

日米コンサルタントの違い 日本にはない制度 事例集

- ◆ *Peer Review*
- ◆ *Proposal (Check Engineer)*
- ◆ *CRIP (Cost Reduction Incentive Program)*
- ◆ *RFI (Request for Information)*
- ◆ *DRB (Dispute Review Board)*
- ◆ *Partnering Consultant*
- ◆ *Standard Agreement*
- ◆ *Professional Insurance*

ROMAN WOLCHUK

Consulting Engineers

26 JOURNAL SQUARE

JERSEY CITY, NJ 07306-4102, USA

Tel (201) 659-██████ Fax (201) 659-██████

E-mail ██████████@juno.com

October 15, 1998

Mr. James E. Roberts
Chief, Division of Structures
California Department of Transportation

1801 30th Street
Sacramento, CA 95816

Dear Mr. Roberts:

Thank you for providing me with the opportunity of presenting our comments on current Caltrans bridge projects featuring orthotropic decks and steel box girders. At the meeting in your office on October 6 which was called by you and attended by the key structural engineers several issues outlined in our letter of September 2, 1998 were discussed and tentative conclusions drawn.

Existing orthotropic decks with closed ribs

With reference to our 1999 TRB paper on "*Steel Orthotropic Decks - Developments in the 1990's*" in which recent catastrophic fatigue failures of orthotropic decks in Holland are discussed, the San Diego-Coronado orthotropic deck bridge with deck plate thickness only $\frac{3}{8}$ in (9.5 mm) thick over most of the bridge length may be considered endangered by fatigue at the intersections of the ribs with the cross beams. (The Dutch bridges which failed had the decks 12 mm thick). The Dublin bridge with a thin deck plate is not subject to much truck traffic. Another orthotropic deck bridge with a thin deck, the Queensway Bridge is not under Caltran's jurisdiction.

In the discussion of the stress concentration phenomenon at the critical locations at the cross beams several possibilities of remedial action were suggested. A careful field inspection for incipient cracks in the deck plate of the San Diego Bridge was considered as a first step. In order to better assess the fatigue exposure of existing decks I suggested an analytical FEM study of the stress flow under AASHTO wheel loads for a typical closed-rib deck configurations with deck plate thickness being a variable parameter. It appears that there may be a possibility of arranging such studies, possibly jointly with other interested State Transportation Departments (Louisiana, Missouri, Illinois), under the auspices and co-ordination by the AASHTO Steel Bridge Committee and the FHWA. We would be glad to provide our advisory and consulting services for such studies.

Mr. J. E. Roberts

October 15, 1998
page 6

Modifications of the design and details suggested above will assure fatigue safety of the decks (the deck plate, rib details) and a reliable performance of the surfacing (achieved by stiffer ribs). Simplifications and adjustments of the general features of the boxes (stiffening, internal bracing, support conditions) will considerably reduce the weight of steel and the unit fabrication cost, which then could be expected to be in the acceptable range of about \$2/lb. Without such revisions the price of the steel superstructure may be over \$3/lb, in which case the total cost of the bridge may substantially exceed the estimates.

As you suggested, I contacted the office of De Leuw, Cather Co. in San Francisco and discussed these issues with Mr. Brian R. Dykes. Since an "independent review and check" of the design is a standard requirement of all Caltrans bridge design contracts, our review and specific recommendations may be accommodated within the project's budget allotted for this purpose. Our review work could be accomplished with a relatively small budget. However, Mr. Dykes was yet unable to suggest any arrangements for such work which could be made only after further consultation with Caltrans.

b) The San Francisco-Oakland Bay Bridge

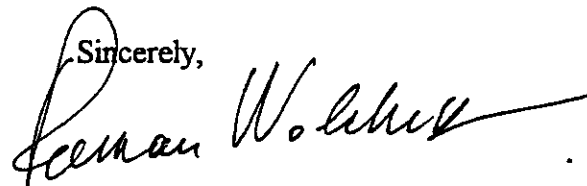
Similar guidelines for the design and details of the steel box girder and the orthotropic deck would apply to the main span of the SF-OB Bridge.

I visited the office of T.Y. Lin, Intern. in San Francisco and discussed the relevant design aspects with Mr. Mirek Olmer, Senior Principal in charge of this contract, who indicated that our advisory and consulting services would be considered after the final contract arrangements with Caltrans are completed. We trust, therefore, that we may be able to make our contribution to this project.

I wish to thank you again for your courtesy of arranging the meeting on October 6 during which I could discuss many engineering subjects with you and the Caltrans engineering staff. I trust that all of these issues may be successfully resolved.

With best personal regards,

Sincerely,



ROMAN WOLCHUK

RW:gg
Enclosures
Copy to: Mr. Eldon Davisson

ROMAN WOLCHUK

Post-it* Fax Note	7671	Date	# of pages ▶
To	Yuji Nakamura	From	C. YIU
Co./Dept.		Co.	
Phone #		Phone #	
Fax #		Fax #	

1

DRAFT

PROPOSAL

The [REDACTED] Team is pleased to submit the Ballpark Cost Estimate to provide Rehabilitation Design Services for the construction of the Lions Gate Bridge in Vancouver.

Enclosed herewith also the Organization and individual in the performance of these activities.

The Cost Proposal is based on the following conditions of understandings as to the project requirements

SCOPE OF WORK AND SCHEDULE**TASK I - TENDER PERIOD**

Works to be performed before the bid submission (January 28, 1999) to assist on tender preparation including cost estimates

Item I Erection engineering work for replacing the deck & Independent Check

- Review the suggested erection scheme by B & T
- Proposed conceptual erection scheme for replacement of the bridge deck and associates
Components, including:-
 - Erection sequences;
 - Temporary deck section design;
 - Replacement of existing deck and truss systems;
 - New hanger installation & replacement and miscellaneous cable items;
 - Schematic drawings and quantities.
 - Principal items of construction equipment that will be employed;
- One trip to Vancouver B.C. for one engineer for two days

Item II Seismic Design and Independent Check

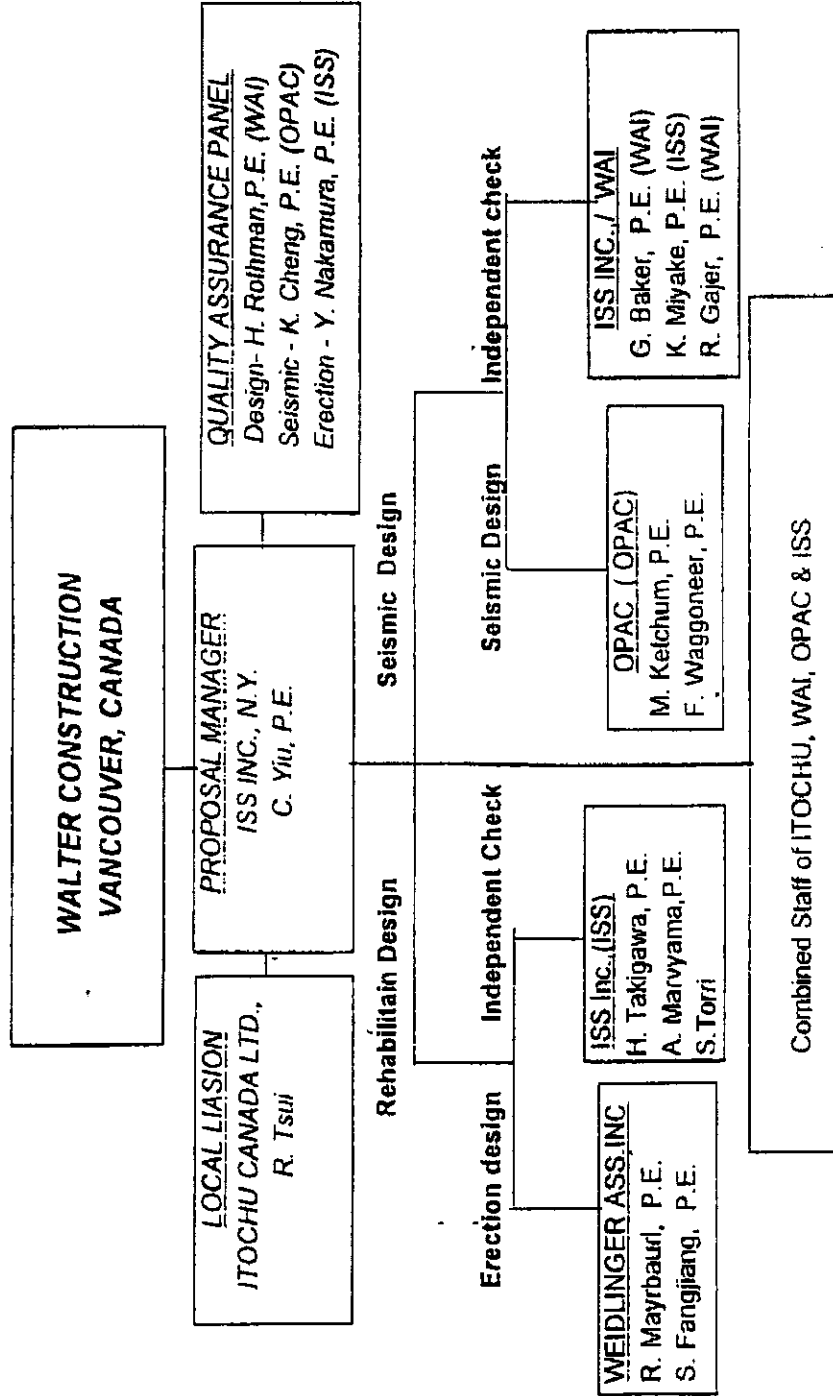
Design/build of approach structure viaduct and upgrade of the main suspended structures

- Review of design and construction documents
- Structural modeling, demands, capacities – existing structure, (3-D response spectra analysis, displacement ductility approach)
- Vulnerability verification – existing structure
- Retrofit strategy – structural scheme
- Retrofit strategy – analytical validation (3-D response spectra analysis, displacement ductility approach)
- Retrofit strategy – schematic drawings and quantities.
- One trip to Vancouver B.C. for one engineer for two days

**ORGANIZATION
REHABILITATION DESIGN SERVICES**

FOR

CONSTRUCTION OF THE LIONS GATE BRIDGE



ROMAN WOLCHUK

Consulting Engineers

26 JOURNAL SQUARE

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E-mail ████████@bellatlantic.net

Roman Wolchuk, P.E.

George S. Baker, P.E.

July 23, 2002

Mr. Yuji Nakamura
Integrated Solution Services

4th Floor, Shiba Nishii Building
4-9-1 Shiba, Minato-ku,
Tokyo 104-0018 JAPAN

Dear Yuji:

It has been a pleasure to meet you again. Based on the discussions yesterday, I have assembled some additional information concerning the San Francisco-Oakland Bay Bridge.

Please find enclosed:

The construction sequence drawings shown on the plans,

The tower shafts and strut drawings,

Specifications on fabrication and welding.

Note on page 590 of the specifications, that the orthotropic deck rib weld is to be 80% minimum.

For the division of the contracts, the intention of Caltrans has been to divide the Self-anchored suspension bridge (SAS) into three contracts: W2 foundations, Tower and Pier E2 foundations, and the remainder. Thus, the piers are included in the foundation contracts, up to a level below the cap beams. The tower was not considered to be a separate contract. The bid opening for the SAS was estimated to be July 15, 2003.

The W2 foundation was expected to be advertised in August 27, 2002. The other foundations and YBI contracts would follow at one to two-month intervals.

I hope we can continue a fruitful relationship.

With best regards,



George Baker, P.E.
Associate and Chief Engineer

15-19

Minor defects may be removed by grinding or chipping without welding repair, in accordance with the following requirements:

- A. The depth of the defect does not exceed 3 percent of the specified dimension. ##JLR (6/25/2001)
- B. The removal of metal does not appreciably affect the strength, integrity or functionality of the casting, as determined by the Engineer.
- C. The remaining wall thickness is equal to or greater than the required minimum wall thickness.
- D. The surrounding metal is ground to a smooth contour with the elimination of apparent stress raisers. ##JLR (3/25/2002)
- E. Specified tolerances on machined surfaces are satisfied.

##JLR (3/25/2002)

15-20

Weld repairs may be permitted if qualified welding procedures are used that demonstrate Charpy V-Notch toughness of 34J at -30 C in the weld metal and 34J at +0 C in the heat-affected zone in the final, as-heat treated condition. Weld repairs shall be completed before final heat treatment. All proposed repair procedures shall be submitted in writing to the Engineer and shall include a description of the defect, the size and the shape of the excavation, the welding procedure specification, preheat and post heat.

##JLR (4/3/2000)

15-21

The exterior surfaces of the saddle castings, after acceptance, shall be painted as specified in "Clean and Paint Structural Steel" of these special provisions. The castings shall be carefully masked to avoid painting any high strength fastener contact surface, interior or other machine finished surface.

15-22

At the time of assembly, the contact surfaces of the saddle castings shall meet the machine finish requirements shown on the plans.

FABRICATION

Quality of Workmanship

##JLR (3/25/2002)

15-23

All bridge elements fabricated with plate material shall be cut and trimmed according to dimensions of templates fabricated and measured to be true at bridge design temperature, as shown on the plans.



tensor engineering

321.773. [REDACTED] • Fax: 321.773 [REDACTED]
EMAIL: tensor@tensorengr.com

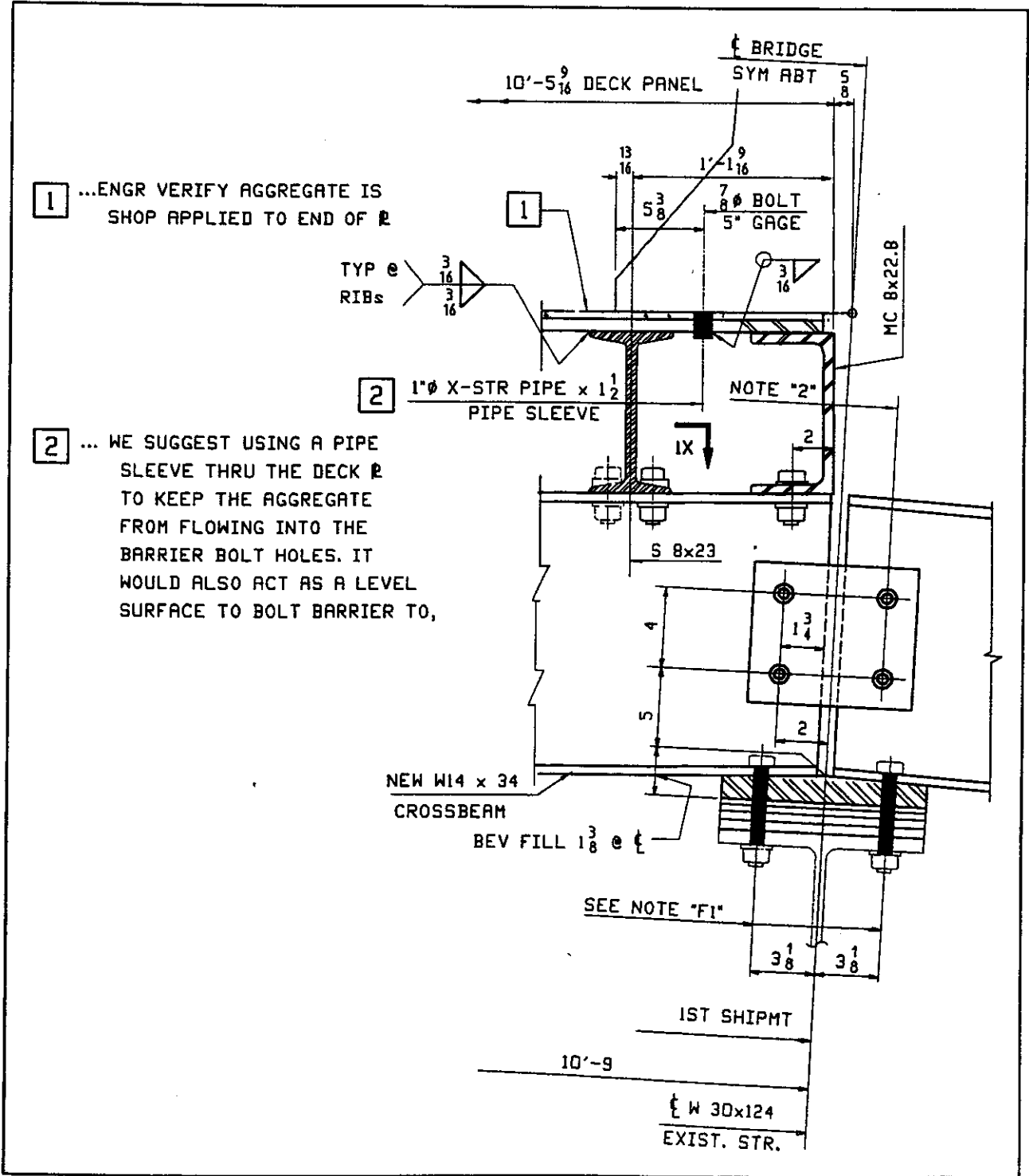
DATE : 12/10/02

TO : Randy Estacio
FROM : WALTER J. GATTI

FIRM : YONKERS CONTRACTING COMPANY, INC.

TENSOR RFI NO. : TEC-14

REF. JOB : TRIBOROUGH BRIDGE LIFT SPAN DECK REPLACEMENT



1 ...ENGR VERIFY AGGREGATE IS SHOP APPLIED TO END OF R

2 ... WE SUGGEST USING A PIPE SLEEVE THRU THE DECK R TO KEEP THE AGGREGATE FROM FLOWING INTO THE BARRIER BOLT HOLES. IT WOULD ALSO ACT AS A LEVEL SURFACE TO BOLT BARRIER TO,

FILE:

紛争解決手法

紛争解決手法	Partnering	DRB	Mediation	Arbitration	Litigation
開催時期	工事期間中 (定期的)	工事期間中 (必要に応じて)	原則、工事中 または工事終了後	原則、工事終了後	原則、工事終了後
発注者、請負者 以外の参加	Facilitator	Dispute Review Board Member	Mediator	Arbitrator	Judge Attorney
解決の手法	話し合い 両者の合意	プレベンション Board 提案	Mediator を介して の両者合意	資料提出、公聴 Arbitrator 提案	裁定
提案に対する 拘束力	なし	なし	なし	あり/なし (両ケースあり)	あり
費用	小	小	中	大	大
解決までの期間	即時	1～3ヶ月程度	1～6ヶ月経度	6ヵ月～2年	1年超

**UDOT / Wasatch Constructors, JU
I-15 Reconstruction
Business Plan**

&

Partnering Workshop Materials

Created by:

I-15 Reconstruction Project Team

May 6, 1997

Partnering Consultant:

**Charles E. Cowan
Charles Cowan & Associates**

**30500 N. E. 258th Avenue
Yacolt, Washington 98675**

(360) 686-██████

Fax (360) 686-██████

CASE Document 2-1996

An Agreement Between Owner and Structural Engineer of Record for Professional Services©
Prepared by the Council of American Structural Engineers

(Date)

Name of Owner
Address of Owner
Attention: _____

Reference: Name of Project
 Address of Project
 Company Job Number:

Dear _____:

We are pleased to propose the following agreement for providing structural engineering services on this project. This proposal will remain open for acceptance for _____ month(s) from the date above.

DESCRIPTION OF PROJECT

The project consists of _____

We understand that this is not a Fast Track Project. [Delete if not applicable].

SCOPE OF SERVICES

The Structural Engineering Services to be provided are described in the Summary of Services (Exhibit A) and Terms and Conditions (Exhibit B). Additional Services (Exhibit B, Paragraph 3. 1.1 and 3.1.2) which are included, are specifically noted in Exhibit A. this agreement does not include services for Project Peer Review or Special Inspections.

ENGINEERING CHARGES

Compensation for our services shall be: [choose one of the following four]

1. A lump sum fee of _____ dollars (\$ _____).
 2. A fee equal to _____ % of the construction cost to the project excluding site work.
- Progress payments for basic services in each phase shall total the following percentages of the total basic compensation payable:

Project Definition	_____ %	Contract Documents	_____ %
Schematic Design	_____ %	Construction Administration	_____ %
Design Development	_____ %	TOTAL	100%

If the services covered by this agreement have not been completed within _____ months of the d _____ of, the remaining fees shall be escalated at the rate of _____ % per year.

[only use the above statements with either lump sum fee or % construction cost fee]

3. A fee calculated on an hourly rate basis per our standard rate schedule. At this time we estimate the total fee to be _____ dollars (\$ _____). This total fee shall be understood to be an estimate. If the estimate is exceeded by more than ten percent, you shall be so advised in advance.

4. A fee calculated on an hourly basis per our standard rate schedule not to exceed _____ dollars (\$ _____).

A retainer in the amount of [_____ % of the total fee] [\$ _____] shall be paid upon execution of this contract. The retainer shall be applied against the final invoice(s).

Additional Services shall be charged at our then current standard hourly rates.

Our current standard hourly rate schedule is:

Principal	:\$ _____	Sr. Draftsman:	\$ _____
Associate:	\$ _____	Jr. Draftsman:	\$ _____
Project Manager:	\$ _____	Clerical:	\$ _____
Designer/Engineer:	\$ _____		

If the project becomes a Fast Track Project, the engineering charges stated above shall be subject to renegotiation.

REIMBURSABLE EXPENSES [choose one of the following two]

1. Reimbursable expenses as described in the Terms and Conditions shall be billed as a multiple of _____ times the cost incurred.

2. In lieu of reimbursable expenses, an administrative fee shall be paid as a lump sum of _____ dollars (\$ _____) invoiced as a percent throughout the course of the project.

ADDITIONAL PROVISIONS

If Basic Services covered by this Agreement have not been completed within _____ months of the date hereof, through no fault of the Structural Engineer of Record (SER), the amounts of compensation set forth in this Agreement shall be equitably adjusted.

This Letter of Agreement, and Exhibits A & B hereto, constitute the entire agreement between the parties. Two copies of this Letter of Agreement have been provided to you. Please examine these documents and if acceptable, sign the original of this letter and return it to us. Retain a copy for your records. We will begin services upon receipt of a signed contract [and our retainer].

*We are looking forward to working with you on this project.

Very truly yours,

ACCEPTED BY:

Date: _____

For: _____

_____, P. E.

_____, Owner

For [firm name]

DPIC Companies, Inc.
Security Insurance Company of Hartford

PL511165-01
DEX511165-01

Policy Continuation Certificate
for Design Professionals
Professional Liability Policy

A Member of the Orion Capital Companies
9 Farm Springs Drive • Farmington, CT 06032

POLICY NUMBER
GENERAL INSURING AGREEMENT

For the total renewal premium stated in Item 6 below and in reliance on statements you made in the Renewal Application and subject to all the terms, conditions and provisions of the policy, we agree to continue Policy Number PL511165. The endorsements listed in Item 11a are attached to and form part of the policy as of the inception date of the renewal period shown in Item 4. Except as modified by endorsements in 11b, all other terms, conditions, exclusions and provisions of the policy apply during the renewal policy period.

GENERAL DECLARATIONS

Item 1 -- **NAMED INSURED:** OPAC Consulting Engineers, Inc.

Item 2 -- **MAILING ADDRESS:** 315 Bay Street
2nd Floor
San Francisco, California 94133

Item 3 -- **Phone #** (415) 989-4551 **FAX #** N/A **Electronic Mail #** N/A

Item 4 -- **POLICY PERIOD:** Effective Date 04/27/97 Expiration Date 04/27/99
(12:01 a.m. Local Time at the Above Mailing Address)

Item 5 --	LIMITS OF INSURANCE:	EACH CLAIM / AGGREGATE		PREMIUM
	Professional Liability	\$	<u>1,000,000 / 2,000,000</u>	\$ <u>111,826</u>
	Optional Endorsements			
	Shared Cost of Defense	#	<u>n/a</u>	\$ <u>-0-</u>
	Dollar One Defense	#	<u>n/a</u>	\$ <u>-0-</u>
	Education Program Credits	#	<u>n/a</u>	\$ <u>-0-</u>
	Limitation of Liability	#	<u>n/a</u>	\$ <u>-0-</u>
	Special Coverage	#	<u>n/a</u>	\$ <u>-0-</u>
	Other	#	<u></u>	\$ <u></u>
	SERMC PROFIT DISTRIBUTION () (See Schedule A)			\$ <u>[4,600]</u>

Item 6 -- **TOTAL PREMIUM:** \$ 107,226
Assessments/Taxes N/A \$

Item 7 -- **DEDUCTIBLE:** \$ 10,000 EACH CLAIM/\$ 10,000 AGGREGATE

Item 8 -- **NOTICE OF CLAIMS MADE AND REPORTED POLICY:**
Professional Liability coverage is on a **CLAIMS MADE AND REPORTED BASIS**. Coverage applies only to those **CLAIMS** that are first reported to the Company during the policy period.

Item 9 -- **NOTICE OF EXPENSE WITHIN THE LIMITS:**
Professional Liability Coverage contains a provision that: (a) reduces the Limits of Insurance stated in the policy by the costs of **CLAIMS EXPENSES** and/or (b) may permit **CLAIMS EXPENSES** to be applied against the deductible or retention amount, if any.

Item 10 -- **RETROACTIVE DATE:** 01/13/92

Item 11a -- Renewal Endorsements Carried Forward: DP37120-0 (01/96); DP37223-0 (01/96); DP7000-0; DP37420-0 (01/96);

Item 11b -- DP37428-0 (01/96);
Renewal Endorsements New: DP37211-0 (02/97); DP37212-0 (02/97); DP37210-0 (02/97);

PLEASE READ THE POLICY CAREFULLY AND DISCUSS THIS COVERAGE WITH THE INSURANCE AGENT OR BROKER DESIGNATED BELOW.

Agent: Dealey, Renton & Associates Date Issued: 04/15/97 KVB

Countersigned by: _____

Countersigned at: Oakland, California