

Subject	State Route 4 (e) Widening Project – Somersville Road to SR 160 (Project 1407) – Amendment #2 to Consultant Services Agreement No. 203 with BKF for Final Design (PS&E) Services
Summary of Issues	<p>In April 2006 the Authority entered into Consulting Agreement No. 203 with BKF Engineers to provide final design services for Segment 2 of the SR 4 (e) Somersville Road to SR 160 Project – Contra Loma/G Street section. In November 2007 the contract was amended to reflect the additional scope relative to the project revision to provide a wider median for future transit.</p> <p>A second amendment is requested at this time to cover additional out-of-scope services to prepare the final design for the eBART bridge structure at Contra Loma in the median of SR4, and associated median barrier retaining walls. BART has requested that the Authority’s freeway design consultant team provide these services so that the final design can be closely coordinated with the adjacent freeway structures. The cost of these services will be covered by RM-2 funds, earmarked for the eBART extension.</p>
Recommendations	Staff recommends that the Authority authorize the Chair to execute Amendment No. 2 to Contract No. 203 with BKF Engineers to increase the budget by \$261,000 for a new not-to-exceed amount of \$6,291,000.
Financial Implications	This amendment will be funded by RM-2 funds earmarked for eBART.
Options	The Authority could elect to not amend BKF’s agreement for additional design services for the eBART structures however, project coordination between the freeway and eBART projects may be jeopardized.
Attachments	<ul style="list-style-type: none"> A. Amendment No. 2 to Agreement No. 203 B. Historical Summary of Contract Amendments for Agreement No. 203 C. Amendment Letter from BKF, dated March 19, 2008.
Changes from Committee	

Background

The SR 4 (e) Somersville to Route 160 Widening Project is divided into three segments. In April 2006, the Authority entered into Agreement No. 203 with BKF for final design services for the center segment (Segment 2), which covers the area surrounding the Contra Loma Interchange and G Street Overcrossing. In November 2007, the contract was amended to cover additional services related to the project revision to provide a wider median for future transit.

BART is currently performing preliminary design and environmental clearance for the eBART extension project. It has become clear that the design of the transit structures in the median of SR4 need to be closely coordinated with the freeway structures because the transit and highway bridges are immediately adjacent to each other. Therefore, BART has requested that the Authority’s freeway final design consultant complete the final design for the eBART structures in tandem with the freeway design.

BART staff have reviewed and concurred with this amendment request. This amendment will be funded by RM-2 (see *proposed* Resolution #08-06-P, agenda item 14.2).

CONTRA COSTA TRANSPORTATION AUTHORITY
Agreement No. 203
With
BKF Engineers
For
Route 4 (east) Widening – Somersville Road to SR 160

AMENDMENT No. 2

WHEREAS, the Contra Costa Transportation Authority and BKF Engineers entered into Agreement No. 203 on April 19, 2006 and

WHEREAS, the Authority has decided to amend the freeway widening concept so as not to preclude future transit in the median of Route 4 within the limits of this project: and

WHEREAS, Amendment No. 1 to Agreement No. 203 was approved on November 28, 2007 to increase scope and compensation related to additional services to include a wider median for future transit; and

WHEREAS, the parties now wish to modify the scope of services and compensation limit to include additional design services for the eBART structures in the median, now therefore be it

MUTUALLY AGREED:

- (1) that Article III of the Agreement is amended to increase the not to exceed amount by \$261,000 for a new Total Compensation Limit of \$6,291,000 and
- (2) that the attached letter from BKF Engineers, dated March 19, 2008, regarding Extra Work Request, is made part of Exhibit B, Scope of Services and
- (3) all other items and conditions of the Agreement shall remain in effect.

In witness whereof, the parties hereto have executed this Amendment 2 to Agreement No. 203 effective as of the 16th day of April 2008.

BKF ENGINEERS

**CONTRA COSTA TRANSPORTATION
AUTHORITY**

Natalina Bernardi
Principal

David E. Hudson, Chair

Robert K. McCleary, Executive Director

**Historical Summary of Contract Amendments
CT 203, BKF Engineers**

Date	Contract Amendment	Amount of Amendment	Total Contract Amount	Description
Apr 19, 2006	Original Contract	\$ -	\$ 4,100,000	Original Contract for preparation of PS&E/construction documents for Segment 2 of the SR4 (e) Somersville to Route 160 Project.
Nov 28, 2007	Amendment No. 1	\$ 1,930,000	\$ 6,030,000	Amendment #1 is to cover additional design services due to changes in the project to include a wider median for future transit and for increased project limits on the adjoining local roadways to address updated traffic operation analysis.
Apr 16, 2008	<i>Proposed</i> Amendment No. 2	\$ 261,000	\$ 6,291,000	Amendment #2 is to cover additional design services for the eBART median structures per BART's request. Amendment is funded with RM-2 funds.



March 19, 2008

Ms. Trudy Presser
Nolte Associates, Inc.
201 N. Civic Drive, Suite 255
Walnut Creek, CA 94596

**Subject: SR 4 Eastbound Widening Project
Extra Work Request -- BART Structure over Contra Loma**

Dear Ms. Presser:

BKF Engineers is pleased to submit the following proposal to provide engineering services for the final design of a BART structure along SR4 at Contra Loma Blvd. The project will include the construction of an approximately 36' wide by 160' long structure carrying two ballasted tracks. The proposed BART structure is located in the center of the future SR4 median between two proposed vehicular bridge structures carrying eastbound and westbound SR4 traffic.

Based on Type Selection documents prepared by BART dated September 21, 2007, the proposed BART structure at Contra Loma Blvd (L-Street) will consist of a two-span cast-in-place prestressed box girder structure supported on a 2-column bent. Columns will be founded on pilecap foundations. Per the conceptual design proposed, abutments will consist of both a short seat and tall cantilever abutments supported on piles.

In addition to the proposed bridge structure, through out the highway corridor a BART barrier will be constructed to separate vehicular traffic from the BART facility. The BART barrier type may vary depending on grade differentials (3 possible cases have been identified) but it is assumed that the BART barrier will be approved through the Type Selection process by BART. Per BART's request, the SR4 Project design will also include the installation of the sub ballast within the BART facility.

It is our understanding that the scope of work and budget covered under this proposal will be separate from the SR4 Widening Project. In general, the scope of services is outlined below:

Task 1 Preliminary Engineering

- A. Coordination
 - Project administration
 - Coordination with other consultants within the design team including, but not limited to, civil, geotechnical, trackwork, systems, and architectural designers
 - Coordination with various agencies including Caltrans, BART, and CCTA. Attend coordination meetings as needed (4 meetings assumed)

- B. Type Selection
 - Review Type Selection design plans and calculations prepared by BART
 - Attend Type Selection Meeting

- C. Geotechnical Engineering
 - Prepare preliminary recommendations (including soil parameters, corrosivity, seismic design curves)
 - Prepare Bridge Foundation Report for Contra Loma Blvd Structure
 - Prepare Log of Test Borings for Contra Loma Blvd Structure



Task 2 65% (Unchecked) Contract Documents:

- A. Administration, coordination
 - Project administration
 - Coordination with other consultants within the design team including, but not limited to, civil, geotechnical, trackwork, systems, and architectural designers
 - Coordination with various agencies including Caltrans, BART, and CCTA. Attend coordination meetings as needed (4 meetings assumed)

- B. Prepare 65% PS&E submittal including:
 - Perform structural design calculations and check calculations for Contra Loma Bridge
 - Perform structural design calculations and check calculations for BART barriers
 - Incorporate subballast design
 - Develop unchecked plans and details
 - Develop quantities and estimates
 - Develop technical specifications
 - Submit 65% PS&E documents

Task 3 90% Contract Documents:

- A. Administration, coordination
 - Project administration
 - Coordination with other consultants within the design team including, but not limited to, civil, geotechnical, trackwork, systems, and architectural designers
 - Coordination with various agencies including Caltrans, BART, and CCTA. Attend coordination meetings as needed (4 meetings assumed)

- B. Perform quality control check including:
 - Perform independent quality control review of 65% plans, and specifications

- C. Prepare 90% PS&E submittal including:
 - Address 65% submittal comments from independent quality control check
 - Address agency comments on 65% submittal
 - Update structural design calculations and check calculations
 - Revise plans, technical specifications and estimates per review comments
 - Submit 90% PS&E documents

Task 4 100% Contract Documents:

- A. Administration, coordination
 - Project administration
 - Coordination with other consultants within the design team including, but not limited to, civil, geotechnical, trackwork, systems, and architectural designers
 - Coordination with various agencies including Caltrans, BART, and CCTA. Attend coordination meetings as needed (4 meeting assumed)

- B. Prepare 100% PS&E submittal including:
 - Address agency comments on 90% submittal
 - Update structural design calculations and check calculations
 - Revise plans, technical specifications and estimates per review comments
 - Submit 100% PS&E documents



Task 5 Geotechnical Services for Design of Bart Barriers:

- A. Geotechnical Services
 - Perform borings samples within the SR4 median for BART Barriers
 - Provide Foundation Report to obtain Caltrans approval of BART Barriers

The following assumptions were made in preparing this scope of work:

1. Plans and details will be drafted using AutoCAD version 2005.
2. The contract documents will be prepared in the Imperial (English) system of measures.
3. Structure design in general will be based on Caltrans Bridge Design Specifications (CBDS) Manual. Design criteria.
4. Plans and specifications shall be prepared following Caltrans standards and AREMA standards.
5. ARS curves shall be prepared using Caltrans and AREMA standards.
6. It is assumed that plan and profile sheets will not be required Case I BART Barriers.
7. Structural design calculations and check calculations shall be prepared for the worst loading case of BRT, DMU and BART.
8. BART track alignment and profile will be provided by BART.
9. Trackwork, systems and architectural design will be provided by others.
10. Underdrain design for BART facility will be provided by others.
11. Corrosion design will be performed by others.
12. Architectural features affecting bridge design (column sizes and shapes) are assumed to be final at the conclusion of Task 2. Minor revisions beyond completion of Task 2 can be accommodated provided structural system is not affected.
13. Bridge layout information (structure layout line, structure width, cross slope) and bridge profile data are assumed to be final at the conclusion of Task 2. Minor revisions to the bridge layout & profile can be accommodated prior to completion of Task 2. Revisions to the bridge layout & profile data during Task 3 or later will be considered extra work.
14. Scope assumes Caltrans approval of Structural Type Selection for Contra Loma Blvd and the BART Barriers.
15. Permit applications (if required) will be prepared and filed.
16. Construction support services are not included but may be provided for additional fee.
17. It is assumed that the BART construction is concurrent with the highway construction.
18. It is assumed that BART submittals and review times coincide with Caltrans submittals and review times.

BKF proposes to provide the above Scope of Services for an estimated amount as follows:

Task 1: Preliminary Engineering	\$ 50,000
Task 2: 65% Contract Documents	\$ 90,000
Task 3: 90% Contract Documents	\$ 56,000
Task 4: 100% Contract Documents	\$ 30,000
Task 5: Geotechnical Services for BART Barriers	\$ 35,000
<hr/> Project Total	<hr/> \$ 261,000



Should any additional services be requested or required which are not included in the above Scope of Services, these services will be considered extra work.

We look forward to continuing to provide services to the CCTA on this project. Please contact me if you have any questions or require additional information.

Very truly yours,
BKF Engineers

A handwritten signature in black ink, appearing to read "Natalina V. Bernardi".

Natalina V. Bernardi, P.E.
Principal/Vice President