaches or North Connector, Bridge #34-116F;
- Upper Deck San Francisco Approaches or Center Ramps, Bridge #34-118L;
- San Francisco Approaches or Lower Deck On-Ramp, Bridge #34-118R;
- Transbay Terminal Loop ramp, Bridge #34-119Y; and
- Harrison Street over-crossing Bridge #34-120Y.

Consult further with SHPO, if SHPO determines that existing documentation does not constitute adequate recordation of the Bay Bridge components addressed hereunder. SHPO will determine what level and type of additional documentation is necessary.

Provide xerographic copies of this documentation to the SHPO and the Department Headquarters Library, upon a written determination by SHPO that all documentation prescribed hereunder is satisfactory, to the History Center at the San Francisco Public Library, San Francisco Architectural Heritage, the Oakland History Room of the Oakland Public Library, the Oakland Museum of California, the Western Railway Museum, and Department District 4 Office. Thereafter, TJPA may proceed with that aspect of the Project that will adversely affect the historic properties documented hereunder.

CH 10 – Within 180 days after FTA determines that the Project has been completed, TJPA, in consultation with FTA and SHPO, will re-evaluate the Bay Bridge, a property listed on the NRHP, and determine whether the National Register nomination should be amended or whether the bridge no longer qualifies for listing and should be removed from the National Register. As appropriate, TJPA will prepare and submit to the FTA and SHPO either an amended nomination or petition for removal, to be processed according to the procedures set forth in 36 CFR Part 60 (60.14 and 60.15).

CH 11 – Develop and implement measures, in consultation with the owners of historic properties immediately adjoining the construction sites, to protect the contributing elements of the Second and Howard Streets Historic District and the Rincon Point/South Beach Historic Warehouse Industrial District from damage by any aspect of the Project. Such measures will include, but are not necessarily limited to those identified in the MOA.

The protective measures herein stipulated will be developed and implemented by TJPA prior to the commencement of any aspect of the Project that could have an adverse effect on historic properties immediately adjoining the construction sites herein identified. In addition, TJPA will monitor the effectiveness of the protective measures herein stipulated and will supplement or modify these measures as and where necessary in order to ensure that they are effective. The historic properties covered by the terms of this paragraph are shown in the following table.

Affected Historic Properties During Construction					
Address/ Assessors Number	Parcel	NRHP Status	Contributing Element of	Const. Date	Type of Impact
589-591 Howard Street / 3736-098		1D	Second & Howard District & New Montgomery / Second Street	1906	Cut-and-cover construction nearby
163 Second Street / 3721-048		1D		1907	
166-78 Townsend Street / 3788-012		3D	Rincon Point/South Beach District & South End District	1910 [1] 1988 [2]	Cut-and-cover construction nearby. Need construction easement
640 Second Street / 3788-002		252	Rincon Point/South Beach District & South End District	1926	Tunnel under or near property
650 Second Street / 3788-049 through 3788- 073		252		1922	
670-680 Second Street / 3788-043, 3788-044		252 (670), 3D (680)		1913	
301-321 Brannan Street / 3788-037		3D		1909	
130 Townsend Street / 3788-008		3D		1910 [1] 1895-6 [2]	
136 Townsend Street / 3788-009		3D		1902 [1] 1913 [2]	
144-46 Townsend Street / 3788-009A		3D		1922	
148-54 Townsend Street / 3788-010		3D		1922	
162-164 Townsend Street / 3788-081		3D		1919	
<p>Notes: National Register Status Codes are as follows:</p> <p>1 Listed on the NRHP</p> <p>2S1 Determined eligible for listing by the Keeper of the Register</p> <p>2S2 Determined eligible for listing by the consensus of the SHPO and federal agency</p> <p>1D Listed on the National Register as a contributor to a district or multi-resource property</p> <p>2D2 Determined eligible as a contributor by consensus determination</p> <p>3D Appears eligible as a contributor to a fully documented district</p> <p>[1] Caltrans, 1983, [2] Corbett and Bradley, 1996</p> <p>Source: JRP Historical Consulting, Parsons Transportation Group, 2001</p>					

CH 12 – TJPA will take the effect of the Project on the three historic properties listed below into account by recording these properties in accordance with the terms herein set forth. These buildings are:

- 191 2nd Street, (APN: 3721-022), and
- 580-586 Howard Street, (APN: 3721-092 through 3721-106), and
- 165-173 2nd Street, (APN: 3721-025).

Prior to taking any action that could adversely affect these properties, consult SHPO and SHPO will determine the type and level of recordation that is necessary for these properties. Upon a written determination by SHPO that all documentation prescribed hereunder is complete and satisfactory, submit a copy of this documentation to SHPO, with xerographic copies to the History Center at the San Francisco Public Library, San Francisco Architectural Heritage, and the Oakland History Room of the Oakland Public Library. Thereafter, proceed with that aspect of the Project that will adversely affect the historic properties documented hereunder.

If SHPO does not respond within 45 days of receipt of each submittal of documentation prescribed herein, assume that SHPO has determined that said documentation is adequate and may proceed with that aspect of the Project that will adversely affect the historic properties documented hereunder.

CH 13 – Repair, in accordance with the Secretary of the Interior’s Standards for Rehabilitation, any damage to contributing elements of the Second and Howard Streets Historic District and the Rincon Point/South Beach Historic Warehouse Industrial District resulting from the Project.

Photograph the condition of the contributing elements prior to the start of the Project to establish the baseline condition for assessing damage. Consult with property owner(s) about the appropriate level of photographic documentation of building interiors and exteriors. Provide a copy of this photographic documentation to the property owner(s), and retain on file.

Submit repair plans and specifications to SHPO for review and comment, if repair of inadvertent damage resulting from the Project is necessary, to ensure that the work conforms to the Secretary of the Interior’s Standards for Rehabilitation. Consult with SHPO to establish a mutually satisfactory time frame for the SHPO’s review. TJPA will carry out any repairs required hereunder in accordance with the comments of SHPO.

CH 14 – Within 180 days after FTA determines that the Project has been completed, TJPA, in consultation with FTA and SHPO, will re-evaluate the Second and Howard Streets Historic District and determine whether the National Register nomination should be amended or whether the district no longer qualifies for listing and should be removed from the National Register. As appropriate, TJPA will prepare and submit to the FTA and SHPO either an amended nomination or petition for removal, to be processed according to the procedures set forth in 36 CFR Part 60 (60.14 and 60.15).

CH 15 – Within 45 days following execution of MOA, consult with FTA, SHPO, JPB and CCSF to initiate the process of determining how archaeological properties that may be affected by the Project will be identified, whether and how the NRHP eligibility of such properties may be addressed, and whether and how the Project's effects, if any, on those archaeological properties

that may be considered historic properties for purposes of this MOA, may be taken into account. FTA and TJPA to invite Caltrans to participate in this consultation. Determine the time frame for this consultation with the consulting parties through consensus.

Consultation will at minimum be informed by, and take into account, the following documents: Attachment 6, "Standard Treatment of Archaeological Sites: Data Recovery Plan," of the "Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Office, and the California Department of Transportation regarding compliance with Section 106 of the National Historic Preservation Act, as it pertains to the Administration of the Federal Aid Highway Program in California;" "Archaeological Research Design and Treatment Plan for SF-480 Terminal Separation Rebuild (Praetzellis and Praetzellis, 1993)" and "The San Francisco-Oakland Bay Bridge, West Approach Replacement: Archaeological Research Design and Treatment Plan (Ziesing, 2000); "Revised Historical Archaeology Research Design for the Central Freeway Replacement Project (Thad M. Van Bueren, Mary Praetzellis, Adrian Praetzellis, Frank Lortie, Brian Ramos, Meg Scantlebury and Judy D. Tordoff)."

CH 16 – If the consulting parties agree that a treatment plan for archaeological properties should be prepared, prepare a Treatment Plan for archeological resources that provides for the identification, evaluation, and treatment of archaeological properties that may be affected by the Project and that conform to the requirements above of item CH13 1) and take into account the information contained in items CH13 2) and CH13 3) and conform to any other standards, documentation, or guidance that the consulting parties may specify

If the consulting parties agree that the Treatment Plan will address historic archaeological properties as well as prehistoric archaeological properties, ensure that appropriately qualified historians prepare a historic context(s) that will be used by an interdisciplinary team consisting at a minimum of historians and historic archaeologist.

The historic context will, at a minimum:

- 1) identify significant research themes and topics that relate to the historic period(s) addressed by the historic context(s)
- 2) determine what types of historic archaeological properties, if any, that may usefully and significantly contribute to research themes and topics deemed by the historic context(s) study to be important
- 3) identify the specific components and constituents (features, artifacts, etc., if any, of historic archaeological property types that can factually and directly, contribute data important to our understanding of significant historic research themes and topics
- 4) determine the amount (sample size, etc.) of archaeological excavation and related activity that is needed to provide the range and type of factual data that will contribute to our understanding of significant historic research themes and topics

Submit the draft Treatment Plan to the other consulting parties for review and comment. The consulting parties have 45 days from receipt of the draft Treatment Plan to comment in writing to FTA and TJPA. Failure of the consulting parties to respond within this time frame shall not preclude FTA and TJPA from finalizing the draft Treatment Plan to their satisfaction.

Before finalizing the draft Treatment Plan, FTA and TJPA to provide the consulting parties with written documentation indicating whether and how the draft Treatment Plan will be modified. Unless any consulting party objects to this documentation in writing to FTA and TJPA within 15 days following receipt, finalize the draft Treatment Plan as deemed appropriate by FTA and TJPA, and proceed to implement the final Treatment Plan.

If FTA and TJPA propose to modify the final Treatment Plan, they will notify the consulting parties concurrently in writing about the proposed modifications. The consulting parties will have 15 days from receipt of notification to comment in writing to FTA and TJPA. Failure of the consulting parties to respond within this time frame shall not preclude FTA and TJPA from modifying the final Treatment Plan to their satisfaction.

Before modifying the final Treatment Plan, FTA and TJPA will provide the consulting parties with written documentation indicating whether and how the final Treatment Plan will be modified. Unless any consulting party objects to this documentation in writing to FTA and TJPA within 15 days following receipt, modify the final Treatment Plan as appropriate, and proceed to implement the modified final Treatment Plan.

CH 17 - 1) Within two years after FTA, in consultation with TJPA, has determined that all fieldwork required by the Treatment Plan has been completed, prepare a draft technical report that documents the results of implementing the Treatment Plan and distributes this draft technical report to the other MOA signatories for review. The reviewing parties will be afforded 60 days following receipt of the draft technical report to submit any written comments to FTA and TJPA. Failure of the reviewing parties to respond within this time frame shall not preclude FTA from authorizing TJPA to revise the draft technical report as FTA and TJPA deem appropriate. FTA will provide the reviewing parties with a written documentation indicating modifications in accordance with any reviewing party comments. Unless the reviewing parties object to this documentation in writing to FTA and TJPA within 30 days following receipt, modify the draft technical report as FTA and TJPA deem appropriate. Thereafter, issue the technical report in final form and distribute this document in accordance with paragraph CH15 2).

2) Distribute copies of the final technical report documenting the results of the Treatment Plan implementation to the other signatory parties, to any consulting Native American Tribe if prehistoric, protohistoric or ethnographic period archaeological properties were located and addressed under the Treatment Plan, and to the appropriate California Historical Resources Information Survey (CHRIS) Regional Information Center, subject to the terms of Stipulation IV. E (CH19).

3) Prepare a written draft document that communicates in lay terms the results of Treatment Plan implementation to members of the interested public. Distribute this written draft document for review and comment concurrently with and in the same manner as that prescribed for the draft written technical report prescribed by paragraph C.1. of this stipulation. If the draft document

prescribed hereunder is a publication such as a report or brochure, then distribute such publication to the other signatory parties, to any consulting Native American Tribe as applicable, and to any other entity that the signatory parties and, as applicable, any consulting Native American Tribe, through consultation as appropriate, subject to the terms of Stipulation IV.E (CH 19).

4) Prepare a written annual report describing the status of its efforts to comply with the terms of Stipulations II – IV, inclusive, of this MOA. Prepare the annual report following the end of each fiscal year (July 1 to June 30) that this MOA is in effect and distributed it to all MOA signatories by July 30 of each year until FTA and the SHPO through consultation determine that the requirements of stipulations II – IV, inclusive of this MOA have been satisfactorily completed.

CH 18 - If the consulting parties agree that a plan for treatment of archaeological properties will not be prepared, then address any archaeological properties discovered during implementation of any aspect of the Project pursuant to 36 CFR 800.13(b)(3).

If the consulting parties agree that a plan for treatment of archaeological properties will not be prepared, then any archaeological properties discovered during implementation of any aspect of the Project will be addressed by TJPA pursuant to 36 CFR 800.13(b)(3).

CH 19 - The signatories to the MOA acknowledge that historic properties covered by this MOA are subject to the provisions of Section 304 of the National Historic Preservation Act of 1966, as amended, and Section 6254.10 of the California Government Code (Public Records Act), relating to the disclosure of archaeological site information and, having so acknowledged, will ensure that all actions and documentation prescribed by this Agreement are consistent with Section 304 of the National Historic Preservation Act of 1966, as amended, and Section 6254.10 of the California Government Code.

CH 20 - The parties to the MOA agree that Native American burials and related items discovered during implementation of the terms of the MOA and of the Project will be treated in accordance with the requirements of Section 7050.5(b) of the California Health and Safety Code. If, pursuant to Section 7050.5(c) of the California Health and Safety Code, the county coroner/medical examiner determines that the human remains are, or may be of Native American origin, then the discovery shall be treated in accordance with the provisions of Section 5097.98(a)-(d) of the California Public Resources Code. TJPA will ensure that to the extent permitted by applicable law and regulation, the views of any consulting Native American Tribe and the Most Likely Descendant(s) are taken into consideration when decisions are made about the disposition of other Native American archaeological materials and records.

11. HAZARDOUS MATERIALS/WASTE - OPERATIONS

See discussion of hazardous material and waste impacts, Section 5.15 of the Final EIS/EIR. Mitigation measures include:

HWO 1 – The Peninsula Corridor Joint Powers Board (JPB) – the agency responsible for operating Caltrain – shall construct and operate any fueling facility in compliance with local, state and Federal regulations regarding handling and storage of hazardous materials.

HWO 2 – JPB shall equip diesel fuel pumps with emergency shut-off valves and, in compliance with U.S. EPA requirements, fuel Underground Storage Tanks (USTs) would be equipped with leak detection and monitoring systems.

HWO 3 – JPB shall employ the use of secondary containment systems for any aboveground storage tanks.

HWO 4 – JPB shall store cleaning solvents in 55-gallon drums, or other appropriate containers, within a bermed area to provide secondary containment.

HWO 5 – JPB shall slope paved surfaces within the fueling facility and the solvent storage area to a sump where any spilled liquids could be recovered for proper disposal.

HWO 6 – JPB shall follow California OSHA and local standards for fire protection and prevention for the handling and storage of fuels and solvents.

HWO 7 – JPB shall prepare a Hazardous Materials Management/ Business Plan and file with the San Francisco Department of Public Health.

12. HAZARDOUS MATERIALS/WASTE – CONSTRUCTION

See discussion of hazardous material and waste impacts during construction, Section 5.21.15 of the Final EIS/EIR. Mitigation measures include:

HMC 1 – TJPA shall follow California OSHA and local standards for fire protection and prevention. Handling and storage of fuels and other flammable materials during construction

will conform to these requirements, which include appropriate storage of flammable liquids and prohibition of open flames within 50 feet of flammable storage areas.

HMC 2 – TJPA shall perform detailed investigations of the potential presence of contaminants in soil and groundwater prior to construction, using conventional drilling, sampling, and chemical testing methods. Based on the chemical test results, a mitigation plan will be developed to establish guidelines for the disposal of contaminated soil and discharge of contaminated dewatering effluent, and to generate data to address potential human health and safety issues that may arise as a result of contact with contaminated soil or groundwater during construction. The investigation and mitigation plan will follow the requirements of the City and County of San Francisco’s Article 22A in the appropriate areas along the alignment.

With construction projects of this nature and magnitude, there are typically two different management strategies that can be employed to address contaminated soil handling and disposal issues. Contaminated soil can be excavated and stockpiled at a centralized location and subsequently sampled and analyzed for disposal profiling purposes in accordance with the requirements of the candidate disposal landfill. Alternatively, soil profiling for disposal purposes can be done in-situ so when soil is excavated it is loaded directly on to trucks and hauled to the appropriate landfill facility for disposal based on the in-situ profiling results. A project of this nature could also combine both strategies.

HMC 3 – TJPA shall cover with plastic sheeting soils removed during excavation and grading activities that remain at a centralized location for an extended period of time to prevent the generation of fugitive dust emissions that migrate offsite.

HMC 4 – TJPA shall use a licensed waste hauler, applying appropriate manifests or bill of lading procedures, as required to haul soil for disposal at a landfill or recycling facility.

HMC 5 – TJPA shall use chemical test results for groundwater samples along the alignment to obtain a Batch Discharge Permit under Article 4.1 of the San Francisco Department of Public Works as well as to evaluate requirements for pretreatment prior to discharge to the sanitary sewer. Effluent produced during the dewatering of excavations will be collected in onsite storage tanks and periodically tested, as required under discharge permit requirements, for potential contamination to confirm the need for any treatment prior to discharge. If required, treatment may include:

- Settling to allow particulate matter (total suspended solids) to settle out of the effluent in order to reduce the sediment load as well as reduce elevated metal and other contaminant concentrations that may be associated with suspended sediments; and/or
- Construction of a small-scale batch waste water treatment system to remove dissolved contaminants (mainly organic constituents such as petroleum hydrocarbons (gas, diesel, and oils), BTEX, and VOCs) from the dewatering effluent prior to discharge to the sanitary sewer. A treatment system would also likely employ the use of filtration to remove suspended solids.

HMC 6 – TJPA shall develop a detailed mitigation plan for the handling of potentially contaminated soil and groundwater prior to starting Project construction.

HMC 7 – TJPA shall design dewatering systems to minimize downward migration of contaminants that can result from lowering the water table if necessary based on environmental conditions. As necessary, shallow soils with detected contamination would be dewatered first using wells screened only in those soils. Dewatering of deeper soils would then be performed using wells screened only in the zone to be dewatered. Dewatering wells would be installed using drilling methods that prohibit shallow contaminated soils from being carried deeper into the boreholes.

HMC 8 – TJPA shall require that workers performing activities on site that may involve contact with contaminated soil or groundwater have appropriate health and safety training in accordance with 29 CFR 1910.120.

A Worker Health and Safety Plan (HSP) will be developed for the Project and monitored for the implementation of the plan on a day-to-day basis by a Certified Industrial Hygienist (CIH). The HSP will include provisions for:

- Conducting preliminary site investigations and analysis of potential job hazards;
- Personnel protective equipment;
- Safe work practices;
- Site control;
- Exposure monitoring;
- Decontamination procedures; and
- Emergency response actions.

The HSP will specify mitigation of potential worker and public exposure to airborne contaminant migration by incorporating dust suppression techniques in construction procedures. The plan will also specify mitigation of worker and environmental exposure to contaminant migration via surface water runoff pathways by implementation of comprehensive measures to control drainage from excavations and saturated materials excavated during construction.

HMC 9 – TJPA shall review existing asbestos surveys, abatement reports, and supplemental asbestos surveys, as warranted. Perform an asbestos survey for buildings to be demolished, as required. Asbestos-containing building materials (ACM) will require abatement prior to building demolition. Removal and disposal of ACM will be performed in accordance with applicable local, state, and federal regulations.

HMC 10 – TJPA shall perform a lead-based paint survey for buildings to be demolished to determine areas where lead-based paint is present and the possible need for abatement prior to demolition.

13. PEDESTRIANS

See discussion of pedestrian impacts, Section 5.19.6.1 of the Final EIS/EIR. Mitigation measures include:

Ped 1 – Agency and City shall use future construction or redevelopment as opportunities to increase building set-backs thereby increasing sidewalk widths. Particular areas where such widening is most needed include:

- Southeast corner Fremont/Mission Street;
- Northeast corner First/Mission Street;
- North side of Mission Street between First and Fremont; and
- Sidewalks south of Howard Street along Folsom, First, Fremont, and Beale that are less than 10 feet wide.

Ped 2 – Agency and City shall eliminate or reduce sidewalk street furniture such as newspaper boxes and magazine racks in the immediate Transbay Terminal area on corners.

Ped 3 – City shall retime traffic light signalization. This could improve pedestrian levels of service at each of the intersections studies that fall into LOS F.

Ped 4 – City shall provide crosswalk signalization at intersections where they do not exist already, such as Folsom and Beale streets.

Ped 5 – City shall provide cross-walk count-down signals at intersections and cross-walks immediately surrounding the new Transbay Terminal.

Ped 6 –TJPA shall ensure that Transbay Terminal design increases corner and sidewalk widths at the four intersections immediately surrounding the Transbay Terminal.

Ped 7 – TJPA shall provide lights within crosswalks to warn when pedestrians are present in the crosswalk, such as at the cross-walk associated with the mid-block bus loading area.

14. PRE-CONSTRUCTION ACTIVITIES

See discussion of construction impacts, Section 5.20.1 of the Final EIS/EIR. Mitigation measures include:

PC 1 – TJPA shall complete a pre-construction building structural survey to determine the integrity of existing buildings adjacent to and over the proposed Caltrain Downtown Extension. Use this survey to finalize detailed construction techniques along the alignment and as the baseline for monitoring construction impacts during and following construction.

PC 2 – TJPA shall contact and interview individual businesses along the Caltrain Extension alignment to gather information and develop an understanding of how these businesses carry out

their work. This survey will identify business usage, delivery/shipping patterns, and critical times of the day or year for business activities. Use this information to assist in: (a) the identification of possible techniques during construction to maintain critical business activities, (b) analyze alternative access routes for customers and deliveries to businesses, (c) develop traffic control and detour plans, and (d) finalize construction practices.

PC 3 – TJPA shall complete detailed geotechnical investigation, including additional sampling (drilling and core samples) and analyses of subsurface soil/rock conditions. Use this information to design the excavation and its support system to be used in the retained cut, cut-and-cover, and tunnel portions of the Caltrain Downtown Extension.

PC 4 – TJPA shall establish community construction information/outreach program to provide on-going dialogue among the TJPA and the affected community regarding construction impacts and possible mitigation/solutions. Include dedicated personnel for an outreach office in the construction area to deal with construction coordination.

PC 5 – TJPA shall establish site and field offices located along the Caltrain Downtown Extension alignment. Field office staff, in conjunction with other staff, will:

- Provide the community and businesses with a physical location where information pertaining to construction can be exchanged,
- Enable TJPA and JPB to better understand community/business needs during the construction period,
- Allow TJPA and JPB to participate in local events in an effort to promote public awareness of the Project,
- Manage construction-related matters pertaining to the public,
- Notify property owners, residences, and businesses of major construction activities (e.g., utility relocation/disruption and milestones, re-routing of delivery trucks),
- Provide literature to the public and press,
- Promote and provide presentations on the Project via a Speakers Bureau,
- Respond to phone inquires,
- Coordinate business outreach programs,
- Schedule promotional displays, and
- Participate in community committees.

PC 6 – TJPA shall implement an information phone line to provide community members and businesses the opportunity to express their views regarding construction. Review calls received and, as appropriate, forward the message to the necessary party for action (e.g., utility company, fire department, the Resident Engineer in charge of construction operations). Information available from the telephone line will include current Project schedule, dates for upcoming community meetings, notice of construction impacts, individual problem solving, construction

complaints and general information. Phone service would be provided in English, Cantonese, and Spanish and would be operated on a 24-hour basis.

PC 7 – TJPA shall develop traffic management plans. Traffic management plans to maintain access to all businesses will be prepared for areas affected by surface or cut-and-cover construction. In addition, daily cleaning of work areas would be performed by contractors for the duration of the construction period. Provisions would be contained in construction contracts to require the maintenance of driveway access to businesses to the extent feasible.

15. GENERAL CONSTRUCTION MEASURES

See discussion of construction staging and methods and construction impacts, Sections 5.20 and 5.21 of the Final EIS/EIR. Mitigation measures include:

GC 1 – TJPA shall disseminate information to community in a timely manner regarding anticipated construction activities.

GC 2 – TJPA shall provide signage. Work with establishments affected by construction activities to develop appropriate signage for display that directs both pedestrian and vehicular traffic to businesses via alternate routes.

GC 3 – TJPA shall install level deck. Install decking at the cut-and-cover sections to be flush with the existing street or sidewalk levels.

GC 4 – TJPA shall provide for efficient sidewalk design and maintenance. Wherever feasible, maintain sidewalks at the existing width during construction. Where a sidewalk must be temporarily narrowed during construction (e.g., deck installation), restore it to its original width during the majority of construction period. (In some places this may require placing the temporary sidewalk on the deck.) Each sidewalk design should be of good quality and approved by the Resident Engineer prior to construction. Handicapped access will be maintained during construction where feasible.

GC 5 – TJPA shall provide construction site fencing of good quality, capable of supporting the accidental application of the weight of an adult without collapse or major deformation. Where covered walkways or other solid surface fencing is installed, establish a program to allow for art work (e.g., by local students) on the surface(s).

16. AIR EMISSIONS – CONSTRUCTION

See discussion of air emission impacts from construction, Section 5.21.9 of the Final EIS/EIR. The following mitigation measures are derived from the "basic control measures" and the "enhanced control measures" recommended by the Bay Area Air Quality Management District (BAAQMD). Mitigation measures include:

AC 1 – TJPA shall assure that, as part of the contract provisions, the Project contractor is required to implement the measures below at all Project construction sites.

AC 2 – TJPA shall water all active construction areas at least twice daily. Ordinance 175-91, passed by the San Francisco Board of Supervisors on May 6, 1991, requires that non-potable water be used for dust control activities; therefore, the Project contractor would be required to obtain reclaimed water from the City's Clean Water Program or other appropriate sources.

AC 3 – TJPA shall cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.

AC 4 – TJPA shall pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.

AC 5 – TJPA shall sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.

AC 6 – TJPA shall sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.

AC 7 – TJPA shall install sandbags or other erosion control measures to prevent silt runoff to public roadways.

AC 8 – TJPA shall replant vegetation in disturbed areas as quickly as possible.

AC 9 – TJPA shall minimize use of on-site diesel construction equipment, particularly unnecessary idling.

AC 10 – TJPA shall shut off construction equipment to reduce idling when not in direct use.

AC 11 – TJPA shall, where feasible, replace diesel equipment with electrically powered machinery.

AC 12 – TJPA shall locate diesel engines, motors, or equipment as far away as possible from existing residential areas.

AC 13 – TJPA shall properly tune and maintain all diesel power equipment.

AC 14 – TJPA shall suspend grading operations during first and second stage smog alerts, and during high winds, i.e., greater than 25 miles per hour.

AC 15 – TJPA, shall, upon completion of the construction phase, buildings with visible signs of dirt and debris from the construction site shall be power washed and/or painted (given that permission is obtained from the property owner to gain access to and wash the property with no fee charged by the owner).

17. VISUAL/AESTHETICS – CONSTRUCTION

See discussion of visual/aesthetic impacts from construction, Section 5.21.16 of the Final EIS/EIR. Short-term visual changes as a result of construction activities are a common and accepted feature of the urban environment, and generally, mitigation is not required. Nonetheless, mitigation measures include:

VA 1 – TJPA shall assure that construction crews working at night direct any artificial lighting onto the work site in order to minimize "spill over" light or glare effects on adjacent areas.

VA 2 – TJPA shall assure that contractors make all efforts possible to minimize specific aesthetic and visual effects of construction identified by neighborhood businesses and residents.

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INTRODUCTION

Assembly Bill (AB) 3180 was enacted by the State Legislature to provide a mechanism to ensure that mitigation measures adopted through the California Environmental Quality Act ("CEQA") process are implemented in a timely manner and in accordance with the terms of project approval. Under AB 3180, local agencies are required to adopt a monitoring or reporting program designed to ensure compliance during project implementation.

The Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project Mitigation Monitoring and Reporting Program ("Mitigation Monitoring Program"), pursuant to AB 3180, CEQA Section 21081.6 and CEQA Guidelines Section 15091, provides the basic framework through which adopted mitigation measures will be monitored to ensure implementation.

ORGANIZATION

The Mitigation Monitoring Program is organized in a table format, keyed to each adopted Final EIS/EIR mitigation measure. For each measure, the table: (1) lists the mitigation measure; (2) specifies the party responsible for implementing the measure; (3) establishes a schedule for mitigation implementation; (4) assigns mitigation monitoring responsibility; and (5) establishes monitoring actions and a schedule for mitigation monitoring.

IMPLEMENTATION

While the Mitigation Monitoring Program generally outlines the actions, responsibilities and schedule for mitigation monitoring, it does not attempt to specify the detailed procedures to be used to verify implementation (e.g., interactions between the Project Sponsor – the Transbay Joint Powers Authority, the San Francisco Redevelopment Agency and City departments, use of private consultants, signed-off on plans, site inspections, etc.). Specific monitoring procedures are either contained in approval documents or will be developed at a later date, closer to the time the mitigation measures will actually be implemented.

The majority of the measures will be monitored primarily by the Transbay Joint Powers Authority (TJPA), in consultation with other City and non-City agencies, as part of the site permit, building permit processes or other report.

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MITIGATION MEASURE	Responsibility for Implementation	MITIGATION SCHEDULE	Monitoring Responsibility	Monitoring Actions/Schedule
Wind				
W 1 – Consider potential wind effects of an individual project for the Redevelopment area. If necessary, perform wind tunnel testing in accordance with City Planning Code Section 148. If exceedences of the wind hazard criterion should occur for any individual project, require design modifications or other mitigation measures to mitigate or eliminate these exceedences. Tailor mitigation measures to the individual needs of each project. Examples of mitigation measures include articulation of building sides and softening of sharp building edges.	San Francisco Redevelopment Agency (Agency)	During environmental review process preceding approval of each individual project in Transbay Redevelopment Area	Agency	Apply project review procedures for wind when projects are developed by or proposed to Agency.
Property Acquisition/Relocation				
Prop 1 – Apply federal Uniform Relocation Act (Public Law 91 646) and California Relocation Act (Chapter 16, Section 7260 et seq., of the Government Code) and related laws and regulations governing both land acquisition and relocation. All real property to be acquired will be appraised to determine its fair market value before an offer is made to each property owner. (Minimum relocation payments are detailed in the laws, and include moving and search payments for businesses.) Provide information, assistance, and payments to all displaced businesses in accordance with these laws and regulations.	City and County of San Francisco (CCSF), Agency, and TJPA	Prior to and during property acquisition and relocation activities	TJPA	TJPA to report to Board on compliance during acquisition and relocation activities.
Safety and Emergency Services				
Saf 1 – Provide project plans to the San Francisco Fire Department for its review to ensure that adequate life safety measures and emergency access are incorporated into the design and construction of Project facilities	Transbay Joint Powers Authority (TJPA)	Prior to project facility permitting and during construction	TJPA	Project facility plans to be forwarded to CCSF Fire Department prior to permit issuance. Inspect installation during construction.

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MITIGATION MEASURE	Responsibility for Implementation	MITIGATION SCHEDULE	Monitoring Responsibility	Monitoring Actions/Schedule
Saf 2 – Prepare a life safety plan including the provision of on-site measures such as a fire command post at the Terminal, the Fire Department’s 800-megahertz radio system and all necessary fire suppression equipment	TJPA	Prior to project facility permitting	TJPA	TJPA to develop life safety plan during facility design phases and implement during testing and startup up phase.
Saf 3 – Prepare a risk analysis to accurately determine the number of personnel necessary to maintain an acceptable level of service at Project facilities.	TJPA	Prior to project facility permitting	TJPA	TJPA to develop risk analysis during facility design phase.
Noise – Operations				
NoiO 1 – Apply noise mitigation at the following locations adjacent to the bus storage facility:	TJPA	During construction	TJPA	TJPA to design detailed noise mitigation during preliminary and final design phases. TJPA engineering staff to inspect installation and/or construction of mitigation measures.
<ul style="list-style-type: none"> • Provide sound insulation to mitigate noise impacts at the residences north of the AC Transit Facility at the corner of Perry and Third Street. At a minimum, apply sound insulation to the façade facing the bus storage facility (the south façade). • Construct two noise barriers to mitigate noise impacts to residences south of the AC Transit Facility along Stillman Street. The first noise barrier would be approximately 10 to 12 feet high and run along the southern edge of the AC Transit storage facility. The second noise barrier would be approximately 5 to 6 feet high and would be located on the portion of the ramp at the southwestern corner of the AC Transit facility. Treat the noise barriers with an absorptive material on the side facing the facility to minimize the potential for reflections off the underside of the freeway. • Construct a noise barrier to mitigate noise impacts to residences south of the Golden Gate Transit Facility along 				

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Stillman Street. The barrier would be approximately 10 to 12 feet high and run along the southern and a portion of the eastern edge of the Golden Gate Transit storage facility. Treat the noise barriers with an absorptive material on the side facing the facility to minimize the potential for reflections off the underside of the freeway.				
NoiO 2 – Landscape the noise walls. Develop the actual design of the walls in cooperation with area residents.	TJPA	During preliminary and final design	TJPA	TJPA to work with area residents during design of noise walls.
NoiO 3 – Construct noise walls prior to the development of the permanent bus facilities.	TJPA	During schedule development, construction document preparation and construction	TJPA	TJPA to develop program schedule and contract documents to implement this construction sequencing requirement.
Noise – Construction				
<p>NoiC 1 – Comply with San Francisco noise ordinance. The noise ordinance includes specific limits on noise from construction. The basic requirements are:</p> <ul style="list-style-type: none"> • Maximum noise level from any piece of powered construction equipment is limited to 80 dBA at 100 feet. This translates to 86 dBA at 50 feet. • Impact tools are exempted, although such equipment must be equipped with effective mufflers and shields. The noise control equipment on impact tools must be as recommended by the manufacturer and approved by the Director of Public Works. 	TJPA	During preparation of construction contract documents and construction	TJPA	TJPA to work with CCSF Department of Public Works (DPW) regarding construction noise mitigation program.

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MITIGATION MEASURE	Responsibility for Implementation	Mitigation Schedule	Monitoring Responsibility	Monitoring Actions/Schedule
<ul style="list-style-type: none"> Construction activity is prohibited between 8 p.m. and 7 a.m. if it causes noise that exceeds the ambient noise plus 5 dBA <p>The noise ordinance is enforced by the San Francisco DPW, which may waive some of the noise requirements to expedite the project or minimize traffic impacts. For example, along Townsend Street where much of the land use is commercial, business owners may prefer nighttime construction since it would reduce disruption during normal business hours. The DPW waivers usually allow most construction processes to continue until 2 a.m., although construction processes that involve impacts are rarely allowed to extend beyond 10 p.m. This category would include equipment used in demolition such as jackhammers and hoe rams, and pile driving. It is not anticipated that the construction documents would have specific limits on nighttime construction. There may be times when nighttime construction is desirable (e.g., in commercial districts where nighttime construction would be less disruptive to businesses in the area) or necessary to avoid unacceptable traffic disruptions. Since the construction would be subject to the requirements of the San Francisco noise regulations, in these cases, the contractor would need to work with the DPW to come up with an acceptable approach balancing interruption of the business and residential community, traffic disruptions, and reducing the total duration of the construction.</p>				
NoiC 2 – Conduct noise monitoring. The purpose of monitoring is to ensure that contractors take all reasonable steps to minimize noise.	TJPA	During construction	TJPA	Monitoring data to be provided to CCSF DPW.
NoiC 3 – Conduct inspections and noise testing of equipment. This measure will ensure that all equipment on the site is in good condition and effectively muffled	TJPA	During construction	TJPA	Perform monitoring during construction.

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MITIGATION MEASURE	Responsibility for Implementation	Mitigation Schedule	Monitoring Responsibility	Monitoring Actions/Schedule
<p>NoiC 4 – Implement an active community liaison program. This program would keep residents informed about construction plans so they can plan around periods of particularly high noise levels and would provide a conduit for residents to express any concerns or complaints about noise.</p>	TJPA	During construction	TJPA	TJPA to develop and initiate community liaison program during final design prior to construction. Program will continue during construction.
<p>NoiC5 – Minimize use of vehicle backup alarms. Because backup alarms are designed to get people’s attention, the sound can be very noticeable even when their sound level does not exceed the ambient, and it is common for backup alarms at construction sites to be major sources of noise complaints. A common approach to minimizing the use of backup alarms is to design the construction site with a circular flow pattern that minimizes backing up of trucks and other heavy equipment. Another approach to reducing the intrusion of backup alarms is to require all equipment on the site to be equipped with ambient sensitive alarms. With this type of alarm, the alarm sound is automatically adjusted based on the ambient noise. In nighttime hours when ambient noise is low, the backup alarm is adjusted down.</p>	TJPA	During construction document preparation and construction	TJPA	Review contract specifications during final design and inspect construction.
<p>NoiC 6 – Include noise control requirements in construction specifications. These should require the contractor to</p> <ul style="list-style-type: none"> • Perform all construction in a manner to minimize noise. The contractor should be required to select construction processes and techniques that create the lowest noise levels. Examples are using predrilled piles instead of impact pile driving, mixing concrete offsite instead of onsite, and using hydraulic tools instead of pneumatic impact tools. 	TJPA	Final design and construction	TJPA	TJPA to develop detailed noise control requirements during preliminary engineering and final design. Ensure contractor obtains permits if necessary. Inspect construction activities for compliance and monitor noise levels. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such

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<ul style="list-style-type: none"> • Use equipment with effective mufflers. Diesel motors are often the major noise source on construction sites. Contractors should be required to employ equipment fitted with the most effective commercially available mufflers. • Perform construction in a manner to maintain noise levels at noise sensitive land uses below specific limits. • Perform noise monitoring to demonstrate compliance with the noise limits. Independent noise monitoring should be performed to check compliance in particularly sensitive areas. • Minimize construction activities during evening, nighttime, weekend and holiday periods. Permits would be required before construction can be performed in noise sensitive areas during these periods. • Select haul routes that minimize intrusion to residential areas. This is particularly important for the trench alternatives that will require hauling large quantities of excavation material to disposal sites. <p>Controlling noise in contractor work areas during nighttime hours is likely to require some mixture of the following approaches:</p> <ul style="list-style-type: none"> • Restrictions on noise producing activities during nighttime hours. • Laying out the site to keep noise producing activities as far as possible from residences, to minimize the use of backup alarms, and to minimize truck activity and truck queuing near the residential areas. • Use of procedures and equipment that produce lower noise 				CCSF Department of Parking and Traffic (DPT) and DPW.

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<p>levels than normal. For example, some manufacturers of construction equipment can supply special noise control kits with highly effective mufflers and other materials that substantially reduce noise emissions of equipment such as generators, tunnel ventilation equipment, and heavy diesel power equipment including mobile cranes and front-end loaders.</p> <ul style="list-style-type: none"> • Use of temporary barriers near noisy activities. By locating the barriers close enough to the noise source, it is possible to obtain substantial noise attenuation with barriers 10 to 12 feet high even though the residences are 30 to 40 feet higher than the construction site. • Use of partial enclosures around noisy activities. It is sometimes necessary to construct shed-like structures or complete buildings to contain the noise from nighttime activities. 				

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MITIGATION MEASURE	Responsibility for Implementation	Mitigation Schedule	Monitoring Responsibility	Monitoring Actions/Schedule
Vibration – Operations				
VibO1 – Use high-resilience track fasteners or a resiliently supported tie system for the Caltrain Downtown Extension for areas projected to exceed vibration criteria, including the following locations: (1) Live/Work condos, 388 Townsend Street (Hubbell and Seventh), (2) San Francisco Residences on Bryant (Harrison Parking Lot Site), (3) Clock Tower Building, and Second Street High Rise and (4) new Marriott Courtyard (Marine Firefighter’s Union).	TJPA	During preliminary engineering, final design and construction	TJPA	TJPA to develop locations/use of resilience track fasteners or resiliently supported tie system during preliminary engineering and final design. Review construction documents and inspect installation. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as CCSF Department of Building Inspection (DBI) and DPW.
Vibration – Construction				
VibC1 – Limit or prohibit use of construction techniques that create high vibration levels. At a minimum, processes such as pile driving would be prohibited at distances less than 250 feet from residences.	TJPA	During preliminary engineering, final design and construction	TJPA	TJPA to ensure preliminary design, final design and contract documents preclude use of pile driving equipment within 250 feet of residences. Construction management and inspection will monitor contractors’ activities to ensure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW.

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VibC 2 – Restrict procedures that contractors can use in vibration sensitive areas. (It is often possible to employ alternative techniques that create lower vibration levels. For example, unrestricted pile driving is one activity that has considerable potential for causing annoying vibration. Using the cast-in-drilled-hole piling method instead will eliminate most potential for vibration impact from the piling.)	TJPA	During preliminary engineering, final design and construction	TJPA	TJPA to establish construction vibration design standards during final design. Include provisions in contract documents and monitor contractors’ activities to ensure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW.
VibC 3 – Require vibration monitoring during vibration intensive activities.	TJPA	During construction	TJPA	TJPA to include provisions for vibration monitoring in construction contract documents or perform monitoring under a separate contract. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW.
VibC 4 – Restrict the hours of vibration intensive activities such as pile driving to weekdays during daytime hours.	TJPA	During design and construction	TJPA	TJPA to include provisions in contract documents and monitor contractors’ activities to ensure compliance.
VibC 5 – Investigate alternative construction methods and practices to reduce the impacts in coordination with the construction contractor if resident annoyance from vibration becomes a problem.	TJPA	During final design and during construction	TJPA	TJPA to include provisions in contract documents and monitor contractors’ activities to ensure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW.

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VibC 6 – Include specific limits, practices and monitoring and reporting procedures for the use of controlled detonation. Control and monitor use of controlled detonation to avoid damage to existing structures. Include specific limits, practices, and monitoring and reporting procedures within contract documents to ensure that such construction methods, if used, would not exceed safety criteria.	TJPA	During final design and during construction	TJPA	TJPA to establish detailed limits, practices, and monitoring program for controlled detonation during final design. Include provisions in contract documents and monitor contractors’ activities to ensure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW.
Soils/Geology				
SG 1 – Monitor adjacent buildings for movement, and if movement is detected, take immediate action to control the movement.	TJPA	During construction	TJPA	TJPA to include provisions in contract documents requiring such monitoring and corrective measures and inspect contractors’ activities to ensure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW.
SG 2 – Apply geotechnical and structural engineering principles and conventional construction techniques similar to the design and construction of high-rise buildings and tunnels throughout the downtown area. Apply design measures and utilize pile-supported foundations to mitigate potential settlement of the surface and underground stations.	TJPA	During preliminary engineering and final design	TJPA	TJPA to review design and contract documents to ensure implementation. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW.
SG 3 – Design and construct structural components of the project to resist strong ground motions approximating the maximum anticipated earthquake (0.5g). The cut-and-cover portions will require pile supports to minimize non-seismic settlement in soft compressible sediments (Bay Mud). The underground Caltrain station at Fourth and Townsend will require pile-supported foundations due to the presence of underlying soft sediments.	TJPA	During preliminary engineering, final design and construction	TJPA	TJPA to design structural components to meet seismic standards during preliminary engineering and final design. Review design, contract documents and construction activities to ensure implementation. Where applicable, coordinate with JPB and CCSF departments with jurisdiction

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				over activities, such as DBI and DPW.
<p>SG 4 – Underpin existing building, where deemed necessary, to protect existing structures from potential damage that could result from excessive ground movements during construction. Design the tunneling and excavation procedures (and construction sequence), and design of the temporary support system with the objective of controlling ground deformations within small enough levels to avoid damage to adjacent structures. Where the risk of damage to adjacent structures is too great, special measures will be implemented such as: (1) underpinning, (2) ground improvement, and/or (3) strengthening of existing structures to mitigate the risks.</p> <p>Underpinning may include internal strengthening of the superstructure, bracing, reinforcing existing foundations, or replacing existing foundations with deep foundations embedded outside the tunnel zone of influence. Alternatives, in lieu of underpinning, involve strengthening the rock between the building and crown of tunnel. Grouting in combination with inclined pin piles can be used not only to strengthen the rock, but also make the rock mass over the tunnel act as a rigid beam, allowing construction of tunnels with no adverse effects on the buildings supported on shallow foundations over the tunnel.</p>	TJPA	During preliminary engineering, final design and construction	TJPA	TJPA to design tunneling, excavation procedures, underpinning, strengthening existing structures or ground improvement to protect existing structures from damage Include provisions in contract documents requiring contractors to implement measures during construction. Monitor construction activities to ensure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW.

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SG 5 – TJPA shall assure proper design and construction of pile-supported foundations for structures to control potential settlement of the surface. Stability of excavations and resultant impacts on adjacent structures can be controlled within tolerable limits by proper design and implementation of the excavation shoring systems.	TJPA	During preliminary engineering, final design and construction	TJPA	TJPA to ensure foundations and excavation shoring systems are designed and constructed to minimize and control settlement and impacts on adjacent structures. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW.
Utilities				
Util 1 – Coordinate with utility providers during preliminary engineering, continuing through final design and construction. Utilities would be avoided, relocated, and/or supported as necessary during construction activities to prevent damage to utility systems and to minimize disruption and degradation of utility service to local customers.	TJPA	During preliminary engineering, final design and construction	TJPA	TJPA to identify utilities; design relocations or protection measures where required; and include requirements in contract documents. Monitor construction activities to ensure implementation of all required measures.
Cultural and Historic Resources				
CH 1 – Comply with the provision of the signed Memorandum of Agreement (MOA) between the Federal Transit Administration, the State Historic Preservation Officer, and the TJPA.	TJPA	During preliminary engineering, final design and construction	TJPA	TJPA will assure compliance with MOA provisions during preliminary engineering, final design and construction, as described below.

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<p>CH 2 – – <u>Professional Qualifications.</u> Assure all activities regarding history, historic preservation, historic architecture, architectural history, historic and prehistoric archaeology are carried out by or under the direct supervision of persons meeting, at a minimum, the Secretary of the Interior's professional qualifications standards (48 FR 44738-9) (PQS) in these disciplines. Nothing in this stipulation may be interpreted to preclude any signatory or any agent or contractor thereof from using the properly supervised services or persons who do not meet the PQS.</p> <p><u>Historic Preservation Standards.</u> Assure all activities regarding history, historic preservation, historic architecture, architectural history, historic and prehistoric archaeology are carried out to reasonably conform to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716-44740) as well as to applicable standards and guidelines established by SHPO.</p> <p><u>Curation and Curation Standards.</u> Ensure that FTA and TJPA shall, to the extent permitted under sections 5097.98 and 5097.991.[sic] of the California Public Resources Code, materials and records resulting from any archaeological treatment or data recovery that may be carried out pursuant to this MOA, are curated in accordance with 36 CFR Part 79.</p>	TJPA	During preliminary engineering, final design and construction	TJPA	Prior to initiation of design and construction activities, TJPA will require submission of and review qualifications of professionals performing the MOA activities to assure that Secretary of Interior standards are met.
<p>CH 3 – Integrate into the design of the new terminal a dedicated space for a permanent interpretive exhibit. The interpretive exhibit will include at a minimum, but is not necessarily limited to: plaques or markers, a mural or other depiction of the historic Transbay Transit Terminal (TTT), ramps, or Key System, or other interpretive material.</p>	TJPA	During preliminary engineering and final design	TJPA	TJPA will include space for interpretive exhibit in terminal during design. Review contract documents and construction submittals and activities to ensure implementation.

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<p>CH 4 – Consult with the State Department of Transportation (Department) regarding the availability of historical documentary materials for the creation of the permanent interpretive display of the history of the original TTT building and its association with the San Francisco- Oakland Bay Bridge. Department will assist TJPA in planning the scope and content of the proposed interpretive exhibit. Invite the Oakland Heritage Alliance, the San Francisco Architectural Heritage, the California State Railroad Museum, and the Western Railway Museum to participate in this consultation. While retaining responsibility for the development of the exhibit, TJPA will jointly consider the Department’s and participating invitees’ recommendations when finalizing the exhibit design. TJPA will produce, install, and maintain the exhibit.</p>	TJPA	During preliminary engineering and final design	TJPA	TJPA will consult with Department regarding availability of documentary materials. TJPA will invite participation in this review from the other designated parties. TJPA will produce, install, and maintain the exhibit in the new Transbay Terminal.
<p>CH 5 – Consult with the City of Oakland about its possible interest in having a similar interpretive exhibit in the East Bay. If agreement is reached prior to completion of final design of the Transbay Terminal, TJPA will provide and deliver exhibit materials to a venue that is mutually satisfactory to TJPA and the City of Oakland.</p>	TJPA	During preliminary engineering and final design	TJPA	During preliminary engineering and final design, TJPA will consult with City of Oakland regarding its possible interest in establishing an exhibit. TJPA will provide and deliver exhibit materials to a venue in the City of Oakland that is mutually satisfactory to TJPA and the City of Oakland should such an exhibit be developed.
<p>CH 6 – Identify, in consultation with Department, elements of the existing TTT that may be suitable for salvage and interpretive use by museums. Within two years following execution of this MOA by FTA and SHPO, TJPA will offer any elements identified as suitable for salvage and interpretive use to San Francisco Architectural Heritage, the California State Railroad Museum, Sacramento, the Western Railway Museum, the Oakland Museum, and any other interested parties. Remove any elements selected in a manner that minimizes damage and deliver with legal title to the recipient. Items not accepted by interested</p>	TJPA	During preliminary engineering and final design	TJPA	Acceptance of items by interested parties must be completed at least 90 days prior to demolition of the Transbay Terminal

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parties for salvage or interpretive use within the time frame specified herein will receive no further consideration.				
CH 7 – Consult with Department and the Oakland Museum about contributing to Department’s exhibit and the production of an interpretive video at the Oakland Museum relating to the history and engineering of the major historic state bridges of the San Francisco Bay Area. TJPA will propose contributions to such an exhibit and video that would be related to the history of the TTT, bus ramp loop structures, and the Key System. Items contributed by TJPA to such an exhibit may include photographs, drawings, videotape, models, oral histories, and salvaged components from the TTT.	TJPA	During preliminary engineering and final design	TJPA	TJPA will produce and deliver to the Oakland Museum agreed-upon materials for such an exhibit and interpretive video.
CH 8 – Assist the Oakland Museum by contributing up to \$50,000 toward the cost of preparing and presenting the exhibit and preparing an exhibit catalog or related museum publication in conjunction with the exhibit, in a manner and to the extent that is mutually satisfactory to TJPA, Department, and the Oakland Museum. A separate agreement will outline the negotiated financial contributions. Work with the Oakland Museum and assist in the preparation of an exhibit and interpretive video if consultation results in agreement between TJPA and the Oakland Museum prior to demolition of the existing TTT.	TJPA	During preliminary engineering and final design	TJPA	TJPA will work with Oakland Museum and assist in the preparation of an exhibit and an interpretive video if consultation results in an agreement between TJPA and Oakland Museum prior to demolition of the existing Transbay Terminal

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<p>CH 9 – Request that SHPO, prior to the start of any work that would have an adverse effect on components of the Bay Bridge that are historic properties, determine whether these components, including the TTT and associated ramps, have been adequately recorded in existing documents. If SHPO determines that, collectively, such documents, which include the Department’s past recordation of a series of remodeling and seismic retrofit project that have occurred since 1993, adequately document the TTT and ramps, then no further documentation will be necessary.</p> <p>Seek, with the assistance of the Department, to obtain the original drawings of the TTT by architect T. Pflueger.</p> <p>If SHPO determines that existing <u>documentation is adequate</u>, compile such documentation into a comprehensive record. Components to be included in the review of past documentation are:</p> <ul style="list-style-type: none"> • 425 Mission Transbay Transit Terminal (APN 3719-003, 3720-001, 3721-006); • Upper Deck San Francisco Approaches or North Connector, Bridge #34-116F; • Upper Deck San Francisco Approaches or Center Ramps, Bridge #34-118L; • San Francisco Approaches or Lower Deck On-Ramp, Bridge #34-118R; • Transbay Terminal Loop ramp, Bridge #34-119Y; and • Harrison Street over-crossing Bridge #34-120Y. <p>Consult further with SHPO, if SHPO determines that existing documentation does not constitute adequate recordation of the Bay Bridge components addressed hereunder. SHPO will determine what level and type of additional documentation is necessary.</p> <p>Provide xerographic copies of this documentation to the SHPO and the Department Headquarters Library, upon a written</p>	TJPA	During preliminary engineering and final design	TJPA	<p>TJPA will consult with the SHPO regarding adequacy of prior recordation efforts.</p> <p>TJPA will work with Department to seek original drawings of the Transbay Transit Terminal.</p> <p>If SHPO determines that existing documentation is adequate, compile such documentation into a comprehensive record.</p> <p>If SHPO determines that existing documentation does not constitute adequate recordation of the Bay Bridge components, then TJPA and SHPO will consult further and SHPO will determine what level and type of additional documentation is necessary.</p>

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determination by SHPO that all documentation prescribed hereunder is satisfactory, to the History Center at the San Francisco Public Library, San Francisco Architectural Heritage, the Oakland History Room of the Oakland Public Library, the Oakland Museum of California, the Western Railway Museum, and Department District 4 Office. Thereafter, TJPA may proceed with that aspect of the Project that will adversely affect the historic properties documented hereunder.				<p>If no response from SHPO within 45 days of receipt of each submittal of documentation, TJPA may assume that said documentation is adequate and may proceed with the project.</p> <p>TJPA will ensure that these records are accepted by SHPO prior to demolition of the TTT and provide copies of the documentation to designated agencies. Then, TJPA will proceed with the aspect of the project that will adversely affect the historic properties documented.</p>
CH 10 – Within 180 days after FTA determines that the Project has been completed, TJPA, in consultation with FTA and SHPO, will re-evaluate the Bay Bridge, a property listed on the NRHP, and determine whether the National Register nomination should be amended or whether the bridge no longer qualifies for listing and should be removed from the National Register. As appropriate, TJPA will prepare and submit to the FTA and SHPO either an amended nomination or petition for removal, to be processed according to the procedures set forth in 36 CFR Part 60 (60.14 and 60.15).	TJPA	Within 180 days after FTA determines that the Project has been completed	TJPA	As appropriate, TJPA will prepare and submit to the FTA and SHPO either an amended nomination or petition for removal, to be processed according to the procedures set forth in 36 CFR part 60 (60.14 and 60.15). TJPA will coordinate these efforts with the CCSF Planning Department.
CH 11 – Develop and implement measures, in consultation with the owners of historic properties immediately adjoining the construction sites, to protect the contributing elements of the Second and Howard Streets Historic District and the Rincon Point/South Beach Historic Warehouse Industrial District from damage by any aspect of the Project. Such measures will include, but are not necessarily limited to those identified in the MOA.	TJPA	During preliminary engineering, final design, and construction	TJPA	TJPA will contact owners of record of historic properties that will be affected (but that will not be acquired and demolished) by the Project. TJPA will provide and review this mitigation monitoring program with the owners via correspondence and/or public and face-to-face meetings. TJPA will coordinate these efforts with the CCSF Planning Department prior to commencement of any aspect of the
The protective measures herein stipulated will be developed and implemented by TJPA prior to the commencement of any aspect				

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<p>of the Project that could have an adverse effect on historic properties immediately adjoining the construction sites herein identified. In addition, TJPA will monitor the effectiveness of the protective measures herein stipulated and will supplement or modify these measures as and where necessary in order to ensure that they are effective. The historic properties covered by the terms of this paragraph are</p> <ul style="list-style-type: none"> • 589-591 Howard Street/3736-098, NRHP Status: 1D, Contributing Element of Second & Howard District & New Montgomery/Second Street, Const. Date: 1906, Type of Impact: Cut-and-cover construction nearby. • 163 Second Street/3721-048, NRHP Status: 1D, Contributing Element of Second & Howard District & New Montgomery/Second Street, Const. Date: 1907, Type of Impact: Cut-and-cover construction nearby. • 166-78 Townsend Street/3788-012, NRHP Status: 3D Contributing Element of Rincon Point/South Beach District & South End District, Const. Date: 1910 [1], 1988 [2], Type of Impact: Cut-and-cover construction nearby. Need construction easement. • 640-Second Street/3788-002, NRHP Status: 252, Contributing Element of Rincon Point/South Beach District & South End District, Const. Date: 1926, Type of Impact: Tunnel under or near property • 650 Second Street/3788-049 through 3788-073, NRHP Status: 252, Contributing Element of Rincon Point/South Beach District & South End District, Const. Date: 1922, Type of Impact: Tunnel under or near property • 670-680 Second Street/3788-043, 3788-044, NRHP Status: 252 (670), 3D (680), Contributing Element of Rincon Point/South 				<p>project that could have any adverse effect on historic properties immediately adjoining the construction sites herein identified.</p> <p>TJPA will monitor the effectiveness of the protective measures and will supplement or modify these measures as and where necessary in order to ensure that they are effective.</p>

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Beach District & South End District, Const. Date: 1913, Type of Impact: Tunnel under or near property				
<ul style="list-style-type: none"> • 301-321 Brannan Street/3788-037, NRHP Status: 3D, Contributing Element of Rincon Point/South Beach District & South End District, Const. Date: 1909, Type of Impact: Tunnel under or near property • 130 Townsend Street/3788-008, NRHP Status: 3D, Contributing Element of Rincon Point/South Beach District & South End District, Const. Date: 1910 [1], 1895-6 [2], Type of Impact: Tunnel under or near property • 136 Townsend Street/3788-009, NRHP Status: 3D, Contributing Element of Rincon Point/South Beach District & South End District, Const. Date: 1902 [1], 1913 [2], Type of Impact: Tunnel under or near property • 144-46 Townsend Street/3788-009A, NRHP Status: 3D, Contributing Element of Rincon Point/South Beach District & South End District, Const. Date: 1922, Type of Impact: Tunnel under or near property • 148-54 Townsend Street/3788-010, NRHP Status: 3D, Contributing Element of Rincon Point/South Beach District & South End District, Const. Date: 1922, Type of Impact: Tunnel under or near property • 162-164 Townsend Street/3788-081, NRHP Status: 3D, Contributing Element of Rincon Point/South Beach District & South End District, Const. Date: 1919, Type of Impact: Tunnel under or near property 				

Notes: National Register Status Codes are as follows:
 1 – Listed on the NRPH
 251 – Determined eligible for listing by the Keeper of the

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<p>Register 252 – Determined eligible for listing by the consensus of the SHPO and federal agency 1D – Listed on the National Register as a contributor to a district or multi-resource property</p>				
<p>CH 12 –TJPA will take the effect of the Project on the three historic properties listed below into account by recording these properties in accordance with the terms herein set forth. These buildings are:</p> <ul style="list-style-type: none"> • 191 2nd Street, (APN: 3721-022), • 580-586 Howard Street, (APN: 3721-092 through 3721-106), and • 165-173 2nd Street, (APN: 3721-025) <p>Prior to taking any action that could adversely affect these properties, consult SHPO and SHPO will determine the type and level of recordation that is necessary for these properties. Upon a written determination by SHPO that all documentation prescribed hereunder is complete and satisfactory, submit a copy of this documentation to SHPO, with xerographic copies⁸ to the History Center at the San Francisco Public Library, San Francisco Architectural Heritage, and the Oakland History Room of the Oakland Public Library. Thereafter, proceed with that aspect of the Project that will adversely affect the historic properties documented hereunder.</p> <p>If SHPO does not respond within 45 days of receipt of each submittal of documentation prescribed herein, assume that SHPO has determined that said documentation is adequate and may proceed with that aspect of the Project that will adversely affect the historic properties documented hereunder.</p>	TJPA	During preliminary engineering and final design	TJPA	<p>TJPA will consult SHPO and SHPO will determine the type of recordation necessary for the properties.</p> <p>TJPA will submit a copy of this documentation to SHPO, upon a written determination by SHPO that all documentation prescribed hereunder is complete and satisfactory, with copies to the designated agencies.</p> <p>If no response from SHPO within 45 days of receipt of each submittal of documentation, then TJPA may proceed with the project.</p>

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<p>CH 13 – Repair, in accordance with the Secretary of the Interior’s Standards for Rehabilitation, any damage to contributing elements of the Second and Howard Streets Historic District and the Rincon Point/South Beach Historic Warehouse Industrial District resulting from the Project.</p> <p>Photograph the condition of the contributing elements prior to the start of the Project to establish the baseline condition for assessing damage. Consult with property owner(s) about the appropriate level of photographic documentation of building interiors and exteriors. Provide a copy of this photographic documentation to the property owner(s), and retain on file.</p> <p>Submit repair plans and specifications to SHPO for review and comment, if repair of inadvertent damage resulting from the Project is necessary, to ensure that the work conforms to the Secretary of the Interior’s Standards for Rehabilitation. Consult with SHPO to establish a mutually satisfactory time frame for the SHPO’s review. TJPA will carry out any repairs required hereunder in accordance with the comments of SHPO.</p>	TJPA	Prior to, during, and following construction	TJPA	<p>TJPA will repair any damage to contributing elements.</p> <p>TJPA will photograph condition of contributing properties prior to the start of the Project to establish the baseline condition for assessing damage. TJPA will consult with property owner(s) about the appropriate level of photographic documentation of building interiors and exteriors, provide a copy of this photographic documentation to the property owner(s), and retain copy on file by TJPA.</p> <p>TJPA will submit repair plans and specifications to SHPO for review and comment, if repair of inadvertent damage is necessary, to ensure conformance to the Secretary of the Interior’s Standards for Rehabilitation.</p>
<p>CH 14 – Within 180 days after FTA determines that the Project has been completed, TJPA, in consultation with FTA and SHPO, will re-evaluate the Second and Howard Streets Historic District and determine whether the National Register nomination should be amended or whether the district no longer qualifies for listing and should be removed from the National Register. As appropriate, TJPA will prepare and submit to the FTA and SHPO either an amended nomination or petition for removal, to be processed according to the procedures set forth in 36 CFR Part 60 (60.14 and 60.15).</p>	TJPA	Within 180 days after FTA determines that the Project has been completed	TJPA	<p>As appropriate, TJPA will prepare and submit to the FTA and SHPO either an amended nomination or petition for removal, to be processed according to the procedures set forth in 36 CFR part 60 (60.14 and 60.15). TJPA will coordinate these efforts with the CCSF Planning Department.</p>

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<p>CH 15 – Within 45 days following execution of MOA, consult with FTA, SHPO, JPB and CCSF to initiate the process of determining how archaeological properties that may be affected by the Project will be identified, whether and how the NRHP eligibility of such properties may be addressed, and whether and how the Project's effects, if any, on those archaeological properties that may be considered historic properties for purposes of this MOA, may be taken into account. FTA and TJPA to invite Caltrans to participate in this consultation. Determine the time frame for this consultation with the consulting parties through consensus.</p> <p>Consultation will at minimum be informed by, and take into account, the following documents:</p> <ol style="list-style-type: none"> 1) Attachment 6, "Standard Treatment of Archaeological Sites: Data Recovery Plan," of the "Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Office, and the California Department of Transportation regarding compliance with Section 106 of the National Historic Preservation Act, as it pertains to the Administration of the Federal Aid Highway Program in California;" 2) "Archaeological Research Design and Treatment Plan for SF-480 Terminal Separation Rebuild (Praetzellis and Praetzellis, 1993)" and "The San Francisco-Oakland Bay Bridge, West Approach Replacement: Archaeological Research Design and Treatment Plan (Ziesing, 2000); 3) "Revised Historical Archaeology Research Design for the Central Freeway Replacement Project (Thad M. Van Bueren, Mary Praetzellis, Adrian Praetzellis, Frank Lortie, Brian Ramos, Meg Scantlebury and Judy D. Tordoff)." 	TJPA	During preliminary engineering phase	TJPA	<p>SHPO, FTA, SHPO, TJPA, JPB, and CCSF will consult to determine how archaeological properties will be identified, whether and how the NRHP eligibility of such properties may be addressed, and whether and how the Project's effects, if any, on those archaeological properties that may be considered historic properties may be taken into account. Invite Caltrans to participate in this consultation.</p> <p style="text-align: right;">The consultation will take into account the designated documents.</p>

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<p>CH 16 – If the consulting parties agree that a treatment plan for archaeological properties should be prepared, prepare a Treatment Plan for archaeological resources that provides for the identification, evaluation, and treatment of archaeological properties that may be affected by the Project and that conform to the requirements above of item CH13 1) and take into account the information contained in items CH13 2) and CH13 3) and conform to any other standards, documentation, or guidance that the consulting parties may specify.</p> <p>If the consulting parties agree that the Treatment Plan will address historic archaeological properties as well as prehistoric archaeological properties, ensure that appropriately qualified historians prepare a historic context(s) that will be used by an interdisciplinary team consisting at a minimum of historians and historic archaeologist.</p> <p>The historic context will, at a minimum:</p> <ol style="list-style-type: none"> 1) identify significant research themes and topics that relate to the historic period(s) addressed by the historic context(s) 2) determine what types of historic archaeological properties, if any, that may usefully and significantly contribute to research themes and topics deemed by the historic context(s) study to be important 3) identify the specific components and constituents (features, artifacts, etc., if any, of historic archaeological property types that can factually and directly, contribute data important to our understanding of significant historic research themes and topics 4) determine the amount (sample size, etc.) of archaeological excavation and related activity that is needed to provide the range and type of factual data that will contribute to our understanding of significant historic research themes and topics 	TJPA	During preliminary engineering	TJPA	<p>TJPA will assure completion of comprehensive treatment plan consistent with the content required in the MOA, if the consulting parties agree that a treatment plan for archaeological properties is to be prepared.</p> <p>TJPA shall transmit this plan to the signatories of the MOA.</p> <p>TJPA will ensure that appropriately qualified historians prepare a historic context(s) that includes the specified information for use by an interdisciplinary team consisting at a minimum of historians and historic archaeologist, if the consulting parties agree that the Treatment Plan will address historic archaeological properties as well as prehistoric archaeological properties.</p>

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<p>Submit the draft Treatment Plan to the other consulting parties for review and comment. The consulting parties have 45 days from receipt of the draft Treatment Plan to comment in writing to FTA and TJPA. Failure of the consulting parties to respond within this time frame shall not preclude FTA and TJPA from finalizing the draft Treatment Plan to their satisfaction.</p> <p>Before finalizing the draft Treatment Plan, FTA and TJPA to provide the consulting parties with written documentation indicating whether and how the draft Treatment Plan will be modified.</p> <p>Unless any consulting party objects to this documentation in writing to FTA and TJPA within 15 days following receipt, finalize the draft Treatment Plan as deemed appropriate by FTA and TJPA, and proceed to implement the final Treatment Plan.</p>	TJPA	During preliminary engineering phase	TJPA and FTA	<p>TJPA will submit the draft Treatment Plan to the consulting parties for review and comment.</p> <p>Before finalizing the draft Treatment Plan, FTA and TJPA will provide the consulting parties whether and how the draft Treatment Plan will be modified.</p> <p>TJPA will ensure that the consulting parties have 15 days following receipt of notification of the modifications to comment in writing about the proposed modifications.</p> <p>Unless consulting party objects, FTA and TJPA will finalize the draft Treatment Plan as they deem appropriate, and TJPA and FTA will implement the final Treatment Plan.</p>
<p>If FTA and TJPA propose to modify the final Treatment Plan, they will notify the consulting parties concurrently in writing about the proposed modifications. The consulting parties will have 15 days from receipt of notification to comment in writing to FTA and TJPA. Failure of the consulting parties to respond within this time frame shall not preclude FTA and TJPA from modifying the final Treatment Plan to their satisfaction.</p> <p>Before modifying the final Treatment Plan, FTA and TJPA will provide the consulting parties with written documentation indicating whether and how the final Treatment Plan will be modified. Unless any consulting party objects to this documentation in writing to FTA and TJPA within 15 days following receipt, modify the final Treatment Plan as appropriate, and proceed to implement the modified final Treatment Plan.</p>	TJPA	During preliminary engineering phase	TJPA and FTA	<p>FTA and TJPA will provide the consulting parties whether and how the final Treatment Plan will be modified.</p> <p>TJPA will ensure that the consulting parties have 15 days following receipt of notification of the modifications to comment in writing about the proposed modifications.</p> <p>Unless consulting party objects, FTA and TJPA will modify the final Treatment Plan as they deem appropriate, and TJPA and FTA will proceed to implement the modified final Treatment Plan.</p>

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<p>CH 17 – 1) Within two years after FTA, in consultation with TJPA, has determined that all fieldwork required by the Treatment Plan has been completed, prepare a draft technical report that documents the results of implementing the Treatment Plan and distributes this draft technical report to the other MOA signatories for review. The reviewing parties will be afforded 60 days following receipt of the draft technical report to submit any written comments to FTA and TJPA. Failure of the reviewing parties to respond within this time frame shall not preclude FTA from authorizing TJPA to revise the draft technical report as FTA and TJPA deem appropriate.</p> <p>FTA will provide the reviewing parties with a written documentation indicating modifications in accordance with any reviewing party comments. Unless the reviewing parties object to this documentation in writing to FTA and TJPA within 30 days following receipt, modify the draft technical report as FTA and TJPA deem appropriate. Thereafter, issue the technical report in final form and distribute this document in accordance with paragraph CH15 2).</p> <p>2) Distribute copies of the final technical report documenting the results of the Treatment Plan implementation to the other signatory parties, to any consulting Native American Tribe if prehistoric, protohistoric or ethnographic period archaeological properties were located and addressed under the Treatment Plan, and to the appropriate California Historical Resources Information Survey (CHRIS) Regional Information Center, subject to the terms of Stipulation IV. E (CH19).</p> <p>3) Prepare a written draft document that communicates in lay terms the results of Treatment Plan implementation to members of the interested public. Distribute this written draft document for review and comment concurrently with and in the same manner as that prescribed for the draft written technical report prescribed by paragraph C.1. of this stipulation. If the draft document prescribed hereunder is a publication such as a report or</p>	TJPA	Within two years of completed fieldwork	TJPA and FTA	<p>TJPA will prepare a draft technical report that documents the results of implementing the Treatment Plan and distribute this draft technical report to the other MOA signatories for review.</p> <p>FTA to authorize TJPA to revise draft as deemed appropriate by FTA and TJPA.</p> <p>FTA will provide the reviewing parties with a written documentation indicating modifications in accordance with any reviewing party comments.</p> <p>Unless any reviewing party objects, FTA and TJA to issue technical report in final form and distribute in accordance with paragraph CH15 2).</p> <p>TJPA will distribute copies of the final technical report documenting the results of Treatment Plan implementation to other signatory parties, to any consulting Native American Tribe, as applicable, and to the appropriate CHRIS Regional Information Center.</p> <p>TJPA will prepare a written draft document that communicates in lay terms the results of Treatment Plan implementation to members of interested public.</p>

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brochure, then distribute such publication to the other signatory parties, to any consulting Native American Tribe as applicable, and to any other entity that the signatory parties and, as applicable, any consulting Native American Tribe, through consultation as appropriate, subject to the terms of Stipulation IV.E (CH 19).				
4) Prepare a written annual report describing the status of its efforts to comply with the terms of Stipulations II – IV, inclusive, of this MOA. Prepare the annual report following the end of each fiscal year (July 1 to June 30) that this MOA is in effect and distributed it to all MOA signatories by July 30 of each year until FTA and the SHPO through consultation determine that the requirements of stipulations II – IV, inclusive of this MOA have been satisfactorily completed.	TJPA	During preliminary engineering, final design, and construction	TJPA	TJPA will prepare an annual report describing its efforts to comply with the terms of stipulations II-IV.
CH 18 – If the consulting parties agree that a plan for treatment of archaeological properties will not be prepared, then address any archaeological properties discovered during implementation of any aspect of the Project pursuant to 36 CFR 800.13(b)(3).	TJPA	During construction phase	TJPA	If treatment plan not prepared, TJPA will address any archaeological properties discovered during implementation of any aspect of the Project pursuant to 36 CFR 800.13(b)(3).
CH 19 – The signatories to the MOA acknowledge that historic properties covered by this MOA are subject to the provisions of Section 304 of the National Historic Preservation Act of 1966, as amended, and Section 6254.10 of the California Government Code (Public Records Act), relating to the disclosure of archaeological site information and, having so acknowledged, will ensure that all actions and documentation prescribed by this Agreement are consistent with Section 304 of the National Historic Preservation Act of 1966, as amended, and Section 6254.10 of the California Government Code.	TJPA	During preliminary engineering phase	TJPA	TJPA will acknowledge that historic properties covered by the MOA are subject to the provisions specified in the MOA, relating to the disclosure of archaeological site information. TJPA will ensure that actions and documentation are consistent with same.

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<p>CH 20 – The parties to the MOA agree that Native American burials and related items discovered during implementation of the terms of the MOA and of the Project will be treated in accordance with the requirements of Section 7050.5(b) of the California Health and Safety Code. If, pursuant to Section 7050.5(c) of the California Health and Safety Code, the county coroner/medical examiner determines that the human remains are, or may be of Native American origin, then the discovery shall be treated in accordance with the provisions of Section 5097.98(a)-(d) of the California Public Resources Code. TJPA will ensure that to the extent permitted by applicable law and regulation, the views of any consulting Native American Tribe and the Most Likely Descendant(s) are taken into consideration when decisions are made about the disposition of other Native American archaeological materials and records.</p>	TJPA	Prior to, during, and following construction	TJPA	<p>TJPA agree that Native American burials and related items discovered during implementation of the terms of the MOA and of the Project will be treated in accordance with the requirements specified. If, pursuant to Section 7050.5(c) of the California Health and Safety Code, the county coroner/medical examiner determines that the human remains are, or may be of Native American origin, then the discovery shall be treated in accordance with the provisions specified. TJPA will ensure that to the extent permitted by applicable law and regulation, the views of any consulting Native American Tribe and the Most Likely Descendant(s) are taken into consideration when decisions are made about the disposition of other Native American archaeological materials and records.</p>
Hazardous Materials/Waste – Operations				
<p>HWO 1 – Construct and operate any Caltrain fueling facility in compliance with local, state and Federal regulations regarding handling and storage of hazardous materials. (Caltrain Joint Powers Board (JPB)/TJPA)</p>	Caltrain Joint Powers Board (JPB)	During construction and operations	TJPA	<p>Review design and contract documents to ensure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to ensure compliance with contract documents and regulations. Inspect operations, and comply with all permitting and reporting requirements.</p>

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HWO 2 – Equip diesel fuel pumps with emergency shut-off valves and, in compliance with U.S. EPA requirements, fuel Underground Storage Tanks (USTs) would be equipped with leak detection and monitoring systems.	JPB	During operations	TJPA	Review design and contract documents to ensure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to ensure compliance with contract documents and regulations. Inspect operations, and comply with all permitting and reporting requirements
HWO 3 – Employ the use of secondary containment systems for any aboveground storage tanks.	JPB	During operations	TJPA	Secondary containment to be included in facility design and construction and maintained during operations
HWO 4 – Store cleaning solvents in 55-gallon drums, or other appropriate containers, within a bermed area to provide secondary containment.	JPB	During operations	TJPA	Inspect operations, and comply with all permitting and reporting requirements
HWO 5 – Slope paved surfaces within the fueling facility and the solvent storage area to a sump where any spilled liquids could be recovered for proper disposal.	JPB	During construction and operations	TJPA	Sloped paved surfaces and sump to be included in facility design
HWO 6 – Follow California OSHA and local standards for fire protection and prevention for the handling and storage of fuels and solvents.	JPB	During operations	TJPA	Review design and contract documents to ensure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to ensure compliance with contract documents and regulations. Inspect operations, and comply with all permitting and reporting requirements

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HWO 7 – Prepare a Hazardous Materials Management/Business Plan and file with the CCSF Department of Public Health.	JPB	During final design	TJPA	JPB to prepare and TJPA to file Hazardous Materials Management/ Business Plan with CCSF Department of Public Health (DPH)

Hazardous Materials/Waste – Construction

<p>HMC 1 – Follow California OSHA and local standards for fire protection and prevention. Handling and storage of fuels and other flammable materials during construction will conform to these requirements, which include appropriate storage of flammable liquids and prohibition of open flames within 50 feet of flammable storage areas.</p>	TJPA	During construction	TJPA	<p>Review design and contract documents to ensure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to ensure compliance with contract documents and regulations.</p>
<p>HMC 2 – Perform detailed investigations of the potential presence of contaminants in soil and groundwater prior to construction, using conventional drilling, sampling, and chemical testing methods. Based on the chemical test results, a mitigation plan will be developed to establish guidelines for the disposal of contaminated soil and discharge of contaminated dewatering effluent, and to generate data to address potential human health and safety issues that may arise as a result of contact with contaminated soil or groundwater during construction. The investigation and mitigation plan will follow the requirements of the City and County of San Francisco’s Article 22A in the appropriate areas along the alignment.</p>	TJPA	During construction	TJPA	<p>Review design and contract documents to ensure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to ensure compliance with contract documents and regulations. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW.</p>

With construction projects of this nature and magnitude, there are typically two different management strategies that can be employed to address contaminated soil handling and disposal issues. Contaminated soil can be excavated and stockpiled at a centralized location and subsequently sampled and analyzed for disposal profiling purposes in accordance with the requirements of the candidate disposal landfill. Alternatively, soil profiling for

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disposal purposes can be done in-situ so when soil is excavated it is loaded directly on to trucks and hauled to the appropriate landfill facility for disposal based on the in-situ profiling results. A project of this nature could also combine both strategies.				
HMC 3 – Cover with plastic sheeting soils removed during excavation and grading activities that remain at a centralized location for an extended period of time to prevent the generation of fugitive dust emissions that migrate offsite.	TJPA	During construction	TJPA	Review design and contract documents to ensure compliance. Obtain all applicable permits. Inspect construction to ensure compliance with contract documents and regulations.
HMC 4 – Use a licensed waste hauler, applying appropriate manifests or bill of lading procedures, as required to haul soil for disposal at a landfill or recycling facility.	TJPA	During construction	TJPA	Review design and contract documents to ensure compliance. Obtain all applicable permits. Inspect construction to ensure compliance with contract documents and regulations.
HMC 5 – Use chemical test results for groundwater samples along the alignment to obtain a Batch Discharge Permit under Article 4.1 of the San Francisco Department of Public Works as well as to evaluate requirements for pretreatment prior to discharge to the sanitary sewer. Effluent produced during the dewatering of excavations will be collected in onsite storage tanks and periodically tested, as required under discharge permit requirements, for potential contamination to confirm the need for any treatment prior to discharge.	TJPA	During construction	TJPA	Review design and contract documents to ensure compliance. Obtain all applicable permits. Inspect construction to ensure compliance with contract documents and regulations. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW.
If required, treatment may include:				
<ul style="list-style-type: none"> ○ Settling to allow particulate matter (total suspended solids) to settle out of the effluent in order to reduce the sediment load as well as reduce elevated metal and other contaminant concentrations that may be associated with suspended 				

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<p>sediments; and/or</p> <ul style="list-style-type: none"> o Construction of a small-scale batch waste water treatment system to remove dissolved contaminants (mainly organic constituents such as petroleum hydrocarbons [gas, diesel, and oils], BTEX, and VOCs) from the dewatering effluent prior to discharge to the sanitary sewer. A treatment system would also likely employ the use of filtration to remove suspended solids. 				
<p>HMC 6 – Develop a detailed mitigation plan for the handling of potentially contaminated soil and groundwater prior to starting project construction.</p>	TJPA	During final design	TJPA	Review detailed mitigation plan, include provisions in contract documents and inspect construction to ensure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW. Obtain all applicable permits
<p>HMC 7 – Design dewatering systems to minimize downward migration of contaminants that can result from lowering the water table if necessary based on environmental conditions. As necessary, shallow soils with detected contamination would be dewatered first using wells screened only in those soils. Dewatering of deeper soils would then be performed using wells screened only in the zone to be dewatered. Dewatering wells would be installed using drilling methods that prohibit shallow contaminated soils from being carried deeper into the boreholes.</p>	TJPA	During final design and construction	TJPA	Include requirements in contract documents and monitor construction activities to ensure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW
<p>HMC 8 – Require that workers performing activities on site that may involve contact with contaminated soil or groundwater have appropriate health and safety training in accordance with 29 CFR 1910.120.</p>	TJPA	During construction	TJPA	Provide health-and-safety training prior to start of and at timely intervals during construction. Include requirements in contract documents and monitor construction activities to ensure compliance.
<p>A Worker Health and Safety Plan (HSP) will be developed for the project and monitored for the implementation of the plan on a day-to-day basis by a Certified Industrial Hygienist (CIH). The</p>				

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<p>HSP will include provisions for:</p> <ul style="list-style-type: none"> • Conducting preliminary site investigations and analysis of potential job hazards; • Personnel protective equipment; • Safe work practices; • Site control; • Exposure monitoring; • Decontamination procedures; and • Emergency response actions. <p>The HSP will specify mitigation of potential worker and public exposure to airborne contaminant migration by incorporating dust suppression techniques in construction procedures. The plan will also specify mitigation of worker and environmental exposure to contaminant migration via surface water runoff pathways by implementation of comprehensive measures to control drainage from excavations and saturated materials excavated during construction.</p>				
<p>HMC 9 – Review existing asbestos surveys, abatement reports, and supplemental asbestos surveys, as warranted. Perform an asbestos survey for buildings to be demolished, as required. Asbestos-containing building materials (ACM) will require abatement prior to building demolition. Removal and disposal of ACM will be performed in accordance with applicable local, state, and federal regulations.</p>	TJPA	During preliminary engineering, final design and construction phases	TJPA	Determine extent of ACM throughout project site. Perform abatement work prior to demolition. Include all regulatory requirements in contract documents and inspect construction to ensure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH. Obtain all applicable permits.

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HMC 10 – Perform a lead-based paint survey for buildings to be demolished to determine areas where lead-based paint is present and the possible need for abatement prior to demolition.	TJPA	During preliminary engineering prior to building demolitions	TJPA	Determine extent of lead contamination throughout project site. Perform abatement work prior to demolition if necessary. Include all regulatory requirements in contract documents and inspect construction to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH. Obtain all applicable permits.
Pedestrians				
Ped 1 – Use future construction or redevelopment as opportunities to increase building set-backs thereby increasing sidewalk widths. Particular areas where such widening is most needed include: <ul style="list-style-type: none"> • The southeast corner of Fremont and Mission streets, • The northeast corner of First and Mission streets, • The north side of Mission Street between First and Fremont, and • Sidewalks south of Howard Street along Folsom, First, Fremont and Beale that are less than 10 feet wide. 	Agency and CCSF	During future project reviews in Transbay Terminal area	Agency and CCSF	TJPA will forward guidance to Agency, CCSF Planning Department and DPW.
Ped 2 – Eliminate or reduce sidewalk street furniture such as newspaper boxes and magazine racks in the immediate Transbay Terminal area on corners.	Agency and CCSF	Prior to opening of new Transbay Terminal	Agency and CCSF	TJPA will forward guidance to Agency, CCSF Planning Department and DPW.
Ped 3 – Retime traffic light signalization. This could improve pedestrian levels of service at each of the intersections studies that fall into LOS F.	CCSF	Prior to opening of new Transbay Terminal	CCSF	TJPA will forward guidance to CCSF DPT.

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Ped 4 – Provide crosswalk signalization at intersections where they do not exist already, such as Folsom and Beale streets.	CCSF	Prior to opening of new Transbay Terminal	CCSF	TJPA will forward guidance to CCSF DPT.
Ped 5 – Provide cross-walk count-down signals at intersections and cross-walks immediately surrounding the new Transbay Terminal.	CCSF	Prior to opening of new Transbay Terminal	CCSF	TJPA will forward guidance to CCSF DPT.
Ped 6 – Ensure that Transbay Terminal design increases corner and sidewalk widths at the four intersections immediately surrounding the Transbay Terminal.	TJPA and CCSF, DPW	During Transbay Terminal design phase	TJPA	TJPA and CCSF DPW, where applicable, to include sidewalk width expansion during preliminary and final design of new Transbay Terminal
Ped 7 – Provide lights within crosswalks to warn when pedestrians are present in the crosswalk, such as at the cross-walk associated with the mid-block bus loading area.	TJPA	Prior to opening of new Transbay Terminal	TJPA	TJPA to work with CCSF DPT to install cross-walk warnings
Pre-Construction Activities				
PC 1 – Complete a pre-construction building structural survey to determine the integrity of existing buildings adjacent to and over the proposed Caltrain Downtown Extension. Use this survey to finalize detailed construction techniques along the alignment and as the baseline for monitoring construction impacts during and following construction.	TJPA	Prior to preliminary engineering, final design and construction	TJPA	TJPA to perform building surveys during preliminary engineering. TJPA to include measures to protect existing buildings in final design and construction documents. TJPA to review design submittals, contract documents and construction activities to ensure implementation

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PC 2 – Contact and interview individual businesses along the Caltrain Downtown Extension alignment to gather information and develop an understanding of how these businesses carry out their work. This survey will identify business usage, delivery/shipping patterns, and critical times of the day or year for business activities. Use this information to assist in: (a) the identification of possible techniques during construction to maintain critical business activities, (b) analyze alternative access routes for customers and deliveries to businesses, (c) develop traffic control and detour plans, and (d) finalize construction practices. (TJPA)	TJPA	During preliminary engineering, final design and construction	TJPA	TJPA to perform business activity survey during preliminary engineering. TJPA to include measures to maintain business activities and access in final design and construction documents. TJPA to review design submittals, contract documents and construction activities to ensure implementation.
PC 3 – Complete detailed geotechnical investigation, including additional sampling (drilling and core samples) and analyses of subsurface soil/rock conditions. Use this information to design the excavation and its support system to be used in the retained cut, cut-and-cover, and tunnel portions of the Caltrain Downtown Extension.	TJPA	During preliminary engineering and final design	TJPA	TJPA to obtain necessary permits from CCSF prior to performing drilling. TJPA to perform detailed geotechnical investigation during preliminary engineering. TJPA to review design submittals, contract documents and construction activities to ensure proper utilization of information obtained during investigation.
PC 4 – Establish community construction information/outreach program to provide on-going dialogue between the TJPA and the affected community regarding construction impacts and possible mitigation/solutions. Include dedicated personnel for an outreach office in the construction area to deal with construction coordination.	TJPA	During construction	TJPA	TJPA to establish program during final design prior to construction.

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<p>PC 5 – Establish site and field offices located along the Caltrain Downtown Extension alignment. Field office staff, in conjunction with other staff, will:</p> <ul style="list-style-type: none"> • Provide the community and businesses with a physical location where information pertaining to construction can be exchanged, • Enable TJPA and JPB to better understand community/business needs during the construction period, • Allow TJPA and JPB to participate in local events in an effort to promote public awareness of the project, • Manage construction-related matters pertaining to the public, • Notify property owners, residences, and businesses of major construction activities (e.g., utility relocation/disruption and milestones, re-routing of delivery trucks), • Provide literature to the public and press, • Promote and provide presentations on the project via a Speakers Bureau, • Respond to phone inquires, • Coordinate business outreach programs, • Schedule promotional displays, and • Participate in community committees. 	TJPA and JPB	During construction	TJPA	TJPA to establish program during final design and continue during construction.

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<p>PC 6 – Implement an information phone line to provide community members and businesses the opportunity to express their views regarding construction. Review calls received and, as appropriate, forward the message to the necessary party for action (e.g., utility company, fire department, the Resident Engineer in charge of construction operations). Information available from the telephone line will include current project schedule, dates for upcoming community meetings, notice of construction impacts, individual problem solving, construction complaints and general information. Phone service would be provided in English, Cantonese, and Spanish and would be operated on a 24-hour basis.</p>	TJPA	During construction		TJPA to establish informational “Hot Line” during final design and continue during construction.
<p>PC 7 – Develop traffic management plans. Traffic management plans to maintain access to all businesses will be prepared for areas affected by surface or cut-and-cover construction. In addition, daily cleaning of work areas would be performed by contractors for the duration of the construction period. Provisions would be contained in construction contracts to require the maintenance of driveway access to businesses to the extent feasible.</p>	TJPA	During preliminary engineering, final design and construction	TJPA	TJPA to forward traffic management plans to CCSF DPT for review and approval. Include all requirements in construction documents and inspect implementation during construction.

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General Construction Measures				
GC 1 – Disseminate information to community in a timely manner regarding anticipated construction activities.	TJPA	During construction	TJPA	TJPA to initiate program during final design and continue during construction.
GC 2 – Provide signage. Work with establishments affected by construction activities to develop appropriate signage for display that directs both pedestrian and vehicular traffic to businesses via alternate routes.	TJPA	Prior to and during construction	TJPA	TJPA to initiate signage program during final design and monitor contractors’ installation during construction.
GC 3 – Install level deck. Install decking at the cut-and-cover sections to be flush with the existing street or sidewalk levels.	TJPA	During construction	TJPA	TJPA to design flush decking during preliminary and final design, include in construction documents and ensure installation during construction.
GC 4 – Provide for efficient sidewalk design and maintenance. Wherever feasible, maintain sidewalks at the existing width during construction. Where a sidewalk must be temporarily narrowed during construction (e.g., deck installation), restore it to its original width during the majority of construction period. (In some places, this may require placing the temporary sidewalk on the deck.) Each sidewalk design should be of good quality and approved by the Resident Engineer prior to construction. Handicapped access will be maintained during construction where feasible.	TJPA	During preliminary engineering and construction	TJPA	TJPA to work with CCSF DPW on design of sidewalk plans during preliminary and final design and ensure installation during construction.
GC 5 – Provide construction site fencing of good quality, capable of supporting the accidental application of the weight of an adult without collapse or major deformation. Where covered walkways or other solid surface fencing is installed, establish a program to allow for art work (e.g., by local students) on the surface(s).	TJPA	During design and construction	TJPA	TJPA to work with CCSF DPW, incorporate requirements in construction documents and inspect installation during construction

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Air Emissions – Construction				
AC 1 – Assure that, as part of the contract provisions, the project contractor is required to implement the measures below at all project construction sites.	TJPA	During development of contract documents	TJPA	Include requirement in contract documents.
AC 2 – Water all active construction areas at least twice daily. Ordinance 175-91, passed by the San Francisco Board of Supervisors on May 6, 1991, requires that non-potable water be used for dust control activities; therefore, the project contractor would be required to obtain reclaimed water from the City’s Clean Water Program or other appropriate sources.	TJPA	During construction	TJPA	Include requirements in contract documents and monitor construction activities to ensure compliance.
AC 3 – Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.	TJPA	During construction	TJPA	Include requirements in contract documents and monitor construction activities to ensure compliance.
AC 4 – Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.	TJPA	During construction	TJPA	Include requirements in contract documents and monitor construction activities to ensure compliance.
AC 5 – Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.	TJPA	During construction	TJPA	Include requirements in contract documents and monitor construction activities to ensure compliance.
AC 6 – Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.	TJPA	During construction	TJPA	Include requirements in contract documents and monitor construction activities to ensure compliance.
AC 7 – Install sandbags or other erosion control measures to prevent silt runoff to public roadways.	TJPA	During construction	TJPA	Include requirements in contract documents and monitor construction activities to ensure compliance.
AC 8 – Replant vegetation in disturbed areas as quickly as possible.	TJPA	During construction	TJPA	Include requirements in contract documents and monitor construction activities to ensure compliance.

**TRANSBAY TERMINAL/CALTRAIN DOWNTOWN EXTENSION/REDEVELOPMENT PROJECT
FEIS/FEIR MITIGATION MONITORING AND REPORTING PROGRAM**

MITIGATION MEASURE	Responsibility for Implementation	Mitigation Schedule	Monitoring Responsibility	Monitoring Actions/Schedule
AC 9 – Minimize use of on-site diesel construction equipment, particularly unnecessary idling.	TJPA	During construction	TJPA	Include requirements in contract documents and monitor construction activities to ensure compliance.
AC 10 – Shut off construction equipment to reduce idling when not in direct use.	TJPA	During construction	TJPA	Include requirements in contract documents and monitor construction activities to ensure compliance.
AC 11 – Where feasible, replace diesel equipment with electrically powered machinery.	TJPA	During construction	TJPA	Include requirements in contract documents and monitor construction activities to ensure compliance.
AC 12 – Locate diesel engines, motors, or equipment as far away as possible from existing residential areas.	TJPA	During construction	TJPA	Include requirements in contract documents and monitor construction activities to ensure compliance
AC 13 – Properly tune and maintain all diesel power equipment.	TJPA	During construction	TJPA	Include requirements in contract documents and monitor construction activities to ensure compliance.
AC 14 – Suspend grading operations during first and second stage smog alerts, and during high winds, i.e., greater than 25 miles per hour.	TJPA	During and following construction	TJPA	Include requirements in contract documents and monitor construction activities to ensure compliance.
AC 15 – Upon completion of the construction phase, buildings with visible signs of dirt and debris from the construction site shall be power washed and/or painted (given that permission is obtained from the property owner to gain access to and wash the property with no fee charged by the owner).	TJPA	During construction	TJPA	Include requirements in contract documents and monitor construction activities to ensure compliance.
Visual/Aesthetics - Construction				
VA 1 – Assure that construction crews working at night direct any artificial lighting onto the work site in order to minimize “spill over” light or glare effects on adjacent areas.	TJPA	During construction	TJPA	Include requirements in contract documents and monitor construction activities to ensure compliance.

**TRANSBAY TERMINAL/CALTRAIN DOWNTOWN EXTENSION/REDEVELOPMENT PROJECT
FEIS/FEIR MITIGATION MONITORING AND REPORTING PROGRAM**

MITIGATION MEASURE	Responsibility for Implementation	Mitigation Schedule	Monitoring Responsibility	Monitoring Actions/Schedule
VA 2 – Assure that contractors make all efforts possible to minimize specific aesthetic and visual effects of construction identified by neighborhood businesses and residents.	TJPA	During construction	TJPA	Include requirements in contract documents and monitor construction activities to ensure compliance.



**Construction Management Services for Bus Storage Facility
Selection Committee Report
February 2012**

Executive Summary and Recommendation

In response to Request for Proposals No. 11-04 for Construction Management Services for Bus Storage Facility, issued on November 10, 2011, the TJPA received six submissions on January 11, 2012. A selection committee convened on January 19, 2012 to evaluate the proposals. Based on the scoring of the written proposals, the selection committee short listed two firms and determined that interviews were necessary. Interviews were held on January 27, 2012 to evaluate the short listed firms.

Based on the criteria outlined in the RFP, and a thorough evaluation and interview process, the selection committee recommends that the TJPA negotiate a professional services contract with Townsend Management, Inc.

Background

The TJPA anticipates advertising for construction of the Bus Storage Facility in May 2013. Construction will necessitate construction management services to oversee and manage contractor activities, to provide documentation, and to provide quality assurance. In addition the construction manager will perform pre-construction services that will include a constructability review and assisting in the bidding and procurement effort. The contract limit is not expected to exceed \$1,000,000 for a period of three (3) years. The TJPA will issue Notice(s) to Proceed authorizing the Consultants' work. Compensation will be paid on an hourly basis for services performed.

Schedule

Outreach Event:	Tuesday, November 8, 2012
RFP Issued:	Thursday, November 10, 2011
Pre-proposal Conference:	Friday, December 2, 2011, 10:00 am
Deadline for Submission of Questions:	Friday, December 9, 2011, 5:00 pm
Answers to Written Questions Posted:	By Friday, December 16, 2011
Proposals Due:	Wednesday January 11, 2012, 3:00 pm
Notification of Interviews:	Friday, January 20, 2012
Interviews:	Friday, January 27, 2012
Contract Recommended for Board Approval:	Thursday, March 8, 2012

Selection Committee Members

- Rebecca Armenta, TJPA Junior Engineer
- Steve Perreault, Deputy Program Manager, URS-PMPC Team
- Phil Sandri, Project Manager, URS-PMPC Team
- Barbara Moy, Manager, DPW Infrastructure Division
- William Wong, Supervisor, AC Transit

RFP Outreach

An announcement of the RFP appeared in the *San Francisco Chronicle*, *San Francisco Examiner* and was posted on the City Purchaser's Bids and Contracts website; a copy of the announcement is Attachment A. On the same day, the TJPA posted the RFP on its website for the public to view and print and sent announcement of its availability to all who had registered for Professional Services notices, had expressed interest for previous CM Services RFPs, or attended the outreach event for this RFP that was held on November 8, 2012. In total, the announcement was sent to more than 370 firms and individuals.

The TJPA received six submittals on or before the RFP submission date, from:

- ABA Global, Inc.
- C M Pros
- Ghirardelli Associates
- Townsend Management, Inc.
- VSCE, Inc.
- Zoon Engineering

Selection Committee Evaluation

The selection committee met on January 19, 2012 to review the written proposals and evaluate strengths and weaknesses using the criteria listed on the score sheet (Attachment B). Three firms did not meet the Minimum Necessary Qualifications and their proposals were not scored: ABA Global, Inc., Ghirardelli Associates, and VSCE, Inc. The remaining three firms met the Minimum Necessary Qualifications and their proposals were scored. Following the discussion, each committee member individually filled out scoring sheets. The TJPA Contracts Compliance Officer collected the scoring sheets and tabulated the results. Based on the results, two firms were shortlisted for interviews.

On January 27, 2012, the committee conducted oral interviews, each committee member individually completed scoring sheets and submitted them to the TJPA Contracts Compliance Manager for tabulation. Interview and written evaluations scores were combined for final scores, shown below.

Based on the criteria outlined in the RFP, Townsend Management, Inc. was ranked highest by the selection committee. The committee recommends that the TJPA negotiate an agreement with TMI to provide Construction Management Services for Bus Storage Facility.

Evaluation Scores (100 points max individual/500 points max total)

Firm	Panelist A	Panelist B	Panelist C	Panelist D	Panelist E	Total Score
C M Pros	57	36	55	42	70	260
Townsend Management	89	90	93	81	90	443
Zoon Engineering	73	79	62	64	68	346

Evaluation Scores (150 points max individual/750 points max total)

Firm	Panelist A	Panelist B	Panelist C	Panelist D	Panelist E	Total Score
Townsend Management	123	107	117	126	112	585
Zoon Engineering	118	89	114	99	95	515

Totals

Firm	Evaluation	Interview	Total Score
Townsend Management	443	585	1,028
Zoon Engineering	346	515	861

Attachments

- Attachment A, RFQ Announcement
- Attachment B, Evaluation Scoring Sheet
- Attachment C, Interview Questions/Scoring Sheet

Reference

Request for Qualifications No. 11-04 for Construction Management Services for Bus Storage Facility issued by the Transbay Joint Powers Authority on November 11, 2011.

All proposals submitted in response to this RFQ are available for review at 201 Mission Street, Suite 2100 upon contacting the TJPA. Proposals will be retained for two years, except for the selected consultant's proposal which will be maintained on permanent record.

Attachment A

ANNOUNCEMENT REQUEST FOR PROPOSALS

The Transbay Joint Powers Authority is issuing a Request for Proposals for CONSTRUCTION MANAGEMENT SERVICES FOR BUS STORAGE FACILITY for the Transbay Transit Center Program from firms with an expertise in construction management of similar facilities.

A Pre-proposal Conference will be held on Friday, December 2, 2011 at 10:00 am, at the address below.

Proposal packages must be received by the TJPA no later than **3:00 p.m. on Wednesday, January 11, 2012**, at the address below. Late proposal packages will not be considered.

Transbay Joint Powers Authority
201 Mission Street, Suite 2100
San Francisco, CA 94105

Prospective Respondents may obtain copies of this RFP, including required forms, by visiting the TJPA's website: <http://www.transbaycenter.org> > TJPA > Doing Business with the TJPA > Current Contract Opportunities or by contacting the TJPA, 201 Mission Street, Suite 2100, San Francisco, CA 94105, (415) 597-4620, email: CMServices@transbaycenter.org.

Attachment B

EVALUATION SCORE SHEET Construction Management Services for Bus Storage Facility RFP

Name of Respondent: _____

Name of Panelist: _____

Signature of Panelist: _____

Criteria	Value	Reviewer Comment
<p>Minimum Necessary Qualifications (Pass/Fail)</p> <p>Proposals will be evaluated to ensure that the Respondent has demonstrated compliance with each of the minimum requirements described in Section 6.0, Minimum Necessary Qualifications. Any Proposal that does not meet the minimum requirements will be automatically rejected, and the selection committee will not evaluate the remainder of the Proposal.</p>		
<p>Qualifications of Resident Engineer (40 point maximum)</p> <p>Provide one lead individual who shall bear overall responsibility for all the Services and who shall report directly to the TJPA or its designee. The Resident Engineer shall meet the following criteria.</p> <ul style="list-style-type: none"> • State of California Registered Professional license in civil engineering. • At least 10 years of verifiable experience in providing construction management services. • Previous experience in providing construction management services on a public transit project and preferably experience with (i) public improvements within the Caltrans right-of-way and (ii) management services on projects involving substantial community involvement. • Previous experience in providing construction management services within the City and County of San Francisco requiring coordination with the Department of Parking and Traffic, Department of Public Works, and Department of Building Inspection. • Minimum of 4 projects with a value greater than ten million dollars (\$10,000,000) each. 		
<p>Qualifications and Experience of Respondent Firm (30 points maximum)</p> <p>Organization Chart of Proposed Project Team: Provide proposed organization chart of key team members showing contractual and reporting relationship of each member and the firm each member</p>		

<p>is associated with as well as the estimated percentage of each firm's involvement in the Agreement.</p> <p>Résumés of Proposed Project Team: Provide a résumé for each member of the project team included on the organization chart. Résumés are to be limited to two pages in length. Total number of résumés submitted is limited to no more than five. Section E-19 shall provide a listing of relevant projects (not to exceed four) in which the individual had a significant role that demonstrates the person's capability to fulfill the proposed role relative to the Scope of Services. Each project shall include a brief description (scope, size, cost, etc.) and performance period (beginning date and completion date) of each project. The project description shall also include the specific role/responsibility of the individual and the duration that individual worked on the project. In addition, provide a point of contact, contact title, email address, telephone, and fax number for each project which may be used as a reference for proposed team member.</p> <p>Example Projects which Best Illustrate Proposed Team's Qualifications for this Contract: Provide a list of up to four relevant projects ongoing or completed by the proposing firms. As instructed, select no more than four (4) projects where multiple team members worked together, if possible, that demonstrates the team's capability to perform work similar to that required for this Agreement. In addition, provide the performance period duration of each project. The projects should reflect demonstrated experience in the following areas as further defined in the Scope of Services tasking:</p> <ul style="list-style-type: none"> • Design/Constructability Reviews • Construction Management • Cost and Schedule Management • Technical Support • Coordination with Other Departments and Affected Entities • Agreement Administration 		
<p>Approach (20 points maximum)</p> <p>Discuss the overall approach, concerns and innovations for accomplishing the work including the anticipated scheduling, staffing, operational impacts of the Project and the Scope of Services.</p>		
<p>References (10 points maximum)</p>		

Total _____
(100 maximum total score possible)

Attachment B

**TJPA INTERVIEW QUESTIONS
RFP 11-04 – Construction Management Services for Bus Storage Facility
Friday, January 27, 2012**

Firm Name:

Panelist:

Presentation

Score: (_____ / 50 points)

Presentation must include the following three points:

- Describe the roles and responsibilities of your proposed key personnel
- Describe your approach in managing the project
- Discuss what you feel are the challenging issues on managing the project and how would you address those challenges

Strengths:

Weaknesses:

- 1. You are preparing the agenda for the pre-construction meeting, describe six items that you would include and why.**

Score: (/ 10 points)

Answer should include:

- Introduction of key personnel
- roles/responsibilities
- review of project site/logistics
- project safety
- schedule
- QA/QC
- permits
- agency coordination (TJPA, CCSF, Caltrans, PG&E, AC Transit, etc.)
- temporary utilities
- correspondence procedures,
- submittal/shop drawing procedures (number of copies, review period,etc.)
- community outreach
- change procedures
- DBE/SBE documentation
- Certified Payroll (Elation)

- 2. Following issuance of a Notice to Proceed, name three items you would expect to receive from the Contractor within the first fifteen days of work.**

Score: (/ 10 points)

Answer should include:

- Project Schedule
- Schedule of submittals
- Schedule of Values
- Request for Substitutions

- 3. You have received the Contractor's initial Project Schedule. Describe some of the items you would look for when reviewing this document.**

Score: (/ 10 points)

Answer should include:

- Have requirements of scheduling specification been met?
- Are contract milestones indicated?
- Does the overall sequencing and approach make sense?
- Does the critical path make sense?
- Are all work items included?
- Are durations reasonable?
- Is there sufficient time for submittals, review and procurement?
- Does the schedule contain any float?
- Are there multiple critical paths?
- Is there sufficient detail (i.e. number of activities)?
- Did the "Base Line" schedule include a detailed narrative with assumptions?

4. What do permit requirements do you anticipate on this project?

Score: (_____ / 10 points)

Answer should include:

- Caltrans encroachment permit
- Site permit
- Excavation permit
- SF DPW permits (utility connections)
- Oversized driveway permit
- Oversized load permit (modulars)
- SF DPW street and sidewalk use permits
- SF DPW night noise permits
- SF PUC construction water use permit
- SF PUC SWPPP permit
- SF MTA/(DPT) Special Traffic permits

5. Describe some of the issues involved with constructing the bus link ramp over Second Street.

Score: (_____ / 10 points)

Answer should include:

- CCSF coordination (DPT, DPW, SFMTA, BLHP, SFFD, SFPD, SFPUC, etc.)
- Caltrans Coordination
- Muni coordination for OCS removal
- Temporary scaffold/shoring approval
- Neighborhood outreach
- Fabrication/delivery of bridge section

6. Describe some of the key neighborhood issues you see for this project and how do you propose to address them.

Score: (_____ / 10 points)

Answer should include:

- Environmental Mitigation and Monitoring
- Communication Protocols
- Outreach
- Discussion of Complaints (Noise, Dust, Traffic, Exhaust, etc.)
- Construction Hours
- Pedestrian Safety
- Site Maintenance

7. Explain the steps involved in preparing a Change Order for approval.

Score: (_____ / 10 points)

Answer should include:

- Merit Determination
- Initiating documents (RFI, change request letter, etc.)
- Estimate
- Scope of Work
- Reason for Change
- Record of Negotiations
- Cost Price Analysis

8. Describe the protocols that must be in place prior to soil excavation and off-haul.

Score: (_____ / 10 points)

Answer should include:

- Approved Health and Safety Plan (HASP)
- Excavation permit
- Soil testing protocol (in-situ vs. stockpile)
- Manifests
- DPT approval of haul route
- Site logistics (tire washing station, entry/exit routes, etc.)

9. Describe the key components of the project closeout process and any tools you might use to efficiently close out a project.

Score: (_____ / 10 points)

Answer for key *components* should include:

- Close-out meeting to determine status of completion items
- Substantial Completion
- Partial Occupancy
- Confirm receipt of project record drawings/specifications, submittals, product data, warranties/guarantees, spare parts, Certificate of Occupancy, etc.
- Release of Claims letter
- Final Payment
- Final Acceptance letter

Answer for *available tools* should include:

- Punch List
- Daily/weekly job walks
- Meeting minutes
- Correspondence (letters, e-mails, etc.)
- Pay application

10. What do you see as the biggest risk exposure on this project?

Score: (_____ / 10 points)

Total Score

(Possible 150)