

Council Meeting of  
May 1, 2007

Honorable Mayor and Members  
of the City Council  
City Hall  
Torrance, California

Members of the Council:

**SUBJECT: Public Works - Award of Consulting Services Agreement to RBF Consulting for Design Services for the 190<sup>th</sup> Street Rehabilitation, T-49. Expenditure: \$274,791**

### **RECOMMENDATION**

The Public Works Director recommends that the City Council Award a Consulting Services Agreement in the amount of \$274,791 to RBF Consulting of Irvine, CA to perform design services for the 190<sup>th</sup> Street Rehabilitation, T-49.

### **Funding**

Funding is available from CIP project T-49.

### **BACKGROUND**

On September 26, 2006, Your Honorable Body approved an appropriation of \$1,650,000 to fund the design and construction of the 190<sup>th</sup> Street Rehabilitation (Hawthorne Boulevard to west city limit), T-49 ("T-49 Project") as part of the adopted Capital Budget. The T-49 Project will provide for pavement reconstruction and overlay of the south side of 190<sup>th</sup> Street within the project limits.

In November 2006, Your Honorable Body approved a Contract Services Agreement with Labelle-Marvin, Inc. to perform a pavement structural evaluation and analysis of the T-49 Project. Their services are complete and staff is ready to proceed to the design phase.

The north side of 190<sup>th</sup> Street between Hawthorne Boulevard and our west city limit is owned by the City of Redondo Beach. They have a Capital project to rehabilitate their portion of 190<sup>th</sup> Street and have already completed the design. There have been ongoing discussions between both cities about the benefits of jointly constructing both projects. Some benefits are: simplifies construction management; reduces traffic impacts; avoids multiple general contractors and cost effectiveness. Therefore, it is recommended that the projects be jointly constructed. Because they will be utilizing federal funds for construction, Redondo Beach is required to advertise their project for bid no later than September 2007.

## ANALYSIS

In order to complete the design of the T-49 Project by September 2007, staff determined that contract design services are required. Engineering staff will perform project management and administration.

Due to our effort to meet the time constraint for the City of Redondo Beach, staff issued a Request for Proposal only to RBF Consulting. RBF successfully designed the Artesia Boulevard Rehabilitation and Sepulveda Boulevard Rehabilitation projects. They are the only firm to recently complete several large design projects for the City and their proposed cost for the T-49 Project is acceptable for this type of project. Furthermore, other qualified firms are currently designing other Capital projects and could not meet the timeframe.

RBF proposes to perform design services in the amount of \$274,791 for this project and they are staffed to complete the work by September 2007. The proposed Consulting Services Agreement (Attachment A) will provide the required design services.

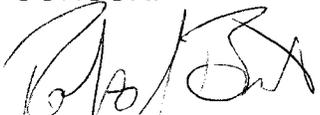
Respectfully submitted,

ROBERT J. BESTE  
Public Works Director

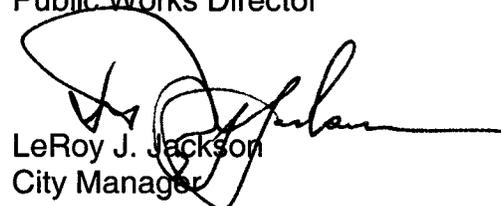


By: Craig Bilezerian  
Project Manager

CONCUR:



Robert J. Beste  
Public Works Director



LeRoy J. Jackson  
City Manager

City Manager's Note:  
Cost for the design will  
be offset by Redondo Beach's  
participation in construction  
and project management.

Attachment A: Consulting Services Agreement – RBF Consulting

## CONSULTING SERVICES AGREEMENT

This CONSULTING SERVICES AGREEMENT (“Agreement”) is made and entered into as of \_\_\_\_\_ (the “Effective Date”), by and between the CITY OF TORRANCE, a municipal corporation (“CITY”), and RBF Consulting, a California Corporation (“CONSULTANT”).

### RECITALS:

- A. The CITY wishes to retain the services of an experienced and qualified CONSULTANT to perform design services for the 190<sup>th</sup> Street Rehabilitation (Hawthorne Blvd. to West City Limits), T-49.
- B. In order to obtain the desired services, the CITY has circulated its Request for Proposal for 190<sup>th</sup> Street Rehabilitation (Hawthorne Blvd. to West City Limits), T-49, RFP No. N/A (the “RFP”).
- C. CONSULTANT has submitted a Proposal (the “Proposal”) in response to the RFP. In its Proposal CONSULTANT represents that it is qualified to perform those services requested in the RFP. Based upon its review of all proposals submitted in response to the RFP, the CITY is willing to award the contract to CONSULTANT.

### AGREEMENT:

#### 1. SERVICES TO BE PERFORMED BY CONSULTANT

CONSULTANT will provide the services and install those materials listed in CONSULTANT’s Proposal submitted in response to the RFP. A copy of the RFP is attached as Exhibit A. A copy of the Proposal is attached as Exhibit B.

#### 2. TERM

Unless earlier terminated in accordance with Paragraph 4 below, this Agreement will continue in full force and effect from the Effective Date through December 31, 2008.

#### 3. COMPENSATION

##### A. CONSULTANT’s Fee.

For services rendered pursuant to this Agreement, CONSULTANT will be paid in accordance with the compensation schedule set forth in the Proposal; provided, however, that in no event will the total amount of money paid the CONSULTANT, for services initially contemplated by this Agreement, exceed the sum of \$274,791 (“Agreement Sum”), unless otherwise first approved in writing by the CITY.

##### B. Schedule of Payment.

Provided that the CONSULTANT is not in default under the terms of this Agreement, upon presentation of an invoice, CONSULTANT will be paid monthly, within 30 days after the date of the monthly invoice.

#### 4. **TERMINATION OF AGREEMENT**

##### A. Termination by CITY for Convenience.

1. CITY may, at any time, terminate the Agreement for CITY's convenience and without cause.
2. Upon receipt of written notice from CITY of such termination for CITY's convenience, CONSULTANT will:
  - a. cease operations as directed by CITY in the notice;
  - b. take actions necessary, or that CITY may direct for the protection and preservation of the work; and
  - c. except for work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.
3. In case of such termination for CITY's convenience, CONSULTANT will be entitled to receive payment for work executed; and costs incurred by reason of such termination, along with reasonable overhead and profit on the work not executed.

##### B. Termination for Cause.

1. If either party fails to perform any term, covenant or condition in this Agreement and that failure continues for 15 calendar days after the nondefaulting party gives the defaulting party notice of the failure to perform, this Agreement may be terminated for cause; provided, however, that if during the notice period the defaulting party has promptly commenced and continues diligent efforts to remedy the default, the defaulting party will have such additional time as is reasonably necessary to remedy the default.
2. In the event this Agreement is terminated for cause by the default of the CONSULTANT, the CITY may, at the expense of the CONSULTANT and its surety, complete this Agreement or cause it to be completed. Any check or bond delivered to the CITY in connection with this Agreement, and the money payable thereon, will be forfeited to and remain the property of the CITY. All moneys due the CONSULTANT under the terms of this Agreement will be retained by the CITY, but the retention will not release the CONSULTANT and its surety from liability for the default. Under these circumstances, however, the CONSULTANT and its surety will be credited with the amount of money retained, toward any amount by which the cost of completion exceeds the Agreement Sum and any amount authorized for extra services.
3. Termination for cause will not affect or terminate any of the rights of the CITY as against the CONSULTANT or its surety then existing, or which may thereafter accrue because of the default; this provision is in addition to all other rights and remedies available to the CITY under law.

C. Termination for Breach of Law.

In the event the CONSULTANT or any of its officers, directors, shareholders, employees, agents, subsidiaries or affiliates is convicted (i) of a criminal offense as an incident to obtaining or attempting to obtain a public or private contract or subcontract, or in the performance of a contract or subcontract; (ii) under state or federal statutes of embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, or any other offense indicating a lack of business integrity or business honesty which currently, seriously, and directly affects responsibility as a public consultant or contractor; (iii) under state or federal antitrust statutes arising out of the submission of bids or proposals; or (iv) of violation of Paragraph 19 of this Agreement; or for any other cause the City determines to be so serious and compelling as to affect CONSULTANT's responsibility as a public consultant or contractor, including but not limited to, debarment by another governmental agency, then the CITY reserves the unilateral right to terminate this Agreement or to impose such other sanctions (which may include financial sanctions, temporary suspensions or any other condition deemed appropriate short of termination) as it deems proper. The CITY will not take action until CONSULTANT has been given notice and an opportunity to present evidence in mitigation.

5. **FORCE MAJEURE**

If any party fails to perform its obligations because of strikes, lockouts, labor disputes, embargoes, acts of God, inability to obtain labor or materials or reasonable substitutes for labor or materials, governmental restrictions, governmental regulations, governmental controls, judicial orders, enemy or hostile governmental action, civil commotion, fire or other casualty, or other causes beyond the reasonable control of the party obligated to perform, then that party's performance shall be excused for a period equal to the period of such cause for failure to perform.

6. **RETENTION OF FUNDS**

CONSULTANT authorizes the CITY to deduct from any amount payable to CONSULTANT (whether or not arising out of this Agreement) any amounts the payment of which may be in dispute or that are necessary to compensate the CITY for any losses, costs, liabilities, or damages suffered by the CITY, and all amounts for which the CITY may be liable to third parties, by reason of CONSULTANT's acts or omissions in performing or failing to perform CONSULTANT's obligations under this Agreement. In the event that any claim is made by a third party, the amount or validity of which is disputed by CONSULTANT, or any indebtedness exists that appears to be the basis for a claim of lien, the CITY may withhold from any payment due, without liability for interest because of the withholding, an amount sufficient to cover the claim. The failure of the CITY to exercise the right to deduct or to withhold will not, however, affect the obligations of CONSULTANT to insure, indemnify, and protect the CITY as elsewhere provided in this Agreement.

7. **THE CITY'S REPRESENTATIVE**

The Public Works Director is designated as the "City Representative," authorized to act in its behalf with respect to the work and services specified in this Agreement and to make all decisions in connection with this Agreement. Whenever approval, directions, or other actions are required by the CITY under this Agreement, those actions will be taken by the City Representative, unless otherwise stated. The City Manager has the right to designate another City Representative at any time, by providing notice to CONSULTANT.

**8. CONSULTANT REPRESENTATIVE(S)**

The following principal(s) of CONSULTANT are designated as being the principal(s) and representative(s) of CONSULTANT authorized to act in its behalf with respect to the work specified in this Agreement and make all decisions in connection with this Agreement:

Gary Miller - Vice President

**9. INDEPENDENT CONTRACTOR**

The CONSULTANT is, and at all times will remain as to the CITY, a wholly independent contractor. Neither the CITY nor any of its agents will have control over the conduct of the CONSULTANT or any of the CONSULTANT's employees, except as otherwise set forth in this Agreement. The CONSULTANT may not, at any time or in any manner, represent that it or any of its agents or employees are in any manner agents or employees of the CITY.

**10. BUSINESS LICENSE**

The CONSULTANT must obtain a City business license prior to the start of work under this Agreement, unless CONSULTANT is qualified for an exemption.

**11. OTHER LICENSES AND PERMITS**

CONSULTANT warrants that it has all professional, contracting and other permits and licenses required to undertake the work contemplated by this Agreement.

**12. FAMILIARITY WITH WORK**

By executing this Agreement, CONSULTANT warrants that CONSULTANT (a) has thoroughly investigated and considered the scope of services to be performed, (b) has carefully considered how the services should be performed, and (c) fully understands the facilities, difficulties and restrictions attending performance of the services under this Agreement. If the services involve work upon any site, CONSULTANT warrants that CONSULTANT has or will investigate the site and is or will be fully acquainted with the conditions there existing, prior to commencement of services set forth in this Agreement. Should CONSULTANT discover any latent or unknown conditions that will materially affect the performance of the services set forth in this Agreement, CONSULTANT must immediately inform the CITY of that fact and may not proceed except at CONSULTANT's risk until written instructions are received from the CITY.

**13. CARE OF WORK**

CONSULTANT must adopt reasonable methods during the term of the Agreement to furnish continuous protection to the work, and the equipment, materials, papers, documents, plans, studies and other components to prevent losses or damages, and will be responsible for all damages, to persons or property, until acceptance of the work by the CITY, except those losses or damages as may be caused by the CITY's own negligence.

**14. CONSULTANT'S ACCOUNTING RECORDS; OTHER PROJECT RECORDS**

Records of the CONSULTANT's time pertaining to the project, and records of accounts between the CITY and the CONSULTANT, will be kept on a generally recognized accounting basis. CONSULTANT will also maintain all other records, including without limitation specifications, drawings, progress reports and the like, relating to the project. All records will be available to the CITY during normal working hours. CONSULTANT will maintain these records for three years after final payment.

**15. INDEMNIFICATION**

CONSULTANT will indemnify, defend, and hold harmless CITY, the City Council, each member thereof, present and future, its officers, agents and employees from and against any and all liability, expenses, including defense costs and legal fees, and claims for damages whatsoever, arising out of, pertaining to, or relating to the negligence, recklessness, or willful misconduct of the CONSULTANT, including, without limitation those arising from the breach of contract, bodily injury, death, personal injury, property damage, loss of use, or property loss. The obligation to indemnify, defend and hold harmless includes, but is not limited to, any liability or expense, including defense costs and legal fees, arising from the negligent acts or omissions, or willful misconduct of CONSULTANT, its officers, employees, agents, subcontractors or vendors. It is further agreed, CONSULTANT's obligations to indemnify, defend and hold harmless will apply to the extent of CONSULTANT's contributing negligence, recklessness, or willful misconduct even in the event of concurrent negligence on the part of CITY, the City council, each member thereof, present and future, or its officers, agents and employees. Payment by CITY is not a condition precedent to enforcement of this indemnity. In the event of any dispute between CONSULTANT and CITY, as to whether liability arises from the concurrent negligence of the CITY or its officers, employees, agents, subcontractors or vendors, CONSULTANT will be obligated to pay for City's defense until such time as a final judgment has been entered adjudicating the CITY's share of responsibility. CONSULTANT will be entitled in the event of a determination of CITY's responsibility to reimbursement of defense costs including but not limited to attorney's fees, expert fees and costs of litigation reflecting the CITY's proportionate share of such expenses.

**16. NON-LIABILITY OF THE CITY'S OFFICERS AND EMPLOYEES**

No officer or employee of the CITY will be personally liable to CONSULTANT, in the event of any default or breach by the CITY or for any amount that may become due to CONSULTANT.

**17. INSURANCE**

A. CONSULTANT must maintain at its sole expense the following insurance, which will be full coverage not subject to self insurance provisions:

- (1) Automobile Liability, including owned, non-owned and hired vehicles, with at least the following limits of liability:
  - (a) Primary Bodily Injury with limits of at least \$500,000 per person, \$1,000,000 per occurrence; and
  - (b) Primary Property Damage of at least \$250,000 per occurrence; or
  - (c) Combined single limits of \$1,000,000 per occurrence.
- (2) General Liability including coverage for premises, products and completed operations, independent contractors/vendors, personal injury and contractual obligations with combined single limits of coverage of at least \$1,000,000 per occurrence.
- (3) Professional liability insurance with limits of at least \$1,000,000 per occurrence.

- (4) Workers' Compensation with limits as required by the State of California and Employers Liability with limits of at least \$1,000,000.
- B. The insurance provided by CONSULTANT will be primary and non-contributory.
- C. CITY, the City Council and each member thereof, members of boards and commissions, every officer, agent, official, employee and volunteer must be named as additional insured under the automobile and general liability policies.
- D. CONSULTANT must provide certificates of insurance and/or endorsements to the City Clerk of the City of Torrance before the commencement of work.
- E. Each insurance policy required by this Paragraph must contain a provision that no termination, cancellation or change of coverage can be made without thirty days notice to CITY.

**18. SUFFICIENCY OF INSURERS**

Insurance required by this Agreement will be satisfactory only if issued by companies admitted to do business in California, rated "B+" or better in the most recent edition of Best's Key Rating Guide, and only if they are of a financial category Class VII or better, unless these requirements are waived by the Risk Manager of the CITY ("Risk Manager") due to unique circumstances. In the event the Risk Manager determines that the work or services to be performed under this Agreement creates an increased or decreased risk of loss to the CITY, the CONSULTANT agrees that the minimum limits of any insurance policies and/or performance bond required by this Agreement may be changed accordingly upon receipt of written notice from the Risk Manager; provided that CONSULTANT will have the right to appeal a determination of increased coverage by the Risk Manager to the City Council of the CITY within 10 days of receipt of notice from the Risk Manager.

**19. CONFLICT OF INTEREST**

- A. No officer or employee of the CITY may have any financial interest, direct or indirect, in this Agreement, nor may any officer or employee participate in any decision relating to the Agreement that effects the officer or employee's financial interest or the financial interest of any corporation, partnership or association in which the officer or employee is, directly or indirectly interested, in violation of any law, rule or regulation.
- B. No person may offer, give, or agree to give any officer or employee or former officer or employee, nor may any officer or employee solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, preparation or any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any way pertaining to any program requirement, contract or subcontract, or to any solicitation or proposal.

**20. NOTICE**

A. All notices, requests, demands, or other communications under this Agreement will be in writing. Notice will be sufficiently given for all purposes as follows:

- (1) Personal delivery. When personally delivered to the recipient: notice is effective on delivery.
- (2) First Class mail. When mailed first class to the last address of the recipient known to the party giving notice: notice is effective three mail delivery days after deposit in an United States Postal Service office or mailbox.
- (3) Certified mail. When mailed certified mail, return receipt requested: notice is effective on receipt, if delivery is confirmed by a return receipt.
- (4) Overnight delivery. When delivered by an overnight delivery service, charges prepaid or charged to the sender's account: notice is effective on delivery, if delivery is confirmed by the delivery service.
- (5) Facsimile transmission. When sent by fax to the last fax number of the recipient known to the party giving notice: notice is effective on receipt. Any notice given by fax will be deemed received on the next business day if it is received after 5:00 p.m. (recipient's time) or on a non-business day.

Addresses for purpose of giving notice are as follows:

CONSULTANT: RBF Consulting  
14725 Alton Parkway  
Irvine, CA 92618-2027

Fax: (949) 472-8373

CITY: City Clerk  
City of Torrance  
3031 Torrance Boulevard  
Torrance, CA 90509-2970  
Fax: (310) 618-2931

- B. Any correctly addressed notice that is refused, unclaimed, or undeliverable because of an act or omission of the party to be notified, will be deemed effective as of the first date the notice was refused, unclaimed or deemed undeliverable by the postal authorities, messenger or overnight delivery service.
- C. Either party may change its address or fax number by giving the other party notice of the change in any manner permitted by this Agreement.

21. **PROHIBITION AGAINST ASSIGNMENT AND SUBCONTRACTING**

This Agreement and all exhibits are binding on the heirs, successors, and assigns of the parties. The Agreement may not be assigned or subcontracted by either the CITY or CONSULTANT without the prior written consent of the other.

22. **INTEGRATION; AMENDMENT**

This Agreement represents the entire understanding of the CITY and CONSULTANT as to those matters contained in it. No prior oral or written understanding will be of any force or effect with respect to the terms of this Agreement. The Agreement may not be modified or altered except in writing signed by both parties.

23. **INTERPRETATION**

The terms of this Agreement should be construed in accordance with the meaning of the language used and should not be construed for or against either party by reason of the authorship of this Agreement or any other rule of construction that might otherwise apply.

24. **SEVERABILITY**

If any part of this Agreement is found to be in conflict with applicable laws, that part will be inoperative, null and void insofar as it is in conflict with any applicable laws, but the remainder of the Agreement will remain in full force and effect.

25. **TIME OF ESSENCE**

Time is of the essence in the performance of this Agreement.

26. **GOVERNING LAW; JURISDICTION**

This Agreement will be administered and interpreted under the laws of the State of California. Jurisdiction of any litigation arising from the Agreement will be in Los Angeles County, California.

27. **COMPLIANCE WITH STATUTES AND REGULATIONS**

CONSULTANT will be knowledgeable of and will comply with all applicable federal, state, county and city statutes, rules, regulations, ordinances and orders.

28. **WAIVER OF BREACH**

No delay or omission in the exercise of any right or remedy by a nondefaulting party on any default will impair the right or remedy or be construed as a waiver. A party's consent or approval of any act by the other party requiring the party's consent or approval will not be deemed to waive or render unnecessary the other party's consent to or approval of any subsequent act. Any waiver by either party of any default must be in writing and will not be a waiver of any other default concerning the same or any other provision of this Agreement.

29. **ATTORNEY'S FEES**

Except as set forth in Paragraph 15, in any dispute, litigation, arbitration, or other proceeding by which one party either seeks to enforce its rights under this Agreement (whether in contract, tort or both) or seeks a declaration of any rights or obligations under this Agreement, the prevailing party will be awarded reasonable attorney's fees, together with any costs and expenses, to resolve the dispute and to enforce any judgment.

30. **EXHIBITS**

All exhibits identified in this Agreement are incorporated into the Agreement by this reference.

31. **CONSULTANT'S AUTHORITY TO EXECUTE**

The person(s) executing this Agreement on behalf of the CONSULTANT warrant that (i) the CONSULTANT is duly organized and existing; (ii) they are duly authorized to execute this Agreement on behalf of the CONSULTANT; (iii) by so executing this Agreement, the CONSULTANT is formally bound to the provisions of this Agreement; and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which the CONSULTANT is bound.

CITY OF TORRANCE,  
a Municipal Corporation

RBF Consulting  
a California Corporation

\_\_\_\_\_  
Frank Scotto, Mayor

By: \_\_\_\_\_  
Gary Miller, Vice President

ATTEST:

\_\_\_\_\_  
Sue Herbers, City Clerk

APPROVED AS TO FORM:

JOHN L. FELLOWS III  
City Attorney

By: \_\_\_\_\_

Attachments:      Exhibit A:      RFP  
                         Exhibit B:      Proposal

Revised..:      12/12/2006

**EXHIBIT A**  
**REQUEST FOR PROPOSALS**

**[To be attached]**

## 190<sup>TH</sup> STREET REHABILITATION, T-49 Hawthorne Blvd to West City Limits

### Project Description:

190th Street is a primary east-west arterial route for Torrance and the south bay region. The center of the roadway is the approximate northerly city boundary with the City of Redondo Beach. The pavement in the project area is severely deteriorated and requires rehabilitation. This project will provide for the pavement reconstruction and rehabilitation, and replacement of displaced curbs, gutters, and sidewalks within the City of Torrance. The City of Redondo Beach has completed its design for their portion of the roadway. Both projects will be advertised for bid and constructed jointly. The City of Redondo Beach will be the lead agency for construction management.

**Project Schedule: Design: April '07 to September '07; Construction: October '07 to March '08.**

**Project Budget: \$1.65 Million**

### Submittal Requirements:

The City has prepared a scope of work (included herein) and is requesting from your firm a proposal of services and a detailed fee estimate for the work. The proposal of services should include the methodology or process for completing each task.

The detailed fee estimate should provide a cost for each element of the project using the format below. The City will evaluate and choose the best qualified Consultant on the basis of project understanding, ability to meet the project schedule and cost effectiveness. A submittal must include resumes/qualifications of proposed staff and subconsultants, proposal of services, fee estimate, schedule of firm's fees and excluded services. You also may separately list services and associated costs that are not in the city's scope of work and might be needed to complete the design work. However, do not include them in the fee estimate.

	<b>Project Manager</b>	<b>Engineer</b>	<b>Admin.</b>	<b>Consultant</b>	<b>Total</b>
	<b>\$100</b>	<b>\$50</b>	<b>\$40</b>		
<b>Task</b>					
<b>A</b>	1	1	1		<b>\$190</b>
<b>B</b>	2	2	2		<b>\$360</b>
<b>C</b>				<b>\$500</b>	<b>\$500</b>
<b>Total</b>					<b>\$1050</b>

### Sample Fee Estimate

Please submit two (2) copies of your proposal and fee estimate information together in a three ring binder to:

**City of Torrance Public Works Dept., 20500 Madrona Ave, Torrance, CA 90503; ATTN: Ms. Davina Buenavista.** You may contact Davina for questions at (310) 618-3057.

Submittals must be received by 5:00 p.m. on Tuesday, March 27, 2007

## Project Scope:

### I. Preliminary Design

#### A. Project Kick-Off Meeting

Consultant will attend a kick-off meeting at the City and prepare a meeting agenda. The agenda should include:

- Lines of communication between the City, Consultant, utility agencies and other agencies involved in the project.
- Discuss the project requirements, scope of work and schedule.

Consultant should prepare and distribute meeting minutes with any action items.

#### B. Research/Review of Available Data

Consultant will research and obtain all available data as a reference to prepare the preliminary and final PS&E. Data includes, but is not limited to, State, County, City, utility and other records/documents, existing street, storm drain, gas, sewer and water main improvement plans, topographic data maps, record drawings, wet and dry utility plans (to determine size and location), geotechnical reports, survey centerline and private property monument data and other pertinent information. Consultant will prepare a table summarizing the obtained data and submit a copy to the City and utility agencies. The Project Team will review this information prior to beginning surveys and preliminary design.

#### C. Site Evaluation

Perform a field inspection of 190th Street to:

- Verify record drawings and other data
- Identify areas of structural damage to existing AC pavement needing either localized repair/reconstruction or overlay.
- Identify damaged curb and gutter, cross-gutters, sidewalk/curb ramps and driveways to be replaced.
- Create a photo log of key project areas.

Consultant will schedule a City representative to be present during the inspection(s) of the existing pavement and damaged curb and gutter, cross-gutters, sidewalk/curb ramps and driveways.

### II. Preliminary Surveys, Studies & Coordination

#### A. Design Topographic Survey

Consultant or its subcontractor will perform the Design Topographic survey. The survey shall be in conformance with the State Land Surveyors Act and be performed under the direct supervision of a CA Registered Land Surveyor. Consultant shall use California State Plane Zone 5 (NAD 83) feet. Tasks include:

1. Establish horizontal and vertical survey and construction control for the complete length of the project and only within the City of Torrance (south half of the roadway).

2. Perform topographic survey, as required, and may include, but not be limited to:
  - 2.1 Cross section elevations taken at 50 ft. intervals. The sections will follow this format: property line/right-of-way, back of walk, top of curb, flow line, edge of gutter/pavement, grade breaks and/or quarter points, pavement delineation and legends (striping, STOP bars, etc.), finish surface at the centerline.
  - 2.2 Locate all existing improvements within the street right-of-way (i.e. above ground utilities, manholes, valve covers, utility vaults and covers, signs, trees, utility poles, traffic signal poles, cross gutters, local depressions, catch basins, driveway openings, sidewalks, corner access ramps, parkway drains, etc).
  - 2.3 Reduce data to a form showing centerline stationing, offset from centerline, and elevation.
  - 2.4 Provide 0.5 ft contours.
  - 2.5 Approximately 11 centerline monuments are within the construction area. Consultant shall tie out all centerline monuments and ties prior to construction and identify them in the design survey.
  - 2.6 Identify in the survey any other monuments, including those on tops of curbs, sidewalk or in the parkway.
3. Consultant will sign, date and submit all original survey notes to the City within 15 working days after the completion of the survey.

Consultant shall provide traffic control as required during survey operations. Lane closures shall be in accordance with City of Torrance Standards, available upon request.

#### **B. Utility Research and Notification**

Research and obtain available existing utility records within the project limits. Compile a Utility Notification and Response Log in a table format and include dates of notification, persons/utility notified and responses from utility. Copies of this information will be provided to the City. Notifications will include:

- Initial Utility Information Request; Follow-up notifications for various plan submittals
- Prepare to Relocate Notice (if applicable)
- Notice to Relocate (if applicable)

Utilities to be notified will include: Southern California Edison, Pacific Bell Telephone, Verizon, GTE, Southern California Gas, Time Warner Cable, Water, Sewer and Storm Drain districts.

#### **C. Utility Potholing**

Consultant will provide a fixed \$20,000 allowance for utility potholing. Locations will be based on information received from utility investigations. Consultant will arrange for utilities to be marked prior to the design topographical survey. Pothole locations and depths will be marked on the pavement surface and will show both horizontal location and depth from surface to the utility. Compensation will be based on actual cost plus 7% markup, but may not exceed \$20,000. From the utility research and utility potholing, Consultant will compile and incorporate utility information on the roadway and water main Base Sheets. Conflicts with existing utilities will be identified for resolution with the conflicting utility.

**D. Utility Coordination**

Consultant will coordinate with the utility agencies throughout the design phase and obtain utility "sign-offs". If the proposed improvements interfere with existing utilities, Consultant will arrange for potholing by the utility. Otherwise, any needed potholing will be performed under the potholing allowance provided in this scope. If required, Consultant will obtain any permit that is required for construction of the project, from any agency or utility company.

**E. Base Sheets**

Consultant will prepare Base Sheets utilizing the design topographic survey, utility research data and existing street, storm drain, sewer and water main improvement plans. The Base Sheets will be utilized for the design of the street rehabilitation/overlay, water main installation, traffic signal modifications and signing and striping plans. The base plans will be prepared at a 1"=40' scale.

Consultant shall data process all topography in AutoCAD Version 2000 or latest edition. Linestyles will be conventional. Text annotation will be stored in layers separate from the graphic elements. An AutoCAD file, layering, linestyle and color specification will be provided by the Consultant to the Client, if requested. Locations of any property lines, centerlines or rights of ways shown on the topography shall be shown graphically from specified Datum.

The topographic file shall include the basis of horizontal and vertical control, North arrow, date of survey, Survey Crew Chief and supervising Licensed Land Surveyor review and sign off, notes and details.

**F. Pavement Evaluation Review/Design**

The City will provide a pavement evaluation/analysis report. Consultant will review the report and discuss the recommended pavement rehabilitation alternatives with the City. This will include the following:

- Assess data and evaluate methods for rehabilitation.
- Prepare value engineering spreadsheets with cost breakdowns for up to 2 alternatives, including comparisons based on projected life.
- Present and discuss recommendations with City.
- After concurrence by the City, the final limits of removal will be shown on the plans.

**III. Plans & Profiles****A. 30%, 60% & 90% Plan Submittal**

All plan types will be in conformance with City of Torrance format, the latest applicable design/drafting standards and shall incorporate the City of Torrance Title blocks. The Public Works Department Title Block shall be used on all plan sheets.

Consultant will prepare and submit plans to the City and utility agencies at 30%, 60% and 90% completion. Plans shall be on 24" x 36" blacklined bond paper sheets, unless otherwise required for utility agencies. Consultant shall submit one (1) set of plans to the City for each submittal.

The following is a listing of plan sheets with corresponding scale to be used as determined by the City.

PLAN	SCALE
Title Sheet	Varies
Construction Notes and Details	1" = 10', Varies
Typical Cross Sections	Varies
Roadway Rehabilitation Plan and Profile	1" = 40' H 1" = 4' V
Traffic Control & Staging Plans	1" = 40' H
Sign and Pavement Delineation Plans	1" = 40' H

**Title Sheet** will include project title, vicinity map, general notes, benchmark with basis of coordinates, dig alert information and legend of symbols.

**Construction Notes and Details** will include a construction note index, list of utility companies with contact name and telephone number, list of standard plans grouped by agency (i.e. APWA, City of Torrance, etc) and construction details. Multiple sheets may be required.

**Typical Cross Sections** will show right-of-way lines, dimensions between curbs, existing pavement surface and curb/gutter, existing roadbed, proposed improvements and grading/crossfall slope. Pavement cross falls should be kept at 2% optimal; however, cross falls may vary from 1% to 5% as needed for grade and to minimize reconstruction. Construction notes related to proposed improvements shall be included on this sheet. Cross sections will be discussed with the City at the 30% and 60% submittal to identify potential problems.

**Roadway Rehabilitation Plan and Profile** will show all existing improvements, as shown on the Base sheets and all existing underground utilities (sewer, water, gas mains and associated laterals, storm drains, catch basins and laterals, manhole and valve covers, meter boxes etc). Proposed work will indicate limits of removals and replacements and cold planing limits, street overlay and rehabilitation areas, adjustment of manholes, vaults and valves to grade. Plans also shall indicate removal/replacement of curbs, gutters, sidewalks, access ramps, driveways, cross gutters, parkway/curb drains and protection of existing facilities. Consultant shall consider and determine the need and location for the preservation of existing control monumentation and the placement of new control monumentation. At a minimum, each sheet shall contain a north arrow, scale, match lines with station and sheet reference, plan and profile construction notes for all improvements on the sheet. Profile shall show existing tops of curb elevations with corresponding station and slope of curb between each grade break. For corner access ramps, provide station and elevation at BCR and ECR and label as "join existing." Elevations also should be provided at quarter points. Dimension the distance between each quarter point and the length of the curve.

**Traffic Control & Staging Plans** for 190<sup>th</sup> Street and intersecting side streets should be designed in accordance with MUTCD 2003 California Supplement and sample plans (electronic versions available) provided by the City.

Note: Prior to beginning work on these plans, Consultant shall meet with the City to discuss construction staging, minimum lane requirements, side street and driveway access and plan notes and legend. It is anticipated that the project will be constructed in stages and each stage will require traffic control plans. The work within each stage will be partially restricted in the vicinity of the intersections to minimize the potential of traffic capacity reductions.

For the purposes of this proposal, the Consultant shall expect to prepare a total of 10 sheets for traffic control. One sheet for notes and typical sections; One for construction phasing and eight sheets for traffic control layouts. If fewer or more sheets are required, the compensation for this item will be adjusted accordingly.

**Sign and Pavement Delineation Plans** will be prepared for 190<sup>th</sup> Street and intersecting streets within the proposed street improvement limits. The plans shall be segmented to minimize the number of plan sheets.

The plans will be prepared in accordance to City standards and design criteria and Caltrans "Traffic Manual" and Standard Plans and Specifications (latest edition). Plans will provide for at least 200 feet of transition for each leg of the intersecting streets.

Plans will show: all existing signs within the project limits, including those mounted on traffic signals, street light and utility poles; proposed signs; and proposed pavement delineation and pavement legends/arrows within the project limits. Consultant shall include those areas on intersecting side streets that are within the project limits. Centerline stationing shall be shown on the plans

## **B. Quantity Calculations and Cost Estimate**

Consultant shall submit preliminary quantities and construction cost estimate at the 60% and 90% submittal. Unit prices will be based upon the most current cost information for a recent, similar project. The final quantity/cost estimate will be based on the final construction plans and submitted with the 100% submittal. Cost estimates shall not include contingency.

Note: The budget (design and construction) for this project is \$1.65 million. The Consultant shall compare its estimated construction costs for the 60%, and 90% submittal to the available budget. If the Consultant's estimated costs exceed the available budget, the Consultant shall inform the City and provide recommendations for costs reduction.

## **C. Project Specifications**

Consultant will use the city's standard "boiler plate" Specifications and Special Provisions (Word 2000) and prepare the entire job-specific Construction Specifications document and Bid schedule suitable for bidding.

## **D. 100% Submittal of Plans & Profiles, Specifications/Special Provisions, Quantities and Cost Estimate**

The 100% submittal will include one (1) complete set of all plans; one (1) complete specifications/special provisions document, including Appendices and Standard plans; and quantities/cost estimate for final review. Minimal corrections may not be needed, but should be expected. Plans shall be on 24" x 36" blacklined bond paper sheets.

**E. Final Submittal**

Upon City approval of the 100% plans/profile submittal, Consultant will submit a complete set of stamped/signed (CA Registered Civil Engineer) original plans on mylar, an unbound set of stamped/signed specifications/special provisions, appendices and a quantities/cost estimate. The Consultant also will submit an electronic copy of all final AutoCAD drawings (with x-refs and plot configuration files), specifications/special provisions and quantities/cost estimate on a CD-ROM.

**F. Project Management & Meetings**

Consultant will perform all project management services during the course of the project as required to complete its contract work (i.e. General Project Coordination, Preparation of Schedule, Quality Control, Progress Reporting, Subconsultant Management).

To ensure understanding of the contract objectives and coordination between the team, meetings between the City and Consultant will be held as follows: for each of the submittals (30%, 60% and 90%), traffic control and staging, and two additional meetings, as requested for a total of six meetings. Consultant shall have no more than 2 attendees per meeting. Project objectives, schedule and any other issues will be discussed and resolved or assigned for follow-up.

At the 30%, 60% and 90% meetings, Consultant will bring two copies of any completed plans, specifications, estimate and an updated project schedule for submittal.

**G. Survey Monument Preservation and Restoration**

Approximately 11 centerline monuments are within the construction area. Consultant shall tie out centerline monuments and any impacted centerline ties prior to construction and prepare and file Corner Records with the County of Los Angeles and City of Torrance. After construction is complete, Consultant shall re-establish monuments removed by construction activities and file final Corner Records with the County of Los Angeles and City of Torrance.

**H. Reimbursable Expenses**

Consultant will provide a fixed \$5,000 allowance for reimbursable expenses. Compensation will be based only on actual costs (or cost plus 7% markup for outsourced work), but may not exceed \$5,000. This task is intended to budget for reimbursable expenses that are associated only with reprographics of plans and paper documents, postage and mileage when making submittals to the City and other agencies or utility companies. Costs to print documents, produce reprographics, postage, telephone, faxes and mileage for Consultant's internal review and/or coordination with satellite offices or subconsultants should be included in the fees for the various tasks.

**I. City Responsibilities**

1. City will provide access to the site; an electronic copy of its "boiler plate" specifications; a copy of its available records of centerline monuments/ties; an electronic copy of the Public Works Department title block; Pavement Evaluation Report
2. A copy of the plans for the Redondo Beach portion.

**EXHIBIT B**

**PROPOSAL**

**[To be attached]**



March 27, 2007

JN 00-000300.10V

Ms. Davina Buenavista  
**CITY OF TORRANCE**  
 Public Works Department  
 20500 Madrona Avenue  
 Torrance, CA 90503

**Subject: PROPOSAL FOR 190<sup>th</sup> STREET REHABILITATION PROJECT, T-49**

Dear Ms. Buenavista:

**RBF Consulting (RBF)** is pleased to present our Proposal to the City of Torrance for providing Engineering Services for the 190<sup>th</sup> Street Rehabilitation Project.

The successful design of the 190<sup>th</sup> Street Rehabilitation Project requires commitment of a proven management team backed by the resources of experienced engineers and designers who are thoroughly familiar with the project design elements and local concerns to ensure the City of Torrance project goals are attained.

The following proposal, provided for your review and approval, details how the RBF Team will deliver on these commitments and meet the City's goals.

Our scope of services is based upon the Request for Proposal provided by the City of Torrance and discussions with public works staff.

General services for this proposal include:

- ❖ Research, Investigation and Field Review
- ❖ Utility Research / Notification / and Pot-Hole Coordination
- ❖ Topographic Survey
- ❖ Pavement Evaluation Review
- ❖ Roadway Rehabilitation
- ❖ Signing and Striping / Construction Staging Design
- ❖ Specification and Bid Documents
- ❖ Final Quantity Estimate
- ❖ Survey Monument Preservation and Restoration

**PLANNING ■ DESIGN ■ CONSTRUCTION**

14725 Alton Parkway, Irvine, CA 92618-2027 ■ P.O. Box 57057, Irvine, CA 92619-7057 ■ 949.472.3505 ■ Fax 949.472.8373

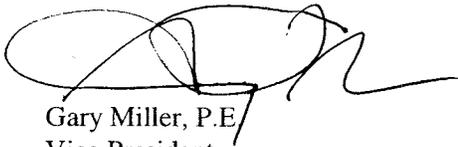
Offices located throughout California, Arizona & Nevada ■ [www.RBF.com](http://www.RBF.com)

printed on recycled paper

Ms. Davina Buenavista  
March 27, 2007  
*Page ii*

We are ready to commence work immediately upon your authorization. Please contact me at (949) 855-3605 or to discuss any aspects of our Proposal.

Sincerely,



Gary Miller, P.E.  
Vice President  
Transportation/Public Works Engineering

PC: Brian Anderson, MS 420\*

*Enclosure: two proposals*



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## Section 1: Scope of Work

### Project Understanding

190th Street is a primary east-west arterial route for Torrance and the south bay region. The project length is approximately 6,680 feet long, incorporating 11 intersections. The pavement in the project area is severely deteriorated and requires rehabilitation. The project will provide for the pavement reconstruction and rehabilitation, and replacement of displaced curbs, gutters, and sidewalks within the City of Torrance. The center of the roadway is the approximate northerly City boundary with the City of Redondo Beach. The City of Redondo Beach has completed its design for their portion of the roadway. Both projects will be advertised for bid and constructed jointly. The City of Redondo Beach will be the lead agency for construction management.

Project Schedule: Design will start in April 2007 to be completed by September 2007; Construction from October 2007 to March 2008

Project Budget: \$1.65 million

### Scope of Work

#### I. PRELIMINARY DESIGN

##### Task 01.00

##### Project Kick-Off Meeting

RBF will prepare a meeting agenda and lead the kick-off meeting at the City. The meeting agenda items will include:

**ALL ABOARD!!**



- ❖ Lines of communication between the City, RBF, utility agencies and other agencies involved in the project.
- ❖ Project requirements, scope of work and schedule.
- ❖ Design criteria, standards and references.

RBF will prepare and distribute meeting minutes in an Action Item Matrix format and document project decisions, and task and distribute to the project team.

This meeting will be attended by the Project Manager, & Design Engineer.

##### *Deliverable:*

- ✓ Meeting Agenda and Minutes
- ✓ Meeting Attendance



### Task 02.00



#### Research/Review of Available Data

RBF will research and obtain all available data as a reference to prepare the preliminary and final PS&E. Data includes, but is not limited to, State, County, City, utility and other records/documents, existing street, storm drain, gas, sewer and water main improvement plans, topographic data maps, record drawings, wet and dry utility plans (to determine size and location), geotechnical reports, survey centerline and private property monument data and other pertinent information. RBF will prepare a table summarizing the obtained data and submit a copy to the City and utility agencies. The Project Team will review this information prior to beginning surveys and preliminary design. The City of Torrance shall provide the portion of rehabilitation improvement plans for adjoining work within the City of Redondo Beach.

#### *Deliverable:*

- ✓ Data Summary Table

### Task 03.00

#### Site Evaluation

RBF will conduct a site review of 190th Street and perform the following task:

- ❖ Verify record drawings and other data
- ❖ Identify areas of structural damage to existing AC pavement needing either localized repair/ reconstruction or overlay.
- ❖ Identify damaged curb and gutter, cross-gutters, sidewalk/curb ramps and driveways to be replaced.
- ❖ Create a photo log of key project areas

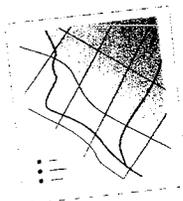
RBF will schedule a site visit with the City to be present during the inspection(s) of the existing pavement and damaged curb and gutter, cross-gutters, sidewalk/ curb ramps and driveways.

#### *Deliverable:*

- ✓ Site Review Notes (for design purposes)

## II. PRELIMINARY SURVEYS, STUDIES & COORDINATION

### Task 04.00



#### Design Topographic Survey

RBF will perform the Design Topographic survey. The survey will be in conformance with the State Land Surveyors Act and be performed under the direct supervision of a CA Registered Land Surveyor. RBF will use California State Plane Zone 5 (NAD 83) feet. Vertical datum will be NGVD 29. Survey tasks will include:

- ❖ Verify consistency with City of Redondo Beach horizontal and vertical datums.



**City of Torrance**  
Public Works Department

- ❖ Establishing horizontal and vertical survey and construction control for the complete length of the project and only within the City of Torrance (south half of the roadway).
- ❖ Perform topographic survey, as requested, and may include, but not be limited to:
  - Cross-section elevations taken at intervals of 50 ft. extending an additional 10 ft. beyond the roadway centerline (City boundary) to align the adjoining rehabilitation work within Redondo Beach. The sections will follow this format: property line/right-of-way, back of walk, top of curb, flow line, edge of gutter/pavement, grade breaks and/or quarter points, pavement delineation and legends (striping, STOP bars, etc.) finish surface at the centerline.
  - Locate all existing improvements within the street right-of-way (i.e. above ground utilities, manholes, valve covers, utility vaults and covers, signs, trees, utility poles, traffic signal poles, cross gutters, local depressions, catch basins, driveway openings, sidewalks, corner access ramps, parkway drains, etc).
  - Reducing data to a form showing centerline stationing, offset from centerline, elevation
  - Provide 0.5 foot contours.
  - Approximately 11 centerline monuments are within the construction area. RBF will tie out all centerline monuments and ties prior to construction and identify them in the design survey.
  - Identify in the survey any other survey monuments found during the survey on tops of curbs, sidewalk or in the parkway.
- ❖ RBF will sign, date and submit all original survey notes to the City within 15 working days after the completion of the survey.

RBF will provide traffic control during survey operations. Lane closures will be in accordance with City of Torrance Standards, available upon request.

***Deliverable:***

- ✓ Original Survey Notes
- ✓ Topographic Survey Data

**Task 05.00**

**Utility Research and Notification**

RBF will research and obtain available existing utility records within the project limits. Compile a Utility Notification and Response Log in table format and include dates of notification, persons/utility notified and responses from utility. Copies of this information will be provided to the City. Notifications will include:



- ❖ Initial Utility Information Request; Follow-up notifications for various plan submittals
- ❖ Prepare to Relocate Notice (if applicable)
- ❖ Notice to Relocate (if applicable)



Utilities to be notified will include: Southern California Edison, Pacific Bell Telephone, Verizon, GTE, Southern California Gas, Time Warner Cable, Water, Sewer and Storm Drain districts.

**Deliverable:**

- ✓ Utility Response Log

**Task 06.00**

**Utility Potholing**

RBF will provide a fixed \$20,000 allowance for utility potholing. Locations will be based on information received from utility investigations. RBF will arrange for utilities to be marked prior to the design topographical survey. Pothole locations and depths will be marked on the pavement surface and will show both horizontal location and depth from surface to the utility. Compensation will be based on actual cost plus 7% markup, but may not exceed \$20,000. From the utility research and utility potholing, RBF will compile and incorporate utility information on the roadway Base Sheets. Conflicts with existing utilities will be identified for resolution with the conflicting utility.

**Deliverable:**

- ✓ Pothole Location Sheets

**Task 07.00**

**Utility Coordination**

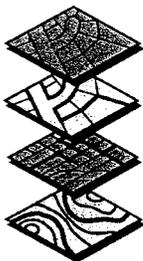
RBF will coordinate with the utility agencies throughout the design phase and obtain utility "sign-offs". If the proposed improvements interfere with existing utilities, RBF will request for potholing to be performed by the utility company. Otherwise, any needed potholing will be performed under the potholing allowance provided in Task 06.00. If required, Consultant will obtain permit(s) that are required for construction of the project, from any agency or utility company.

**Deliverable:**

- ✓ On-going Maintenance of the Utility Response Log

**Task 08.00**

**Base Sheets**



RBF will prepare Base Sheets utilizing the design topographic survey, utility research data, utility potholing and existing street, storm drain, sewer and water main improvement plans. The Base Sheets will be utilized for the design of the street rehabilitation/overlay, traffic signal modifications and signing and striping plans. The base plans will be prepared at a 1"=40' scale.

RBF will data process all topography in AutoCAD LDD2i or latest edition. Linestyles will be conventional. Text annotation will be stored in layers separate from the graphic elements. An AutoCAD file, layering, linestyle and color specification will be provided by RBF to the Client, if requested. Locations of any property lines, centerlines or rights of ways shown on the topography shall be shown graphically from specified Datum.



The topographic file shall include the basis of horizontal and vertical control, North arrow, date of survey, Survey Crew Chief and supervising Licensed Land Surveyor review and sign off, notes and details.

**Deliverable:**

- ✓ 190th Street Topographical Base Sheets

**Task 09.00 Pavement Evaluation Review/Design**

The City will provide to RBF a pavement evaluation/analysis report. RBF will review the report and discuss the recommended pavement rehabilitation alternatives with the City. This task includes the following:

Assess data and evaluate methods for rehabilitation.

Prepare value engineering spreadsheets with cost breakdowns for up to two (2) alternatives, including comparisons based on projected life.

Present and discuss recommendations with City

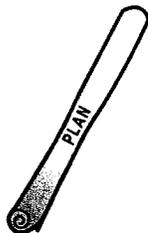
After concurrence by the City, the final limits of removal will be shown on the plans

**Deliverable:**

- ✓ Pavement Evaluation Recommendation

**III. PLANS AND PROFILES**

**Task 10.00 30%, 60% and 90% Plan Submittal**



All plan types will be in conformance with City of Torrance format, the latest applicable design/drafting standards and shall incorporate the City of Torrance Title blocks. The Public Works Department Title Block shall be used on all plan sheets.

RBF will prepare and submit plans to the City and utility agencies at 30%, 60% and 90% completion. Plans shall be on 24" x 36" blacklined bond paper sheets, unless otherwise required for utility agencies. RBF will submit one (1) set of plans to the City for each submittal.

The following is a listing of plan sheets with corresponding scale to be used as determined by the City:

TASK	PLAN	SCALE	# of SHEETS
10.01	Title Sheet	Varies	1
10.02	Construction Notes and Details	1" = 10', Varies	1
10.03	Typical Cross Sections	Varies	1
10.04	Roadway Rehabilitation Plan and Profile	1" = 40' H 1" = 4' V	7
10.05	Stage Construction/Traffic Handling Phasing Plans	1" = 40' H	10



City of Torrance  
Public Works Department

TASK	PLAN	SCALE	# of SHEETS
10.06	Signing, Striping, and Loop Detector Replacement Plans	1" = 40' H	5
<b>TOTAL SHEETS</b>			<b>25</b>

- 10.01 Title Sheet** will include project title, vicinity map, general notes, benchmark with basis of coordinates, dig alert information and legend of symbols.
- 10.02 Construction Notes and Details** will include a construction note index, list of utility companies with contact name and telephone number, list of standard plans grouped by agency (i.e. APWA, City of Torrance, etc) and construction details.
- 10.03 Typical Cross Sections** will show right-of-way lines, dimensions between curbs, existing pavement surface and curb/gutter, existing roadbed surface, proposed improvements and grading/crossfall slope. Pavement cross falls should be kept at 2% optimal; however, cross falls may vary from 1% to 5% as needed for grade and to minimize reconstruction. Construction notes related to proposed improvements shall be included on this sheet. Cross sections will be discussed with the City at the 30% and 60% submittal to identify potential constraints/ issues.
- 10.04 Roadway Rehabilitation Plan and Profile** will show all existing improvements, as shown on the Base sheets and all existing underground utilities (sewer, water, gas mains and associated laterals, storm drains, catch basins and laterals, manhole and valve covers, meter boxes etc). Proposed work will indicate limits of removals and replacements and cold planing limits, street overlay and rehabilitation areas, adjustment of manholes, vaults and valves to grade. Plans also shall indicate removal/replacement of curbs, gutters, sidewalks, access ramps, driveways, cross gutters, parkway/curb drains and protection of existing facilities. RBF will consider and determine the need and location for the preservation of existing control monumentation and the placement of new control monumentation. At a minimum, each sheet shall contain a north arrow, scale, match lines with station and sheet reference, plan and profile construction notes for all improvements on the sheet. Profile shall show existing tops of curb elevations with corresponding station and slope of curb between each grade break. For corner access ramps, provide station and elevation at BCR and ECR and label as "join existing". Elevations also should be provided at quarter points. Dimension the distance between each quarter point and the length of the curve.
- 10.05 Stage Construction/Traffic Handling Phasing Plans.** RBF will prepare Stage Construction/Traffic Handling Phasing Plans for 190th Street and intersecting side streets in accordance with the 2006 California Manual on Uniform Traffic Control Devices (MUTCD), the City of Torrance, and Caltrans 2006 Standard Plans and Standard Specifications.



The plans will be prepared for the following anticipated improvements. These are:

- ❖ Pavement Rehabilitation
- ❖ Sidewalk/Cross-Gutter/Gutter/Curb Improvements

RBF will meet with the City to discuss construction staging, minimum lane requirements, side street and driveway access and plan notes and legend, prior to beginning this item of work. It is anticipated that the project will be constructed in stages and each stage will require traffic control plans. The work within each stage will be partially restricted in the vicinity of the intersections to minimize the potential of traffic capacity reductions.

For the purpose of this proposal, RBF will expect to prepare a total of 10 sheets for traffic control. One sheet for notes and typical sections; One for construction phasing and eight sheets for traffic control layouts. If fewer or more sheets are required, the compensation for this item will be adjusted accordingly.

The Stage Construction/Traffic Handling Plans will utilize accepted methods of lane closure delineation, signage and barricading. Specific work areas will be protected from traffic based on the construction phase, type of work and construction equipment required within the work area. The plans will be designed to maximize lane usage for all traffic movements, maintain pedestrian access routes, and provide a workable area. The plans will be prepared at a 1"=40' scale.

#### 10.06 Signing, Striping, and Loop Modification Plans

RBF will prepare Signing, Striping, and Loop Modification plans for 190th Street and intersecting streets within the proposed street improvement limits. The plans will be segmented to minimize the number of plans sheets.



The plan will be prepared in accordance to City standards and design criteria and Caltrans Standard Plans and Specifications (latest edition). Plan will provide for at least 200 feet of transition for each leg of the intersecting streets.

Plans will show: all existing signs within the project limits, including those mounted on traffic signals, street light and utility poles; proposed signs; and proposed pavement delineation and pavement legends/arrows within the project limits. RBF will include those areas on intersecting side streets that are within the project limits. Centerline stationing will be shown on the plans.

In addition, the signing and striping plans will show the replacement of the existing traffic signal loop detectors that may be damaged due to proposed pavement rehabilitation. RBF engineers will field verify the location of the existing loop detectors within the project limits. The plans will show the location of the existing loop detectors, existing conduits and pull boxes, location of new loop detectors, and



**City of Torrance**  
Public Works Department

splicing of the new loop detectors with the existing loop conductors inside the adjacent pull box.

RBF will show signing and striping improvements and traffic signal loops replacement on the same plans.

Signing and Striping and Loop Modification plans will be prepared at 1"=40' scale, dual tier format and in accordance with the standards set forth by the City of Torrance, 2006 California Manual on Uniform Traffic Control Devices (MUCTD), and the latest Caltrans standard plans and specifications.

**Task 11.00      Quantity Calculations and Cost Estimate**

RBF will submit preliminary quantities and construction cost estimate at the 60%, & 90% submittal. Unit prices will be based upon the most current cost information for a recent, similar City project. The final quantity/cost estimate will be based on the final construction plans and submitted with the 100% submittal. Cost estimates will not include a contingency line item.

RBF will compare the calculated probable construction cost estimate with the available project budget at the 60% and 90% submittals. Design recommendations and modifications will be provided to the City if estimated costs exceed available project budget.

*Deliverable:*

- ✓ Quantity Calculations
- ✓ Cost Estimate

**Task 12.00      Project Specifications**

RBF will prepare the Technical and Special Provisions sections (word 2000) of the project construction documents using the City's standard project, APWA "Greenbook", and Caltrans standard format. RBF will combine the entire job-specific Construction Specification documentation (including the City's "boiler plate", bid schedule, and other bonding and insurance portions as provided by the City) and assemble the documents suitable for bidding of the Contract.

*Deliverable:*

- ✓ Project Construction Specifications

**Task 13.00      100% Submittal of Plans & Profiles, Specifications/Special Provisions, Quantities and Cost Estimate**

The 100% submittal will include one (1) complete set of all drawings; one (1) complete set of specifications/special provisions documents, including Appendices and Standard plans; and one (1) complete set of quantities/cost estimate for final review. Minimal corrections may not be needed, but are anticipated. Plans will be delivered on 24"x36" blacklined bond paper sheets.



**Deliverable:**

- ✓ 100% PS&E Submittal

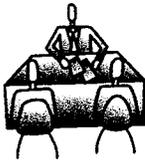
**Task 14.00 Final Submittal**

Upon City approval of the 100% plans/profile submittal, RBF will submit a complete set of stamped/signed (CA Registered Civil Engineer) original plans on mylar, an unbound set of stamped/signed specifications/special provisions, appendices and quantities/cost estimate. RBF will also submit an electronic copy of all final AutoCAD drawings (with x-refs and plot configuration files), specifications/special provisions and quantities/cost estimate on a CD-ROM.

**Deliverable:**

- ✓ Final PS&E Submittal

**Task 15.00 Project Management & Meetings**



RBF will perform project management services during the course of the project as required to complete its contract work (including general project coordination, preparation of schedule, quality control, progress reporting, subconsultant management).

To coordinate project understanding of the contract objectives and coordination between the team; meetings between the City and RBF will be held as follows: for each of the project submittals (30%, 60%, and 90%), traffic control and staging, and two additional meetings, as requested for a total of six (6) meetings. RBF will have no more than two (2) attendees per meeting. Project objectives, schedule and any other issues will be discussed and resolved or assigned for follow-up.

At the 30%, 60% and 90% meetings, RBF will bring two copies of any completed plans, specifications, estimate and an updated project schedule for submittal.

**Deliverable:**

- ✓ Meeting Agendas and Minutes
- ✓ Monthly Progress Reports
- ✓ Project Schedules

**Task 16.00 Survey Monument Preservation and Restoration**

Approximately 11 centerline monuments are within the construction area. RBF will tie out centerline monuments and any impacted centerline ties prior to construction and prepare and file Corner Records with the County of Los Angeles and City of Torrance. After construction is complete, RBF will re-establish monuments removed by construction activities and file final Corner Records with the County of Los Angeles and City of Torrance.

**Deliverable:**

- ✓ Corner Records for 11 Centerline Monuments



### Task 17.00 Reimbursable Expenses

RBF will provide a fixed \$5,000 allowance for reimbursable expenses. Compensation will be based only on actual costs (or cost plus 7% markup for outsourced work), but may not exceed \$5,000. This task is intended to budget for reimbursable expenses that are associated only with reprographics of plans and paper documents, postage and mileage when making submittals to the City and other agencies or utility companies. Costs to print documents, produce reprographics, postage, telephone, faxes, and mileage for Consultants internal review and/or coordination with satellite offices or subconsultants should be included in the fees for various tasks.

### City Responsibilities

1. City will provide access to the site.
2. City will provide an electronic copy of its "boiler plate" and other bid, bonding and assurance documents to assemble the project specification documents.
3. City will provide a copy of its records of centerline monuments/ties.
4. City will provide an electronic copy of the Public Works Department and Community.
5. Pavement Evaluation Report
6. CEQA Documentation and processing.
7. Copy of plan documents for the City of Redondo Beach, 190th Street project.

### Scope Assumptions

#### GENERAL

- ❖ The City will make available as-builts on file at the City of Torrance offices.
- ❖ The City will make available the design plans for 190th Street Rehabilitation project within the City of Redondo Beach.
- ❖ The City will request (if available) for the electronic survey data, and field notes for the 190th Street Rehabilitation project within the City of Redondo Beach.
- ❖ The City will prepare all Cooperative Agreements or Amendments.

#### MAPPING AND RIGHT-OF-WAY

- ❖ The City will provide right-of-way information for inclusion into the project base map. Right-of-way lines and easements will be shown graphically based upon the information provided.
- ❖ Right-of-way acquisition including temporary construction easements is not required for this work, therefore appraisal or acquisition support or preparation of legal descriptions or exhibits is not required.

#### UTILITIES

- ❖ Preparation of agreements, legal descriptions and exhibits for new or revised utility easements will be performed by the City.



## **Additional Work**

Following is a list of services and tasks that may be necessary to complete the 190th Street Rehabilitation project. Fees for these items can be provided upon review of the Scope and necessity with the City of Torrance.

- ❖ Performing field survey intersection grid of the intersections requiring 10' x 10' grid detailed plans.
- ❖ Design of private property improvements impacted by the roadway improvements.
- ❖ Preparation of landscaping and irrigation modifications plans.
- ❖ Preparation of a Water Pollution Control Plan (WPCP) and a Storm Water Pollution Prevention Plan (SWPPP).
- ❖ Preparation for and attendance at community outreach meetings.
- ❖ Meeting attendance with individual utility companies and representatives to coordinate facility relocations.
- ❖ Preparation of traffic signal timing and coordination plans.
- ❖ Preparation of As-Built (Record) Drawings
- ❖ Preparation and design of storm drain, water, sewer, and other underground facilities



## Section 2: Project Team

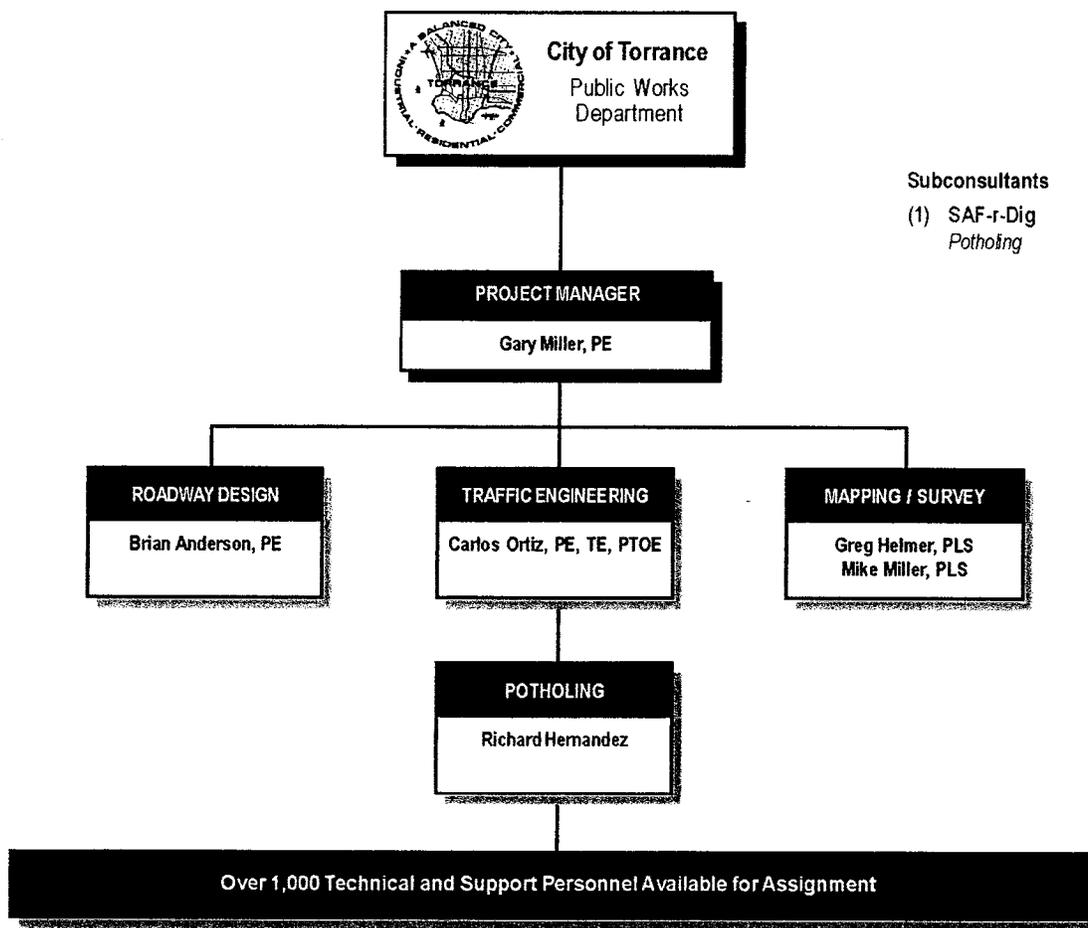
### Project Organization



RBF is pleased to present a team of highly qualified professionals to provide the City of Torrance with professional services for the 190<sup>th</sup> Street Rehabilitation, T-49 Project that consists of the rehabilitation of 190<sup>th</sup> Street from Hawthorne Boulevard to West City Limits. The RBF Team has extensive experience in executing work programs with tasks identical to those identified in the City’s RFP. We are aware of the urgent need for the rehabilitation of 190<sup>th</sup> Street due to the severe deterioration of the pavement in the project area.

The RBF Team, as outlined in our Organization Chart (Exhibit 2-1) below, was specifically selected for their experience on similar projects, in addition to their availability for immediate assignment to the City of Torrance.

Exhibit 2-1





## Project Management / Leadership



As indicated in our Organization Chart, we are pleased to provide the services of **Mr. Gary Miller, PE** who will serve as Project Manager. Mr. Miller has more than three decades of public sector experience allowing him to provide strong, hands-on engineering skills with all types of transportation projects including major arterial roadways, interchange ramps and freeway improvements. Mr. Miller has extensive experience assisting cities and local agencies with the use of Federal, State and Local reimbursement funds.

He is uniquely qualified to manage this project due his prior and current experience working on street improvement projects in Los Angeles County. Mr. Miller has recently provided similar services to the City of Torrance on the **Sepulveda Boulevard Rehabilitation and Water Main Replacement Project** and the **Artesia Boulevard Improvement Project**. His familiarity with the local area, City standards, requirements and staff will ultimately benefit the City in a successfully completed project, delivered on time and within budget.



**Mr. Brian Anderson, PE**, will serve as Project Engineer, leading roadway design efforts for the team. Mr. Anderson has extensive experience in the management and design of transportation facilities, public works, and site development projects and is available to lead design efforts for the 190<sup>th</sup> Street Rehabilitation Project.

Mr. Anderson is excited to provide design services to the City of Torrance, having recently served as the Project Manager for several large arterial roadway projects for the City of Los Angeles and the City of Tustin. He has managed and designed numerous projects that have involved roadway and drainage improvements, traffic engineering, survey, agency coordination, and utility coordination, all services critical to the successful completion of the 190<sup>th</sup> Street Rehabilitation Project. In addition to the excellent engineering skills that Mr. Anderson brings to the City, the RBF Team consists of experienced technical and support personnel to provide the high quality professional services this project requires.

## Key Personnel Qualifications Summary

Table 2-1 on the following page summarizes RBF's key personnel committed to this project, demonstrating their experience, professional licenses / certifications, and years of experience.



City of Torrance  
Public Works Department

Table 2-1

NAME / ROLE / AVAILABILITY	YEARS / EDUCATION / REGISTRATION	SIMILAR PROJECTS
<b>Gary L. Miller, P.E.</b> Project Manager  30%	32 Years of Experience B.S., Civil Engineering, California State University, Long Beach Civil Engineer (CA, AZ, NV)	<ul style="list-style-type: none"> <li>❖ Sepulveda Boulevard Rehabilitation and Water Main Replacement Project (Torrance, CA)</li> <li>❖ Artesia Boulevard Improvement Project (Torrance, CA)</li> <li>❖ Palos Verdes Drive North, Caltrans District 7 (Palos Verdes Estates, CA)</li> <li>❖ SR-55 / Edinger Avenue Widening and Pavement Rehabilitation Project (Santa Ana and Tustin, CA)</li> </ul>
<b>Brian Anderson, P.E.</b> Project Engineer / Roadway Design  50%	20 Years of Experience B.S., Civil Engineering, California State University Long Beach Civil Engineer (CA, AZ)	<ul style="list-style-type: none"> <li>❖ Tustin Ranch Road, Warner, and Armstrong Arterial Improvements (Tustin, CA)</li> <li>❖ Street and Storm Drain Improvements (Midway City, CA)</li> <li>❖ Washington Boulevard Grade Separation Project (Los Angeles County, CA)</li> </ul>
<b>Carlos A. Ortiz, P.E., T.E., P.T.O.E.</b> Traffic Engineering  25%	17 Years of Experience B.S., Civil Engineering, California State Polytechnic University, Pomona Civil Engineer (CA, AZ) Traffic Engineer (CA) Professional Traffic Operations Engineer (US)	<ul style="list-style-type: none"> <li>❖ Sepulveda Boulevard Rehabilitation and Water Main Replacement Project (Torrance, CA)</li> <li>❖ Artesia Boulevard Improvement Project (Torrance, CA)</li> <li>❖ Edinger Avenue Widening Project, Caltrans District 12 (Santa Ana and Tustin, CA)</li> <li>❖ Apple Valley Road Realignment and Widening (Apple Valley, CA)</li> </ul>
<b>Gregory A. Helmer, P.L.S.</b> Mapping / Survey  10-20%	32 Years of Experience A.A., Business Administration, Palomar College, San Marcos, CA Professional Land Surveyor (CA, AZ, CO, NV)	<ul style="list-style-type: none"> <li>❖ Sepulveda Boulevard Rehabilitation and Water Main Replacement Project (Torrance, CA)</li> <li>❖ Apple Valley Road Realignment and Widening (Apple Valley, CA)</li> <li>❖ Sand Canyon Avenue Grade Separation at the Metrolink / BNSF Railroad (Irvine, CA)</li> <li>❖ Interstate 405 / Jeffrey Road Interchange Improvements (Irvine, CA)</li> </ul>
<b>Michael R. Miller, P.L.S.</b> Mapping / Survey  10-20%	34 Years of Experience B.A., English Literature, California State University, Fullerton Professional Land Surveyor (CA)	<ul style="list-style-type: none"> <li>❖ Sepulveda Boulevard Rehabilitation and Water Main Replacement Project (Torrance, CA)</li> <li>❖ Palos Verdes Drive East Roadway Improvements (Rancho Palos Verdes, CA)</li> <li>❖ Interstate 405 / State Route 55 Post-Construction Record of Survey (Orange County)</li> <li>❖ Long Beach On-Call Professional Services Contract (Long Beach, CA)</li> </ul>
<b>Richard Hernandez</b> Pothing <i>SAF-r-DIG</i>  20%	University of Maryland National Technical Schools 40-hour Hazmat Certification ATSSA, Traffic Control Supervisor Certification Project Management Certification	<ul style="list-style-type: none"> <li>❖ Caltrans District 7/Los Angeles County BPW Hwy 30 Extension (Los Angeles County, CA)</li> <li>❖ Alameda Corridor Project (Los Angeles County, CA)</li> <li>❖ Caltrans I-405 &amp; Euclid Sound Wall Project (Orange County, CA)</li> <li>❖ Santa Ana River Pipeline Alignment and Orange County Water District Plant Site (Orange County, CA)</li> </ul>



City of Torrance  
Public Works Department

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## Subconsultants

### **SAF-r-DIG®**

RBF will utilize the services of SAF-r-DIG Utility Services, Inc. to perform potholing services. We have previously teamed with SAF-r-DIG on similar transportation projects including projects with the City of Torrance.

SAF-r-DIG Utility Surveys, Inc. (SAF-r-DIG) is a California state-certified “Small-Business” (OSBCR #11159) and federal EBE (Emerging Business Enterprise) with licensed General Engineering (Class A) services performed by trained professional employees.

SAF-r-DIG specializes in obtaining accurate subsurface utility information for creating utility base maps. The method used is non-destructive, minimally invasive, air/hydro/vacuum process that exposes the utility for visual verification, identification, inspection, measurements and documentation of the data for subsequent creation of the utility base maps. SAF-r-DIG immediately restores the affected areas to its original condition to the extent that it is sometimes difficult to tell that the task was performed.

## Project Team Resumes

Detailed resumes for the RBF Team including our subconsultant are provided on the following pages.

**Gary L. Miller, P.E.**  
Project Manager

PROJECT TEAM RESUME

**Registration:**

1983, Civil Engineer, CA, 36897

2001, Civil Engineer, AZ, 36239

2002, Civil Engineer, NV, 105359

**Years of Experience:** 32

**Education:**

B.S., 1976, Civil Engineering, California State University, Long Beach

**Professional Affiliations:**

Member, American Society of Civil Engineers

Member, American Public Works Association

Member, Institute of Transportation Engineers

Member, American Association of Airport Executives

Member, Airport Consultants Council

More than three decades of public sector experience allows Mr. Miller to provide strong, hands-on engineering skills with Local, Regional, and Caltrans projects. He has been responsible for the preparation of plans, specifications and estimates for major arterial roadways, interchange ramps and freeway improvements. Mr. Miller has extensive experience assisting cities and local agencies with the use of Federal, State and Local reimbursement funds. Mr. Miller also has extensive experience processing federally funded projects through the Local Assistance Branch of Caltrans' Districts 7 and 12. His work efforts involve compliance with funding requirements including application procedures and the environmental review process.

**RELEVANT EXPERIENCE:**

**Sepulveda Boulevard Rehabilitation and Water Main Replacement Project (Torrance, CA) – Principal in Charge.** RBF was selected by the City of Torrance to provide final plans, specifications and estimates for the rehabilitation of approximately one mile of Sepulveda Boulevard (between Hawthorne Boulevard and the west City limit). The rehabilitation was necessary to relieve traffic congestion, repair the deteriorated street conditions which had become a significant maintenance issue, and replace the existing 8" water main with a new 12" transmission main and an 8" water main. The street improvements include: pavement reconstruction and ARHM overlay, curb, gutter and sidewalks and cross-gutter reconstruction, traffic signal modifications and improvements, roadway widening at intersections, and installation of a new 12-inch transmission water main. In addition, the project also required coordination with several agencies including Caltrans District 7 and application for a Metropolitan Transit Authority (MTA) Grant for reimbursement for the roadway and traffic signal improvements at Hawthorne Boulevard.

**Artesia Boulevard Improvement Project (Torrance, CA) - Mr. Miller served as Project Manager for this federally funded revitalization project that improves the entire three-mile roadway corridor through the City of Torrance resulting from a relinquishment of the State highway (Route 91) to the City. This project includes traffic studies, pavement testing and evaluation, signal timing and improvements, utility undergrounding, landscaping and irrigation, pavement reconstruction and storm drain improvements. The work includes the completion of the PS&E package and coordination between City, County, State, utility, subconsultant and RBF staff. Specific project challenges included proving the City design and construction scope alternatives and recommendations to best take advantage of the limited construction budget and available funding. This project also required the preparation of documents through Caltrans**



RBF "Excellence In Teamwork" Award Winner

**RBF**  
CONSULTING

District 7 local assistance to obtain funding for this project.

**Palos Verdes Drive North, Caltrans District 7 (Palos Verdes Estates, CA)** - Project Manager. RBF was responsible for the preparation of plans, specifications and cost estimates for the rehabilitation of approximately 1.25 miles of Palos Verdes Drive North. RBF's scope of work included pavement evaluation and rehabilitation, drainage design, construction management, design and construction survey, and utility research and coordination. The work also included the preparation of documentation to receive funds for this STP (ISTEA) funded project. All documents were prepared in accordance with Local Programs Procedures and submitted to the Caltrans District Local Assistance Engineer (DLAE) for review and processing to authorize and obligate federal funds.

**State Route 55 / Edinger Avenue Widening and Pavement Rehabilitation Project, Caltrans District 12 (Santa Ana and Tustin, CA)** - Project Manager. Responsible for the preparation of plans, specifications and estimates for the widening of Edinger Avenue from a four-lane roadway to a major six-lane access-controlled urban arterial highway for 2.2 miles. The project proceeded from geometric approval to final designs. The final designs entailed street improvements, grading, drainage, landscaping, retaining walls, traffic sign and striping, traffic signals, and traffic control. The project included BNSF Railroad crossing improvements and coordination with PUC. Extensive utility relocation/agency and adjoining roadway design coordination and the preparation of right-of-way maps and coordination for appraisals and acquisition were important aspects of this project. The effort further included ramp-widening improvements to the SR-55 on and off ramps from Edinger Avenue. This project required extensive coordination between the City of Santa Ana, City of Tustin, and Caltrans.

**Citywide Roadway Rehabilitation (Beverly Hills, CA)** - Mr. Miller served as Project Manager providing oversight and scheduling for the engineering and landscape architectural services to the City of Beverly Hills over the past eight years on a variety of projects. RBF performed field surveys, pavement testing services, plans, specifications and cost estimates for paving overlay and rehabilitation projects citywide. Projects consisted of various overlay and reconstruction methods along with miscellaneous curb and gutter reconstruction to improve drainage for both local residential as well as major arterial roadways. Projects also included evaluating locations for ADA compliance. RBF also prepared landscape median improvements and parkway planting along many of the arterial roadways. These roadways paving and improvement projects included: Rodeo Drive, Olympic Avenue, Wilshire Boulevard, Third Street, Lexington Drive and Whittier Avenue to name a few.

**North Long Beach Street Enhancement Program (Long Beach, CA)** – Principal in Charge. Mr. Miller provided program management oversight and engineering coordination for improvements within the public rights-of-way in the North Long Beach Redevelopment Project Area. As part of the program management services for the City, the design initiation and approval process was coordinated for three design consultants providing roadway and alley plans, specifications, and estimates (PS&E) packages. In addition, a project web site was developed to provide a central communication source for design directives and community outreach. Scheduling of all submittals and a review of QA/QC procedures for the design team was part of the overall program management work effort.

**Apple Valley Road Realignment and Widening (Apple Valley, CA)** - Principal In Charge. Responsible for roadway design for the widening and reconstruction of 2.7 miles of Apple Valley Road, from Yucca Loma Road to Bear Valley Road. Work tasks include roadway design, hydrology and hydraulics analysis, a Class I bike lane design, local street storm drainage improvements, landscape and irrigation design, traffic circulation analysis, traffic signal warrant analysis, traffic signal modifications, signing and striping, full traffic handling and stage construction phasing, right-of-way mapping, and coordination with various utility agencies, the Town of Apple Valley, San Bernardino Association of Governments, adjacent developers, Apple Valley Ranchos Water Company, and the Apple Valley Unified School District.

**Street Overlay and Reconstruction Project, Phase I and II (Santa Barbara, CA)** - Principal-in-Charge. RBF performed field surveying and prepared plans, specifications, and cost estimates for the overlay and reconstruction of 57,000 lineal feet of streets within the City of Santa Barbara. The project included reviewing data from the City's pavement overlay program to determine the structural section for each street. The project consisted of various overlay and reconstruction methods along with curb and gutter replacement, concrete cross-gutter installation and replacement, and curb ramp installation.

**Brian Anderson, P.E.**  
Roadway Design

**PROJECT TEAM RESUME**

**Registration:**

1996, Civil Engineer, CA, 55298  
2000, Registered Civil Engineer, AZ,  
36215

**Years of Experience:** 20

**Education:**

B.S., 1986, Civil Engineering, California  
State University Long Beach

**Professional Affiliations:**

Member, American Society of Civil  
Engineers

Member, American Association of  
Airport Executives

Brian Anderson has extensive experience in the management and design of transportation facilities, public works, and site development projects. He recently served as Project Manager for the Interstate 5, and arterial alignment study of the South Orange County Transportation Infrastructure Improvement Plan for the Transportation Corridor Agency in Orange County; as Project Manager for the March Joint Powers Authority, March ARB category II, Instrument Landing System Upgrade in Riverside, and as Project Manager for March Joint Powers Authority Apron Expansion Project in Riverside. Mr. Anderson's experience covers management and design of commercial and general aviation airfield projects, complex rail and roadway grade separation projects, interstate highway projects, underground utility projects, large-scale drainage facilities, and commercial and residential development projects. His focus has been in the production of design plans, specifications, and project development studies which provide clear direction for construction or for additional project development.

**RELEVANT EXPERIENCE:**

**Tustin Ranch Road, Warner, and Armstrong Street Improvements (Tustin, CA) – Project Manager.** Responsible for providing arterial roadway design services for various arterial roadway systems within the Tustin Legacy Development. Responsible for oversight of the development of improvement plans and the individual design elements including structural, roadway design, utility design, and drainage. Coordinated planning efforts with landscape architecture and adjacent engineering development, and provided coordination efforts for individual development agencies and permitting processes. Design plans and specifications were required for over two and a half miles of new roadway, a new bridge structure spanning 412 feet over Edinger Avenue and the SCRRA/OCTA railroad, and widening approximately 1,000 feet of Walnut Avenue all in support for the redevelopment of the former Tustin Marine Corps Air Station.

**Street and Storm Drain Improvements (Midway City, CA) – Project Manager.** Responsible for the development and final design of new drainage facilities and associated street improvements within a six-block residential area of Midway City. Coordinated the preparation of the project design report, final design plans, specifications and estimates to alleviate flooding by providing a new storm drain main line to convey the area storm run-off, and to provide increased protection for motorists and pedestrians. The work includes reviewing several alternative drainage systems (1.2 miles) to convey runoff from a drainage area of 218 acres, and reconstructing approximately 4.6 miles of residential streets.

**Washington Boulevard Grade Separation Project (Los Angeles County, CA)** - Prior to joining RBF, Mr. Anderson served as Deputy Project Manager responsible for PS&E of a rail grade separation project at the south end of the proposed Alameda Corridor. The project will extend the existing depressed roadway to the northwest to allow Washington Boulevard to be grade separated from the Alameda Corridor tracks as well as the Redondo Junction Tracks. Rail and 2-way traffic will be maintained during construction, with detour alternatives currently being evaluated. The project includes design of two rail bridge structures, retaining wall design, roadway, drainage and utility relocation, and construction support services. Services include detailed phasing plans a, traffic control and management. Project construction must allow both rail and roadway traffic to be maintained through construction.

**Interstate 15 Yuma Drive Interchange (Norco, CA)** - Prior to joining RBF, Mr. Anderson served as Design Engineer responsible for final design of a new interchange on Interstate 15. Services included geometric layouts and a variety of costs estimating scenarios were investigated to aid in securing funding for construction of the project. In addition to the interchange design, other project elements included four miles of auxiliary lanes, widening of three under crossing structures and improvements to the local circulation system.

**State Route 91 Outside Widening Project Study Report (Riverside, CA)** - Prior to joining RBF, Mr. Anderson served as Design Engineer responsible for planning Route 91 freeway improvement alternatives from Magnolia Avenue to State Route 91 / State Route 60 / I-215 Interchange. The work included local street improvements; interchange type selections, geometric designs for freeway realignment, project fact sheet and HOV Reports, cost estimations, and public hearings.

**State Route-57 / Lambert Road Project Study Report/Project Development Study (PSR/PDS) (Brea, CA)** - Prior to joining RBF, Mr. Anderson served as Design Manager for the development and analysis of alternative interchange improvements near and around the Lambert Road and State Route 57 Interchange. The purpose of the PSR/PDS was to develop a range of potential improvement alternatives and the cost associated with these alternatives in order to compete for available funding with either projects in the State and local transportation improvement program.

**Carlos A. Ortiz, P.E., T.E.,  
P.T.O.E.**  
Traffic Engineering

**Registration:**

1997, Civil Engineer, CA, C057535  
1999, Traffic Engineer, CA, 2025  
1999, Civil Engineer, AZ, 34333  
1999, Professional Traffic Operations  
Engineer, US, 426

**Years of Experience:** 17

**Education:**

B.S., 1989, Civil Engineering, California  
State Polytechnic University, Pomona

**Professional Affiliations**

Past-President, Riverside-San  
Bernardino Section, Institute of  
Transportation Engineers

Member, Institute of Transportation  
Engineers

President, Orange County Traffic  
Engineering Council (OCTEC)

Member, American Society of Civil  
Engineers, Past-President Orange  
County Younger Member Forum

Member, American Public Works  
Association



RBF "Excellence In Teamwork" Award Winner

Mr. Ortiz manages the traffic engineering aspects for RBF's transportation projects. Mr. Ortiz's professional experience includes the design of site and grading improvements, street improvements, intelligent transportation systems, traffic signals, traffic signal communication systems, lighting, ramp metering systems, traffic monitoring systems, dynamic message sign systems, stage construction/traffic handling, and signing and striping. Mr. Ortiz is also experienced in intersection realignment studies, traffic impact studies, sight distance analysis studies, speed limit studies, left turn storage studies, traffic warrant studies, and stop sign warrant studies for government and private development projects.

**RELEVANT EXPERIENCE:**

**Sepulveda Boulevard Rehabilitation and Water Main Replacement Project (Torrance, CA) – Traffic Engineering.** RBF was selected by the City of Torrance to provide final plans, specifications and estimates for the rehabilitation of approximately one mile of Sepulveda Boulevard (between Hawthorne Boulevard and the west City limit). The rehabilitation was necessary to relieve traffic congestion, repair the deteriorated street conditions which had become a significant maintenance issue, and replace the existing 8" water main with a new 12" transmission main and an 8" water main. The street improvements include: pavement reconstruction and ARHM overlay, curb, gutter and sidewalks and cross-gutter reconstruction, traffic signal modifications and improvements, roadway widening at intersections, and installation of a new 12-inch transmission water main. In addition, the project also required coordination with several agencies including Caltrans District 7 and application for a Metropolitan Transit Authority (MTA) Grant for reimbursement for the roadway and traffic signal improvements at Hawthorne Boulevard.

**Artesia Boulevard Improvement Project (Torrance, CA) - Traffic Engineer** responsible for the preparation of street lighting, traffic analysis, signal timing, traffic signal modifications, signing and striping plans, specifications and estimates for the Artesia Boulevard Improvement Project. This project, a 2.7 mile section of roadway rehabilitation, is part of the City's revitalization program to provide aesthetic enhancements and improve the safety and quality of life in the community. The work includes design for pavement rehabilitation, parkways, medians, sidewalk, curb and gutter, driveways, bus pads, median and parkway landscaping, storm drain, street lighting, traffic analysis, signal timing, stage construction, traffic handling, traffic signal modifications, signing and striping and federal funding applications.

**Edinger Avenue Widening Project, Caltrans District 12 (Santa Ana and Tustin, CA)** - RBF prepared plans, specifications and estimates for the widening of Edinger Avenue from a four-lane roadway to a major six-lane access-controlled urban arterial highway for 2.2 miles. The final improvements included street improvements, grading, drainage, landscaping, retaining walls, traffic sign and striping, traffic signals, and traffic control. The project also included ramp-widening improvements to the SR-55 on and off ramps from Edinger Avenue. This project required extensive coordination between the City of Santa Ana, City of Tustin, and Caltrans. Mr. Ortiz served as the Project Manager for the traffic engineering tasks that included preparation of plans, specifications and probable cost estimates for traffic signals, traffic signal interconnect system, Highway Advisory Radio System (HAR) relocation, signing and striping, stage construction/traffic handling and Transportation Management Plan (TMP).

**Apple Valley Road Realignment and Widening (Apple Valley, CA)** - Traffic Engineer. RBF was responsible for roadway design for the widening and reconstruction of 2.7 miles of Apple Valley Road, from Yucca Loma Road to Bear Valley Road. Work tasks include roadway design, hydrology and hydraulics analysis, a Class I bike lane design, local street storm drainage improvements, landscape and irrigation design, traffic circulation analysis, traffic signal warrant analysis, traffic signal modifications, signing and striping, full traffic handling and stage construction phasing, right-of-way mapping. Coordination included various utility agencies, the Town of Apple Valley, San Bernardino Association of Governments, adjacent developers, Apple Valley Ranchos Water Company, and the Apple Valley Unified School District.

**Highway 111 and Indian Wells Lane (Indian Wells, CA)** - This project involved street widening, utility relocation and intersection improvements for Highway 111 and Indian Wells Lane. As Project Manager, Mr. Ortiz was responsible for the preparation of plans, specifications and probable cost estimates for street improvements, water and sewer improvements, traffic signal modification, and signing and striping. The project involved preparation of conceptual geometric plans and intersection truck turning analysis for realignment and improvements of the intersection. The project involved coordination with Caltrans.

**Lexington Road and Burton Way Traffic Signal Improvements (City of Beverly Hills, CA)** - The project involved modification of four traffic signals, installation of one new traffic signal with CCTV, and storm drain system and intersection improvements. The project also included installation of traffic signal interconnect systems Along Lexington Road and Burton Way. Mr. Ortiz served as the project manager and was responsible for preparation of plans, specifications, and probable cost estimates for the proposed improvements.

**Carlos A. Ortiz, P.E., T.E.,  
P.T.O.E.**  
Traffic Engineering

**Newport Coast Drive Street Improvements (Newport Beach, CA)** - This project involved street widening, utility and median improvements of Newport Coast Drive from San Joaquin Road to State Route 73. Mr. Ortiz served as the Traffic Manager. Mr. Ortiz was responsible for the preparation of plans, specifications and probable cost estimates for modification of two traffic signals, traffic signal interconnect, signing and striping, and stage construction/traffic handling.

**Interstate 405 / Jeffrey Road Interchange, Caltrans District 12 (Irvine, CA)** - The project involved widening the northbound and southbound ramps and the widening of the Jeffrey Road Bridge, both entirely within existing Caltrans right-of-way. Mr. Ortiz served as the Traffic Engineer for the traffic engineering tasks that included signage, pavement delineation, lighting system, ramp metering systems, dynamic message signs, traffic signals and summary of quantities plans. The project also includes relocating and modifying the existing Caltrans fiber optic trunk line and video surveillance systems (CCTV) including the video node hub. The project involved coordination with Caltrans District 12.

**Interstate 710 / Firestone Boulevard Interchange Phase II (South Gate, CA)** - The project involved the realignment of the northbound direct off ramp and northbound direct on ramp and improvements on Firestone Boulevard. Mr. Ortiz serviced as the Project Manager for the traffic engineering tasks that included preparation of a traffic signal, traffic signal communication system, lighting system, signage, pavement delineation, and stage construction PS&E.

**Gregory A. Helmer, P.L.S.**  
Mapping / Survey

**PROJECT TEAM RESUME**

**Registration:**

1982, Professional Land Surveyor, CA,  
5134  
1992, Professional Land Surveyor, CO,  
28272  
1995, Professional Land Surveyor, NV,  
11432  
1997, Registered Land Surveyor (AZ),  
AZ, 32228

**Years of Experience:** 32

**Education:**

A.A., 1991, Business Administration,  
Palomar College, San Marcos, CA

**Professional Affiliations**

Member, American Congress on  
Surveying and Mapping  
Member, American Association for  
Geodetic Surveying  
Member, Council of Professional  
Surveyors  
Member, California Land Surveyors  
Association  
Founding Officer, California Spatial  
Reference Center

Mr. Helmer brings creative vision and impeccable knowledge and expertise to management of surveying and mapping projects. He is a nationally-recognized expert in GPS positioning and spatial reference systems. He is the author of several professional papers and magazine articles, and has provided instructional seminars to audiences throughout the United States. His professional experience includes precise geodetic control, geographic information systems, photogrammetric mapping and cadastral surveys. Mr. Helmer has extensive knowledge and experience in bringing together specialists and advanced technologies to solve unique surveying and mapping challenges; with a clear understanding of project specifications and budget constraints, as well as public and private contract administration issues.

**RELEVANT EXPERIENCE:**

**Sepulveda Boulevard Rehabilitation and Water Main Replacement Project (Torrance, CA) – Mapping / Survey.** RBF was selected by the City of Torrance to provide final plans, specifications and estimates for the rehabilitation of approximately one mile of Sepulveda Boulevard (between Hawthorne Boulevard and the west City limit). RBF provided design topographic survey data for the complete length of the project area and will provide corner records for 18 centerline monuments, after construction of the project.

**Apple Valley Road Realignment and Widening (Apple Valley, CA) -** Surveying and Right-of-way Manager in support of roadway design for the widening and reconstruction of 5.7 miles of Apple Valley Road, from Yucca Loma Road to Bear Valley Road. Work tasks included horizontal and vertical control, preliminary design surveys, right-of-way engineering, and acquisition documents.

**Sand Canyon Avenue Grade Separation at the Metrolink / BNSF Railroad (Irvine, CA) -** Project Surveyor. RBF is providing design and construction services for Sand Canyon Avenue / Undercrossing at SCRRA/OCTA / Metrolink Grade Separation. RBF is responsible for roadway layout, structures design, pump station design, railroad permitting and coordination, railroad shoofly design, drainage design, utility relocation coordination, survey/right-of-way engineering, community outreach, landscape/irrigation, identification of funding and geotechnical engineering services.

**Caltrans District 7, Golden State Freeway, Route 1 and San Diego Freeway Project Control (Los Angeles and Ventura Counties, CA) -** Project Manager for horizontal and vertical control surveying along 50 miles of right-of-way. Horizontal control was provided by GPS methods and vertical control was provided by digital leveling methods.

**State Route 710 Extension (Los Angeles County, CA)** - Project Surveyor responsible for airborne GPS control of helicopter-based video for the Route 710 Extension from Interstate 10 to State Route 210 (through the Cities of Los Angeles, Alhambra, South Pasadena, and Pasadena).

**Interstate 405 / Jeffrey Road Interchange Improvements (Irvine, CA)** - Survey Manager responsible for the preparation of appraisal maps and acquisition documents required for widening the existing four-lane overcrossing structure, provide a third travel lane in each direction along Jeffrey Road, and modifying all six of the existing ramps. Right-of-way engineering services included pre-construction record of survey, land net retracement, appraisal maps and legal descriptions.

**Interstate 5 Gateway Project Survey and Mapping Services (Orange County, CA)** - Survey Project Manager for surveying and mapping services in support of design for the I-5 North Widening Project in Orange County. The work includes project control, aerial topographic mapping, land net recovery right of way engineering and monument perpetuation surveys. Coordination between the consultant design team and Caltrans Districts 7 and 12 was required to insure compatibility between completed survey work on other projects and to avoid costly re-work.

**Interstate 405 / State Route 55 Post-Construction Record of Survey (Orange County)** - Survey Project Manager. Following construction, RBF was responsible for surveying the existing and new right of way lines for final monumentation. This work included perpetuation of geodetic control used in the design and construction phase, and locating controlling boundary corners sufficient to retrace deed lines and historical right of way monumentation maps. RBF worked closely with Orange County Transportation Authority (OCTA) and Caltrans, District 12 to ensure that common goals for the surveying and mapping work were established and maintained for all interested organizations.

**State Route U.S. 101 / Lewis Road Interchange (Ventura County, CA)** - Principal-in-Charge and Project Manager responsible for construction surveying services for the State Route U.S. 101 / Lewis Road interchange in Ventura County. This task order was completed under an on-call survey and mapping services contract to Caltrans District 59.

**Michael R. Miller, P.L.S.**  
Mapping / Survey

PROJECT TEAM RESUME

**Registration:**

1987, Professional Land Surveyor,  
CA, 5747

**Years of Experience:** 34

**Education:**

B.A., 1972, English Literature,  
California State University, Fullerton  
Survey Studies

**Professional Affiliations:**

Member, California Land  
Surveyors Association

Member, California Council of Civil  
Engineers and Land Surveyors

American Council of Engineering  
Companies (ACEC)

At RBF, Mr. Miller manages the daily operations of survey field crews, prepares contract documents, oversees safety meetings, and office data processing services. He is responsible for all operational elements of Survey Engineering, CADD Data Processing, client coordination, estimates, and proposal preparation. He maintains a working knowledge of field conditions, electronic office and field instrumentation, and survey crew operations. Mr. Miller has been responsible for hundreds of land surveying, construction staking, topographic, and aerial survey projects.

**RELEVANT EXPERIENCE:**

**Artesia Boulevard Improvement Project (Torrance, CA)** – Mr. Miller served as Survey Manager for this federally funded revitalization project that improves the entire three-mile roadway corridor through the City of Torrance resulting from a relinquishment of the State highway (Route 91) to the City. This project includes design topographic survey data and mapping, traffic studies, pavement testing and evaluation, signal timing and improvements, utility undergrounding, landscaping and irrigation, pavement reconstruction and storm drain improvements. The work includes the completion of the PS&E package and coordination between City, County, State, utility, subconsultant and RBF staff.

**Sepulveda Boulevard Rehabilitation and Water Main Replacement Project (Torrance, CA)** – Survey Manager. RBF was selected by the City of Torrance to provide final plans, specifications and estimates for the rehabilitation of approximately one mile of Sepulveda Boulevard (between Hawthorne Boulevard and the west City limit). As Survey Manager, Mr. Miller provided design topographic survey data and mapping for the complete length of the project area and will provide corner records for 18 centerline monuments, after construction of the project.

**Palos Verdes Drive East and Montemalaga Drive Roadway Improvements (Rancho Palos Verdes, CA)** - Survey Manager responsible for survey services for the rehabilitation of approximately 3.25 miles of residential and secondary roadways in the City of Rancho Palos Verdes. This metric project required compliance with 3R standards and local program procedures. The work also included construction administration and inspection services.

**Interstate 405 / State Route 55 Post-Construction Record of Survey (Orange County)** - Following construction, RBF was responsible for surveying the existing and new right of way lines for final monumentation. This work included preparation of geodetic control used in the design and construction phase, and locating controlling boundary corners sufficient to retrace deed lines and historical right of way monumentation maps. New right of way



RBF "Excellence In Teamwork" Award Winner  
National Recognition, Engineering Excellence  
Award Winner

**RBF**  
CONSULTING

monuments were established for all parcel takes and a Record of Survey map prepared and filed with the Orange County Surveyor's Office. RBF worked closely with Orange County Transportation Authority (OCTA) and Caltrans, District 12 to ensure that common goals for the surveying and mapping work were established and maintained for all interested organizations.

**Long Beach On-Call Professional Services Contract (Long Beach, CA) - Survey Manager.** Under a three year on-call services contract with the City of Long Beach, RBF has provided civil engineering, building and landscape architecture and other professional consulting services on an as-needed basis for various public works improvement projects. To date, RBF has provided preliminary and final engineering, survey, traffic engineering studies and drainage studies for various streets and alley projects. Projects have included improvements and rehabilitation to roadways, streets, alleys, building and architectural renovations.

**Interstate 710 / Firestone Boulevard Interchange Phase II (South Gate, CA) - Field Survey Coordinator.** RBF provided transportation engineering and survey services to the City of South Gate for final design of the Phase II interchange improvements to I-710 at Firestone Boulevard. All work was coordinated through Caltrans District 7 and the City of South Gate. The work included the reconstruction of the northbound off-ramp and the northbound loop on-ramp, removal of the collector-distributor road between the existing northbound loop ramps, removal of the northbound loop off-ramp, signalization of the off-ramp's terminus with Firestone Boulevard, and improvements on Firestone Boulevard to accommodate this work. Additional right-of-way was required to accommodate the right turn lane into the existing commercial development.

**Caltrans District 7, State Route 110 Widening (Los Angeles County, CA) - Project Manager** responsible for a 2.2-mile segment of this freeway widening in downtown Los Angeles.

**Caltrans District 7, SR-126 (Los Angeles County, CA) - Project control and right-of-way surveying** for eight miles of this State Highway.

**Caltrans District 12, State Route 91 Widening, Segment D (Anaheim, Orange County, CA) - Project Manager** responsible for Segment D of the State Route 91 Widening Project. The work included full construction staking services (paving stakes, wall stakes, utility stakes) and control surveys (including horizontal and vertical control, reviewing grid grades, and establishing additional G.P.S. construction control).

**Richard Hernandez**  
Potholing

**Registration / Certifications:**

Safety Certified with Union Pacific and Burlington Northern Santa Fe Railroads

40-hour Hazmat certification

ATSSA, Traffic Control Supervisor Certification

Project Management Certification

Certified DOT Supervisory training Registered with Union Pacific and Burlington Northern Santa Fe Railroad

Registered with RSO. (Los Angeles Refinery Safety Overview)

**Education:**

University of Maryland National Technical Schools

Direct, on-the-scene, Project Management and supervision of field forces; that perform the non-destructive, damage-prevention potholing services to designate, locate and expose existing subsurface utilities. Principal Contact/Utility Coordinator.

**RELEVANT EXPERIENCE:**

**Caltrans District 7/Los Angeles County BPW Hwy 30 Extension (Los Angeles County, CA)** – On Joint Caltrans District 7/Los Angeles County BPW Hwy 30 extension, in addition to Investigating utility and Right of Way encroachment by house sanitary sewer lateral connections, Richard Hernandez, as Contact/Utility Coordinator, discretely handled the sensitive public relations aspect of field operations.

**Alameda Corridor Project (Los Angeles County, CA)** – Functioned as Sub-Contractor's Project Manager for the \$2.4 billion, 20-mile Alameda Corridor Project; a project of national significance involving political jurisdictions marked by conflicting interests operated by rival ports and railroad companies. The project center piece was a 33-foot-deep, 50-foot wide trench that required the relocation of 1700 lines of sewers, gas, electricity, and fiber-optic services. Additionally, the Pacific Coast Highway Over Crossing phase required night time activity, utility visual verification coordination of non-destructive, damage prevention exposure of refinery pipeline crossings and surface railroad crossings.

**Caltrans I-405 & Euclid Sound Wall Project (Orange County, CA)** – Persistence pays! Project was inherited, with no "as-built" information. Several "Orphan Utilities" (existence denied by any utility owner) complicated the positive identification of the existing conflicts. After being frustrated by several field meets with consultant engineer's misleading information and Utility-owner coordinators, who mis-marked locations, were of no assistance, and many unsuccessful, gratuitous, test holes, Richard Hernandez's persistence, finished the project on time.

**Santa Ana River Pipeline Alignment and Orange County Water District Plant Site (Orange County, CA)** – Richard Hernandez functioned as Sub-Contractor to COM, the Prime Consultant, on the World's largest Groundwater Replenishment System Project with an estimated cost of \$350 million. Richard Hernandez acted as Project Manager for the accurate data collection and visual verification of existing subsurface utilities. The phases involved \$250,000 of potholing with 360 potholes; both along the 13-mile Santa Ana River pipeline alignment and at the Orange County Water District plant site.

**SAF-r-DIG**





## Section 3: Qualifications

### Firm Profile

**Established:** 1944  
**Size of Staff:** 1,060  
**Number of Offices:** 14

RBF is a full service consulting firm providing planning, engineering, surveying, and related professional services. RBF is a private corporation founded in California in 1944.

#### Offices:

Camarillo, California  
Carlsbad, California  
Irvine, California  
Las Vegas, Nevada  
Monterey Bay, California  
Ontario, California  
Palm Desert, California  
Phoenix, Arizona  
Sacramento, California  
San Diego, California  
San Jose, California  
Temecula, California  
Tucson, Arizona  
Walnut Creek, California

The firm offers a professional staff of over 1,000 employees located throughout the western United States. RBF possesses the full range of disciplines necessary to provide turnkey planning, design and construction of a wide range of projects. Over 85 percent of RBF's work is for repeat clients, which is testimony to the firm's client service capabilities.

In the 2006 list of The Top 500 Design Firms as published by Engineering News Record, RBF is ranked number 70. RBF is ranked 40th in the nation's top "pure design" consulting firms.



*RBF is ranked 70th in  
ENR's Top 500  
engineering firms and  
40th in "pure design"*

#### Services Provided:

RBF has the experience, organizational resources, and management capabilities to provide a complete range of services for both large- and small-scale projects.

#### Planning:

Land Planning  
Transportation Planning  
Environmental Services  
Urban Planning and Design  
GIS  
Visual Analysis and Design

### Relevant Experience

RBF is recognized statewide as a transportation-consulting leader and is a top ranked, full service engineering and planning firm founded over 60 years ago. RBF has completed numerous transportation-related projects throughout Southern California requiring specialized expertise in transportation planning and environmental documentation. This expertise extends from the earliest stages of a project in the development and analysis of project alternatives through final engineering design in the preparation of plans, specifications and estimates.

#### Design:

Civil Engineering  
Transportation Engineering  
Water Resource Engineering  
Structural Engineering  
Traffic Engineering  
Electrical Engineering  
Landscape Architecture

RBF utilizes a large, diverse staff of professional and support personnel with similar experience related to the 190<sup>th</sup> Street Rehabilitation Project. RBF's most recent relevant project experience is summarized in the matrix on the following page (Exhibit 3-1). At the end of this section, we have provided detailed project descriptions for our most relevant projects.

#### Construction:

Field Surveying  
Mapping / Right of Way  
Construction Staking  
Construction Management  
Construction Inspection



Exhibit 3-1



Proven Experience for  
Every Major Project Element

	Survey / Mapping	Pavement Evaluation Utilities	Roadway Rehabilitation Potholing	Traffic Signal Rehabilitation Traffic Analysis	Traffic Signal Improvements	Traffic Control and Staging Federal Funding	Multi Agency Coordination State Permits	Construction Support Services
Sepulveda Boulevard Rehabilitation and Water Main Replacement Project (Artesia, CA)	✓	✓	✓	✓	✓	✓	✓	✓
Artesia Boulevard Improvement Project (Torrance, CA)	✓	✓	✓	✓	✓	✓	✓	✓
Interstate 405 / Euclid Street Interchange and Newhope Street Extension (Fountain Valley, CA)		✓		✓	✓	✓	✓	✓
Tustin Ranch Road, Warner and Armstrong Street Improvements (Tustin, CA)	✓	✓	✓	✓		✓		✓
State Route 55 / Edinger Avenue Widening and Pavement Rehabilitation Project (Santa Ana, CA)	✓	✓	✓	✓	✓	✓	✓	✓
Apple Valley Road Realignment and Widening (Apple Valley, CA)	✓	✓		✓	✓	✓	✓	✓
Highway 111 from Plaza Way to San Marcos Avenue (Palm Desert, CA)	✓	✓	✓	✓		✓	✓	✓
Street Overlay and Reconstruction Project, Phase I and Phase II (Santa Barbara, CA)	✓	✓	✓	✓	✓			✓
Citywide Roadway Rehabilitation (Beverly Hills, CA)	✓		✓	✓	✓	✓	✓	✓
Edinger Avenue Widening and Pavement Rehabilitation Phase II (Tustin, CA)		✓	✓	✓	✓	✓	✓	✓
Long Beach On-Call Professional Services Contract (Long Beach, CA)	✓	✓	✓	✓	✓			✓
Lexington Road and Burton Way Traffic Signal Improvements (Beverly Hills, CA)	✓	✓				✓	✓	✓

References

RBF believes that client satisfaction and repeat client base measures demonstrated excellence of a firm. We are proud of our record of 85 percent repeat clients, which increases year after year. Our clients themselves provide a more visible testimony of our demonstrated competence. We invite you to contact our past clients as outlined in Table 3-1 on the following page.



City of Torrance  
Public Works Department

**Table 3-1**

PROJECT	AGENCY
North Long Beach Street Enhancement Master Plan (Long Beach, CA)	Lee Mayfield City of Long Beach 562/570-6172
Apple Valley Road Improvement (Apple Valley, CA)	Brad Miller, PE Town of Apple Valley 760/240-7000
Artesia Boulevard Improvement Project (Torrance, CA)	Craig Bilezerian City of Torrance 310/618-3054

### Representative Projects

RBF's comprehensive project approach, in partnership with City team members, has been proven on our past projects to successfully deliver a project within or below budget. Comprehensive work planning and developing a proactive project team relationship will be critical to the successful management and delivery of this project. This typical team approach allows RBF to adapt to any project condition. Following are detailed project descriptions of relevant RBF projects.

**PROJECT HIGHLIGHTS**

- *Over One Mile of Roadway Rehabilitation*
- *Final Plans, Specifications and Estimates*
- *Water Main Replacement*
- *Storm Drain System*
- *Traffic Analysis*
- *Signing and Striping*
- *Traffic Signal Modifications and Communication System*
- *Traffic / Construction Staging*
- *Utility Coordination*
- *Topographic Design Survey*
- *Multi-Agency Coordination*
- *Caltrans Encroachment Permit*

**REPRESENTATIVE PROJECT**

**Sepulveda Boulevard Rehabilitation and Water Main Replacement Project  
Torrance, CA**

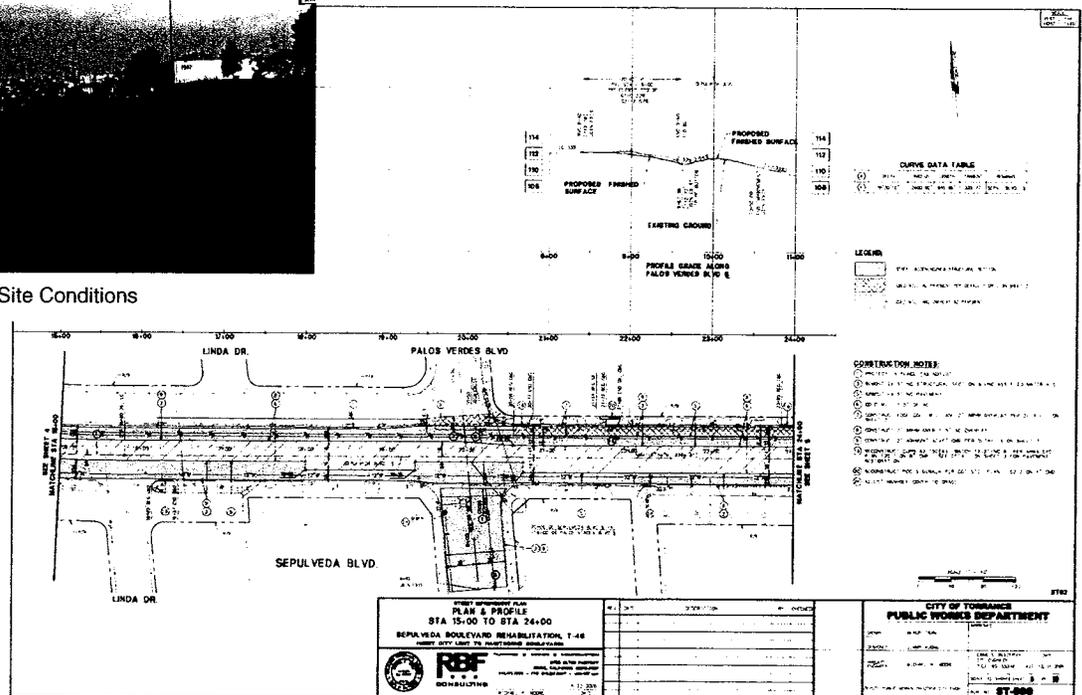
RBF was selected by the City of Torrance to provide final plans, specifications and estimates for the rehabilitation of approximately one mile of Sepulveda Boulevard (between Hawthorne Boulevard and the west City limit). The rehabilitation was necessary to relieve traffic congestion, repair the deteriorated street conditions which had become a significant maintenance issue, and replace the existing 8" water main with a new 12" transmission main and an 8" water main. The street improvements include:

- Pavement reconstruction and ARHM overlay
- Curb, gutter and sidewalks and cross-gutter reconstruction
- Traffic signal modifications and improvements
- Roadway widening at intersections
- Installing a new 12-inch transmission water main

In addition, the project also required coordination with several agencies including Caltrans District 7 and application for a Metropolitan Transit Authority (MTA) Grant for reimbursement for the roadway and traffic signal improvements at Hawthorne Boulevard.



Existing Site Conditions



**PROJECT HIGHLIGHTS**

- *2.7 Miles of Roadway Rehabilitation*
- *Revitalization Program Element*
- *Aesthetic Enhancements*
- *Storm Drain System*
- *Traffic Signals*
- *Traffic Signal Communication System*
- *Traffic / Construction Staging*

**REPRESENTATIVE PROJECT**

### **Artesia Boulevard Improvement Project Torrance, CA**

RBF was retained by the City of Torrance to evaluate alternative improvement concepts and prepare plans, specifications and estimates for the Artesia Boulevard Improvement Project. This project, a 2.7 mile section of roadway rehabilitation, is part of the City's revitalization program to provide aesthetic enhancements and improve the safety and quality of life in the community. The work included design for pavement rehabilitation, parkways, medians, sidewalk, curb and gutter, driveways, bus pads, median and parkway landscaping, storm drain, street lighting, traffic analysis, signal timing, traffic signal modifications, signal communication system, signing and striping and federal funding applications.

**Existing Conditions****Completed**

**PROJECT HIGHLIGHTS**

- *Minimize Impacts to Existing Development*
- *Attractive Gateway Into the City*

REPRESENTATIVE PROJECT

### **Interstate 405 / Euclid Street Interchange and Newhope Street Extension Fountain Valley, CA**

RBF was retained by the City of Fountain Valley to prepare a preliminary design report and final plans, specifications, and estimates for the extension of Newhope Street through an existing industrial area. The project created a new gateway into the City of Fountain Valley's Southpark Specific Plan area. The project consists of widening the existing northbound I-405 offramp to Euclid Street from two to five lanes and the reconfiguration of the northbound on-ramp to align with the new four-lane extension of Newhope Street between Euclid Street and Talbert Avenue. Plans included layout, profile superelevation, grading, storm drain, signing, striping, signals, ramp metering, stage construction, and landscaping. The project also includes the design of new sewer and water facilities for the Newhope extension.



Existing Conditions



Proposed

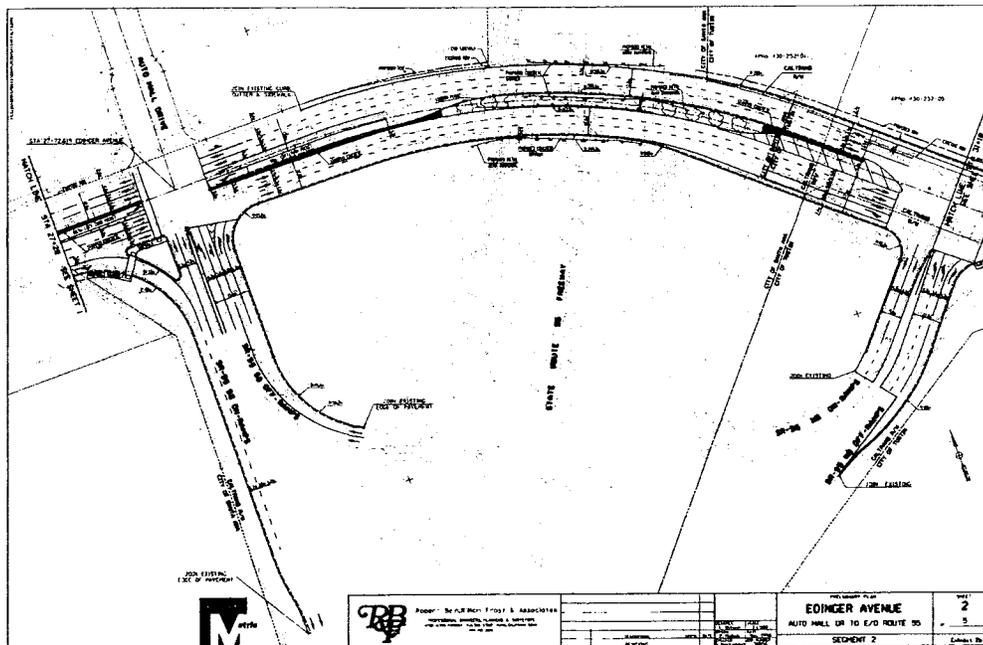
## PROJECT HIGHLIGHTS

- *Caltrans / Local Agency Interface*
- *Project Study Report*
- *Pavement Rehabilitation*
- *Stage Construction*
- *Storm Drain Facilities*
- *Median Island Landscaping*
- *BNSF Rail Crossing Permits*

## REPRESENTATIVE PROJECT

### State Route 55 / Edinger Avenue Widening and Pavement Rehabilitation Project Santa Ana, CA

RBF prepared plans for the proposed improvements to Edinger Avenue from Ritchey Street to Red Hill Avenue, approximately 2.2 miles. The project provides for significant capacity enhancements to Edinger Avenue and eliminates the existing bottleneck at the State Route 55 Interchange. RBF's work proceeded from geometric approval to final designs. The final designs entailed street improvements, grading, drainage, landscaping, retaining walls, traffic sign and striping, traffic signals, and traffic control. The project included BNSF Railroad crossing improvements and coordination with PUC. RBF prepared G.O.88 application and obtained permits to provide improvements at this rail crossing. Extensive utility relocation/agency and adjoining roadway design coordination and the preparation of right-of-way maps and coordination for appraisals and acquisition were important aspects of this project. The effort further included ramp widening improvements to the SR-55 on and off ramps from Edinger Avenue. Extensive coordination was required with the cities of Santa Ana and Tustin and Caltrans.



**PROJECT HIGHLIGHTS**

- *Public Backbone Infrastructure*
- *Roadway, Utility, Structural and Drainage Design*
- *Redevelopment of Former Marine Corps Air Facility*
- *700-Acre Project*
- *4,000 New Housing Units*

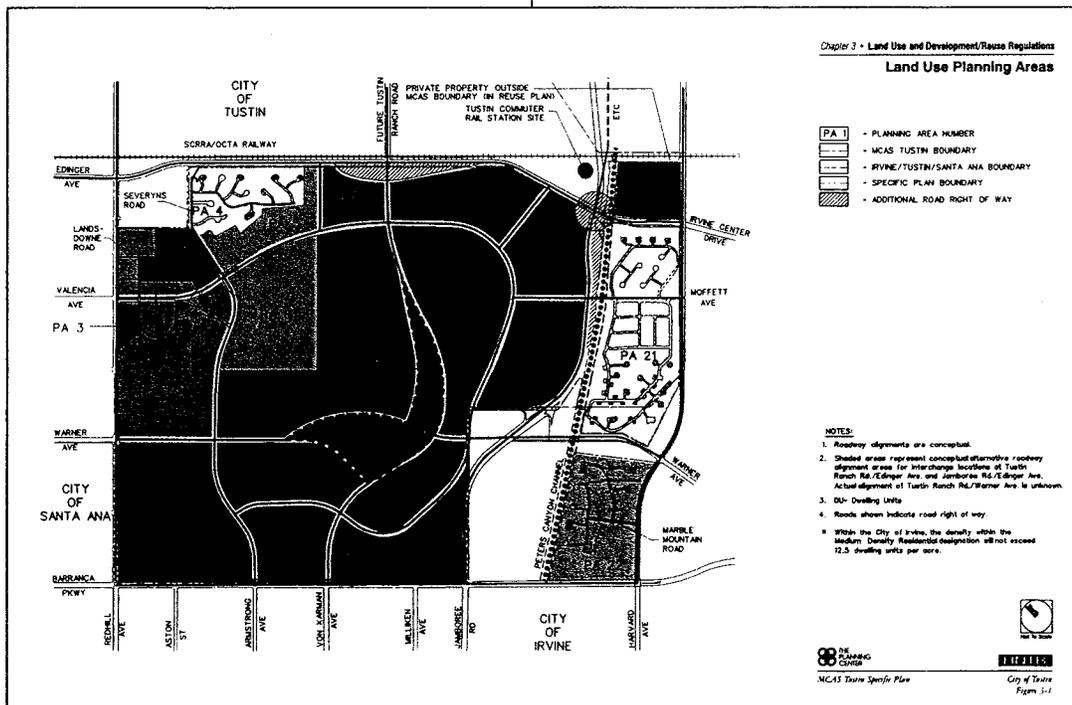
**REPRESENTATIVE PROJECT**

**Tustin Ranch Road, Warner and Armstrong Street Improvements, Tustin Legacy Tustin, CA**

RBF is responsible for providing planning and civil engineering services for public backbone infrastructure as well as environmental planning and policy planning efforts for redevelopment of the Tustin Marine Corps Air Station. The 700-acre project will develop specific plans for dwellings, a business center, a golf village, shops and a hotel, and will feature a 75-acre linear park linking the entire property.

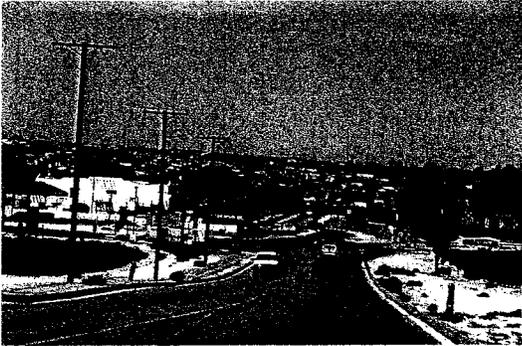
Providing arterial roadway design services for various roadway systems within the Tustin Legacy Development is a significant portion of the project. RBF is responsible for the development of improvement plans and the individual design elements including structural, roadway design, utility design, and drainage. The project also involves coordinating planning efforts with landscape architecture and adjacent engineering development, and providing coordination efforts for individual development agencies and permitting processes. RBF is preparing design plans and specifications for over two and a half miles of new roadway, a new bridge structure spanning 412 feet over Edinger Avenue and the SCRR/OCTA railroad, and widening approximately 1,000 feet of Walnut Avenue, to support redevelopment of the former Tustin Marine Corps Air Station. Additionally, RBF is reconfiguring portions of existing arterial

roadways to meet the new traffic modeling. Tie-in between new and existing roadways will require clear phasing and operation plans to mitigate any traffic delays.



**PROJECT HIGHLIGHTS**

- *Roadway Design*
- *Traffic Signal Design*
- *Storm Drain Design*
- *Pavement Investigation*
- *Stage Construction/  
Traffic Handling*
- *Environmental Services*
- *Community Presentations*

**REPRESENTATIVE PROJECT**

### **Apple Valley Road Realignment and Widening Apple Valley, CA**

RBF provided professional civil engineering, roadway design and environmental services to the Town of Apple Valley for the widening, reconstruction and realignment of 5.7 miles of Apple Valley Road, from Highway 18 to Bear Valley Road. Apple Valley Road is a vital arterial link within the Town's roadway network. The widening and reconstruction improvements include roadway realignment, hydrology and hydraulics analysis, a Class I bike lane design, local street storm drainage improvements, landscape and irrigation design, traffic circulation analysis, traffic signal warrant analysis, traffic signal modifications, signing and striping, full traffic handling and stage construction phasing, right-of-way mapping, and coordination with various utility agencies, the County of San Bernardino, San Bernardino Association of Governments, adjacent developers, Apple Valley Ranchos Water Company, and the Apple Valley Unified School District.



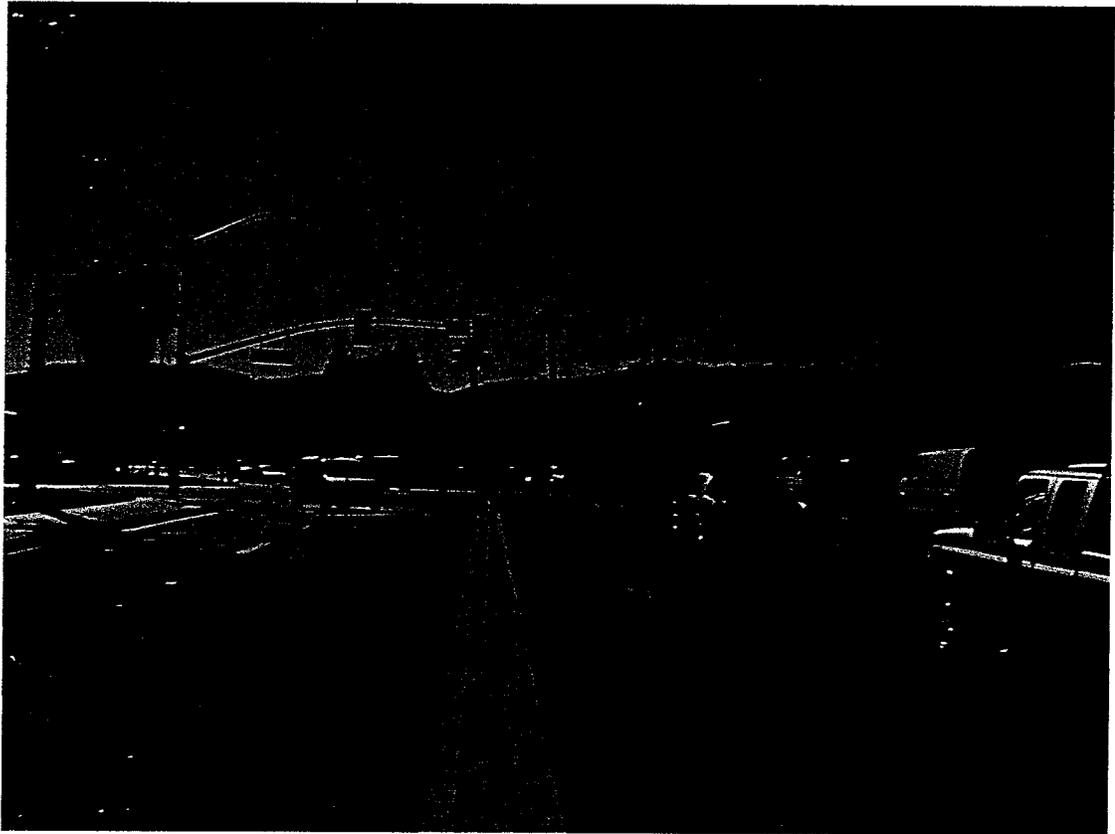
Visualization

**PROJECT HIGHLIGHTS**

- *Street Widening, Utility Relocation, and Intersection Improvements*
- *Extensive Coordination*

**REPRESENTATIVE PROJECT****Highway 111 from Plaza Way to San Marcos Avenue  
Palm Desert, CA**

This project involved street widening, utility relocation and intersection improvements. RBF Consulting was responsible for surveying, preparation of plans, specifications and probable cost estimates for street improvements, storm drain improvements, modification of two traffic signals, traffic signal interconnect system, signing and striping, and stage construction and traffic control. The project involved coordination with the City of Palm Desert and Caltrans District 8.



**PROJECT HIGHLIGHTS****REPRESENTATIVE PROJECT**

- *Field Surveying*
- *Plans, Specifications and Estimates*

**Street Overlay and Reconstruction Project, Phase I and II  
Santa Barbara, CA**

RBF performed field surveying and prepared plans, specifications, and cost estimates for the overlay and reconstruction of 57,000 lineal feet of streets within the City of Santa Barbara. The project included reviewing data from the City's pavement overlay program to determine the structural section for each street. The project consisted of various overlay and reconstruction methods along with curb and gutter replacement, concrete cross-gutter installation and replacement, and curb ramp installation. The overlay methods included conventional asphalt concrete overlay, grind and overlay, asphalt over Glasgrid, and asphalt rubber overlay. Pavement reconstruction methods included full depth asphalt concrete, asphalt over base, and asphalt over a subgrade stabilization layer of rock ballast. Scheduling and program management was tracked and posted on a website for access by all team members.



**PROJECT HIGHLIGHTS**

- *Major Rehabilitation / Improvements to Roadways*
- *Engineering, Surveying, and Landscape Architectural Services*

**REPRESENTATIVE PROJECT****Citywide Roadway Rehabilitation  
Beverly Hills, CA**

RBF has provided engineering, surveying and landscape architectural services to the City of Beverly Hills over the past ten years on a variety of roadway rehabilitation projects. RBF performed field surveys, pavement testing services, plans, specifications and cost estimates for paving overlay and rehabilitation projects citywide. Additional services included traffic signal loop replacement, traffic signal modification, traffic striping, markings and traffic control, and coordination with citizen's committees. RBF also prepared landscape median improvements and parkway planting along many of the arterial roadways. The projects consisted of various overlay and reconstruction methods along with miscellaneous curb and gutter reconstruction to improve drainage for both local residential as well as major arterial roadways. Projects also included evaluating locations for ADA compliance. These roadway paving and improvement projects included Rodeo Drive, Olympic Avenue, Wilshire Boulevard, Third Street, Lexington Drive, Whittier Avenue, as well as others.



**PROJECT HIGHLIGHTS**

- *Roadway Realignment*
- *Pavement Rehabilitation*
- *Drainage Facility*
- *Metric Units*
- *Median Islands*

**REPRESENTATIVE PROJECT**

### **Edinger Avenue Widening and Pavement Rehabilitation, Red Hill Avenue to Jamboree Road - Phase II Tustin, CA**

RBF prepared plans in metric units for the proposed improvements to Edinger Avenue from westerly of Red Hill Avenue to easterly of Jamboree Road, approximately one (1) mile. The project provides for significant capacity enhancements to Edinger Avenue. RBF's work proceeded from geometric approval to final designs. The final designs entailed pavement rehabilitation, street improvements, grading, extensive storm facility design, landscaping, retaining walls, traffic signage, striping, traffic signals, and traffic control. The project included coordination with the Orange County Transportation Authority (OCTA) and Metrolink Railroad to obtain a permit from OCTA to allow grading within Metrolink railroad right-of-way. Coordination with utilities and other adjacent projects were key to the success of this project.

**PROJECT HIGHLIGHTS****REPRESENTATIVE PROJECT**

- *On-Call Engineering Services*
- *Improvements and Rehabilitation for Streets, Alleys, Building and Architectural Renovation*

### **Long Beach On-Call Professional Services Contract Long Beach, CA**

Under a three-year, on-call services contract with the City of Long Beach, RBF has provided civil engineering, building and landscape architecture, and other professional consulting services on an as-needed basis for various public works improvement projects. To date, RBF has provided preliminary and final engineering, survey, traffic engineering studies, and drainage studies for various streets and alley projects. Projects have included improvements and rehabilitation to roadways, streets, alleys, building and architectural renovations.

**Before****After**

**PROJECT HIGHLIGHTS**

- *Traffic Signal Systems*
- *Traffic Signal Interconnect System*
- *CCTV System*
- *Roadway Improvements*
- *Signing and Striping Improvements*
- *Survey and Staking Services*

**REPRESENTATIVE PROJECT**

### **Lexington Road and Burton Way Traffic Signal Improvements Beverly Hills, CA**

This project involved the modification of four (4) traffic signals, installation of one (1) new traffic signal with a closed circuit television system (CCTV), signing / striping improvements, and storm drain system and intersection improvements. The project also included installation of traffic signal interconnect systems along Lexington Road and Burton Way. RBF was responsible for the preparation of plans, specifications, and probable cost estimates for the improvements.





## Section 4: Fee Estimate

### Proposed Fee Estimate

RBF is pleased to submit the following Fee Proposal for the preparation of the 190<sup>th</sup> Street Rehabilitation PS&E. Our proposal is based upon the Scope of Work outlined in Section 1 and is detailed on the enclosed Hours and Fee table. We would be happy to discuss modifications to items within our Scope of Work and fees with the City during contract negotiations.

3/26/2007  
J.N. 00000300.10V

**REB**  
ENGINEERS ARCHITECTS

COST/FEE  
TASK/HOUR BREAKDOWN

CITY OF TORRANCE  
190th Street Rehabilitation, T-49,  
Hawthorne Boulevard to West City Limit

TASK	DESCRIPTION	NO. OF SHEETS		PRINCIPAL		PROJECT MANAGER		SENIOR ENGINEER		PROJECT ENGINEER		DESIGN ENGINEER/MAPPER		DESIGN TECHNICIAN		CLERICAL		2-MAN SURVEY CREW		SUBCONSULTANT FEE		HOURS/ SHEET		FEE		
		Shs	Hours	\$	Hours	\$	Hours	\$	Hours	\$	Hours	\$	Hours	\$	Hours	\$	Hours	\$	Hours	\$	Hours	\$	Hours	\$	Hours	\$
<b>I. PRELIMINARY DESIGN</b>																										
01.00	PROJECT KICK-OFF MEETING (1 MEETING FOR 2 STAFF)	N/A	0	\$0	8	\$1,408	0	\$0	6	\$774	0	\$0	0	\$0	0	\$0	4	\$232	0	\$0	0	\$0	18	\$2,414		
02.00	RESEARCH/REVIEW OF AVAILABLE DATA	N/A	0	\$0	4	\$724	0	\$0	20	\$2,800	0	\$0	20	\$1,740	0	\$0	4	\$232	0	\$0	0	\$0	48	\$5,256		
03.00	SITE EVALUATION (1 DAY FOR 2 STAFF)	N/A	0	\$0	18	\$2,538	0	\$0	18	\$2,532	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	36	\$5,490		
<b>II. PRELIMINARY SURVEYS, STUDIES &amp; COORDINATION</b>																										
04.00	DESIGN TOPOGRAPHIC SURVEY	N/A	0	\$0	16	\$2,916	12	\$1,800	0	\$0	64	\$7,808	20	\$1,740	0	\$0	11.0	\$23,980	0	\$0	0	\$0	222	\$38,144		
05.00	UTILITY RESEARCH AND NOTIFICATION	N/A	0	\$0	0	\$0	0	\$0	18	\$2,532	28	\$3,416	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	46	\$5,738		
06.00	UTILITY FOTHOLOG	N/A	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0		
07.00	UTILITY COORDINATION	N/A	0	\$0	8	\$1,408	0	\$0	20	\$2,800	0	\$0	40	\$3,480	0	\$0	0	\$0	0	\$0	0	\$0	68	\$7,468		
08.00	BASE SHEETS (INCLUDING UTILITY MAPPING)	7	0	\$0	7	\$1,232	0	\$0	16	\$2,664	28	\$3,416	40	\$3,480	0	\$0	0	\$0	0	\$0	0	\$0	91	\$10,192		
09.00	PAVEMENT EVALUATION REVIEW/DESIGN	N/A	0	\$0	6	\$1,056	0	\$0	0	\$0	0	\$0	40	\$3,480	0	\$0	0	\$0	0	\$0	0	\$0	46	\$4,536		
<b>III. PLANS &amp; PROFILES</b>																										
10.00	30%, 60% & 90% PLAN SUBMITTAL																									
10.10	Title Sheet	1	0	\$0	0	\$0	0	\$0	8	\$1,032	8	\$976	12	\$1,044	0	\$0	0	\$0	0	\$0	0	\$0	28	\$3,052		
10.20	Construction Notes and Details	1	0	\$0	2	\$352	0	\$0	8	\$1,032	10	\$1,220	18	\$1,568	0	\$0	0	\$0	0	\$0	0	\$0	38	\$4,170		
10.30	Typical Cross Sections	1	0	\$0	2	\$352	0	\$0	8	\$1,032	38	\$4,392	38	\$3,132	0	\$0	0	\$0	0	\$0	0	\$0	62	\$6,908		
10.40	Roadway Rehabilitation Plan and Profile	7	0	\$0	16	\$2,916	0	\$0	65	\$8,985	80	\$9,760	125	\$10,875	0	\$0	0	\$0	0	\$0	0	\$0	288	\$31,836		
10.50	Stage Construction/Traffic Handling Phasing Plans	10	3	\$545	8	\$1,408	0	\$0	42	\$5,418	50	\$6,100	120	\$10,440	0	\$0	0	\$0	0	\$0	0	\$0	223	\$24,011		
10.60	Signing and Striping and Loop Modification Plans	5	3	\$545	15	\$2,640	0	\$0	22	\$2,838	44	\$5,368	75	\$8,525	0	\$0	0	\$0	0	\$0	0	\$0	159	\$18,016		
11.00	QUANTITY CALCULATIONS AND COST ESTIMATE	N/A	0	\$0	4	\$704	0	\$0	20	\$2,800	25	\$3,050	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	49	\$5,334		
12.00	PROJECT SPECIFICATIONS	N/A	0	\$0	12	\$2,112	0	\$0	58	\$7,482	8	\$976	8	\$896	10	\$896	0	\$0	0	\$0	0	\$0	88	\$10,870		
13.00	100% SUBMITTAL OF PLANS, SPECIFICATIONS AND ESTIMATE (PS&E)	24	4	\$860	8	\$1,408	0	\$0	8	\$1,032	12	\$1,464	8	\$896	8	\$896	0	\$0	0	\$0	0	\$0	44	\$5,436		
14.00	FINAL SUBMITTAL	24	2	\$480	6	\$1,056	0	\$0	8	\$1,032	12	\$1,464	8	\$896	8	\$896	0	\$0	0	\$0	0	\$0	44	\$5,436		
15.00	PROJECT MANAGEMENT AND MEETINGS																									
15.01	PROJECT MANAGEMENT	N/A	16	\$3,440	120	\$21,120	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	136	\$24,560		
15.02	MEETINGS (8 MEETINGS FOR 2 STAFF)	N/A	0	\$0	36	\$5,056	0	\$0	36	\$4,544	0	\$0	0	\$0	0	\$0	6	\$548	0	\$0	0	\$0	78	\$11,328		
<b>IV. POST DESIGN SERVICES</b>																										
16.00	SURVEY MONUMENT PRESERVATION AND RESTORATION	N/A	0	\$0	8	\$1,408	0	\$0	4	\$516	35	\$4,270	0	\$0	4	\$532	48	\$5,332	48	\$5,332	48	\$5,332	99	\$16,880		
<b>V. REIMBURSABLES</b>																										
17.00	REIMBURSABLE EXPENSES	N/A	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
TOTAL		80	28	\$6,020	304	\$53,504	12	\$1,800	385	\$49,656	428	\$52,216	570	\$49,580	44	\$2,552	168	\$2,552	168	\$2,552	168	\$2,552	1,829	\$274,791		



**City of Torrance**  
Public Works Department

## Hourly Rate Schedule

Effective January 2007 through December 2007

<u>OFFICE PERSONNEL</u>	<u>\$ / hr.</u>
Senior Principal .....	\$240.00
Principal .....	215.00
Project Director .....	200.00
Senior Project Manager .....	190.00
Project Manager.....	176.00
Structural Engineer.....	176.00
Corrosion Engineer.....	153.00
Senior Engineer/Senior Planner.....	150.00
Electrical Engineer .....	142.00
Landscape Architect .....	138.00
Senior GIS Analyst.....	135.00
Project Engineer/Project Planner.....	129.00
Environmental Specialist.....	125.00
Design Engineer/Senior Designer/Mapper .....	122.00
GIS Analyst .....	110.00
Designer/Planner .....	106.00
Graphic Artist .....	89.00
Environmental Analyst/Staff Planner.....	89.00
Design Technician .....	87.00
Assistant Engineer/Planner.....	84.00
Engineering Aid/Planning Aid .....	68.00
 <u>FIELD PERSONNEL</u>	
2-Person Survey Crew .....	\$218.00
1-Person Survey Crew .....	160.00
Licensed Surveyor .....	158.00
Field Supervisor .....	153.00
 <u>CONSTRUCTION MANAGEMENT PERSONNEL</u>	
Construction Manager .....	\$167.00
Resident Engineer/Project Manager .....	140.00
Senior Construction Inspector .....	110.00
Construction Inspector.....	106.00
Field Office Engineer .....	101.00
Construction Technician.....	87.00
 <u>OTHER SERVICES AND FEES</u>	
Project Coordinator .....	\$99.00
Permit Processor.....	75.00
Clerical/Word Processing .....	58.00
Consultation Relative to Legal Actions .....	350.00
Vehicle Mileage.....	0.50/Mile

Note:

Blueprinting, reproduction, messenger service and other direct expenses will be charged as an additional cost plus 15%. A Sub-consultant Management Fee of fifteen-percent (15%) will be added to the direct cost of all sub-consultant services to provide for the cost of administration, sub-consultant consultation and insurance.